A Complete Bibliography of Publications in *Fish Physiology and Biochemistry*: 2020–2029

Nelson H. F. Beebe
University of Utah
Department of Mathematics, 110 LCB
155 S 1400 E RM 233
Salt Lake City, UT 84112-0090
USA

Tel: +1 801 581 5254

E-mail: beebe@math.utah.edu, beebe@acm.org,
beebe@computer.org (Internet)
WWW URL: https://www.math.utah.edu/~beebe/

07 April 2025
Version 1.24

Title word cross-reference

17β [592]. 3 [212]. $^{+}$ [269, 56, 13, 508, 583]. $^{0,+}$ [300]. $^{2+}$ [139, 348, 331]. $^{6+}$ [778]. $_{10}$ [663]. $_{2}$ [424, 131, 326, 386]. $_{3}$ [173, 446]. $_{4}$ [130]. $_{5}$ [424]. $_{6}$ [147]. α [770, 126, 56, 310, 216, 191, 329, 531, 18, 5, 41, 619, 628, 474]. β [182, 500, 593, 396, 104, 589, 31, 136, 331, 27, 49, 602, 79, 41, 618, 259, 574]. γ [771, 627]. κ [413]. $n-3$ [463]. p [693]. $\times$ [437, 158, 338, 765, 624, 429, 618, 297, 135]. ε [729].

-adrenergic [331]. **-ATPase** [56, 13, 508]. **-ATPase-immunoreactive** [269]. **-binding** [103]. **-cell** [79]. **-conglycinin** [104]. **-endorphin** [602]. **-Estradiol** [136, 27, 592]. **-Glucan** [49, 593, 589, 618]. **-glucans** [500]. **-glycoprotein** [693]. **-ketoglutarate** [329]. **-ketoglutaric** [619]. **-lipoic** [126]. **-MSH** [310]. **-subunit** [56]. **-supplemented** [434]. **-tocopherol** [770].

/K [269, 13, 508]. **/mTOR** [31].

1 [348, 654, 18, 663, 574, 34]. **1/PI3K/AKT/mTOR** [722]. **11-ketotestosterone** [399]. **14-3-3** [41]. **1917** [664]. **1973/Lacepede** [224]. **1Asp** [182].

2 [148, 2, 203]. **2-chloroethyl** [550]. **214** [72]. **222** [69]. **2b** [523].

3 [178, 31, 657]. **3/7** [13].

5 [657]. **5-mL** [240]. **5a/b** [703].

8th [675].

ABA [475]. **ablation** [537]. **abrupt** [365]. **absence** [735]. **Absorption** [213, 104, 744, 123]. **Acanthopagrus** [316, 407, 531, 452]. **Acanthopterygii** [269]. **acceleration** [225]. **accidental** [429]. **acclimated** [265]. **acclimation** [337, 179, 746]. **account** [410]. **accretion** [759]. **accumulation** [360, 119, 560, 459, 95, 129, 350, 380]. **acetate** [770]. **acetylation** [683]. **acetyltransferase** [683]. **acid** [193, 175, 183, 142, 360, 334, 206, 51, 765, 300, 180, 126, 415, 484, 486, 599, 728, 354, 499, 705, 278, 625, 547, 53, 66, 397, 707, 767, 372, 580, 137, 454, 559, 655, 341, 619, 521, 670]. **acid-induced** [206]. **acidic** [723]. **acidification** [253, 633, 133]. **acidifier** [462]. **acidilactici** [200]. **acidophilus** [105]. **acids** [181, 524, 513, 526, 486, 563, 299]. **Acipenser** [241, 111, 722, 460, 738, 161, 41, 370, 128, 389, 616]. **acox** [574]. **across** [182, 317, 453, 54, 646]. **Actinopterygii** [21]. **actions** [684]. **activate** [229, 156]. **activated** [457]. **activating** [599, 496]. **activation** [529, 788, 764, 103, 202, 306, 628]. **active** [642]. **Activin** [289]. **activities** [38, 99, 108, 223, 572, 492, 268, 515, 279, 454]. **activity** [381, 770, 263, 272, 794, 649, 784, 358, 235, 147, 416, 13, 55, 106, 278, 107, 171, 49, 683, 774, 219, 154, 614, 109]. **acts** [156]. **Acute** [466, 736, 142, 311, 485, 308, 545, 461, 442, 763, 416, 153, 654, 455, 597, 52, 133, 579, 295, 761, 734, 423, 749, 567, 197, 621, 452, 258, 497]. **acutely** [183, 325]. **acyl** [127]. **acyl-coenzyme** [127]. **ADAM10** [479]. **ADAM17** [479]. **adapt** [463]. **adaptability** [730]. **adaptation** [52, 688]. **adaptations** [613, 733]. **adaptive** [651, 132, 391]. **added** [650]. **adding** [348]. **Addition** [500, 619]. **additional** [37]. **additive** [503]. **additives** [235, 72]. **adenohypophyseal** [757]. **adenylate** [416]. **Adequate** [73]. **adipocyte** [127, 776, 501]. **adipocytes** [796, 360, 178, 388]. **adipogenesis** [556, 538]. **adipose** [501]. **adjustments** [318]. **adjusts** [320]. **adjuvants** [771]. **administered** [759, 353, 664]. **Administration** [61, 413, 308, 111, 225, 106, 230, 406, 478]. **adrenergic** [641, 331]. **adult** [326, 754, 56, 108, 208, 412]. **adults** [757, 14]. **Advances** [456, 336]. **adverse** [656, 11]. **aeration** [472]. **aerobic** [440]. **Aeromonas** [121, 166, 461, 468, 647, 605, 551, 650, 505, 568, 150, 109]. **aeruginosa** [440]. **affect** [766, 411, 560, 751, 112, 601, 525, 315, 302, 580, 634]. **affected** [679].

affecting [244, 700]. **affects** [428, 17, 285, 473, 333, 415, 747, 136, 607, 705, 145, 683, 371, 50, 608, 68]. **afferent** [171]. **affinis** [261, 157]. **Africa** [242]. **African** [101, 369, 303, 756, 720, 605, 342, 331, 612, 614]. **after** [424, 100, 3, 308, 532, 419, 405, 387, 747, 230, 250, 128, 621, 458, 425]. **against** [490, 793, 343, 166, 756, 589, 465, 792, 647, 571, 58, 771, 354, 517, 45, 568, 429, 275, 120]. **agalactiae** [771]. **Agaricus** [706]. **agastric** [218]. **age** [239]. **ageing** [683]. **agent** [342]. **aggregation** [600]. **aggression** [332, 50]. **aggressiveness** [432, 78]. **aging** [425]. **aguabonita** [119]. **AIF** [206]. **aiming** [684]. **Air** [367, 185, 328, 709, 751, 209, 429]. **air-breathing** [185, 328, 709, 751, 209, 367]. **akaara** [338, 338]. **AKG** [619]. **AKR1A1** [361]. **AKT** [722, 446, 580, 649]. **Akt-TOR-S6K** [649]. **AKT/TOR** [580]. **AKT1** [708]. **alarm** [780]. **alba** [792, 340]. **albiflora** [773, 541]. **albinism** [215]. **alboplumbeus** [62, 204]. **Albula** [54]. **album** [617]. **Alburnus** [220, 189, 635]. **albus** [117, 89, 305, 325, 224, 523]. **albus/javanensis** [224]. **alcohol** [629]. **alexandri** [33, 6, 320]. **alfonsino** [486]. **alginate** [512, 587]. **alginate/chitosan** [512]. **alive** [615]. **alkalinity** [791, 153]. **all-male** [537]. **alleviate** [605]. **alleviated** [442, 459, 559]. **alleviates** [34, 493, 11]. **alleviation** [708, 568]. **Allium** [277]. **allostatic** [100]. **Aloe** [551, 109]. **along** [316, 35]. **Alosa** [322, 654]. **Alpha** [521]. **Alpha-ketoglutaric** [521]. **alter** [634]. **Alterations** [543, 795, 428, 794, 325, 605, 653, 630, 749, 488]. **Altered** [274, 430, 491]. **altering** [748]. **Alternation** [597]. **alternations** [316]. **Alternative** [280, 94, 671, 262, 656, 187]. **alters** [529, 378, 179, 704, 281, 205, 313, 12]. **altiparanae** [245, 244]. **altitude** [5]. **altivelis** [309, 146, 377]. **Amatitlania** [349]. **Amazon** [318]. **amazonarum** [183]. **Amazonian** [340]. **amazonicus** [142, 78]. **amberjack** [211, 456, 319]. **amblycephala** [699, 65, 227, 411, 475, 560, 468, 660, 359, 421, 580, 714, 520, 474]. **ameliorate** [227]. **ameliorates** [129, 622, 776]. **ameliorating** [630]. **amelioration** [568]. **Ameliorative** [792, 517, 462, 354, 499]. **American** [322, 654, 279]. **amine** [478]. **amino** [513, 300, 415, 526, 66, 580, 137, 299, 670]. **Ammonia** [153, 552, 772, 156, 634, 663]. **ammonia-N** [156]. **ammonium** [157]. **among** [104, 489]. **Amphiprion** [253, 566, 497]. **AMPK** [509, 634]. **Amur** [398]. **amylase** [444]. **amylases** [540]. **Anabas** [533]. **anabolic** [649]. **anadromous** [373, 658]. **anaesthesics** [638]. **anaesthetised** [438]. **analyses** [74]. **Analysis** [636, 771, 311, 308, 132, 206, 158, 726, 118, 117, 69, 176, 261, 665, 330, 792, 405, 387, 687, 709, 290, 588, 569, 133, 772, 231, 625, 547, 39, 610, 28, 141, 384, 98, 412, 271, 414, 361, 743, 798, 207, 255, 398, 304, 583, 626, 672, 733]. **Anarhichas** [240, 243, 763]. **Anarrhichthys** [374]. **ancient** [94]. **and/or** [793, 560]. **androgen** [82]. **androgenetic** [678]. **anemia** [477]. **anesthesia** [199, 544, 611, 696, 659]. **Anesthetic** [419, 171, 692, 433, 376]. **anesthetics** [71, 340]. **anesthetized** [69, 648]. **angelfish** [422, 304, 362]. **Angelica** [130]. **Anguilla** [467, 689, 715, 82, 399]. **anguillarum** [465]. **anguillicaudatus**

[386]. **anhydrase** [56]. **animals** [575]. **anise** [638]. **anisum** [638]. **Annual** [62, 241]. **anorexigenic** [161]. **antagonist** [535]. **Antarctic** [363, 364, 646]. **antarcticus** [229]. **anterior** [191]. **Anti** [307, 20, 39, 12]. **anti-apoptosis** [39]. **Anti-miR33** [307]. **anti-oxidative** [20, 12]. **antigenic** [521]. **Antioxidant** [794, 234, 268, 381, 105, 777, 193, 770, 175, 142, 38, 119, 570, 368, 152, 756, 99, 783, 43, 168, 629, 784, 792, 212, 591, 328, 661, 164, 617, 635, 509, 57, 55, 730, 25, 61, 223, 76, 270, 169, 505, 590, 195, 19, 413, 767, 59, 676, 173, 567, 271, 454, 341, 645, 489, 614, 452, 258, 733, 736]. **antioxidant-immune** [505]. **antioxidant-related** [193, 57]. **antioxidant-relevant** [61]. **antioxidants** [101]. **antioxidation** [107, 275]. **Antioxidative** [120, 256, 552, 166, 394, 205, 480, 77, 345]. **antiparasitic** [143]. **apelin** [221]. **Aphanius** [58]. **Apium** [465]. **apoptosis** [529, 206, 403, 155, 305, 507, 755, 517, 295, 39, 646, 359, 79, 498, 581, 2, 203, 697, 520, 778]. **apoptosis-inducing** [206]. **apoptosis-linked** [755]. **apoptotic** [212]. **appetite** [570, 420, 235, 347, 525, 292]. **appetite-related** [420, 235]. **apple** [106]. **application** [309, 540, 714, 425]. **applications** [562, 639]. **Appraisal** [107]. **approaches** [494]. **Appropriate** [578, 738]. **Apteronotus** [544]. **aquacultural** [371]. **Aquaculture** [763, 562, 64, 277]. **aquatic** [575]. **AQUI** [171]. **AQUI-S20E(R)** [171]. **arachidonic** [53]. **area** [744]. **areas** [133]. **argenteus** [97, 435]. **arginine** [635]. **argus** [134, 409, 410, 196]. **Argyrosomus** [83]. **Aristichthys** [216]. **armatus** [194]. **aromatase** [554, 769, 592]. **arrangement** [790]. **arsenic** [794]. **Artemia** [564]. **Arthrospira** [656]. **artificial** [287, 85]. **asafoetida** [154]. **ascorbic** [354]. **Asian** [335, 224]. **asiaticus** [24, 207]. **asoca** [727]. **aspects** [66]. **aspirin** [719]. **assay** [640, 738]. **assess** [237]. **Assessing** [589, 595]. **Assessment** [719, 677, 66, 696, 424, 680, 550, 591, 32]. **assimilation** [451]. **associated** [300, 735, 190, 491, 798]. **association** [703]. **Associations** [87]. **astaxanthin** [562, 632]. **astaxanthin-enriched** [632]. **Astronotus** [621]. **Astyanax** [757, 494, 250, 245, 244]. **ATF4** [517, 577]. **ATF4-CHOP** [517]. **atf6** [531]. **ATGL** [202, 388]. **Atlantic** [214, 139, 463, 264, 180, 763, 466, 128]. **ATPase** [269, 56, 13, 508]. **Atractosteus** [500, 14]. **atrial** [287]. **attachment** [658]. **attempts** [677]. **attenuate** [156]. **attenuates** [699, 321, 212, 75, 666, 324]. **attraction** [154]. **attractive** [299]. **augments** [166]. **Aurantiochytrium** [346]. **aurata** [263, 175, 796, 308, 282, 667, 75, 679, 198, 620]. **auratus** [17, 177, 151, 94, 598, 760, 235, 548, 225, 106, 664, 46, 315, 488, 676, 345]. **australis** [467, 399]. **Author** [556]. **autochthonous** [339, 471]. **autonomy** [522]. **autophagic** [628]. **autophagy** [202, 430, 68]. **autophagy-related** [430, 68]. **autoxidation** [226]. **avermectin** [517, 666, 534]. **avermectin-induced** [666]. **avermectin-triggered** [517]. **avoids** [656]. **AVT** [314]. **axes** [286]. **axis** [189, 310, 163, 316, 716, 371, 602, 8, 35, 196]. **Azadirachta** [647]. **azo** [669]. **Azolla** [394].

b [300, 147, 669, 393, 413, 523, 616, 703, 474]. **B.** [101]. **B1** [148]. **Bacillus** [339, 394, 348, 64, 431, 355]. **background** [483, 476]. **bacteria** [471, 543, 377].

bacterial [465, 309, 41, 627, 184]. **baeri** [161, 41]. **baerii** [111, 722, 370, 616]. **BAFF** [207]. **bagrid** [135]. **Bahamas** [54]. **balance** [545, 655]. **balm** [38]. **BaP** [404]. **barbadensis** [551]. **barbata** [268]. **Barbus** [752]. **barramundi** [133, 496, 73]. **barrier** [431, 316, 135]. **barriers** [732]. **basa** [165]. **based** [101, 445, 477, 261, 22, 789, 234, 66, 187, 655, 696, 304, 443]. **bass** [437, 321, 188, 144, 69, 396, 122, 417, 87, 484, 603, 708, 747, 455, 721, 746, 745, 281, 547, 53, 66, 774, 577, 172, 170, 350, 627, 700, 697, 748, 578, 743, 313, 592, 596, 606, 12, 778]. **bath** [659]. **batrachus** [356, 160]. **bay** [568]. **Bcl** [39]. **Bcl-xl** [39]. **bcl6aa** [280]. **BDNF** [480]. **be** [202, 642, 262, 217, 530]. **bean** [629]. **behavior** [294, 112, 476]. **Behavioral** [749, 659, 754, 432, 605, 613]. **behaviors** [597]. **behaviour** [32]. **behavioural** [428, 780]. **being** [462]. **beluga** [43]. **benefit** [625]. **Benefits** [25]. **Benthosema** [549]. **benzo** [91, 404]. **benzocaine** [174]. **berberine** [227, 660, 509]. **bergamia** [10]. **bergamot** [10]. **Beryx** [486]. **betaine** [560]. **Betanin** [480]. **Betta** [751]. **better** [742]. **between** [269, 261, 87, 411, 82, 721, 27, 621]. **bidens** [584]. **bighead** [216]. **bile** [334, 667, 278, 563]. **bimaculatus** [545, 250, 443]. **binding** [265, 103, 640, 372, 657]. **bioaccumulation** [177]. **Biochemical** [787, 101, 424, 353, 232, 794, 756, 737, 420, 719, 43, 792, 349, 147, 468, 10, 390, 108, 605, 755, 617, 499, 61, 482, 205, 347, 692, 510, 624, 769, 749, 260]. **biochemistry** [759, 263, 545, 552, 587, 281, 568, 313, 433]. **bioenergetic** [33]. **biofloc** [90, 656]. **bioinformatic** [506]. **Biology** [675, 21]. **bioluminescence** [549]. **biomarker** [424, 689, 266, 130, 395, 389]. **biomarkers** [795, 101, 782, 122, 43, 591]. **biomass** [656, 439, 503]. **biomedical** [609]. **biometric** [419]. **biometrics** [795]. **biosynthesis** [463, 486, 397, 491]. **biosynthesis-related** [463]. **biotransformation** [404, 341]. **bisphenol** [777, 1, 741, 504, 250]. **bisphenol-A** [250]. **bisporus** [706]. **bisulfite** [687]. **bitter** [695]. **bitterling** [110, 522]. **Black** [669, 274, 251, 509, 407, 531, 423, 767, 700, 173, 452]. **bladder** [629]. **blend** [765]. **Bloch** [335, 545, 133, 506, 533, 195]. **blochii** [278, 234, 478, 7]. **blood** [777, 193, 272, 641, 368, 117, 99, 420, 43, 695, 81, 147, 153, 354, 594, 205, 49, 462, 423, 433]. **blotches** [600]. **bluegill** [535]. **blunt** [529, 65, 468, 359, 421, 580, 714, 520, 474]. **bocourti** [165]. **bodied** [140]. **bodies** [735]. **body** [437, 695, 364, 584, 470, 601, 769, 476, 608, 30, 655]. **bolus** [406]. **bonariensis** [716]. **bone** [58, 28]. **bonefishes** [54]. **boost** [503]. **boosting** [480]. **borne** [732]. **Bostrichthys** [789]. **Both** [259, 677]. **bottom** [320, 18]. **bottom-dwelling** [18]. **BPA** [581]. **Brachionus** [724]. **Brachymystax** [449, 436]. **brachypomus** [624]. **brackish** [707]. **Brain** [3, 373, 284, 790, 311, 554, 633, 23, 416, 222, 316, 309, 191, 491, 143, 613, 50, 24, 302, 480, 8, 156, 534, 324]. **bran** [22]. **bran-based** [22]. **branchial** [37]. **Brazil** [276]. **Brdt** [263]. **bream** [529, 175, 796, 65, 468, 198, 359, 187, 767, 421, 580, 714, 520, 452, 474]. **breathing** [185, 328, 709, 751, 209, 367]. **breeders** [282]. **breeding** [303, 636, 435]. **brevirostrum** [460]. **Brewer** [439]. **Brief** [238]. **broodstock** [765, 482, 632, 541]. **broodstocks** [409]. **brown** [112]. **Brycon**

[142, 690, 78, 247]. **BsVg819** [789]. **buckthorn** [742, 459]. **Bunge** [275]. **Burchell** [369, 342, 594]. **butter** [545]. **button** [706]. **butyrate** [321, 603, 573]. **by-product** [445].

C [343, 587, 31, 283, 492, 567]. **Ca** [331, 139]. **Cadmium** [17, 732, 81, 750, 177, 150]. **cages** [472, 319]. **calbasu** [471]. **calcarifer** [335, 133, 496, 73]. **calcitonin** [111]. **calcium** [265, 326, 111, 379]. **calcium-binding** [265]. **camel** [791]. **campechanus** [312]. **can** [227, 392, 60, 113, 528, 197]. **canadum** [132, 330]. **cannot** [202]. **capabilities** [411]. **capable** [748]. **capacities** [173]. **capacity** [105, 570, 629, 661, 635, 509, 20, 205, 590, 19, 77, 676, 454, 452, 123, 12]. **carangid** [226]. **Carassius** [272, 17, 94, 598, 760, 235, 548, 225, 106, 664, 205, 46, 315, 177, 488, 676, 151, 345]. **carbamate** [112]. **carbamazepine** [510]. **carbohydrate** [699, 233, 227, 785, 560, 108, 453, 84, 52, 347, 444, 776, 697, 296]. **carbohydrate-to-lipid** [108]. **carbohydrates** [292]. **carbon** [723]. **Carbonate** [791, 326]. **carbonic** [56]. **carcass** [493]. **Cardiac** [331, 438, 760, 753, 692]. **cardiovascular** [694]. **carnitine** [788, 764, 329, 561]. **Carotenoid** [409, 562]. **carotenoids** [548]. **carotinifaciens** [632]. **carp** [105, 193, 272, 186, 360, 682, 34, 403, 291, 368, 93, 104, 442, 155, 178, 388, 553, 148, 153, 222, 599, 80, 37, 216, 527, 129, 307, 286, 136, 607, 638, 509, 57, 469, 55, 499, 25, 685, 740, 205, 517, 666, 439, 39, 650, 460, 683, 60, 113, 355, 543, 19, 127, 556, 538, 18, 631, 676, 776, 173, 259, 534, 149, 114, 702, 299, 292, 151, 293, 255, 345, 458, 425, 36, 123, 521]. **carpio** [355, 105, 193, 186, 682, 368, 93, 348, 148, 731, 222, 573, 37, 638, 57, 55, 499, 685, 650, 460, 113, 425, 36, 521]. **carrageenin** [308]. **carvalhoi** [100]. **cascade** [750]. **case** [687, 456]. **case-study** [687]. **caspase** [212, 13]. **Caspian** [145]. **caspicus** [145]. **Cat** [176]. **Cat-1-type** [176]. **catabolism** [628, 574]. **catabolism-independent** [628]. **catadromous** [625]. **catalase** [328]. **cataria** [659]. **catfish** [101, 369, 181, 518, 790, 303, 356, 477, 185, 554, 285, 545, 51, 756, 333, 720, 582, 328, 709, 267, 605, 755, 342, 331, 612, 231, 768, 295, 238, 16, 367, 366, 143, 393, 698, 160, 201, 586, 608, 567, 165, 361, 135, 614, 380]. **cathepsins** [393]. **cationic** [300]. **Catla** [339, 784]. **caught** [409]. **caused** [334, 202, 708, 407, 487, 749, 11]. **causes** [753]. **causing** [748]. **Cd** [348]. **CDK** [2, 203]. **CDK-2** [2, 203]. **cDNA** [16]. **celery** [465]. **cell** [272, 34, 131, 542, 735, 649, 719, 155, 427, 426, 222, 309, 527, 102, 522, 456, 536, 91, 366, 418, 146, 79, 498, 537, 377, 714, 443, 247]. **cells** [490, 220, 335, 757, 680, 206, 641, 400, 649, 690, 522, 684, 645, 255]. **Cellular** [423, 790, 83, 565, 363, 318, 26, 435, 229, 72, 750, 255]. **cellularity** [473]. **Centropyge** [422, 304, 362]. **cerevisiae** [42]. **certain** [543]. **CFVg1** [356]. **cGAS** [666]. **cGAS-STING** [666]. **cGnRH** [262]. **chain** [181, 486, 397, 508]. **challenge** [100, 15, 627, 184, 78, 497]. **challenged** [369]. **challenges** [604, 646]. **change** [138]. **Changes** [230, 515, 279, 421, 334, 400,

526, 349, 22, 97, 390, 773, 504, 617, 594, 85, 218, 561, 260]. **Channa** [794, 103, 212, 430, 506, 270, 750, 195, 141]. **channel** [139, 477, 51, 698, 567]. **Chanos** [265, 515]. **Characidae** [494, 690, 245, 247]. **Characiformes** [757, 690, 245, 247]. **characterisation** [467]. **characteristics** [636, 244, 592]. **Characterization** [718, 689, 651, 422, 642, 222, 391, 627, 297, 361, 703, 221, 362, 471, 65, 206, 134, 542, 298, 305, 178, 189, 486, 328, 709, 67, 708, 80, 654, 216, 40, 290, 588, 527, 102, 469, 506, 289, 536, 540, 16, 366, 228, 531, 610, 127, 141, 146, 219, 384, 372, 382, 501, 149, 357, 398, 36, 657, 194]. **Characterizing** [660]. **Chelidonichthys** [565]. **chemistry** [462]. **chemosensitizers** [693]. **chilled** [496, 165]. **Chinese** [570, 188, 144, 69, 67, 110, 347, 525, 327, 24, 156, 530, 634, 296, 207, 434, 619]. **Chirostoma** [712, 191]. **chitin** [756]. **chitosan** [512, 43, 225]. **Chlorella** [120]. **chloride** [335, 730]. **chloroethyl** [550]. **chlorpyrifos** [120]. **chlorpyrifos-induced** [120]. **cholecystokinin** [616]. **cholesterol** [186, 285]. **cholinergic** [480]. **Chondrichthyes** [340]. **CHOP** [517, 386]. **chorion** [729, 725]. **chromatosomes** [600]. **chromium** [233, 430, 778]. **Chronic** [371, 748, 119, 732, 754, 746, 504, 567, 258]. **Chrysiptera** [23, 358]. **chrysops** [437]. **CHSE** [72]. **CHSE-214** [72]. **chuatsi** [570, 347, 525, 327, 156, 98, 530, 528, 634, 296, 619]. **chum** [508]. **Cichlasoma** [183, 301, 4, 279]. **cichlid** [782, 349, 310, 301, 4, 279]. **cichlids** [318]. **cider** [106]. **CIK** [206]. **Cinnamaldehyde** [123, 608]. **cinnamic** [728]. **circadian** [636, 204]. **Cirrhinus** [543, 18]. **cirrosa** [495, 481]. **citratus** [376]. **Citrus** [10]. **Clarias** [101, 369, 303, 356, 542, 720, 328, 709, 642, 267, 605, 342, 331, 612, 594, 393, 160, 614]. **class** [180]. **classes** [53]. **classical** [299]. **climate** [685]. **climbing** [533]. **Clinocottus** [514]. **cloaca** [152]. **clock** [636, 774]. **Cloning** [386, 70, 40, 219, 370, 149, 93, 708, 80, 216, 469, 506, 531, 384, 184, 194]. **closely** [758]. **clothianidin** [737]. **clownfish** [344, 253, 566, 497]. **Clupeiformes** [610]. **co** [404, 326]. **co-exposure** [404]. **coagulans** [339, 348]. **coastal** [133]. **cobalt** [30, 401]. **cobia** [132, 330]. **cockroach** [451]. **coconut** [256]. **cod** [214, 326]. **coenzyme** [127]. **cofactor** [787]. **cognitive** [480]. **coibor** [629]. **coioides** [108, 306, 219]. **cold** [485, 338, 715, 32, 597, 569, 489, 733]. **coli** [664]. **collagen** [629, 259]. **colloidal** [789]. **color** [483, 405, 387, 584, 612, 497]. **coloration** [548]. **colorations** [476]. **Colossoma** [159, 648, 564, 167, 624, 438, 324, 659]. **colouration** [555]. **columbina** [252]. **column** [753]. **Combined** [552, 15, 587, 427, 426]. **Common** [37, 105, 193, 682, 368, 93, 294, 148, 136, 607, 71, 638, 57, 55, 499, 685, 460, 113, 425, 36]. **communication** [238]. **communities** [217]. **community** [188, 144, 603, 675]. **companions** [246]. **Comparative** [303, 311, 726, 118, 411, 591, 28, 652, 670]. **Comparing** [432]. **Comparison** [779, 304, 427, 426]. **compensated** [202]. **compensatory** [747]. **competitive** [601]. **complete** [395, 397]. **complex** [658]. **components** [658]. **composition** [353, 437, 282, 321, 180, 695, 409, 705, 423, 769, 608, 30, 670]. **Comprehensive** [158, 733]. **compromise** [514]. **concentrate** [158].

concentrating [483]. **Concentration** [71]. **concentrations** [477, 550, 679, 174, 707, 659]. **concerning** [494]. **concert** [56]. **condition** [470, 320]. **conditional** [537]. **conditions** [175, 232, 100, 47, 752, 264, 402, 591, 495, 481, 427, 426, 317, 761, 734, 367, 738, 48]. **cone** [511]. **confer** [756]. **confined** [761, 734]. **conglycinin** [104]. **conjoined** [261]. **Consequences** [183]. **conservation** [439, 684]. **conspecific** [356, 780]. **Constant** [9]. **consumption** [179, 116, 195]. **containing** [620]. **contaminant** [719]. **contamination** [293]. **content** [790]. **contents** [475, 66]. **context** [50]. **contractile** [140]. **contractility** [331]. **contribute** [453]. **control** [339, 262]. **controlled** [211]. **convict** [349]. **coping** [786]. **copper** [183, 119, 343, 450, 325, 76]. **copper-induced** [76]. **CoQ** [663]. **coral** [600]. **coriander** [505]. **Coriandrum** [505]. **cornucola** [363]. **Correction** [788, 449, 188, 741, 405, 495, 427, 761, 729, 556, 203, 313]. **correlated** [474]. **Correlation** [82]. **corticotropin** [483]. **corticotropin-releasing** [483]. **cortisol** [535, 417, 604, 754, 37, 466, 315]. **costs** [210]. **cottonseed** [395]. **Cottus** [96]. **could** [379, 530]. **Coumaric** [193]. **coupling** [640]. **course** [466]. **cpt** [574]. **cpt-1** [574]. **Cr** [778]. **creatine** [33, 475, 484, 743]. **CRF** [314]. **CRH** [633, 221]. **CRISPR** [3]. **CRISPR-induced** [3]. **critical** [548, 374]. **croaker** [665, 84, 20, 76, 382, 454, 501, 297, 489, 502]. **crocea** [665, 84, 20, 76, 382, 454, 501, 297, 502]. **Cromileptes** [309, 146, 377]. **cross** [27]. **cross-talk** [27]. **crosstalk** [621]. **crowding** [622]. **crucial** [150]. **crucian** [272, 676, 151]. **Cryopreservation** [690, 240, 113]. **Cryopreserved** [766, 682]. **cryovials** [240]. **Ctenopharyngodon** [360, 206, 34, 291, 104, 442, 155, 178, 81, 388, 553, 599, 80, 527, 129, 307, 286, 469, 39, 683, 19, 127, 556, 538, 631, 776, 259, 299, 292, 255, 458, 123]. **Cu** [76]. **Culter** [189, 635]. **cultivating** [553]. **culture** [47, 542, 495, 481, 257, 90, 91, 365, 681, 170, 779]. **cultured** [42, 252, 796, 82]. **Curcuma** [92]. **curcumin** [381, 499]. **currents** [585]. **curry** [793]. **CuSO** [130]. **cyanea** [23, 358]. **cyanobacteria** [60]. **cycle** [9, 241, 550, 23]. **Cymbopogon** [376]. **Cynoglossus** [67, 29, 434]. **cyp19a1a** [306]. **cyp19a1b** [592]. **cyprini** [735]. **cyprinid** [294, 397]. **Cyprinidae** [21, 583]. **Cypriniformes** [610, 583]. **Cyprinus** [105, 193, 186, 682, 368, 93, 148, 731, 222, 573, 37, 638, 57, 55, 499, 685, 650, 460, 113, 355, 425, 36, 521, 348]. **cyto** [794]. **cyto-genotoxicity** [794]. **cytochrome** [554]. **cytokine** [788, 764]. **cytometric** [719]. **cytoprotection** [5].

D [393, 631, 173]. **dabryanus** [209, 389]. **daidzein** [731]. **daily** [724, 774]. **damage** [788, 764, 183, 339, 477, 461, 273, 427, 426, 95, 354, 346, 392, 492, 666, 750, 534, 748, 559, 778, 324]. **damages** [190]. **damselfish** [23, 358]. **dandelion** [268]. **Danio** [200, 428, 323, 176, 706, 103, 550, 126, 459, 644, 597, 453, 208, 102, 239, 492, 536, 302, 59, 412]. **data** [214]. **davidi** [88, 221]. **de-oiled** [22]. **deacetylated** [756]. **Dead** [248, 327]. **Dead-end** [248]. **deamination** [619]. **death** [719, 507, 456, 190]. **Deciphering** [722]. **decitabine** [546]. **Decoction** [697]. **decrease** [96, 197]. **decreased** [679].

deep [486, 140]. **deep-diving** [140]. **deep-sea** [486]. **defatted** [700]. **defects** [507, 546]. **defence** [212, 234]. **defense** [777, 76, 489]. **defenses** [271]. **deficiency** [507]. **deformities** [753]. **delay** [797]. **Delivery** [254, 86]. **deltoidea** [720]. **demonstrated** [669]. **denaturation** [226]. **densities** [80]. **density** [47, 130, 772, 281, 205, 313, 657]. **denudata** [433]. **deoxynivalenol** [148]. **dependent** [284, 212, 407]. **depolarization** [287]. **deposition** [326, 629, 708, 31, 379]. **deprivation** [400, 301, 367]. **derivatives** [728]. **derived** [110, 536, 702, 443]. **detection** [789, 610]. **Determination** [241, 486]. **determining** [566]. **detrimental** [647, 521]. **Deuterodon** [276]. **developing** [546]. **Development** [542, 122, 751, 102, 789, 366, 757, 282, 726, 264, 300, 422, 712, 731, 267, 163, 251, 599, 584, 511, 352, 409, 456, 162, 694, 228, 418, 653, 29, 297, 362]. **developmental** [473, 176, 507, 642, 270]. **DHA** [649, 178]. **DHA-induced** [178]. **DHs** [678]. **Di-2-ethylhexyl** [491]. **diacanthus** [162]. **diazinon** [756]. **dibromide** [412]. **Dibutyl** [516]. **Dicentrarchus** [795, 783, 122, 711, 87, 472, 465, 761, 734, 547, 623, 53, 66, 774, 48]. **did** [603]. **Diel** [125]. **diet** [529, 699, 252, 121, 788, 764, 321, 51, 227, 378, 560, 791, 22, 459, 701, 52, 106, 705, 761, 734, 395, 439, 217, 643, 379, 407, 19, 187, 776, 563, 697, 559, 275, 11, 458]. **diet-fed** [563, 458]. **diet-induced** [699, 776, 275]. **Dietary** [381, 105, 101, 764, 159, 334, 321, 570, 732, 797, 765, 756, 493, 227, 415, 560, 484, 459, 431, 390, 603, 286, 75, 635, 482, 223, 145, 525, 707, 379, 577, 698, 622, 568, 302, 487, 18, 608, 561, 631, 530, 528, 30, 324, 759, 42, 770, 445, 471, 513, 463, 793, 343, 51, 576, 104, 166, 43, 233, 695, 465, 475, 126, 486, 720, 717, 728, 70, 108, 569, 84, 519, 617, 566, 671, 509, 90, 55, 499, 230, 20, 346, 347, 73, 234, 329, 169, 53, 162, 590, 462, 767, 77, 676, 580, 618, 173, 154, 578, 135, 401, 743, 120]. **dietary** [296, 345, 596, 12, 670, 788]. **diets** [101, 445, 742, 477, 500, 589, 180, 637, 451, 784, 785, 394, 10, 92, 661, 453, 509, 730, 107, 656, 192, 620, 505, 66, 268, 568, 727, 561]. **differences** [189]. **Different** [586, 489, 524, 232, 104, 473, 408, 294, 665, 168, 402, 591, 147, 582, 432, 80, 317, 108, 448, 208, 730, 406, 289, 107, 162, 758, 201, 681, 561, 779, 137, 48, 655, 296, 657, 659]. **Differential** [754, 231, 172, 304]. **differentially** [182, 736]. **differentiation** [396, 351, 319, 501, 297, 398]. **diffusive** [514]. **digest** [60]. **Digested** [278]. **digestibility** [785, 278]. **digestible** [572]. **digestion** [565, 104, 166, 123]. **digestive** [718, 565, 38, 500, 256, 765, 411, 712, 415, 394, 539, 108, 470, 55, 106, 406, 281, 223, 107, 533, 650, 515, 758, 279, 767, 154, 454, 313]. **dimerus** [301, 279]. **dimming** [46]. **dimorphism** [288, 703]. **dioica** [349]. **dioxide** [679]. **dipeptide** [137]. **diquat** [412]. **direct** [532]. **discharge** [544]. **Discovery** [501, 117, 429]. **disease** [512, 343, 394, 717, 664, 59, 631, 676, 618, 275, 345]. **dismutase** [328]. **disorder** [227, 354]. **disorders** [791, 307, 407, 487, 776]. **disrupting** [777]. **disruption** [186, 442, 58]. **Disruptive** [731]. **disrupts** [516, 694]. **Dissolved** [634, 751, 723]. **distal** [53]. **Distinct** [1, 604, 741]. **distributed** [182]. **Distribution**

[269, 191, 285, 291, 176, 300, 318, 178, 289, 16, 478, 161, 124, 221]. **Disturbance** [142]. **disturbing** [350]. **divaricatum** [438]. **divergence** [118]. **divergent** [132]. **diversely** [294]. **diversity** [431]. **diving** [140]. **Dmrt** [398]. **Dmrt1** [219, 443]. **DNA** [339, 687, 273, 288, 453, 492, 778]. **dnd** [248]. **Do** [625]. **dobula** [391]. **Does** [253, 766, 711, 112, 302]. **dogfish** [385]. **Dolops** [100]. **donors** [780]. **Dormitator** [718]. **dots** [640]. **doubled** [678]. **drastic** [623]. **DRCF** [102]. **droplet** [178]. **drugs** [151]. **drum** [437, 604, 495, 481, 773, 162, 541]. **drumstick** [75]. **dumerili** [211, 456, 319]. **duration** [245]. **during** [220, 282, 185, 300, 587, 712, 333, 23, 274, 405, 387, 440, 96, 56, 267, 251, 450, 773, 455, 615, 632, 289, 375, 138, 113, 738, 418, 515, 279, 29, 382, 488, 271, 398, 258]. **dusky** [138]. **dwelling** [18]. **dye** [669]. **dynamic** [104]. **dysfunction** [699, 753, 517].

E. [158, 338]. **Early** [711, 623, 365, 653, 282, 396, 473, 715, 333, 267, 539, 453, 319, 492, 198, 228, 515, 556, 538, 279, 8, 29, 414, 621]. **early-life** [198]. **edition** [675]. **Edwardsiella** [543]. **eel** [467, 353, 689, 117, 715, 89, 305, 82, 325, 686, 224, 374, 365, 523, 150]. **eels** [399]. **Effect** [175, 337, 83, 38, 545, 667, 312, 420, 629, 465, 358, 582, 287, 416, 225, 26, 209, 470, 615, 406, 572, 239, 686, 781, 738, 195, 767, 177, 165, 135, 200, 641, 752, 326, 343, 188, 144, 589, 43, 472, 126, 310, 58, 544, 164, 75, 351, 623, 505, 487, 161, 429, 567, 114, 433]. **effective** [433, 340]. **Effects** [369, 790, 335, 485, 437, 119, 99, 587, 715, 168, 155, 332, 147, 273, 720, 10, 548, 717, 96, 644, 728, 108, 584, 84, 13, 579, 519, 617, 509, 90, 482, 399, 768, 295, 347, 198, 716, 53, 157, 359, 404, 21, 8, 77, 79, 488, 137, 173, 154, 454, 48, 520, 88, 655, 645, 151, 452, 434, 7, 502, 739, 314, 796, 363, 535, 265, 282, 94, 500, 552, 793, 782, 396, 783, 180, 451, 784, 276, 785, 81, 111, 235, 484, 468, 647, 754, 148, 731, 427, 426, 32, 130, 390, 573, 701, 661, 37, 70, 453, 466, 71, 772, 409]. **effects** [499, 116, 514, 724, 517, 301, 15, 656, 171, 590, 355, 407, 115, 140, 653, 681, 59, 676, 580, 563, 299, 663, 11, 293, 521, 595]. **Efficacy** [638, 55, 611, 187, 630, 303, 199, 419, 771, 505]. **efficiency** [482, 528, 197]. **Egg** [236, 237, 282, 264, 238, 141]. **egg-envelope** [141]. **Egg-sperm** [236]. **egg-to-fry** [264]. **egged** [96]. **eggs** [353, 254, 678, 522, 201]. **Eicosapentaenoic** [599]. **Eigenmann** [276]. **electric** [544]. **electrical** [287]. **electrolytic** [545]. **electrophysiological** [659]. **electroporation** [86]. **element** [103]. **element-binding** [103]. **elements** [103]. **Elevated** [477]. **elevates** [5]. **elevation** [729, 725]. **elicits** [704]. **elimination** [238]. **elongase** [103]. **elovl5** [103]. **embryo** [282, 270]. **embryo/larval** [282]. **embryogenesis** [450]. **Embryonic** [546, 163]. **embryos** [492, 694, 447]. **emerging** [757, 719]. **emphasis** [541]. **emphatic** [549]. **encapsulated** [499]. **end** [248]. **endangered** [677, 690, 138, 247]. **endemic** [247]. **endocrine** [411, 773, 716, 460, 385]. **endogenous** [724, 743]. **endomorphins** [35]. **Endoplasmic** [360, 529, 666, 531]. **endorphin** [602]. **energetic** [210, 25]. **energy** [790, 17, 202, 416, 455, 572, 516, 197, 489, 389, 458, 606]. **Enhance** [455, 649, 528]. **enhanced** [105, 742]. **Enhancement** [345, 413]. **enhancer**

[342]. **enhances** [34, 570, 49, 622, 18, 5, 776]. **enriched** [730, 705, 632, 505, 355]. **enrichment** [724, 585]. **enrichments** [8]. **envelope** [141]. **environment** [5]. **Environmental** [116, 760, 318, 427, 426, 679]. **Environmentally** [550]. **environments** [172]. **Enzymatic** [481, 495]. **Enzyme** [19, 38, 65, 752, 99, 784, 785, 415, 235, 147, 55, 572, 107, 540, 268, 515, 279, 154, 454, 12]. **Enzyme-treated** [19]. **enzymes** [718, 565, 500, 256, 784, 394, 486, 108, 55, 106, 281, 223, 650, 270, 397, 195, 652, 767, 313, 341]. **Enzymological** [395]. **EPA** [649, 599]. **epigenetic** [774]. **Epinephelus** [513, 158, 338, 108, 306, 116, 138, 219, 429, 618]. **epithelial** [500, 667, 460, 135]. **Epithelioma** [735]. **EPO** [391]. **eprinomectin** [143]. **Eptatretus** [71]. **erinaceus** [717]. **erythrocytes** [179, 270]. **Escherichia** [664]. **Essential** [199, 433, 376, 419, 648, 486, 617, 638, 611, 692, 438, 340]. **essentiality** [513]. **established** [377]. **Establishment** [640, 309, 527, 146, 714, 443]. **estor** [712]. **Estradiol** [136, 396, 644, 191, 231, 27, 434, 592]. **estradiol-17** [396]. **estradiol-treated** [231]. **estrogen** [134, 1, 741, 607, 694]. **estrogenic** [58]. **ethanolic** [647]. **ethylhexyl** [491]. **ethylmaleimide** [658]. **Etroplus** [782]. **Eugenol** [340, 69, 544, 171, 696]. **Eurasian** [257]. **European** [795, 182, 353, 689, 783, 715, 711, 417, 87, 472, 465, 761, 734, 547, 623, 53, 66, 774, 686, 365, 201]. **Euterpe** [324]. **evaluate** [122]. **Evaluating** [793]. **Evaluation** [739, 445, 535, 740, 250, 727, 293, 756, 168, 163, 701, 72, 319, 221]. **even** [100]. **event** [749]. **evidence** [58]. **evolution** [391]. **Evolutionary** [626, 672]. **example** [262]. **excessive** [379]. **excision** [492]. **excretion** [153, 156]. **exercise** [437, 532, 37]. **exhaustive** [532]. **exocrine** [385]. **exocytosis** [373]. **Exogenous** [785, 192, 315, 535, 784, 254, 58, 584, 84, 55, 724, 271]. **exosomes** [702, 255]. **experienced** [246]. **experimental** [609]. **experimentally** [369, 234]. **exploration** [474]. **exploratory** [535]. **Exploring** [513, 408, 555, 277]. **exposed** [183, 368, 227, 604, 560, 709, 26, 430, 153, 325, 57, 167, 367, 169, 143, 260, 341, 595]. **Exposure** [777, 473, 679, 112, 694, 383, 159, 424, 17, 119, 338, 326, 732, 552, 589, 719, 792, 753, 440, 455, 504, 75, 250, 546, 91, 174, 371, 404, 423, 653, 177, 429, 534, 447, 150, 733]. **exposure-induced** [534]. **expressing** [56]. **Expression** [185, 298, 89, 435, 74, 24, 592, 373, 263, 335, 17, 651, 308, 65, 265, 554, 34, 338, 500, 463, 93, 51, 636, 408, 706, 711, 305, 785, 475, 1, 178, 330, 741, 23, 189, 273, 717, 709, 642, 97, 390, 457, 644, 80, 70, 668, 13, 191, 755, 617, 564, 772, 509, 57, 61, 399, 306, 612, 145, 231, 73, 192, 367, 444, 28, 127, 172, 302, 161, 713, 41, 29, 384, 382, 68, 98, 479, 259, 370, 114, 361, 30, 520, 523, 88, 655, 645, 663, 184, 207, 398, 36, 657, 304, 626, 14]. **expressions** [204, 386, 40, 16, 531, 151]. **extended** [617]. **extenders** [738]. **extends** [413]. **extracellular** [331, 536]. **extract** [38, 797, 99, 629, 349, 647, 717, 130, 129, 61, 230, 768, 622, 487, 345]. **extracted** [645]. **extracts** [793, 440, 268]. **Extreme** [179]. **extrinsic** [401]. **extruded** [411]. **eyes** [204].

FA [454]. **faba** [629, 629]. **factor** [266, 206, 422, 87, 435, 216, 668, 286, 566, 399, 658, 16, 5, 149, 657]. **factor-1** [216, 399]. **Factors** [244, 193, 476, 401]. **family** [300, 348, 457, 398, 626]. **farmed** [175, 180, 70, 198, 652]. **farming** [72]. **Farnesoid** [446]. **fasciatus** [58, 290, 588, 13]. **fasted** [428]. **fasting** [651, 282, 408, 637, 711, 273, 127]. **fasting-induced** [127]. **fat** [529, 788, 764, 51, 459, 95, 509, 379, 407, 786, 563, 275, 11, 458]. **fate** [417]. **fathead** [131]. **fatty** [181, 183, 142, 524, 180, 486, 499, 625, 547, 397, 707, 702, 275, 655]. **Fc** [627]. **features** [237, 256, 758]. **fed** [193, 252, 428, 321, 51, 22, 509, 730, 656, 268, 379, 727, 561, 563, 559, 458, 619]. **Feed** [411, 570, 463, 51, 673, 235, 348, 701, 668, 721, 519, 470, 482, 392, 301, 608, 557]. **feedback** [292]. **feeding** [651, 532, 637, 420, 712, 37, 721, 453, 511, 724, 217, 774, 327, 758, 170, 385, 530, 154, 370, 88, 221, 616]. **feeds** [339, 671, 551, 434]. **female** [185, 158, 285, 338, 593, 62, 92, 257, 24, 429, 618, 297]. **females** [9, 644, 191, 586, 541]. **fennel** [638]. **Fenpropathrin** [447]. **fermented** [42, 445, 394, 661, 727, 619]. **fertilization** [282, 738]. **fertilizing** [483]. **Ferula** [154]. **ferulic** [454]. **fibers** [181]. **Ficus** [720, 590]. **ficus-indica** [590]. **fight** [613]. **fight-flight** [613]. **fih** [654]. **fillet** [142, 785, 700]. **fingerlings** [381, 233, 179, 722, 772, 768, 462, 622, 401]. **finishing** [572]. **finned** [269]. **First** [58, 410, 242, 532, 677, 511]. **Fish** [392, 655, 675, 252, 220, 483, 248, 424, 524, 757, 363, 762, 269, 266, 158, 131, 246, 673, 794, 532, 400, 294, 735, 451, 103, 364, 202, 226, 305, 249, 86, 591, 486, 687, 64, 26, 430, 310, 32, 544, 130, 457, 309, 336, 448, 690, 71, 262, 20, 789, 555, 410, 678, 551, 301, 540, 320, 245, 270, 169, 138, 684, 190, 781, 646, 787, 750, 327, 418, 218, 413, 487, 652, 8, 277, 5, 384, 557, 528, 271, 149, 260, 703, 696, 736, 376]. **fishery** [151]. **fishes** [526, 751, 140]. **Fishmeal** [747, 445, 637, 745, 730, 395, 217, 700, 619]. **fishmeal-based** [445]. **fishmeal-free** [637]. **flagellin** [771]. **flatfish** [680, 613]. **flavanones** [275]. **flavescens** [351]. **flavor** [19]. **flesh** [19, 634]. **flight** [613]. **flonicamide** [57]. **flora** [553, 650]. **florfenicol** [478]. **Flos** [345]. **flounder** [445, 427, 426, 288, 519, 215]. **flow** [532, 719]. **Fluctuation** [43, 615, 724]. **fluid** [236]. **Fluorescent** [32]. **fluorometry** [740]. **fluviatilis** [257]. **flux** [514, 628]. **fly** [700]. **focus** [739]. **focusing** [360, 126]. **fodder** [650]. **Foeniculum** [638]. **folic** [175]. **follicle** [644, 257]. **follicle-stimulating** [644]. **followed** [637]. **following** [174, 478]. **food** [332, 37, 195, 292]. **formate** [462]. **formation** [641, 178, 179, 662, 98, 600]. **forms** [477, 499, 758, 137]. **formulated** [192]. **Forsskål** [116]. **fossilis** [518, 790, 185, 554, 367]. **Foxo1** [306]. **fractions** [113]. **fragility** [272]. **fragment** [789]. **fragments** [680]. **Free** [526, 637, 137]. **freeze** [613]. **freeze-hide** [613]. **frenatus** [497]. **frequency** [420, 721, 692, 170]. **fresh** [265]. **freshening** [229]. **freshwater** [790, 742, 424, 524, 103, 723, 506, 551, 625, 540, 270, 141, 488, 508, 340]. **fries** [759]. **Front** [646]. **frozen** [110]. **fructooligosaccharide** [468]. **fruit** [692].

fry [264, 55, 77]. **fucoidan** [164, 187]. **fuel** [753]. **Full** [398]. **Full-length** [398]. **fulvidraco** [334, 285, 16, 361, 559, 380]. **fumonisin** [148]. **function** [667, 654, 579, 650, 727, 480, 713, 382, 776, 385, 361, 207, 616, 626]. **Functional** [598, 357, 474, 206, 134, 323, 486, 316, 216, 290, 588, 469, 372, 194, 672]. **functionality** [470, 738]. **functions** [411, 505, 135]. **fungicide** [112]. **fuscoguttatus** [158, 116, 429, 618]. **fusion** [583]. **future** [262].

G [189, 475]. **g-ABA** [475]. **GA** [51]. **GABA** [18, 151]. **GABA-T** [151]. **GAD** [151]. **Gadus** [214, 326]. **Gambusia** [261, 157]. **gametes** [677, 675]. **gar** [500, 14]. **gariepinus** [101, 369, 303, 720, 605, 342, 331, 612, 594, 393, 614]. **garlic** [277]. **gas** [153]. **gastric** [218]. **gastrin** [616]. **gastrointestinal** [797, 267]. **gated** [139]. **GCN2** [577]. **GCN2/ATF4** [577]. **GDH** [634]. **GDH/AMPK** [634]. **Gene** [373, 284, 263, 335, 308, 338, 500, 636, 711, 87, 785, 475, 178, 235, 348, 273, 67, 390, 457, 755, 617, 566, 564, 772, 57, 662, 61, 789, 399, 375, 192, 367, 444, 127, 41, 219, 361, 520, 798, 645, 207, 389, 592, 474, 362, 14]. **generations** [453]. **Genes** [663, 518, 524, 232, 689, 651, 726, 51, 117, 408, 706, 420, 189, 717, 204, 328, 709, 148, 430, 97, 644, 80, 317, 229, 509, 145, 231, 774, 646, 228, 531, 302, 652, 29, 68, 124, 370, 30, 655, 215, 398, 574, 36, 304]. **Genetic** [610, 87, 684]. **genetically** [70, 758]. **genetics** [198]. **genistein** [285, 731]. **Genome** [457, 28]. **Genome-wide** [457, 28]. **Genomic** [668, 28]. **genotoxic** [392]. **genotoxicity** [794]. **genotypic** [541]. **gentian** [587, 615, 618]. **germ** [522, 684, 418, 537, 247]. **GF** [87]. **GF-I** [87]. **GH** [232, 163, 663]. **GH/IGF** [232, 163]. **ghrelin** [3]. **giant** [513, 444]. **gibel** [205, 345]. **gibelio** [17, 205, 177, 151]. **gill** [220, 335, 33, 633, 587, 179, 274, 56, 283, 57, 594, 367, 366, 359, 508, 714, 520, 433, 97]. **gills** [403, 368, 455, 746, 75, 516, 143]. **gilthead** [263, 175, 796, 308, 282, 667, 671, 679, 198, 620]. **ginger** [611]. **Ginsburg** [744]. **ginseng** [676]. **Ginseng(R)** [342]. **gland** [757, 23]. **glanis** [238, 201]. **global** [739]. **globiceps** [514]. **globule** [583]. **glochidia** [322]. **glucagon** [93, 114]. **Glucan** [49, 593, 589, 618]. **glucans** [500]. **glucocorticoid** [535]. **glucolipid** [530]. **Glucose** [93, 337, 570, 227, 111, 660, 453, 49, 444, 79, 561, 748, 114, 596]. **glutamate** [672]. **glutathione** [752, 148, 491]. **Gly16** [182]. **Glycerol** [553, 644]. **glycinin** [573]. **glycinin-induced** [573]. **Glycocholic** [559]. **glycogen** [708, 606]. **glycolysis** [444, 578]. **glycometabolism** [560]. **glycoprotein** [428, 693, 210]. **glycoprotein-associated** [300]. **glycyrrhetinic** [51]. **GnIH** [506]. **GnRH** [191, 24]. **GnRH2** [221]. **GnRHa** [211, 225]. **GnRHs** [23]. **go** [262]. **goby** [125, 50]. **gold** [789]. **golden** [232, 119, 701, 668, 85, 379, 28, 7]. **goldfish** [94, 598, 760, 640, 235, 548, 225, 262, 662, 664, 46, 315, 488]. **gonad** [186, 310, 409, 231, 398]. **Gonadal** [251, 138, 396, 422, 711, 584, 289, 85, 115, 297, 196, 398, 362]. **Gonadotropin** [94, 185, 134, 506]. **Gonadotropin-releasing** [94, 185, 134, 24]. **gonadotropins** [518, 89, 23, 399, 523]. **gonads** [435, 288]. **gonochoristic**

[410]. **goramy** [444]. **gourami** [444]. **GQDs** [640]. **graded** [22]. **Gradual** [364]. **Grape** [129, 797, 61, 230, 487]. **graphene** [640]. **Grass** [34, 39, 360, 291, 104, 442, 155, 178, 388, 553, 62, 204, 599, 80, 527, 129, 307, 286, 469, 25, 683, 19, 127, 556, 538, 488, 631, 776, 259, 149, 114, 702, 299, 292, 293, 255, 458, 123]. **gratissimum** [199, 648]. **gravel** [753]. **graveolens** [465]. **great** [334]. **greater** [211, 456, 319]. **green** [744]. **greenling** [786]. **grey** [625]. **Gromphadorhina** [451]. **grouper** [513, 158, 587, 108, 309, 615, 705, 306, 138, 146, 219, 429, 618, 377, 446, 563]. **groupers** [338]. **growing** [19]. **Growth** [232, 564, 730, 664, 795, 42, 105, 101, 175, 200, 512, 159, 742, 339, 471, 38, 682, 437, 477, 17, 266, 570, 500, 732, 256, 343, 51, 576, 473, 797, 166, 493, 99, 408, 312, 420, 665, 451, 233, 87, 695, 629, 465, 411, 785, 333, 349, 235, 147, 468, 720, 10, 548, 717, 26, 435, 603, 573, 701, 661, 728, 747, 108, 584, 668, 721, 84, 286, 722, 164, 519, 635, 566, 772, 509, 90, 55, 499, 106, 61, 230, 20, 278, 399, 281, 223, 205, 572, 351, 145, 632, 768, 347, 525, 107, 73, 329, 533, 16, 620]. **growth** [162, 66, 590, 707, 379, 577, 374, 462, 115, 187, 622, 769, 727, 302, 767, 681, 476, 608, 77, 350, 631, 700, 779, 137, 776, 173, 530, 528, 154, 454, 748, 559, 578, 30, 313, 663, 452, 345, 434, 596, 657, 123, 12, 521, 670, 194]. **growth-related** [493, 408]. **GRP78** [702, 531]. **grypus** [752]. **GSK** [31]. **GSK-3** [31]. **guanidinoacetic** [484]. **gudgeon** [15]. **guentheri** [413]. **gulio** [768]. **Gunther** [115]. **gurnard** [565]. **Gut** [637, 105, 321, 732, 695, 475, 316, 107, 53, 462]. **gut-brain** [316]. **guttatus** [85]. **Gymnocorymbus** [32]. **Gymnocypris** [403, 153, 457, 391]. **gynogenetic** [189, 678].

H [131, 189, 56, 386]. **H131S** [391]. **H4K12** [683]. **habit** [327]. **habits** [758]. **haematological** [22]. **haematology** [10, 192, 66]. **hagfish** [71]. **Hamilton** [777, 339, 471, 593, 542, 233, 102, 643, 727]. **hammerheads** [242]. **handling** [419, 763, 681]. **haploids** [678]. **Harpagifer** [229]. **hatchery** [319, 738]. **hatchery-produced** [319]. **hatching** [473]. **head** [180, 466, 423]. **health** [732, 782, 576, 720, 661, 747, 721, 84, 329, 620, 53, 462, 187, 618, 596, 521]. **healthiness** [19, 154]. **heart** [598, 287, 352]. **Heat** [338, 490, 770, 142, 449, 436, 709, 390, 492, 195, 610, 748, 128, 184, 458, 574, 645]. **heat-shock-protein-** [390]. **heat-stressed** [390]. **heavy** [753, 377]. **Heckel** [752]. **helps** [47]. **hemato** [765, 617, 482]. **hemato-biochemical** [617, 482]. **hemato-immunological** [765]. **Hematological** [624, 343, 145, 630, 260]. **hematology** [263, 548, 717]. **Heme** [150]. **hemodynamics** [760, 287]. **hemoglobin** [182]. **hepatic** [381, 788, 764, 159, 415, 560, 235, 708, 70, 95, 129, 25, 205, 572, 623, 505, 66, 510, 487, 341, 606, 12]. **hepatic-renal** [505]. **hepatocytes** [693, 44, 372, 702]. **hepatopancreatic** [307]. **hepatotoxicity** [550, 669, 516, 581]. **heptaphyllum** [692]. **Herba** [650]. **herbal** [639]. **herbicide** [160, 412]. **Hericium** [717]. **hermaphrodite** [305, 138]. **hermaphroditic** [89]. **Hermetia** [217, 620]. **Hesperozygis** [419]. **Heteropneustes** [518, 790, 185, 554, 367]. **hexaflumuron** [792].

Hexagrammos [786]. **Hexavalent** [778]. **hibernation** [688]. **hide** [613]. **HIF** [18, 654]. **HIF-1** [18]. **HIF2** [474]. **High** [529, 52, 205, 444, 558, 596, 12, 101, 699, 337, 788, 764, 47, 321, 326, 51, 227, 785, 560, 459, 427, 426, 153, 130, 37, 453, 509, 590, 646, 379, 407, 5, 384, 776, 563, 697, 260, 559, 275, 11, 458, 595]. **high-altitude** [5]. **High-carbohydrate** [52, 699, 227, 785, 560, 453, 776]. **high-density** [47]. **High-fat** [529, 788, 764, 51, 459, 509, 407, 563, 275, 11, 458]. **high-latitude** [646, 260]. **high-pectin** [559]. **Higher** [593]. **highland** [457]. **hilsa** [56]. **Hippocampus** [744]. **Hippophae** [742]. **Histochemical** [565]. **Histological** [712, 325, 319, 122, 155, 792, 495, 481, 594, 395]. **histology** [381, 175, 232, 343, 636, 241, 235, 147, 274, 548, 107, 192]. **histomorphology** [769]. **histomorphometry** [256, 394, 656]. **histone** [288, 683]. **Histopathological** [260, 795, 770, 408, 605, 755, 630]. **histopathology** [263, 545, 273]. **histoprotection** [339]. **history** [685]. **hMG** [303]. **HO-1** [348, 34]. **homeostasis** [369, 337, 47, 450, 697, 128, 389]. **homolog** [2, 203]. **homologs** [479]. **homologues** [306]. **hormonal** [353, 797, 138, 425]. **Hormone** [506, 483, 134, 94, 286, 257, 24, 36, 194, 194]. **hormone-independent** [94]. **hormone-sensitive** [36]. **hormone2** [185]. **hormones** [644, 584, 257, 18, 434]. **Houttuyniae** [650]. **HPI** [8]. **HSF1** [149, 13]. **HSL** [202]. **HSP** [645]. **HSP70** [149, 184, 13]. **HSPs** [645]. **Huangyou** [295]. **Huangyou-1** [295]. **Hucho** [77]. **human** [323]. **humboldtianum** [191]. **humic** [341]. **Humoral** [57, 381, 369]. **humpback** [309, 146, 377]. **hunting** [294]. **Huso** [43]. **hybrid** [437, 158, 338, 484, 615, 705, 295, 624, 769, 429, 446, 297, 135]. **hybridization** [508]. **hydrogen** [386, 75]. **hydrolysate** [791, 722, 781]. **hydrophila** [121, 461, 468, 551, 568, 150, 109]. **hydroxy** [728]. **hydroxy-cinnamic** [728]. **hydroxyproline** [162]. **hyper** [132]. **hyper-** [132]. **hypermelanistic** [67]. **hypermelanosis** [215]. **hyperplasia** [776]. **hypo** [132]. **hypo-salinity** [132]. **hypochlorite** [238]. **Hypoosmotic** [316, 641]. **Hypophthalmichthys** [60]. **hypophthalmus** [333, 571, 366, 608]. **Hyposalinity** [704]. **hypothalamic** [310, 286, 8]. **hypothalamic-pituitary-gonad** [310]. **hypothalamo** [196]. **hypothalamo-pituitary-gonadal** [196]. **hypothalamus** [774, 88]. **Hypothermal** [265]. **Hypoxia** [186, 403, 318, 5, 786, 383, 33, 311, 598, 760, 330, 274, 710, 416, 153, 216, 209, 455, 746, 52, 579, 167, 514, 76, 295, 198, 320, 716, 359, 423, 45, 18, 630, 391, 384, 498, 714, 260, 520, 474]. **hypoxia-adaptive** [391]. **Hypoxia-induced** [403, 710, 630]. **Hypoxia-inducible** [5, 216]. **Hypoxia-mediated** [186]. **hypoxia-related** [520]. **hypoxia-tolerant** [359]. **hypoxic** [188, 144, 172, 5, 567].

Iberian [21, 677]. **ibuprofen** [510, 293]. **Ictalurus** [51, 698, 567]. **idella** [360, 34, 291, 104, 442, 155, 178, 388, 129, 307, 286, 469, 39, 683, 19, 127, 631, 259, 292, 458, 123]. **idellus** [206, 81, 553, 599, 80, 527, 556, 538, 776, 299, 255]. **Identification** [131, 134, 330, 189, 67, 127, 161, 457, 231, 319, 418, 713, 714, 149, 114, 398].

identified [726, 2, 203]. **identifying** [660]. **IFN** [771]. **IFN-** [771]. **IGF** [232, 163, 722, 192, 663]. **IGF-1** [722, 663]. **IGF-1/PI3K/AKT/mTOR** [722]. **igfbp** [703, 657]. **igfbp-3** [657]. **igfbp-5** [657]. **igfbp-5a** [703]. **igfbp-5a/b** [703]. **igfbp2** [114]. **iguape** [276]. **II** [566]. **IIB** [289]. **ilisha** [56]. **illucens** [217, 620]. **imaging** [241]. **imbalance** [699, 33, 459]. **imidacloprid** [797, 737]. **immersion** [488, 659]. **immune** [42, 105, 369, 200, 121, 38, 500, 256, 343, 756, 99, 783, 706, 589, 465, 333, 792, 235, 273, 771, 431, 97, 108, 307, 136, 607, 722, 75, 617, 635, 57, 730, 230, 482, 281, 145, 632, 15, 650, 505, 268, 460, 781, 646, 195, 568, 767, 498, 676, 776, 173, 446, 313, 293, 258, 736]. **immune-antioxidant** [792]. **immune-biochemical** [756]. **immune-related** [273]. **immune-relevant** [706]. **immunity** [381, 101, 770, 512, 471, 368, 552, 394, 717, 519, 106, 664, 223, 590, 157, 622, 77, 59, 421, 567, 645, 345, 733]. **immunofluorescent** [719]. **Immunohistochemical** [460, 494, 289]. **immunohistochemistry** [739]. **immunological** [793, 765, 166, 43, 169, 543]. **immunophysiology** [768]. **immunoprotective** [120]. **immunoreactive** [269]. **immunostimulation** [339]. **immunosuppression** [605, 354]. **IMO** [254]. **Impact** [160, 681, 476, 711, 722, 723, 192, 620]. **impacting** [477]. **Impacts** [770, 20, 632, 408, 575, 555, 613, 365]. **Impaired** [95]. **impairment** [142, 480, 697]. **impairments** [253]. **impairs** [159, 593]. **implants** [211]. **implications** [232, 32, 85, 557]. **importance** [271]. **improve** [181, 223, 379, 187, 585, 528]. **improved** [101, 70, 307, 217, 19, 559, 578, 614, 458]. **Improvement** [233, 106, 121]. **improves** [512, 321, 493, 785, 212, 599, 75, 662, 329, 169, 577, 618, 128, 30, 123, 78]. **improving** [567]. **in-pond** [281, 170, 313]. **inclusion** [493, 394, 708, 551, 643]. **incorporated** [727]. **incorporation** [101]. **increase** [364, 15, 586, 197]. **increased** [245]. **increases** [475, 444, 744, 302]. **Increasing** [700, 463, 480]. **independent** [94, 628]. **indexes** [468, 108]. **Indian** [267, 102, 141]. **indica** [647, 590]. **indicate** [642]. **indicators** [795, 232, 347]. **indices** [335, 145, 85, 462, 769, 59, 502]. **indigenous** [431]. **induce** [303, 353, 550]. **Induced** [783, 699, 788, 764, 428, 360, 3, 65, 206, 131, 403, 794, 797, 442, 178, 710, 204, 328, 430, 459, 573, 316, 605, 346, 76, 666, 190, 46, 91, 491, 355, 624, 127, 480, 630, 498, 776, 534, 697, 275, 120, 150]. **inducers** [645]. **induces** [529, 777, 507, 791, 95, 546, 516, 581, 30, 447, 778]. **inducible** [216, 5]. **inducing** [206, 257, 669]. **induction** [356, 715, 210, 328, 376]. **industrial** [21]. **industry** [562]. **infected** [468, 705, 234, 650, 543, 255]. **infection** [121, 322, 793, 461, 647, 605, 551, 150, 255]. **inflammation** [529, 699, 459, 129, 761, 734, 355, 776, 697]. **inflammatory** [788, 764, 308, 65, 321, 573, 316, 325, 20, 778]. **Influence** [42, 576, 695, 650, 774, 35, 232, 256, 278, 692, 245, 270, 707]. **influenced** [637, 522]. **Influences** [795, 51, 353, 497, 780]. **ingredients** [180]. **inheritance** [612]. **inhibiting** [778]. **Inhibition** [11, 788, 764, 428, 186, 752, 202, 573, 517]. **inhibitor** [769]. **Inhibitory** [506].

inhibits [9, 31]. **initial** [418]. **injection** [285, 254]. **innate** [369, 770, 589, 136, 519, 617, 90, 223, 781, 157, 173, 258, 736]. **innesi** [539]. **inoculated** [109]. **inorganic** [477]. **inositol** [65, 77]. **inositol-requiring** [65]. **insecticide** [797]. **insight** [594, 375, 540]. **Insights** [228, 773, 688, 755, 697, 626, 380]. **Insulin** [266, 566, 16, 657, 93, 87, 435, 708, 668, 286, 399, 577, 114, 389]. **Insulin-like** [266, 566, 16, 657, 87, 435, 668, 286, 399]. **intake** [593, 463, 292]. **intakes** [631]. **Integrated** [130, 424, 782]. **integrative** [772]. **integrity** [500, 316, 66]. **intensive** [495, 481]. **interaction** [236, 464]. **Interactions** [721, 601]. **Interactive** [580]. **interferes** [602]. **intermediary** [415, 623]. **intermediate** [572]. **intermittent** [188, 144, 746, 733]. **International** [675]. **interrenal** [8]. **intersex** [410]. **Interspecific** [601]. **intervention** [747]. **Intestinal** [436, 217, 529, 381, 321, 500, 732, 256, 188, 144, 104, 667, 394, 147, 553, 468, 704, 459, 431, 603, 661, 728, 747, 773, 316, 336, 84, 164, 519, 470, 656, 650, 620, 66, 355, 769, 767, 177, 618, 779, 137, 697, 11, 596, 521, 449]. **intestine** [477, 147, 53, 744, 45, 498, 559]. **intestines** [368]. **intracellular** [270]. **Intraperitoneal** [285]. **inventory** [397]. **investigate** [326]. **Investigation** [220, 752, 719, 460]. **involved** [272, 565, 232, 360, 65, 726, 388, 486, 660, 229, 662, 362]. **Involvement** [33, 62, 708, 306, 523, 255]. **involving** [149]. **iodocarb** [112]. **ion** [97]. **ionic** [402]. **ionocytes** [269]. **ionoregulation** [37]. **ions** [752]. **IRE1** [65]. **iron** [477]. **irradiation** [315]. **islet** [79]. **isoforms** [127, 508]. **isolated** [448, 787]. **Isolation** [471, 536, 247]. **isoleucine** [580, 135]. **isosmotic** [374]. **isotocin** [50]. **isotype** [642]. **iTRAQ** [261]. **ivermectin** [428]. **ivermectin-induced** [428].

jamun [234]. **Japanese** [82, 341, 215]. **japonica** [82, 2, 203]. **japonicus** [154]. **javanensis** [224]. **Jian** [222]. **Journal** [691, 775, 799]. **journey** [246]. **juiciness** [19]. **junctions** [697]. **juvenile** [739, 718, 445, 232, 449, 436, 69, 451, 629, 332, 111, 440, 204, 427, 426, 661, 125, 84, 6, 509, 167, 116, 351, 656, 73, 138, 162, 379, 407, 624, 187, 170, 631, 173, 68, 530, 154, 128, 621, 293, 596, 12, 670]. **juveniles** [795, 105, 47, 253, 648, 406, 761, 734, 623, 268].

K. [154]. **K/AKT/mTOR** [446]. **Kajika** [96]. **KC426951** [90]. **Keap** [788, 764]. **Keap1** [778]. **keeping** [615]. **ketoglutarate** [329]. **ketoglutaric** [619, 521]. **ketotestosterone** [399]. **key** [518, 139, 228, 391]. **kidney** [206, 180, 155, 81, 37, 466, 423, 377, 663, 255]. **KIF17** [382]. **killifish** [58]. **kinase** [272, 33, 212]. **kinds** [151]. **kinetic** [218]. **kinetics** [214]. **kingfish** [651, 713, 657]. **kiss** [191, 642, 370]. **Kiss/Kissr** [642]. **kiss1** [642]. **Kisspeptin** [554, 24]. **kisspeptin/gonadotropin** [24]. **kisspeptin/gonadotropin-releasing** [24]. **kisspeptin2** [185]. **kisspeptins** [23]. **Kissr** [642]. **klunzingeri** [91]. **knockout** [662]. **koi** [186, 650]. **Korean** [704]. **krill** [413]. **Kryptolebias** [483]. **KwaZulu** [242]. **KwaZulu-Natal**

[242].

l [788, 764, 788, 764, 742, 732, 329, 561, 748]. **l-carnitine** [788, 764, 329, 561]. **L.** [214, 175, 93, 408, 461, 648, 649, 87, 472, 629, 710, 148, 638, 112, 423, 201, 297]. **L6** [212]. **Labeo** [777, 471, 793, 737, 719, 233, 179, 22, 223, 551, 289, 192, 190, 643, 462, 622, 727, 630]. **labrax** [795, 783, 122, 711, 87, 472, 465, 761, 734, 547, 623, 53, 66, 774, 48]. **Lacepede** [224]. **Lack** [282]. **Lactobacillus** [105, 512, 90]. **lacustrine** [758]. **lacustris** [757, 494]. **lagowskii** [431, 384, 561, 260]. **laietanus** [21]. **Lake** [220]. **lalandi** [651, 713, 657]. **lambari** [276]. **Lampetra** [2, 203]. **lamprey** [641, 479, 2, 203, 626]. **lampreys** [672]. **lanceolata** [99]. **lanceolatus** [513, 158, 338, 429, 618]. **large** [665, 84, 20, 76, 536, 140, 382, 454, 501, 489, 502]. **large-bodied** [140]. **Largemouth** [396, 321, 603, 708, 747, 455, 721, 746, 745, 281, 577, 172, 170, 350, 627, 700, 697, 748, 578, 743, 313, 592, 596, 606, 12, 778]. **Larimichthys** [665, 84, 20, 76, 382, 454, 501, 297, 502]. **larvae** [353, 682, 363, 500, 212, 591, 495, 481, 163, 564, 724, 623, 533, 694, 515, 744, 4, 749, 79, 700, 454, 414, 48, 14]. **Larval** [539, 282, 766, 473, 712, 440, 511, 669, 643, 365]. **late** [556, 538]. **Lateolabrax** [188, 144, 69, 45, 154, 558, 433]. **Lates** [335, 133, 496, 73]. **latifrons** [718]. **latipes** [44, 74, 341]. **latitude** [646, 384, 260]. **latus** [316]. **laurel** [568]. **lauric** [767]. **Laurus** [568]. **law** [612]. **lead** [253]. **leads** [186, 439]. **leaf** [732, 793, 792, 234, 727, 676]. **leaves** [647]. **lecithin** [530]. **led** [742, 168]. **Leiocassis** [135]. **lemon** [38]. **length** [398]. **lenok** [449, 436, 449, 436]. **leo** [754]. **leopard** [754]. **leopardus** [600]. **Lepomis** [535]. **leptin** [284, 651, 27, 29]. **leptin-dependent** [284]. **leptorhynchus** [544]. **Let** [262]. **lethal** [547]. **leucine** [577, 580, 137]. **leuciscids** [677]. **leucophore** [662]. **leukocytes** [49]. **Level** [201, 360, 363, 291, 126, 415, 394, 62, 22, 566, 278, 643, 50, 302, 480, 12]. **levels** [373, 193, 322, 408, 332, 126, 147, 273, 430, 466, 730, 658, 525, 107, 656, 49, 143, 681, 700, 154, 296, 657]. **lewini** [242]. **lichen** [268]. **life** [473, 333, 550, 685, 198]. **life-cycle** [550]. **lifespan** [344, 413]. **Light** [204, 168, 46, 315, 48]. **Light-induced** [204]. **like** [266, 87, 435, 668, 286, 566, 399, 16, 657]. **limit** [374]. **limitations** [687]. **limited** [484, 37]. **line** [131, 735, 222, 309, 527, 102, 536, 366, 146, 377, 714, 443]. **linked** [417, 755, 492]. **Linn.** [731]. **Linnaeus** [199, 416, 160, 28]. **Linseed** [181]. **lipase** [70, 278, 556, 538, 36]. **lipases** [11]. **Lipid** [450, 407, 796, 360, 570, 264, 51, 180, 472, 202, 378, 178, 126, 560, 553, 148, 459, 390, 701, 108, 95, 31, 129, 307, 509, 278, 347, 525, 53, 643, 379, 4, 350, 561, 528, 124, 454, 446, 563, 748, 702, 578, 596, 628, 574, 12, 380]. **Lipid-related** [450]. **lipid-sourced** [202]. **lipidomics** [251, 563]. **lipids** [344, 701, 569, 324]. **lipoic** [126]. **lipolysis** [388, 127]. **lipolytica** [503]. **lipometabolism** [509].

lipometabolism-related [509]. **lipopolysaccharide** [65, 736]. **Lipoprotein** [467, 556, 538]. **Lippia** [340, 376]. **liver** [175, 477, 752, 576, 180, 719, 330, 235, 147, 553, 273, 548, 148, 661, 31, 325, 27, 190, 91, 774, 787, 143, 577, 172, 302, 412, 124, 748, 559, 275, 663, 458, 596, 7, 778]. **liver-related** [330]. **livers** [265, 368]. **Liza** [91]. **loach** [386, 209]. **load** [100]. **local** [293]. **localization** [435, 289, 508]. **locomotion** [294]. **locomotor** [774]. **Long** [710, 498, 618, 9, 94, 326, 677, 358, 486, 40, 397, 434]. **Long-** [618]. **long-chain** [486, 397]. **Long-term** [710, 498, 326, 677, 358, 40, 434]. **longa** [92]. **longfin** [724]. **longirostris** [135]. **longitudinal** [743]. **Lophiosilurus** [33, 6, 320]. **Low** [252, 463, 427, 426, 40, 730, 224, 19, 452, 736]. **low-fishmeal** [730, 217]. **low-salinity** [452]. **lpla** [556, 538]. **LPXRFa** [196]. **LR** [155]. **lucerna** [565]. **luciferase** [549]. **luciferin** [549]. **luciferin-luciferase** [549]. **lucioperca** [402, 228]. **lufenuron** [57]. **lupus** [763]. **lutea** [744]. **Lutjanus** [312]. **lysine** [415, 395, 137].

M [154]. **M.** [437]. **macdonaldi** [47]. **macrochirus** [535]. **macroelement** [66]. **macrolepis** [636, 688, 375, 655, 670]. **macrophages** [589]. **macropomum** [159, 648, 564, 167, 624, 438, 324, 659]. **maculatus** [188, 144, 69, 115, 45, 558, 433]. **Madagascar** [451]. **magnesium** [111]. **magnetite** [755]. **Magnolia** [433]. **magur** [328, 709, 542, 328, 709, 642, 267]. **mahseer** [8]. **mainly** [346]. **maintain** [100, 738]. **maintains** [732]. **major** [406, 187]. **Malaysian** [405, 387]. **male** [759, 158, 338, 242, 756, 241, 677, 1, 741, 96, 504, 482, 112, 85, 429, 537, 618, 297]. **males** [9, 731, 250, 586, 541, 425]. **malformation** [163]. **malformations** [653]. **malformed** [189]. **malpigmentation** [215]. **management** [439]. **mandarin** [528, 703]. **mangurus** [418]. **manipulation** [535]. **mannan** [429]. **mannan-oligosaccharide** [429]. **marble** [125]. **marcescens** [369]. **marginatus** [138]. **marigold** [793]. **marine** [633, 180, 378, 591, 753, 410, 124]. **marker** [566, 556, 538]. **markers** [540, 73, 460, 681]. **marmorata** [125]. **marmoratus** [483, 779]. **Mart** [324]. **masculinized** [441]. **masou** [658]. **Mastacembelus** [194]. **masu** [658]. **maternal** [282, 378]. **matrinxã** [78]. **maturation** [356, 715, 731, 257, 289, 301, 85, 115, 29, 583]. **maturation-inducing** [257]. **mature** [242]. **mauritiana** [121]. **maximum** [344, 548]. **maximus** [182, 118, 649, 415, 710, 40, 579, 707, 137, 574]. **may** [262, 217]. **MC** [155]. **MC-LR** [155]. **MC1R** [67]. **MC3R** [464]. **MC4R** [464]. **meagre** [83]. **meal** [445, 158, 321, 451, 661, 346, 107, 395, 217, 620, 66, 781, 727, 700, 619]. **meal/low** [217]. **meal/low-fishmeal** [217]. **measure** [513]. **measurements** [532]. **meat** [742]. **mechanically** [60]. **Mechanism** [746, 693, 429, 696, 443]. **Mechanisms** [64, 100, 118, 475, 555, 774, 412]. **medaka** [490, 633, 753, 280, 44, 341]. **mediated** [186, 461, 388, 130]. **mediating** [257, 574, 380]. **Mediterranean** [21]. **medium** [496]. **Megalobrama** [699, 65, 227, 411, 475, 560, 468, 660, 359, 421, 580, 714, 520, 474]. **melanin** [483]. **melanin-concentrating** [483]. **melanocortin** [67, 469, 357].

melanocortin-3 [469, 357]. **melanopsin** [204]. **melastigma** [753]. **Melatonin** [78, 175, 185, 358, 62, 58, 555]. **Melissa** [38]. **members** [626]. **Membrane** [344, 725, 640, 627, 729]. **Memory** [327]. **Mendelian** [612]. **menotropin** [303]. **Mentha** [794, 145]. **mercury** [239, 355]. **mercury-induced** [355]. **mesenchymal** [460]. **mesopotamicus** [252, 100, 611, 572, 49, 109, 258, 733, 736]. **Messenger** [658]. **meta** [569]. **meta-analysis** [569]. **Metabolic** [296, 100, 364, 791, 26, 22, 167, 456, 761, 734, 533, 503, 577, 407, 727, 18, 749, 776, 733]. **Metabolism** [567, 275, 796, 17, 285, 570, 264, 51, 104, 472, 227, 318, 276, 378, 126, 415, 553, 416, 58, 450, 701, 660, 307, 453, 84, 579, 509, 25, 44, 572, 295, 347, 525, 623, 656, 516, 79, 350, 561, 580, 557, 530, 124, 454, 446, 563, 748, 702, 578, 743, 655, 489, 12]. **metabolism-related** [124]. **metabolisms** [596]. **Metabolites** [475, 273, 466]. **metabolome** [705]. **Metabolomics** [674, 412, 449, 436, 502]. **metabotropic** [672]. **metal** [752]. **metallothionein** [81]. **metals** [377]. **Metformin** [699]. **methanesulfonate** [69, 174]. **Methemoglobin** [174]. **methionine** [223, 395, 558]. **method** [547, 585, 655]. **methods** [122]. **methylation** [687, 288, 453]. **methyltestosterone** [351]. **metrics** [462]. **mettl8** [74]. **Mickey** [115]. **microalgae** [744]. **microbes** [355]. **microbial** [188, 144, 431, 603, 217]. **microbiota** [529, 321, 475, 704, 459, 773, 470, 620, 177, 779, 697]. **Microcystis** [440]. **Microencapsulation** [512]. **microflora** [336]. **microglia** [754]. **microglia-related** [754]. **micromegethes** [397]. **micronucleus** [179]. **Microptenus** [184]. **Micropterus** [321, 396, 603, 708, 747, 455, 721, 746, 745, 281, 577, 172, 170, 350, 627, 700, 697, 748, 578, 743, 313, 592, 596, 606, 12]. **MicroRNA** [485, 172]. **microRNAs** [172]. **microstructure** [48]. **mid** [492]. **mid-early** [492]. **might** [453]. **migration** [220, 56]. **MIH** [257]. **mild** [198, 621]. **Mildronate** [350]. **milkfish** [265, 515]. **milt** [112]. **mimics** [56]. **mineral** [698]. **mini** [674]. **mini-review** [674]. **miniaturized** [397]. **Minimizing** [180]. **minnow** [131]. **minor** [240, 243]. **miR33** [307]. **miRNAs** [604, 330, 660, 375]. **Mirror** [521]. **Misgurnus** [386]. **mismatch** [492]. **mitigated** [797]. **mitigates** [487, 480, 697, 521]. **mitigating** [64]. **Mitigation** [569, 534, 791, 234]. **mitochondria** [760, 448]. **Mitochondrial** [400, 699, 641, 318, 517, 458]. **mitogenic** [456]. **mitophagy** [76]. **mixture** [737]. **mL** [240]. **model** [757, 72, 669, 609, 480, 749]. **moderate** [598]. **modes** [294, 779]. **modulate** [181, 646]. **modulated** [381, 603, 736]. **modulates** [100, 765, 61, 761, 734, 49, 302]. **modulating** [732, 660, 666, 18]. **Modulation** [76, 663, 258, 554, 688, 8]. **Modulations** [264]. **Modulatory** [343, 590]. **Molecular** [65, 206, 305, 328, 709, 654, 216, 290, 588, 469, 506, 531, 384, 372, 114, 184, 207, 36, 194, 467, 93, 442, 598, 122, 178, 754, 771, 708, 80, 40, 289, 540, 73, 653, 681, 382, 696, 657, 443, 670]. **molitrix** [60]. **molybdenum** [787]. **mono** [541]. **mono-sex** [541]. **monoamine** [332]. **monoamines** [8]. **monolaurate** [644]. **Monopterus** [117, 89, 305, 325, 224, 523]. **morhua** [214, 326]. **Moringa** [442, 75, 768]. **Morone** [437]. **Morpho** [758]. **Morpho-physiological** [758].

morphogenetic [28]. **morphological** [650, 520]. **morphology** [214, 326, 636, 188, 144, 473, 587, 179, 468, 431, 519, 536, 516, 767, 433]. **morphometry** [105, 695]. **mosquitofish** [261, 157]. **mossambicus** [337, 765, 310, 371, 602, 510, 35]. **mosshead** [514]. **mother** [254]. **motility** [214, 139, 402, 679, 686]. **motoro** [152]. **Mouse** [115]. **mouth** [271]. **mouth-opening** [271]. **movement** [476]. **Mozambique** [337, 371, 602, 35]. **mozuku** [187]. **mPR** [640]. **MRAP2a** [464]. **mrigala** [543, 18]. **mRNA** [193, 185, 554, 178, 23, 644, 114, 88, 151]. **MS** [69]. **MS-222** [69]. **MSH** [310]. **MT** [351]. **mTOR** [599, 31, 722, 446]. **mucosal** [200, 706, 235, 75, 90, 230, 664, 145]. **mucus** [181, 220, 471, 466, 543, 77, 135]. **mullet** [625, 91]. **Multi** [504, 743, 482]. **Multi-** [504]. **Multi-omics** [743]. **multi-strain** [482]. **Multifaceted** [772]. **multiple** [26, 571, 789, 546, 425]. **murrel** [506, 270, 141]. **Muscle** [759, 183, 131, 542, 473, 408, 461, 587, 649, 86, 273, 599, 728, 281, 547, 439, 140, 652, 146, 259, 313]. **muscles** [68]. **Muscular** [563]. **mushroom** [706]. **mutation** [391]. **mutations** [3, 474]. **mykiss** [119, 796, 742, 232, 38, 343, 473, 99, 532, 637, 168, 298, 785, 693, 273, 210, 287, 470, 354, 723, 61, 230, 482, 27, 536, 217, 268, 404, 487, 197, 357, 464, 663]. **Mylopharyngodon** [509, 173]. **myo** [77]. **myo-inositol** [77]. **myoblast** [527]. **myogenic** [564]. **myoglobin** [298]. **myoglobins** [226]. **Myostatin** [461]. **Myostatin-mediated** [461]. **myotubes** [212]. **Mystus** [768]. **Myxocyprinus** [24, 207].

N [156, 658]. **N-ethylmaleimide-sensitive** [658]. **naked** [153]. **Nano** [166, 493, 499]. **nano-phosphorus** [493]. **nano-silica** [499]. **nano-zeolite** [499]. **nanoemulsion** [441]. **Nanog** [362]. **nanogel** [755]. **nanoparticle** [235, 328]. **nanoparticle-induced** [328]. **nanoparticles** [381, 343, 756, 709, 571, 605, 208, 679, 698, 225]. **nanoselenium** [390]. **Natal** [242]. **native** [276, 224]. **Natural** [417, 723, 685]. **nauplii** [564]. **NAV3** [352]. **navigation** [691, 775, 799]. **navigator** [352]. **necessary** [729, 725]. **negative** [282]. **negatively** [596]. **Neglected** [616]. **neon** [539]. **neonicotinoids** [737]. **Neotropical** [757, 586, 301, 245, 684]. **Nepeta** [659]. **nerve** [658]. **nervous** [762]. **nettle** [349]. **network** [284, 33, 569, 696]. **Neu3a** [44]. **neural** [171, 546]. **neurobehavioural** [491]. **neurodegeneration** [491]. **neuroectodermal** [460]. **Neuron** [352]. **Neuronal** [483, 790, 658]. **Neuropeptide** [523, 17]. **neurotoxicity** [510, 447]. **neurotranscriptomic** [754]. **neurotransmission** [316]. **Neurotransmitter** [600]. **Neurotrophins** [762]. **neutral** [723]. **NF** [413]. **NF-** [413]. **Nibea** [629, 773, 162, 541]. **nigrofasciata** [349]. **Nile** [381, 770, 121, 788, 764, 512, 485, 437, 256, 552, 576, 797, 166, 493, 408, 461, 451, 695, 1, 741, 792, 791, 394, 147, 10, 647, 717, 771, 95, 569, 441, 164, 755, 617, 671, 772, 90, 730, 346, 632, 656, 329, 503, 590, 568, 476, 68, 275, 120, 11]. **niloticus** [759, 42, 770, 121, 788, 764, 512, 485, 437, 732, 256, 552, 576, 765, 166, 493,

408, 461, 199, 419, 451, 695, 1, 741, 394, 147, 10, 647, 717, 771, 661, 728, 70, 569, 441, 164, 617, 772, 90, 730, 346, 107, 329, 169, 505, 590, 568, 476, 275]. **Nissle** [664]. **nitrate** [694]. **Nitric** [143, 5]. **nitrite** [694]. **nitrogen** [451]. **no** [623, 272]. **nobilis** [216, 568]. **nocturnal** [186]. **Non** [547, 224, 762, 673, 496, 106, 231, 60, 769, 537, 557]. **non-activating** [496]. **Non-lethal** [547]. **non-mechanically** [60]. **Non-native** [224]. **non-nervous** [762]. **non-Saccharomyces** [673]. **non-specific** [106]. **non-starch** [557]. **non-steroidal** [769]. **non-transgenic** [537]. **non-treated** [231]. **nonapeptide** [554]. **nonnative** [601]. **nonspecific** [77, 345]. **nonylphenol** [1, 741, 91]. **nor** [711]. **norepinephrine** [600]. **normal** [261, 189]. **normalization** [485]. **normalized** [459]. **Northwest** [54]. **notable** [33]. **notably** [780]. **Notch** [490]. **Nothobranchius** [413]. **Notothenia** [364]. **Notothenioid** [646, 363]. **Novel** [380, 222, 747, 2, 203]. **NPB** [523, 523]. **NPBWR2b** [523]. **NPs** [43]. **Nr1d1** [68]. **NRF2** [34, 788, 764, 131, 778]. **Nrf2-Keap1** [778]. **Nrf2/Keap** [788, 764]. **NTCP** [626]. **nucb1** [88]. **nucb2A** [88]. **nuclear** [735]. **nucleotide** [492, 215]. **number** [536, 780]. **nutrient** [282, 732, 451, 411, 717, 579, 707, 727]. **nutrients** [202]. **nutrition** [70, 271]. **Nutritional** [378, 499, 126, 317, 72, 531, 156, 657]. **nutritive** [599].

O [131, 386, 424]. **O.** [765]. **Oatp2b1** [323]. **observation** [242]. **occupational** [585]. **ocellaris** [566]. **ocellate** [152]. **ocellatus** [437, 604, 374, 621]. **ochratoxin** [159, 148]. **Ocimum** [199, 648]. **oconnori** [583]. **ocular** [62]. **Odontesthes** [716]. **oestrogenic** [250]. **oestrone** [250]. **officinale** [339, 611]. **officinalis** [38, 268]. **offspring** [378, 644, 110]. **oil** [742, 256, 199, 419, 648, 753, 10, 617, 611, 20, 692, 169, 413, 487, 438, 655, 433, 659]. **oil-supplemented** [10]. **oiled** [753, 22]. **oiled-gravel-column** [753]. **oils** [638, 20, 169, 655, 340, 376]. **Oleic** [705, 360]. **oleifera** [442, 75, 768]. **oleracea** [732, 324]. **olfactory** [373, 658]. **oligosaccharide** [429]. **olivaceus** [445, 427, 426, 288, 519, 215]. **olive** [445, 427, 426, 288, 519]. **omega** [524]. **omega-3** [524]. **omics** [743]. **Ompok** [545]. **on-growing** [19]. **Onchorhynchus** [785, 268]. **Oncorhynchus** [796, 742, 232, 38, 119, 343, 473, 99, 532, 637, 168, 298, 693, 273, 210, 287, 470, 354, 723, 61, 230, 482, 658, 27, 536, 217, 404, 487, 197, 357, 464, 663]. **onset** [9, 24]. **ontogenesis** [228]. **Ontogeny** [757, 267, 766, 495, 481, 539, 515, 279]. **Onychostoma** [636, 688, 375, 655, 670]. **oocyte** [356, 683, 583]. **oocytes** [86, 399, 583]. **oogenesis** [225]. **opening** [271]. **opioid** [602]. **opn4xa** [204]. **opn4xb** [204]. **Opsanus** [171]. **Opsariichthys** [584]. **opsin** [94]. **optimal** [591]. **Optimization** [496, 533, 643, 401]. **optimized** [394]. **optimizing** [530]. **Optimum** [170, 566]. **optochemical** [740]. **Opuntia** [590]. **oral** [225, 406, 478]. **orally** [664]. **orange** [253, 695, 108, 306, 219]. **orange-spotted** [108, 306, 219]. **orbignyanus** [690, 247]. **Oreochromis** [759, 42, 770, 337, 121, 788, 764, 512, 485, 437, 732, 256, 552, 576, 765, 166, 493, 408, 461, 199, 419, 451, 695, 1, 741, 394, 147, 10, 647, 717, 310, 771, 661, 728, 70, 569, 441, 164, 617, 772, 90, 730, 346, 107, 329, 169, 505, 590, 781, 371,

602, 510, 568, 769, 35, 476, 275]. **organ** [373, 777, 544]. **organic** [477, 765, 723]. **organism** [363]. **organizational** [390]. **ornamental** [376]. **ortholog** [323]. **Oryzias** [753, 44, 74, 341]. **oscar** [621]. **Osmo** [514]. **Osmo-respiratory** [514]. **osmolality** [312]. **Osmoregulation** [249, 739, 526, 374, 452]. **osmorespiration** [125]. **osmotic** [272, 232, 641, 118, 402, 13, 6]. **Osphronemus** [444]. **Ostariophysi** [269]. **otakii** [786]. **other** [202]. **otolith** [326]. **Ovaprim** [303]. **ovarian** [82, 236, 301, 29]. **ovaries** [189, 304]. **ovary** [467, 554, 254, 306, 35]. **ovatus** [701, 668, 379, 28]. **overdoses** [759]. **overlapping** [651]. **overwintering** [636, 405, 387, 375]. **oviparous** [271]. **ovoviviparity** [251]. **ovulation** [257]. **ovulation-mediating** [257]. **ovulatory** [683]. **oxidant** [142]. **oxidant/antioxidant** [142]. **oxidase** [127]. **oxidation** [95]. **Oxidative** [648, 346, 91, 795, 42, 777, 790, 183, 253, 34, 131, 403, 732, 343, 794, 442, 587, 122, 420, 364, 753, 273, 328, 430, 459, 427, 426, 573, 95, 325, 605, 354, 20, 601, 295, 692, 666, 234, 190, 46, 359, 624, 568, 177, 498, 581, 779, 776, 414, 697, 150, 12, 778, 595, 78, 258]. **oxide** [328, 709, 143, 5]. **oxidized** [487]. **oxidoreductase** [416]. **Oxyeleotris** [125]. **oxygen** [532, 179, 751, 283, 740, 116, 514, 295, 634]. **oxygenase** [150]. **Oxygenation** [472, 514]. **oxyrinchus** [128]. **oxytetracycline** [759, 354]. **oyster** [171].

P [189, 210, 428, 270, 193, 326]. **p-Coumaric** [193]. **P-glycoprotein** [210, 428]. **P450** [554]. **P53** [384]. **pacamã** [33]. **Pacific** [71, 658, 385]. **pacu** [100, 611, 572, 49, 109, 258, 733, 736]. **Paedocypris** [397]. **Pagrus** [406, 187]. **palmitic** [206, 372]. **Pampus** [97, 435]. **pancreas** [385]. **pancreatic** [79]. **Pangasianodon** [333, 571, 366, 608]. **Pangasius** [165]. **papaya** [622]. **papulosum** [735]. **paqr9** [729, 725]. **Paracheirodon** [539]. **Paracoccus** [632]. **Paralichthys** [445, 427, 426, 288, 519, 215]. **parameter** [594]. **parameters** [42, 369, 181, 343, 765, 99, 706, 420, 695, 235, 147, 10, 130, 390, 728, 90, 61, 230, 482, 145, 692, 320, 510, 543, 218, 315, 767, 293]. **Paramisgurnus** [209]. **parasitica** [793]. **parr** [112]. **partial** [445]. **participates** [162]. **participation** [33]. **particle** [536]. **passive** [782]. **Patagonotothen** [363]. **pathogens** [64]. **pathology** [164, 663]. **pathway** [490, 788, 764, 649, 388, 58, 599, 722, 509, 517, 666, 162, 397, 413, 446, 634, 778]. **pathways** [94, 189, 646, 577, 581, 580]. **Pattern** [612, 65, 416, 683, 382]. **patterns** [23, 62, 28, 398, 36, 670]. **Pax7** [662]. **pck1** [453]. **pear** [590]. **pearl** [587, 615, 618]. **Pearlscale** [304, 422, 362]. **pearlspot** [782]. **pectin** [334, 559]. **Pediococcus** [200]. **peel** [695, 10, 590, 622]. **pejerrey** [716]. **pelleted** [411]. **Pelteobagrus** [334, 16, 498, 559, 135, 380]. **Peninsula** [677, 21]. **pentoxide** [424]. **peppermint** [145]. **peptide** [212, 602, 137]. **Perca** [257, 351]. **perch** [570, 257, 351, 347, 525, 533, 327, 156, 530, 634, 296, 619]. **percula** [253]. **perfluoroalkyl** [404]. **performance** [381, 42, 181, 175, 200, 159, 471, 38, 682, 477, 17, 343, 576, 493, 99, 408, 420, 629, 465, 333, 349, 235, 147, 468, 720, 10, 548, 26, 432, 661, 721, 84, 286, 722,

164, 519, 635, 509, 90, 55, 730, 25, 61, 20, 278, 281, 664, 205, 572, 145, 632, 656, 329, 379, 577, 187, 140, 769, 767, 631, 700, 779, 776, 173, 530, 528, 154, 454, 748, 559, 197, 798, 313, 434, 596, 123, 521]. **performances** [765, 223]. **Perilipin** [178]. **period** [282, 636]. **peripheral** [383, 762]. **periprandial** [161]. **perirenal** [501]. **PERK** [517]. **permanganate** [164]. **peroxidation** [148]. **peroxide** [386, 75]. **peroxiredoxin** [588]. **peroxisomal** [95]. **peroxisome** [457]. **personally** [246]. **perspective** [687, 625]. **PFASs** [404]. **PGE2** [257]. **pH** [291, 427, 426, 723, 686]. **Pharmacokinetics** [478]. **pharmacology** [696]. **phase** [545, 572, 404]. **phenolics** [794]. **phenotypic** [541]. **phenotyping** [237]. **phenylalanine** [578]. **phosphate** [550, 111]. **phosphorus** [493]. **phosphoryl** [33]. **photo** [185]. **photo-thermal** [185]. **photoperiod** [9, 545, 621]. **Photoperiodic** [115]. **Phoxinus** [384, 260]. **phthalate** [516, 491]. **phthalate-induced** [491]. **Phylogeny** [348, 479, 28]. **physical** [166, 135]. **physicochemical** [723]. **Physio** [22]. **Physio-metabolic** [22]. **Physiological** [737, 755, 167, 46, 109, 733, 770, 513, 158, 793, 442, 419, 763, 274, 710, 582, 704, 432, 133, 579, 615, 320, 503, 407, 758, 476, 421, 488, 786, 502, 595]. **physiology** [777, 637, 784, 333, 209, 54, 772, 406, 157, 609, 160, 608, 433]. **phytase** [192]. **phytoestrogens** [796]. **Pi** [291, 446]. **PI3K** [722]. **PI3KC3** [380]. **PI3KR1** [708]. **Piaractus** [252, 100, 611, 572, 49, 624, 109, 258, 733, 736]. **piceus** [509, 173]. **picolinate** [233]. **Pigmentation** [98]. **pike** [712]. **Pikeperch** [402, 652, 228]. **Pilot** [326]. **Pimpinella** [638]. **pinnata** [394]. **Piper** [438]. **piperine** [519]. **piperita** [794, 145]. **piracanjuba** [690]. **pituitary** [757, 23, 310, 286, 371, 602, 8, 35, 196, 7]. **pituitary-ovary** [35]. **pituitary-testis** [371, 602]. **pivotal** [261]. **PKA** [388]. **PKA/ATGL** [388]. **plant** [101, 477, 169]. **plant-based** [477]. **Plantago** [99]. **plantain** [99]. **plantarum** [512, 90]. **Plasma** [604, 181, 364, 111, 108, 466, 444, 113]. **Plasmid** [86]. **plasticity** [513]. **platensis** [656]. **platy** [115]. **plays** [150]. **Plectropomus** [600]. **PML** [735]. **point** [374, 675]. **poisoned** [81]. **Polar** [646]. **polarography** [740]. **pollution** [21]. **pollux** [96]. **polyactis** [297]. **polymorphism** [182]. **polymorphisms** [215]. **polysaccharide** [459]. **polysaccharides** [557]. **polyunsaturated** [486, 397]. **pomfret** [97, 435]. **Pompano** [7, 701, 668, 278, 234, 395, 379, 478, 28]. **pond** [682, 281, 170, 313]. **pond-reared** [682]. **populations** [182, 15]. **populi** [345]. **Populus** [792]. **porcus** [416, 423]. **portentosa** [451]. **Portulaca** [732]. **Positional** [782]. **positive** [610]. **positively** [603, 608]. **possible** [243, 62, 257, 306]. **Post** [680, 301, 461, 564, 683, 385]. **post-acute** [461]. **post-feeding** [385]. **post-larvae** [564]. **post-ovulatory** [683]. **Post-spawning** [301]. **Post-thaw** [680]. **postprandial** [156]. **Potamotrygon** [152, 340]. **Potamotrygonidae** [340]. **potassium** [164, 462]. **Potency** [693]. **Potential** [573, 284, 689, 485, 641, 673, 562, 763, 792, 349, 661, 723, 250, 503, 429, 382, 412, 523, 120]. **Potentials** [551]. **powder** [732, 695, 792, 92, 145]. **powdered** [720]. **Ppar** [628, 574]. **practical** [562]. **Prdm1a** [280]. **Prdm1b** [280]. **pre** [369, 715].

pre-treatment [369]. **pre-treatments** [715]. **precocious** [112]. **predators** [294]. **predict** [723]. **predominantly** [124]. **prefer** [37]. **preferences** [318, 448]. **preferential** [606]. **Preliminary** [247, 569]. **premature** [735, 507]. **prenanti** [372]. **pretilachlor** [160]. **pretreatment** [785]. **prevent** [477]. **preventing** [96]. **previtellogenic** [399]. **prey** [327]. **prickly** [590]. **primary** [796, 649, 702]. **Primordial** [418, 684, 537]. **PRL** [40]. **PRLR** [40]. **pro** [788, 764]. **pro-inflammatory** [788, 764]. **proanthocyanidin** [129]. **probiotic** [339, 471, 64, 482, 639]. **probiotics** [471]. **procedure** [780]. **process** [104]. **produced** [441, 319]. **product** [445]. **Production** [110, 537, 541, 181, 518, 524, 680, 715, 417, 202, 604, 720, 283, 678, 439, 5, 149, 634]. **profile** [183, 3, 185, 261, 251, 466, 499, 74, 580, 137]. **profiles** [142, 334, 756, 226, 475, 288, 205, 547, 66, 707, 713, 29]. **Profiling** [591, 642, 13]. **progestagens** [257]. **progesterone** [640, 729, 725]. **programming** [378, 453]. **progress** [562]. **progressive** [274]. **proliferation** [649]. **proliferator** [457]. **proliferator-activated** [457]. **prolonged** [273]. **promote** [649, 603, 631]. **promoted** [381, 553, 530]. **promoter** [219]. **promotes** [52, 286]. **Promoting** [776, 583]. **promotion** [339]. **propagated** [682]. **propagation** [85]. **properties** [629, 723, 787, 277]. **propiconazole** [276]. **protect** [113]. **Protection** [45, 490, 100, 166, 756, 429]. **Protective** [81, 468, 571, 58, 130, 573]. **Protein** [272, 701, 4, 101, 248, 265, 158, 338, 213, 261, 103, 791, 212, 86, 709, 32, 390, 721, 566, 406, 278, 658, 572, 656, 73, 781, 195, 19, 187, 372, 528, 578, 657, 521]. **protein-3** [657]. **protein-based** [101, 187]. **Protein-sparing** [701]. **Proteins** [645, 254, 747, 610, 652, 28]. **proteolysis** [393]. **Proteomic** [255, 261]. **Protium** [692]. **protogynous** [89, 305, 138]. **provide** [375]. **providing** [540]. **provisioned** [564]. **Prx1** [588]. **przewalskii** [403, 153, 457]. **pseudo** [215]. **pseudo-albinism** [215]. **Pseudobagrus** [231]. **Pseudobranch** [56]. **Pseudopimelodus** [418]. **Pseudotropheus** [92]. **Pterophyllum** [376]. **pterotum** [549]. **puberty** [24]. **PUFA** [463]. **puffer** [62, 204, 317, 443]. **pufferfish** [332]. **punctata** [195]. **punctatus** [51, 794, 430, 506, 750, 698, 141, 567]. **Purification** [752, 540]. **purinergic** [159]. **purslane** [732]. **putative** [467, 475]. **putitora** [593, 8, 30, 401]. **pyrene** [91, 404]. **pyridoxine** [528]. **pyrimidine** [790]. **Pyropia** [252]. **pyroptotic** [750]. **pyruvate** [379].

Qingbo [294]. **qPCR** [485]. **Quality** [678, 742, 680, 766, 493, 211, 587, 785, 644, 482, 281, 700, 165, 634, 313, 614, 458]. **quantity** [332]. **quantum** [640]. **quelen** [181, 766, 692, 143, 586]. **quercetin** [630, 59, 534].

rabbitfish [85]. **raceway** [281, 170, 313]. **Rachycentron** [132, 330]. **rainbow** [739, 796, 742, 38, 237, 343, 473, 99, 637, 168, 298, 785, 693, 687, 273, 210, 287, 390, 470, 354, 723, 61, 230, 482, 27, 536, 217, 268, 404, 487, 585, 197, 357, 464].

raised [558]. **rapeseed** [661]. **rapid** [238]. **rate** [116, 590]. **rates** [665, 451, 37, 514]. **rather** [346, 556, 538]. **ratio** [329]. **ratios** [108, 347]. **ray** [269]. **ray-finned** [269]. **RBP4** [372]. **re** [651, 514]. **re-feeding** [651]. **re-oxygenation** [514]. **reaction** [508]. **reactions** [166, 316]. **reactive** [283]. **reared** [682, 319, 761, 734, 707, 170]. **rearing** [175, 264, 8]. **rec8** [219]. **receptor** [651, 640, 67, 191, 469, 658, 289, 367, 694, 729, 725, 29, 627, 446, 357, 523, 196, 616, 457]. **receptors** [467, 762, 1, 741, 191, 506, 713, 672]. **recirculating** [170]. **recognition** [492]. **recombinant** [518, 94, 298, 86, 262]. **recovers** [788, 764]. **recovery** [488]. **recycling** [439]. **red** [252, 272, 437, 641, 338, 765, 312, 604, 405, 387, 406, 781, 315, 187, 140, 769]. **red-spotted** [338]. **redox** [369, 699, 148]. **reduce** [379, 616]. **reduced** [687, 459, 700]. **reduces** [159, 440, 355, 619, 78]. **reducing** [748]. **reduction** [202, 365]. **refeeding** [408, 637, 470, 16]. **reference** [485, 317]. **refrigeration** [243]. **regain** [47]. **regimes** [473, 408]. **regius** [83]. **regucalcin** [265]. **regulate** [259]. **regulated** [596]. **regulates** [283, 635, 446, 600, 574]. **regulating** [422, 68, 271, 583]. **Regulation** [518, 524, 44, 41, 702, 272, 651, 131, 134, 118, 461, 89, 305, 402, 773, 375, 39, 63, 138, 162, 531, 327, 172, 219, 370, 501, 703, 275, 523, 292, 196, 443, 626]. **regulator** [373]. **regulators** [257]. **regulatory** [284, 103, 148]. **reidi** [744]. **rejection** [782]. **related** [193, 463, 117, 493, 408, 420, 330, 235, 189, 273, 717, 754, 430, 97, 390, 450, 644, 617, 509, 57, 145, 231, 444, 531, 758, 68, 124, 520, 489, 215]. **Relation** [263]. **relationships** [526]. **relative** [663]. **release** [211]. **releasing** [483, 185, 134, 94, 24, 194]. **relevant** [706, 550, 61]. **relieving** [732]. **remodeling** [138, 359, 382, 714]. **remodelling** [598]. **renal** [791, 505]. **renewal** [90]. **reovirus** [255]. **reoxygenation** [274, 295, 359, 45]. **repair** [492]. **Replacement** [169, 445, 158, 20, 395, 439, 66, 700, 655]. **Replacing** [661]. **repolarization** [287]. **representation** [687]. **repression** [280]. **Reproduction** [773, 94, 593, 189, 96, 632, 250, 375]. **reproduction-related** [189]. **Reproductive** [54, 220, 263, 9, 200, 765, 756, 211, 241, 677, 23, 358, 349, 62, 644, 773, 504, 688, 342, 112, 716, 21, 315, 160, 769, 713, 196]. **reproductive-related** [644]. **reprogramming** [743]. **required** [490, 352]. **requirements** [513, 103, 4, 558]. **requiring** [65]. **rerio** [200, 428, 323, 176, 706, 103, 550, 126, 459, 644, 597, 453, 208, 102, 239, 492, 536, 302, 59, 412]. **research** [565, 266, 674, 609]. **reserves** [572]. **residue** [759]. **residues** [493]. **resilience** [551]. **Resistance** [735, 512, 793, 343, 465, 333, 394, 717, 664, 505, 187, 568, 59, 631, 676, 618, 414, 345]. **resolved** [508]. **resource** [439]. **respectively** [477]. **respiration** [318, 740, 666]. **Respiratory** [448, 751, 209, 514, 295, 49]. **responds** [294]. **Response** [633, 6, 510, 42, 105, 770, 121, 651, 308, 65, 132, 131, 321, 449, 436, 338, 264, 291, 545, 99, 783, 211, 400, 589, 760, 1, 526, 741, 212, 274, 710, 348, 717, 62, 771, 130, 386, 573, 80, 654, 40, 325, 597, 133, 136, 607, 466, 722, 75, 617, 635, 229, 772, 615, 20, 482, 281, 761, 734, 16, 46, 505, 781, 531, 568, 586, 639, 438, 41, 384, 372, 498, 627, 676, 446, 30, 313, 150, 184, 345, 592, 778, 258, 497].

Responses
[341, 483, 83, 200, 424, 38, 363, 437, 158, 256, 368, 793, 419, 648, 737, 364, 465, 763, 333, 791, 548, 704, 754, 751, 432, 668, 57, 90, 730, 167, 632, 395, 533, 169, 503, 268, 750, 224, 577, 624, 18, 421, 173, 221, 645, 296, 255, 595, 733, 736, 780]. **responsible** [215]. **responsiveness** [93]. **restoring** [480]. **restricted** [209]. **restriction** [470]. **result** [318, 106]. **Resveratrol** [575]. **retardation** [797]. **reticulum** [529, 360, 331, 666, 531]. **retinal** [163, 48]. **retinol** [372]. **retinol-binding** [372]. **Retrospect** [745]. **reveal** [94, 97, 563, 221, 215]. **revealed** [659]. **revealing** [158]. **reveals** [284, 132, 118, 504, 133, 688, 271, 414, 255]. **reversed** [541]. **Reversible** [92]. **review** [248, 524, 213, 562, 575, 582, 336, 674, 745, 63, 639]. **Rhamdia** [181, 766, 692, 143, 586, 595]. **rhamnoides** [742]. **Rhynchocypris** [431, 561]. **rhythmic** [68]. **rhythms** [125, 774]. **ribwort** [99]. **rice** [22]. **ricefield** [117, 89, 305, 523]. **Richardson** [718]. **ringens** [419]. **risk** [32]. **Risso** [456]. **river** [152, 56]. **rivers** [293]. **rivoliana** [724]. **RM12** [270]. **RNA** [132, 658, 304]. **RNA-Seq** [304, 132]. **roach** [9, 145]. **robust** [237]. **rockfish** [274, 704, 251, 779]. **rohita** [777, 793, 737, 719, 233, 179, 22, 223, 551, 289, 192, 190, 643, 462, 622, 727, 630]. **rohu** [179, 223, 289, 192, 462, 727, 630]. **Role** [339, 511, 393, 769, 65, 131, 349, 647, 236, 64, 571, 130, 331, 354, 462, 150, 583]. **roles** [2, 203]. **ROS** [641, 270]. **rossii** [364]. **rosy** [110]. **rotifer** [724]. **rotundiformis** [724]. **roughskin** [290, 588, 13]. **round** [50]. **route** [628]. **RRBS** [687]. **RU486** [535]. **rubripes** [311, 726, 420, 332, 317, 124]. **ruckeri** [343]. **ruthenus** [241, 460, 738]. **Rutilus** [145].

S [777, 752]. **S-transferase** [752]. **S20E(R)** [171]. **S6K** [649]. **sac** [353, 363, 440, 367]. **Saccharomyces** [42, 673]. **salar** [139, 264, 180]. **saline** [488]. **Salinity** [333, 594, 770, 337, 335, 363, 132, 368, 552, 312, 526, 97, 772, 730, 590, 374, 365, 41, 452]. **Salmo** [139, 264, 180, 112]. **salmoides** [321, 396, 603, 708, 747, 455, 721, 746, 745, 281, 577, 172, 170, 350, 700, 697, 748, 578, 743, 313, 184, 592, 596, 606, 12]. **salmon** [373, 139, 463, 264, 180, 466, 658, 72, 508]. **salmonid** [601, 174]. **saloumoides** [627]. **Salt** [798, 40, 707]. **salts** [667]. **sampling** [547]. **Sander** [402, 228]. **Santalum** [617]. **sapidissima** [322, 654]. **saponins** [676]. **Saprolegnia** [793]. **Saraca** [727]. **sarcoplasmic** [331]. **sarmentosum** [275]. **sativum** [505, 277]. **Sauvage** [366]. **saxatilis** [437]. **scalare** [376]. **scaleless** [403]. **scalloped** [242]. **scat** [134, 409, 410, 196]. **Scatophagus** [134, 409, 410, 196]. **Schizothorax** [372, 88, 221, 583]. **schlegelii** [274, 704, 432, 407, 531, 452]. **Sciaenops** [437, 604]. **Scophthalmus** [182, 118, 649, 415, 710, 40, 579, 707, 137, 574]. **scopolamine** [480]. **scopolamine-induced** [480]. **Scorpaena** [416, 423]. **scorpionfish** [416, 423]. **Screening** [796, 317]. **sculpin** [290, 588, 13, 514]. **SE** [96]. **sea** [175, 796, 742, 188, 144, 69, 122, 417, 87, 486, 459, 319, 198, 547, 53, 66, 774, 187, 767, 452]. **seabass** [795, 335, 783, 711, 472, 465, 761, 734, 623, 558, 433]. **seabream**

[263, 308, 282, 667, 316, 75, 671, 406, 679, 620, 407, 531]. **seahorse** [744]. **Season** [607, 211, 773, 632]. **Seasonal** [688, 85, 218, 263, 62, 435]. **seawater** [265, 633, 715, 686, 508]. **seawater-** [265]. **seaweed** [252]. **seaweed-supplemented** [252]. **Sebastes** [274, 704, 432]. **Sebastiscus** [779]. **secondary** [244]. **secreted** [255]. **secretion** [86]. **sedated** [648]. **sedation** [611]. **sedative** [419, 692]. **sedentary** [320]. **Sedum** [275]. **seed** [797, 129, 61, 230, 768, 487]. **segments** [104]. **seizures** [324]. **select** [591]. **selection** [671, 610]. **Selenium** [235, 355, 458, 369, 571, 286]. **Selenium-enriched** [355]. **selenium-nanoparticles** [571]. **Selenized** [673]. **selenomethionine** [235]. **selenoprotein** [390]. **selenoprotein-related** [390]. **self** [483, 100, 671]. **self-fertilizing** [483]. **self-protection** [100]. **self-selection** [671]. **semen** [482]. **semilaevis** [67, 29, 434]. **Seminal** [113, 152]. **senegalensis** [680, 681]. **senescence** [735]. **sensibility** [82]. **sensitive** [383, 511, 658, 36]. **sensitivity** [239]. **sensor** [740]. **sensors** [295]. **Seq** [304, 132]. **Sequence** [176, 300]. **sequences** [306]. **sequencing** [687, 231]. **serine** [212]. **Seriola** [651, 211, 724, 456, 319, 713, 657]. **serotonin** [383, 613, 302]. **Serranidae** [138]. **Serratia** [369]. **serum** [263, 545, 552, 400, 587, 312, 475, 10, 90, 281, 395, 568, 769, 767, 313]. **sesame** [66]. **severe** [613]. **sex** [186, 117, 396, 751, 351, 231, 319, 138, 244, 297, 541, 434]. **sex-related** [117, 231]. **sex-reversed** [541]. **Sexual** [288, 715, 417, 703]. **shabout** [752]. **shad** [322, 654]. **shape** [522]. **sharptooth** [331]. **shellfish** [266]. **Shen** [154]. **shi** [495, 481]. **shifting** [625]. **Shock** [645, 338, 709, 390, 6, 624, 195, 610, 128]. **Short** [148, 181, 637, 677, 358, 111, 747, 40, 511, 496, 91, 738, 423, 586, 618, 614, 606]. **short-** [677, 358]. **short-chain** [181]. **Short-term** [148, 637, 111, 747, 40, 496, 91, 738, 586, 618, 614, 606]. **short-time** [423]. **short-wave-sensitive** [511]. **shortfinned** [399]. **shortnose** [460]. **show** [392]. **shows** [311, 257]. **sialidase** [44]. **Siberian** [111, 722, 161, 41, 370, 616]. **sidoides** [376]. **Siganus** [85]. **sign** [158, 429, 618, 297]. **signal** [156, 778]. **signaling** [159, 649, 388, 599, 31, 283, 722, 509, 517, 456, 577, 580, 446, 634]. **signalling** [266]. **signature** [625]. **signatures** [670]. **Significance** [401, 266]. **Silica** [605, 499]. **silico** [308]. **Siluriformes** [418]. **Silurus** [238, 201]. **silver** [181, 435, 208, 679, 143, 60]. **silverside** [712]. **silvery** [97]. **Silybin** [666, 517]. **silymarin** [72]. **similar** [270]. **simulated** [419]. **simultaneous** [724]. **sinensis** [130, 789]. **Single** [215, 427, 426, 406]. **Single-nucleotide** [215]. **Siniperca** [570, 347, 525, 327, 156, 98, 530, 528, 634, 296, 619]. **sinkiangensis** [154]. **sirt1** [13]. **site** [391]. **situ** [508]. **siva1** [305]. **six** [406]. **size** [711, 601, 536, 198, 703]. **skeletal** [461, 86, 495, 481, 527, 68]. **Skin** [706, 181, 471, 405, 387, 75, 145, 543, 77, 135]. **SLC10** [626]. **SLC34s** [291]. **slc3a1** [300]. **slc3a1/slc7a9** [300]. **slc7a1a** [176]. **slc7a9** [300]. **sleep** [609]. **Smad2** [89]. **Smad4** [259]. **small** [648, 96, 536, 610, 297]. **small-egged** [96]. **snapper** [312]. **snout** [529, 65, 468, 359, 421, 580, 714, 520, 474]. **SNP** [474]. **snubnose** [234, 395, 478]. **Social** [314, 50, 597, 78]. **socolofi** [92]. **sodium**

[321, 576, 587, 603, 573, 730, 238]. **soldier** [700]. **sole** [67, 434]. **Solea** [680, 681]. **Soluble** [557, 658]. **somatic** [522, 115]. **Some** [214, 752, 166, 408, 61, 302, 476, 299]. **source** [680, 721, 656, 407]. **source-dependent** [407]. **sourced** [202]. **sources** [406, 561]. **South** [242, 279]. **Sox3** [422]. **soy** [158, 19, 521]. **soybean** [321, 104, 661, 278, 107, 66, 530, 619]. **sp** [346]. **Sp1** [103]. **space** [761, 734]. **space-confined** [761, 734]. **sparing** [701]. **Sparus** [263, 175, 796, 308, 282, 667, 75, 679, 198, 620]. **spatiotemporal** [176, 300]. **spawning** [322, 282, 262, 685, 301]. **species** [424, 524, 757, 318, 276, 582, 283, 448, 690, 789, 601, 540, 684, 174, 798, 247]. **specific** [106]. **spectra** [168]. **specularis** [355]. **speed** [440]. **spent** [439]. **Sperm** [152, 211, 214, 240, 139, 682, 766, 715, 243, 249, 236, 740, 679, 239, 686, 113, 738, 165, 425]. **spermatid** [382]. **spermatogenesis** [242, 245]. **spermatogonia** [689, 690]. **spermatogonial** [490, 680, 110]. **spermatozoa** [246, 402, 687, 496, 679]. **spermiogenesis** [382]. **Spexin** [713, 161]. **Sphk1** [507]. **Sphyrna** [242]. **spiny** [385]. **spirulina** [166, 656]. **spleen** [517]. **splendens** [486, 751]. **splendid** [486]. **splicing** [280]. **spot** [4, 443]. **Spotted** [240, 134, 338, 243, 108, 409, 410, 306, 162, 219, 558, 433, 196]. **spp** [431, 54, 781, 769]. **spring** [685]. **Squalius** [21]. **Srebp** [103]. **stability** [641]. **stage** [440, 271]. **stages** [473, 333, 642, 289]. **stagnant** [90]. **stagnant-renewal** [90]. **standard** [175]. **starch** [557, 596]. **starvation** [623, 16, 614, 606]. **state** [582]. **states** [221]. **status** [770, 175, 142, 253, 552, 343, 783, 233, 168, 82, 394, 721, 164, 617, 601, 169, 480, 585, 88, 345, 657, 78]. **stem** [490, 690, 676]. **sterile** [541]. **sterilization** [92]. **sterlet** [241, 460, 738, 645]. **steroid** [518, 640, 584, 434]. **steroidal** [769]. **Steroidogenesis** [63, 186, 731]. **sterol** [103]. **stickiness** [238]. **stickwater** [722]. **stimulates** [747, 73, 628]. **stimulating** [644]. **stimulation** [641, 287, 331]. **Stimulatory** [111, 103]. **STING** [666]. **stingray** [152, 340]. **Stocking** [281, 130, 80, 772, 205, 657, 313]. **stomach** [45]. **storage** [591, 496, 738, 201, 165]. **store** [243, 677]. **storing** [124]. **stoutii** [71]. **strain** [102, 482, 664]. **strains** [798, 489]. **Stranded** [753]. **strategies** [651, 786]. **strategy** [591, 533]. **stream** [21]. **strengthening** [732]. **Strengths** [687]. **Streptococcus** [771]. **streptozotocin** [79]. **stress** [529, 795, 42, 490, 770, 252, 790, 83, 335, 142, 360, 100, 485, 363, 641, 34, 131, 449, 403, 436, 338, 732, 188, 144, 794, 783, 442, 587, 122, 420, 763, 330, 791, 388, 348, 753, 273, 548, 754, 328, 26, 430, 459, 427, 426, 97, 386, 573, 654, 316, 40, 325, 597, 569, 13, 133, 466, 605, 229, 772, 615, 145, 492, 295, 666, 234, 533, 190, 46, 49, 91, 228, 157, 407, 531, 613, 359, 187, 45, 622, 568, 653, 681, 749, 585, 177, 421, 498, 581, 779, 776, 567, 414, 697, 748, 30, 150, 621, 645, 184, 452, 458, 574, 778]. **stress** [595, 258, 733, 497, 780]. **stress-induced** [498]. **stress-mediated** [388]. **stress-related** [145]. **stressed** [390]. **stresses** [26, 571, 41]. **stressors** [368, 166, 371]. **striata** [103]. **striatus** [212, 270]. **strip** [789]. **striped** [437, 333, 484, 366, 608]. **stripping** [425]. **strongly** [522]. **Structural** [141, 598, 610]. **structure** [757, 155, 178, 390, 650, 28, 652, 748, 520, 207].

structures [668]. **studies** [554, 494]. **study** [284, 326, 408, 589, 411, 712, 549, 687, 466, 652, 743, 670, 247, 659]. **studying** [714]. **sturgeon** [111, 236, 674, 722, 460, 161, 41, 370, 128, 645, 398, 389, 616]. **sub** [363, 108]. **sub-adult** [108]. **sub-Antarctic** [363]. **subacute** [250]. **Subcellular** [508]. **subcutaneous** [308]. **subjected** [142, 33, 755, 78, 780]. **Sublethal** [276, 440]. **submitted** [761, 734]. **suboptimal** [656, 169]. **subpopulations** [679]. **subsequent** [488]. **substance** [270, 780]. **substances** [404, 299]. **substitute** [619]. **Substitution** [451, 745, 781]. **substrate** [448]. **substrates** [606]. **subtherapeutic** [759]. **subtilis** [394, 355]. **subtropical** [736]. **subunit** [56]. **success** [322, 282]. **sucker** [24, 207]. **Sudan** [669]. **Sugar** [80]. **suggest** [475]. **Suitable** [329]. **sulfate** [157]. **sulfur** [513]. **sunfish** [535]. **superorders** [269]. **superoxide** [328]. **supplemental** [454]. **Supplementation** [742, 784, 663, 105, 175, 121, 788, 764, 47, 321, 570, 51, 166, 233, 126, 484, 58, 431, 390, 569, 84, 519, 75, 617, 55, 25, 482, 346, 192, 162, 577, 698, 19, 568, 302, 767, 608, 561, 676, 528, 559, 30, 401, 120]. **supplementations** [343, 223]. **supplemented** [252, 10, 761, 734, 395, 268, 434]. **supplementing** [92]. **supply** [37, 455, 73, 458]. **suppressed** [49]. **suppression** [413, 350]. **supra** [679]. **supra-environmental** [679]. **suratensis** [782]. **surrogate** [680, 541]. **surrounding** [522]. **Survival** [322, 253, 782, 312, 564, 533, 374, 653, 454]. **survive** [320]. **Susceptibility** [492, 309, 377]. **Sustained** [385, 437]. **swamp** [325, 224, 150]. **swim** [629]. **swimming** [437, 783, 440, 197]. **Switch** [613]. **sws1** [511]. **sympatric** [758]. **synaptic** [373]. **synaptophysin** [373]. **Synergetic** [639]. **synergy** [72]. **synthesis** [186, 27]. **system** [777, 232, 762, 119, 633, 500, 542, 152, 300, 712, 549, 753, 416, 148, 642, 267, 539, 607, 25, 281, 658, 656, 234, 46, 195, 413, 744, 24, 170, 313, 258]. **systematic** [582, 336]. **Systemic** [126]. **systems** [314, 90].

T [151, 139, 148]. **T-2** [148]. **T-type** [139]. **tachykinin** [270]. **Tachysurus** [285, 361]. **tagged** [212]. **tags** [782]. **taimen** [77, 77]. **Takifugu** [311, 726, 420, 332, 62, 204, 317, 124, 443]. **talk** [27]. **tambaqui** [159, 438, 624]. **Tambatinga** [624]. **Tank** [497, 147]. **Taraxacum** [268]. **tarda** [543]. **target** [399]. **targets** [485]. **tarichi** [220]. **tau** [171]. **taurine** [101, 513, 475, 278, 72, 73]. **taurocholate** [576]. **TCEP** [550]. **teleost** [593, 532, 378, 251, 435, 456, 63, 124]. **Teleostei** [757, 138]. **teleosts** [213]. **temperate** [685]. **Temperature** [363, 646, 128, 252, 83, 368, 473, 364, 333, 179, 582, 96, 751, 427, 426, 615, 346, 514, 724, 15, 245, 169, 686, 195, 586, 558, 197, 645, 7, 736]. **temperatures** [322, 463, 224, 201, 595]. **Temporal** [29]. **tendency** [535]. **tenderness** [19]. **Tenualosa** [56]. **teprenone** [188, 144, 45]. **term** [326, 637, 677, 358, 111, 710, 148, 747, 40, 496, 91, 738, 586, 498, 618, 614, 434, 606]. **ternetzi** [32]. **test** [789, 433]. **testes** [304]. **Testicular** [375, 680, 726, 731, 496, 301, 247]. **testis** [494, 688, 110, 371, 602, 443]. **Testosterone** [441, 434]. **testudineus** [533]. **tetra** [539, 244]. **Textile** [669]. **textural** [629]. **TGF** [259]. **TGF-**

[259]. **thaw** [680]. **their** [471, 762, 673, 737, 189, 709, 40, 668, 531, 127, 255]. **Therapeutic** [505, 759, 647, 659]. **therapy** [307]. **Thermal** [226, 190, 140, 795, 185, 442, 695, 548, 654, 685, 624, 41]. **thermic** [6]. **thinlip** [625]. **though** [702]. **three** [604, 1, 741, 448, 71, 85, 540, 684, 174, 4, 798, 489]. **three-spot** [4]. **threonine** [212]. **threonine-protein** [212]. **throughout** [211]. **thymol** [25]. **thyroid** [286, 18]. **Tibetan** [457]. **tiger** [317]. **tight** [697]. **Tilapia** [728, 35, 381, 770, 337, 121, 788, 764, 512, 485, 437, 256, 552, 576, 797, 765, 166, 493, 408, 461, 589, 451, 695, 792, 791, 394, 147, 405, 387, 10, 647, 717, 771, 661, 70, 95, 569, 441, 164, 617, 671, 772, 90, 730, 346, 632, 107, 656, 329, 503, 590, 781, 371, 602, 568, 769, 476, 68, 275, 798, 120, 11]. **tilapias** [1, 741]. **time** [466, 774, 423]. **time-course** [466]. **Timing** [396]. **Tisochrysis** [744]. **Tissue** [124, 232, 762, 119, 752, 291, 93, 587, 178, 289, 16, 478, 161, 501, 534, 559, 221]. **tissues** [383, 364, 273, 317, 448, 208, 652, 663]. **titanium** [679]. **TMAO** [560]. **toadfish** [171]. **tocopherol** [770]. **tolerance** [311, 695, 318, 32, 594, 590, 18, 786, 798, 474]. **tolerances** [489]. **tolerant** [359]. **tomato** [497]. **tongue** [67, 434]. **tool** [237]. **Topology** [291]. **TOR** [649, 162, 580, 593, 8, 30, 401]. **TORC1** [156]. **total** [548, 275]. **totoaba** [47, 47]. **toxic** [130, 663]. **Toxicity** [163, 208, 777, 797, 756, 504, 755, 270, 750, 120]. **toxicological** [412]. **toxicology** [309]. **toxin** [148]. **Traceability** [684, 418]. **Trachidermus** [290, 588, 13]. **Trachinotus** [701, 668, 278, 234, 379, 478, 28, 7]. **tract** [565, 650]. **training** [128]. **traits** [493, 87, 677]. **transcript** [651, 235]. **transcription** [232, 422, 229, 658, 646, 137, 124, 149]. **Transcriptional** [284, 133, 360, 291, 103, 126, 430, 39, 128]. **Transcriptome** [117, 665, 405, 387, 271, 414, 583, 3, 726, 688, 466, 231, 398]. **transcriptomes** [97, 7]. **Transcriptomic** [69, 311, 158, 118, 792, 504]. **transcriptomics** [563]. **transcripts** [463]. **transepithelial** [723]. **transfer** [33]. **transferase** [752]. **transformation** [491, 327]. **transgenesis** [32]. **transgenic** [537]. **transient** [410]. **Transition** [724, 152]. **transparency** [662]. **transparent** [662]. **transplantation** [690, 110, 247]. **transponder** [782]. **transport** [300, 587, 199, 419, 415, 97, 611, 76, 421, 376]. **transportation** [502]. **transporter** [93, 323, 176, 300, 80]. **transporter/glycoprotein** [300]. **transporter/glycoprotein-associated** [300]. **transporters** [732, 137]. **traumatic** [780]. **treated** [706, 231, 19, 659]. **treatment** [369, 353, 211, 310, 592]. **treatments** [185, 396, 715, 358]. **tree** [75, 234]. **Triacylglycerol** [553]. **tributanoate** [553]. **tributylate** [553]. **tricaine** [69, 174]. **trichlorfon** [589, 130]. **Trichopodus** [751]. **trichopterus** [751]. **trigger** [364]. **triggered** [517]. **triggers** [350]. **triglyceride** [44]. **trimaculatum** [4]. **triphenyltin** [163]. **triploid** [541]. **tris** [550]. **tropical** [500, 23, 358, 32, 14]. **tropicus** [500, 14]. **trout** [739, 796, 742, 232, 38, 237, 119, 343, 473, 99, 637, 168, 298, 785, 693, 687, 273, 210, 287, 390, 470, 354, 723, 61, 230, 482, 112, 27, 536, 217, 268, 781, 404, 487, 585, 197, 357, 464, 600]. **Trp14** [290]. **trunk** [81]. **trutta** [112]. **Trx** [290]. **Trypsin** [14, 218].

Tryptophan [47, 212, 734, 302, 761]. **Tryptophan-supplemented** [734, 761]. **Tryptophan-tagged** [212]. **tsRNAs** [375]. **tub** [565]. **tube** [546]. **tuna** [445]. **turbot** [182, 118, 649, 415, 710, 40, 579, 707, 137]. **turmeric** [92]. **turning** [675]. **turnover** [451, 73]. **twins** [261]. **Two** [306, 269, 103, 318, 771, 431, 453, 601, 15, 646, 127, 151, 215, 36, 443]. **two-spot** [443]. **Type** [353, 139, 176, 289, 259]. **types** [411, 668]. **tyrosinase** [98].

ubiquitin [646]. **ultrasound** [241]. **ultrastructure** [48]. **Umbrina** [495, 481]. **unbalanced** [450]. **Uncommon** [685]. **Understanding** [609, 456]. **underwater** [585]. **unpredictable** [754]. **unprocessed** [445]. **unveiling** [670]. **upon** [586]. **upregulating** [34]. **uptake** [383, 86, 514]. **urban** [293]. **Urtica** [349]. **Use** [744, 673, 262]. **Using** [723, 585, 518, 682, 241, 753, 395, 238, 696]. **Usnea** [268]. **Ussuri** [231]. **ussuriensis** [231]. **utilization** [570, 51, 532, 233, 202, 411, 785, 717, 701, 519, 707, 727, 608, 561, 528, 541, 197, 606].

V [424]. **VA** [570]. **vachelli** [498, 135]. **validation** [471]. **Valine** [156]. **value** [599]. **vanadium** [424]. **var** [222, 355]. **variants** [87]. **variation** [405, 387, 153, 346, 198]. **variations** [582, 594]. **varied** [32]. **varies** [269]. **variety** [359]. **varying** [322]. **vasa** [711]. **vasotocin** [367, 50]. **vegetable** [20, 655]. **ventilatory** [532]. **ventricle** [287]. **vera** [109]. **veronii** [166, 647, 605, 650, 505]. **versus** [740]. **vertebrate** [94]. **vesicle** [152]. **vesicles** [536]. **via** [529, 788, 764, 475, 577, 413, 634, 616]. **viability** [237, 34]. **Vibrio** [465]. **vibriosis** [705]. **Vicia** [629]. **vinegar** [106]. **vinifera** [61, 230, 487]. **viral** [255]. **viscera** [781]. **VisEgg** [237]. **Vitamin** [31, 283, 343, 587, 81, 147, 631, 173, 567]. **vitellogenesis** [353]. **vitellogenin** [467, 356, 789, 27]. **Vitis** [61, 230, 487]. **vitrified** [110]. **vitro** [356, 752, 400, 589, 708, 257, 399, 270, 683, 228, 201, 425, 554]. **vivo** [471, 168, 270, 228, 425, 554, 669]. **voltage** [139]. **voltage-gated** [139]. **volume** [402, 522]. **volumes** [112]. **voluntary** [532]. **voulezi** [595]. **vrolikii** [422, 304, 362]. **vulgare** [638]. **vulgaris** [120].

W [742]. **wakefulness** [609]. **walking** [267, 160]. **wallacei** [340]. **warm** [179]. **warmer** [463]. **Warming** [229, 739]. **was** [459]. **waste** [439]. **water** [83, 265, 463, 732, 552, 493, 629, 147, 427, 426, 346, 514, 245, 367, 707, 744, 558, 197]. **water-borne** [732]. **water/alcohol** [629]. **waterborne** [369, 119, 177]. **waterless** [587, 615]. **wave** [511]. **weakly** [544]. **weaning** [539, 533]. **well** [390, 462]. **well-being** [462]. **wels** [238]. **Western** [157]. **wheat** [596]. **whey** [791]. **which** [475]. **while** [709]. **whisker** [768]. **white** [706, 547]. **whitefish** [758]. **whole** [363, 550, 110, 655]. **whole-body** [655]. **whole-organism** [363]. **wide** [457, 28]. **wild** [102, 409, 15, 652]. **wild-caught** [409]. **window** [659]. **winter** [420, 96, 685, 632]. **without** [477, 700]. **Wnt10b** [283]. **wolf** [374]. **wolffish** [240, 243, 763]. **Workshop** [675].

X [446]. **Xiphophorus** [115]. **xl** [39]. **xylanase** [84, 192].

Yangtze [389]. **Yarrowia** [503]. **years** [246]. **yeast** [439]. **yeasts** [673]. **yellow**
[285, 665, 773, 84, 20, 351, 76, 295, 16, 382, 454, 501, 297, 361, 541, 489, 502, 380]. **yellowfin** [316]. **yellowtail** [651, 724, 244, 713, 657]. **Yersinia** [343]. **Yinchenhao** [697]. **yolk** [353, 363, 440, 393, 583]. **yolk-sac** [353, 363, 440].

Zebrafish [323, 284, 200, 428, 3, 176, 300, 550, 126, 507, 212, 254, 440, 754, 459, 163, 450, 644, 31, 283, 597, 453, 511, 504, 352, 52, 102, 239, 492, 536, 546, 270, 669, 516, 694, 491, 609, 729, 725, 302, 480, 653, 749, 59, 79, 537, 581, 412, 414, 447, 780]. **zeolite** [499]. **zinc** [328, 709, 26, 525]. **Zingiber** [339, 611]. **Zinkwazi** [242]. **Ziziphus** [121]. **ZnO** [43]. **zootechnical** [656]. **Zuiew** [224]. **zymography** [540].

References

Huang:2010:DET

[1] Weiren Huang, Yong Zhang, and Haoran Lin. Distinct expression of three estrogen receptors in response to bisphenol A and nonylphenol in male Nile tilapias (*Oreochromis niloticus*). *Fish Physiology and Biochemistry*, 36(2):237–249, June 2010. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-008-9280-8`. See correction [741].

Xu:2019:NCH

[2] Yang Xu, Yang Tian, and Qingwei Li. A novel CDK-2 homolog identified in lamprey, *Lampetra japonica*, with roles in apoptosis. *Fish Physiology and Biochemistry*, 45(6):1829–1843, December 2019. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-019-00683-w`. See correction [203].

Blanco:2020:BTP

[3] Ayelén Melisa Blanco, Raúl Cortés, and María Jesús Delgado. Brain transcriptome profile after CRISPR-induced ghrelin mutations in zebrafish. *Fish Physiology and Biochemistry*, 46(1):1–21, February 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-019-00687-6`.

Toledo-Solis:2020:PLR

[4] F. J. Toledo-Solís, R. Martínez-García, and M. Saenz de Rodrigáñez. Protein and lipid requirements of three-spot cichlid *Cichlasoma trimaculatum*

larvae. *Fish Physiology and Biochemistry*, 46(1):23–37, February 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-019-00692-9`.

Wang:2020:HIF

[5] Congcong Wang, Xiaohui Wu, and Qianghua Xu. Hypoxia-inducible factor 1α from a high-altitude fish enhances cytoprotection and elevates nitric oxide production in hypoxic environment. *Fish Physiology and Biochemistry*, 46(1):39–49, February 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-019-00694-7`.

Mattioli:2020:RJE

[6] Cristiano Campos Mattioli, Rodrigo Takata, and Ronald Kennedy Luz. Response of juvenile *Lophiosilurus alexandri* to osmotic and thermic shock. *Fish Physiology and Biochemistry*, 46(1):51–61, February 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-019-00696-5`.

Zhou:2020:ETT

[7] Zhi Zhou, Yanqiang Li, and Jian Luo. Effects of temperature on the transcriptomes of pituitary and liver in Golden pompano *Trachinotus blochii*. *Fish Physiology and Biochemistry*, 46(1):63–73, February 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-019-00695-6`.

Ullah:2020:EER

[8] Imdad Ullah, Amina Zuberi, and Svante Winberg. Effects of early rearing enrichments on modulation of brain monoamines and hypothalamic–pituitary–interrenal axis (HPI axis) of fish mahseer (*Tor putitora*). *Fish Physiology and Biochemistry*, 46(1):75–88, February 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-019-00697-4`.

Ammar:2020:CLP

[9] Imen Ben Ammar, Sylvain Milla, and Pascal Fontaine. Constant long photoperiod inhibits the onset of the reproductive cycle in roach females and males. *Fish Physiology and Biochemistry*, 46(1):89–102, February 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-019-00698-3`.

Kesbic:2020:EBE

[10] Osman Sabri Kesbiç, Ümit Acar, and Özlem Durna Aydin. Effects of bergamot (*Citrus bergamia*) peel oil-supplemented diets on growth performance, haematology and serum biochemical parameters of Nile tilapia (*Oreochromis niloticus*). *Fish Physiology and Biochemistry*, 46 (1):103–110, February 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-019-00700-y`.

Zhang:2020:IIL

[11] Yu-Xue Zhang, Zhe-Yue Jiang, and Zhen-Yu Du. Inhibition of intestinal lipases alleviates the adverse effects caused by high-fat diet in Nile tilapia. *Fish Physiology and Biochemistry*, 46(1):111–123, February 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-019-00701-x`.

Zhou:2020:HDL

[12] Yue-Lang Zhou, Jia-Ling Guo, and Shi-Mei Lin. High dietary lipid level alters the growth, hepatic metabolism enzyme, and anti-oxidative capacity in juvenile largemouth bass *Micropterus salmoides*. *Fish Physiology and Biochemistry*, 46(1):125–134, February 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-019-00705-7`.

Ma:2020:EOS

[13] Qian Ma, JieHua Kuang, and Zhimeng Zhuang. Effects of osmotic stress on Na^+ /K^+-ATPase, caspase 3/7 activity, and the expression profiling of sirt1, hsf1, and hsp70 in the roughskin sculpin (*Trachidermus fasciatus*). *Fish Physiology and Biochemistry*, 46(1):135–144, February 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-019-00703-9`.

laCruz:2020:TGE

[14] Kristal de M. Jesús-De la Cruz, Ángela Ávila-Fernández, and Carlos Alfonso Alvarez-González. Trypsin gene expression in adults and larvae of tropical gar *Atractosteus tropicus*. *Fish Physiology and Biochemistry*, 46 (1):145–155, February 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-019-00704-8`.

Petitjean:2020:CET

[15] Quentin Petitjean, Séverine Jean, and Lisa Jacquin. Combined effects of temperature increase and immune challenge in two wild gudgeon popula-

tions. *Fish Physiology and Biochemistry*, 46(1):157–176, February 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-019-00706-6`.

Qin:2020:ILG

[16] Qin Qin, Xiaohui Chen, and Wenbin Liu. Insulin-like growth factor I of yellow catfish (*Pelteobagrus fulvidraco*): cDNA characterization, tissue distribution, and expressions in response to starvation and refeeding. *Fish Physiology and Biochemistry*, 46(1):177–186, February 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-019-00707-5`.

Cai:2020:CEA

[17] Yanan Cai, Yuwei Yin, and Yuehong Li. Cadmium exposure affects growth performance, energy metabolism, and neuropeptide expression in *Carassius auratus gibelio*. *Fish Physiology and Biochemistry*, 46(1): 187–197, February 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-019-00709-3`.

Varghese:2020:DGE

[18] Tincy Varghese, V. J. Rejish Kumar, and Asim Kumar Pal. Dietary GABA enhances hypoxia tolerance of a bottom-dwelling carp, *Cirrhinus mrigala* by modulating HIF-1α, thyroid hormones and metabolic responses. *Fish Physiology and Biochemistry*, 46(1):199–212, February 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-019-00708-4`.

Song:2020:ETS

[19] Yan Song, LiangChao Yan, and XiaoQiu Zhou. Enzyme-treated soy protein supplementation in low protein diet improved flesh tenderness, juiciness, flavor, healthiness, and antioxidant capacity in on-growing grass carp (*Ctenopharyngodon idella*). *Fish Physiology and Biochemistry*, 46 (1):213–230, February 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-019-00710-w`.

Mu:2020:IRD

[20] Hua Mu, Chaoqing Wei, and Kangsen Mai. Impacts of replacement of dietary fish oil by vegetable oils on growth performance, anti-oxidative capacity, and inflammatory response in large yellow croaker *Larimichthys crocea*. *Fish Physiology and Biochemistry*, 46(1):231–245, February 2020.

CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-019-00712-8.

Soler:2020:EIP

[21] Patricia Soler, Montserrat Solé, and Dolors Vinyoles. Effects of industrial pollution on the reproductive biology of *Squalius laietanus* (Actinopterygii, Cyprinidae) in a Mediterranean stream (NE Iberian Peninsula). *Fish Physiology and Biochemistry*, 46(1):247–264, February 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-019-00713-7.

Kumar:2020:PMH

[22] Sarvendra Kumar, N. P. Sahu, and Ashutosh D. Deo. Physio-metabolic and haematological changes of *Labeo rohita* fed with graded level of deoiled rice bran-based diet. *Fish Physiology and Biochemistry*, 46(1): 265–275, February 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-019-00714-6.

Imamura:2020:MEP

[23] Satoshi Imamura, Sung-Pyo Hur, and Akihiro Takemura. The mRNA expression patterns of kisspeptins, GnRHs, and gonadotropins in the brain and pituitary gland of a tropical damselfish, *Chrysiptera cyanea*, during the reproductive cycle. *Fish Physiology and Biochemistry*, 46(1): 277–291, February 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-019-00715-5.

Su:2020:EKG

[24] Shiping Su, Qingqing Li, and Qiming Xie. Expression of the kisspeptin/gonadotropin-releasing hormone (GnRH) system in the brain of female Chinese sucker (*Myxocyprinus asiaticus*) at the onset of puberty. *Fish Physiology and Biochemistry*, 46(1):293–303, February 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-019-00717-3.

Morselli:2020:BTS

[25] Monique B. Morselli, João H. Reis, and Aleksandro S. Da Silva. Benefits of thymol supplementation on performance, the hepatic antioxidant system, and energetic metabolism in grass carp. *Fish Physiology and Biochemistry*, 46(1):305–314, February 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-019-00718-2.

Kumar:2020:EZG

[26] Neeraj Kumar, Kishore Kumar Krishnani, and Narendra Pratap Singh. Effect of zinc on growth performance and cellular metabolic stress of fish exposed to multiple stresses. *Fish Physiology and Biochemistry*, 46(1): 315–329, February 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-019-00719-1`.

Paolucci:2020:CTB

[27] Marina Paolucci, Elena Coccia, and Ettore Varricchio. A cross-talk between leptin and 17β-estradiol in vitellogenin synthesis in rainbow trout *Oncorhynchus mykiss* liver. *Fish Physiology and Biochemistry*, 46(1): 331–344, February 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-019-00720-8`.

Sun:2020:GWC

[28] Jinhui Sun, Kecheng Zhu, and Dianchang Zhang. Genome-wide comparative analysis of *bone morphogenetic proteins*: genomic structure, phylogeny, and expression patterns in the golden pompano, *Trachinotus ovatus* (Linnaeus, 1758). *Fish Physiology and Biochemistry*, 46(1): 345–358, February 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-019-00721-7`.

Wang:2020:TEP

[29] Bin Wang, Aijun Cui, and Yongjiang Xu. Temporal expression profiles of leptin and its receptor genes during early development and ovarian maturation of *Cynoglossus semilaevis*. *Fish Physiology and Biochemistry*, 46(1):359–370, February 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-019-00722-6`.

Younus:2020:DCS

[30] Naima Younus, Amina Zuberi, and Isidoro Metón. Dietary cobalt supplementation improves growth and body composition and induces the expression of growth and stress response genes in *Tor putitora*. *Fish Physiology and Biochemistry*, 46(1):371–381, February 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-019-00723-5`.

Liu:2020:VCI

[31] Dongwu Liu, Yaqi Gu, and Qin Zhang. Vitamin C inhibits lipid deposition through GSK-3β /mTOR signaling in the liver of zebrafish. *Fish Physiology and Biochemistry*, 46(1):383–394, February 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-019-00727-1`.

Leggatt:2020:FPT

[32] Rosalind A. Leggatt and Robert H. Devlin. Fluorescent protein transgenesis has varied effects on behaviour and cold tolerance in a tropical fish (*Gymnocorymbus ternetzi*): implications for risk assessment. *Fish Physiology and Biochemistry*, 46(1):395–403, February 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-019-00725-3`.

Baldissera:2020:IPT

[33] Matheus D. Baldissera, Carine de Freitas Souza, and Ronald K. Luz. Involvement of the phosphoryl transfer network in gill bioenergetic imbalance of pacamã (*Lophiosilurus alexandri*) subjected to hypoxia: notable participation of creatine kinase. *Fish Physiology and Biochemistry*, 46 (1):405–416, February 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-019-00728-0`.

Chen:2020:GCE

[34] Xin Chen, Kun Han, and Chengyu Hu. Grass carp (*Ctenopharyngodon idella*) NRF2 alleviates the oxidative stress and enhances cell viability through upregulating the expression of *ho-1*. *Fish Physiology and Biochemistry*, 46(1):417–428, February 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-019-00729-z`.

Vijayalaxmi:2020:IEA

[35] Vijayalaxmi and C. B. Ganesh. Influence of endomorphins along the pituitary-ovary axis in the Mozambique tilapia *Oreochromis mossambicus*. *Fish Physiology and Biochemistry*, 46(1):429–438, February 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-019-00731-5`.

Zheng:2020:MCE

[36] Xianhu Zheng, Hongyang Dang, and Xiaowen Sun. Molecular characterization and expression patterns of two hormone-sensitive lipase genes

in common carp *Cyprinus carpio*. *Fish Physiology and Biochemistry*, 46 (1):439–450, February 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-019-00738-y`.

Liew:2020:CCE

[37] Hon Jung Liew, Antonella Pelle, and Gudrun De Boeck. Common carp, *Cyprinus carpio*, prefer branchial ionoregulation at high feeding rates and kidney ionoregulation when food supply is limited: additional effects of cortisol and exercise. *Fish Physiology and Biochemistry*, 46(1): 451–469, February 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-019-00736-0`.

Bilen:2020:ELB

[38] Soner Bilen, Tarek Abdalsalam Salem Altief, and Kerim Güney. Effect of lemon balm (*Melissa officinalis*) extract on growth performance, digestive and antioxidant enzyme activities, and immune responses in rainbow trout (*Oncorhynchus mykiss*). *Fish Physiology and Biochemistry*, 46 (1):471–481, February 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-019-00737-z`.

Qi:2020:GCE

[39] Guoqin Qi, Ningli Yu, and Chengyu Hu. Grass carp (*Ctenopharyngodon idella*) bcl-xl: transcriptional regulation and anti-apoptosis analysis. *Fish Physiology and Biochemistry*, 46(2):483–500, April 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-019-00668-9`.

Liu:2020:CMC

[40] Zhifeng Liu, Aijun Ma, and Jiangbo Qu. Cloning and molecular characterization of PRL and PRLR from turbot (*Scophthalmus maximus*) and their expressions in response to short-term and long-term low salt stress. *Fish Physiology and Biochemistry*, 46(2):501–517, April 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-019-00699-2`.

Wang:2020:RAG

[41] Xiaowen Wang, Guoqing Ma, and Hua Zhu. Regulation of 14-3-3β /α gene expression in response to salinity, thermal, and bacterial stresses in Siberian sturgeon (*Acipenser baeri*). *Fish Physiology and Biochemistry*, 46(2):519–531, April 2020. CODEN FPBIEP. ISSN 0920-1742 (print),

1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-019-00702-w.

Abu-Elala:2020:IDF

[42] Nermeen M. Abu-Elala, Nehal A. Younis, and Melina A. Bonato. Influence of dietary fermented *Saccharomyces cerevisiae* on growth performance, oxidative stress parameters, and immune response of cultured *Oreochromis niloticus*. *Fish Physiology and Biochemistry*, 46(2):533–545, April 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-019-00711-9.

Gharaei:2020:FBI

[43] Ahmad Gharaei, Mostafa Khajeh, and Reza Fadai. Fluctuation of biochemical, immunological, and antioxidant biomarkers in the blood of beluga (*Huso huso*) under effect of dietary ZnO and chitosan–ZnO NPs. *Fish Physiology and Biochemistry*, 46(2):547–561, April 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-019-00726-2.

Oishi:2020:RTM

[44] Kazuki Oishi, Mina Miyazaki, and Kazuhiro Shiozaki. Regulation of triglyceride metabolism in medaka (*Oryzias latipes*) hepatocytes by neu3a sialidase. *Fish Physiology and Biochemistry*, 46(2):563–574, April 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-019-00730-6.

Sun:2020:PTA

[45] YongXu Sun, HongBiao Dong, and JiaSong Zhang. Protection of teprenone against hypoxia and reoxygenation stress in stomach and intestine of *Lateolabrax maculatus*. *Fish Physiology and Biochemistry*, 46 (2):575–584, April 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-019-00732-4.

Ryu:2020:POS

[46] Han Seok Ryu, Jin Ah Song, and Cheol Young Choi. Physiological and oxidative stress response of goldfish *Carassius auratus* induced by a light dimming system. *Fish Physiology and Biochemistry*, 46(2):585–595, April 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-019-00733-3.

Cabanillas-Gamez:2020:TSH

[47] Miguel Cabanillas-Gámez, Ulises Bardullas, and Lus M. López. Tryptophan supplementation helps totoaba (*Totoaba macdonaldi*) juveniles to regain homeostasis in high-density culture conditions. *Fish Physiology and Biochemistry*, 46(2):597–611, April 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-019-00734-2`.

Yan:2020:EDL

[48] Hongwei Yan, Qi Liu, and Ying Liu. Effects of different light conditions on the retinal microstructure and ultrastructure of *Dicentrarchus labrax* larvae. *Fish Physiology and Biochemistry*, 46(2):613–628, April 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-019-00735-1`.

Sabioni:2020:BGE

[49] Rafael Estevan Sabioni, Fábio Sabbadin Zanuzzo, and Elisabeth Criscuolo Urbinati. β-glucan enhances respiratory activity of leukocytes suppressed by stress and modulates blood glucose levels in pacu (*Piaractus mesopotamicus*). *Fish Physiology and Biochemistry*, 46(2):629–640, April 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-019-00739-x`.

Sokolowska:2020:SCA

[50] Ewa Sokołowska, Magdalena Gozdowska, and Ewa Kulczykowska. Social context affects aggression and brain vasotocin and isotocin level in the round goby. *Fish Physiology and Biochemistry*, 46(2):641–652, April 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-019-00741-3`.

Desouky:2020:IGA

[51] Hesham Eed Desouky, Guang zhen Jiang, and Wen bin Liu. Influences of glycyrrhetinic acid (GA) dietary supplementation on growth, feed utilization, and expression of lipid metabolism genes in channel catfish (*Ictalurus punctatus*) fed a high-fat diet. *Fish Physiology and Biochemistry*, 46(2):653–663, April 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-019-00740-4`.

Ma:2020:HCD

[52] Qiang Ma, Chun-Ting Hu, and Zhen-Yu Du. High-carbohydrate diet promotes the adaptation to acute hypoxia in zebrafish. *Fish Physiology and*

Biochemistry, 46(2):665–679, April 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-019-00742-2`.

Rivero-Ramirez:2020:EDA

[53] F. Rivero-Ramírez, S. Torrecillas, and D. Montero. Effects of dietary arachidonic acid in European sea bass (*Dicentrarchus labrax*) distal intestine lipid classes and gut health. *Fish Physiology and Biochemistry*, 46(2):681–697, April 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-019-00744-0`.

Mejri:2020:RPB

[54] Sahar Mejri, Cameron Luck, and Matthew J. Ajemian. Reproductive physiology of bonefishes (*Albula* spp.) across the Northwest Bahamas. *Fish Physiology and Biochemistry*, 46(2):699–712, April 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-019-00743-1`.

Monier:2020:EDE

[55] Mohamed N. Monier. Efficacy of dietary exogenous enzyme supplementation on growth performance, antioxidant activity, and digestive enzymes of common carp (*Cyprinus carpio*) fry. *Fish Physiology and Biochemistry*, 46(2):713–723, April 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-019-00745-z`.

Kumar:2020:PMG

[56] Munish Kumar, Tincy Varghese, and Subrata Dasgupta. Pseudobranch mimics gill in expressing Na^+ K^+-ATPase 1 α-subunit and carbonic anhydrase in concert with H^+-ATPase in adult hilsa (*Tenualosa ilisha*) during river migration. *Fish Physiology and Biochemistry*, 46(2):725–738, April 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-019-00746-y`.

Mirghaed:2020:HIR

[57] Ali Taheri Mirghaed, Melika Baes, and Seyyed Morteza Hoseini. Humoral immune responses and gill antioxidant-related gene expression of common carp (*Cyprinus carpio*) exposed to lufenuron and flonicamide. *Fish Physiology and Biochemistry*, 46(2):739–746, April 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-019-00747-x`.

Lahmar:2020:FEP

[58] Samar Lahmar, Kaouthar Kessabi, and Imed Messaoudi. First evidence on protective effect of exogenous melatonin supplementation against disruption of the estrogenic pathway in bone metabolism of killifish (*Aphanius fasciatus*). *Fish Physiology and Biochemistry*, 46(2):747–757, April 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-019-00748-w`.

Wang:2020:EQI

[59] Junhui Wang, Chunnuan Zhang, and Zhenfei Li. The effects of quercetin on immunity, antioxidant indices, and disease resistance in zebrafish (*Danio rerio*). *Fish Physiology and Biochemistry*, 46(2):759–770, April 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-019-00750-2`.

Setlikova:2020:SCE

[60] Irena Šetlíková, Sandra Maciarzová, and Tomáš Policar. Silver carp (*Hypophthalmichthys molitrix*) can non-mechanically digest cyanobacteria. *Fish Physiology and Biochemistry*, 46(2):771–776, April 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-019-00751-1`.

Mousavi:2020:AGE

[61] Shalaeh Mousavi, Najmeh Sheikhzadeh, and Karim Mardani. Administration of grape (*Vitis vinifera*) seed extract to rainbow trout (*Oncorhynchus mykiss*) modulates growth performance, some biochemical parameters, and antioxidant-relevant gene expression. *Fish Physiology and Biochemistry*, 46(3):777–786, June 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-019-00716-4`.

Kim:2020:APO

[62] Byeong-Hoon Kim, Sung-Pyo Hur, and Young-Don Lee. Annual patterns of ocular melatonin level in the female grass puffer, *Takifugu alboplumbeus*: possible involvement in seasonal reproductive response. *Fish Physiology and Biochemistry*, 46(3):787–801, June 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-019-00749-9`.

Rajakumar:2020:SRT

[63] Anbazhagan Rajakumar and Balasubramanian Senthilkumaran. Steroidogenesis and its regulation in teleost — a review. *Fish Physiology and*

Biochemistry, 46(3):803–818, June 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-019-00752-0`.

Kuebutornye:2020:MRP

[64] Felix K. A. Kuebutornye, Emmanuel Delwin Abarike, and Cai Xia Xie. Mechanisms and the role of probiotic *Bacillus* in mitigating fish pathogens in aquaculture. *Fish Physiology and Biochemistry*, 46(3):819–841, June 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-019-00754-y`.

Cao:2020:MCE

[65] Xiu-Fei Cao, Guang-Zhen Jiang, and Wen-Bin Liu. Molecular characterization and expression pattern of inositol-requiring enzyme 1 (IRE1) in blunt snout bream (*Megalobrama amblycephala*): its role of IRE1 involved in inflammatory response induced by lipopolysaccharide. *Fish Physiology and Biochemistry*, 46(3):843–860, June 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-019-00753-z`.

Saleh:2020:ASM

[66] Norhan E. Saleh. Assessment of sesame meal as a soybean meal replacement in European sea bass (*Dicentrarchus labrax*) diets based on aspects of growth, amino acid profiles, haematology, intestinal and hepatic integrity and macroelement contents. *Fish Physiology and Biochemistry*, 46(3):861–879, June 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-019-00756-w`.

Li:2020:ICM

[67] Kunming Li, Na Zhao, and Baolong Bao. Identification and characterization of the melanocortin 1 receptor gene (MC1R) in hypermelanistic Chinese tongue sole (*Cynoglossus semilaevis*). *Fish Physiology and Biochemistry*, 46(3):881–890, June 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-019-00758-8`.

Wu:2020:ENA

[68] Ping Wu, Jia Cheng, and Jianshe Zhang. Nr1d1 affects autophagy in the skeletal muscles of juvenile Nile tilapia by regulating the rhythmic expression of autophagy-related genes. *Fish Physiology and Biochemistry*, 46(3):891–907, June 2020. CODEN FPBIEP. ISSN 0920-1742 (print),

1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-019-00757-9.

Dong:2020:TAJ

[69] Hongbiao Dong, Wenhao Wang, and Jiasong Zhang. Transcriptomic analysis of juvenile Chinese sea bass (*Lateolabrax maculatus*) anesthetized by MS-222 (tricaine methanesulfonate) and eugenol. *Fish Physiology and Biochemistry*, 46(3):909–920, June 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-019-00755-x.

Liu:2020:CHL

[70] Ting Liu, Kai Huang, and Ting Wang. Cloning of hepatic lipase and the effects of dietary nutrition on hepatic lipase expression in genetically improved farmed tilapia (*Oreochromis niloticus*). *Fish Physiology and Biochemistry*, 46(3):921–930, June 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-019-00759-7.

McCord:2020:CET

[71] Charlene L. McCord, Emma Whiteley, and Douglas Fudge. Concentration effects of three common fish anesthetics on Pacific hagfish (*Eptatretus stoutii*). *Fish Physiology and Biochemistry*, 46(3):931–943, June 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-020-00761-4.

Olivares-Ferretti:2020:SNA

[72] Pamela Olivares-Ferretti, Rodrigo Sánchez, and Jorge Parodi. A synergy of the nutritional additives taurine and silymarin in salmon farming: evaluation with the CHSE-214 cellular model. *Fish Physiology and Biochemistry*, 46(3):945–952, June 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-020-00760-5.

Poppi:2020:ASD

[73] David A. Poppi, Stephen S. Moore, and Brett D. Glencross. Adequate supply of dietary taurine stimulates expression of molecular markers of growth and protein turnover in juvenile barramundi (*Lates calcarifer*). *Fish Physiology and Biochemistry*, 46(3):953–969, June 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-020-00762-3.

Pang:2020:EPA

[74] Wei Pang, Ziwei Zhao, and Xiaowu Chen. Expression profile analyses of *mettl8* in *Oryzias latipes*. *Fish Physiology and Biochemistry*, 46 (3):971–979, June 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00764-1`.

Mansour:2020:DSD

[75] Abdallah Tageldein Mansour, Cristóbal Espinosa, and M. Ángeles Esteban. Dietary supplementation of drumstick tree, *Moringa oleifera*, improves mucosal immune response in skin and gills of seabream, *Sparus aurata*, and attenuates the effect of hydrogen peroxide exposure. *Fish Physiology and Biochemistry*, 46(3):981–996, June 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00763-2`.

Pan:2020:MCI

[76] Yun Pan, Chun-Xiang Ai, and Wen-Cheng Li. Modulation of copper-induced antioxidant defense, Cu transport, and mitophagy by hypoxia in the large yellow croaker (*Larimichthys crocea*). *Fish Physiology and Biochemistry*, 46(3):997–1010, June 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00765-0`.

Wang:2020:EDE

[77] Chang'an Wang, Shaoxia Lu, and Jiasheng Yin. Effects of dietary *myo*-inositol on growth, antioxidative capacity, and nonspecific immunity in skin mucus of taimen *Hucho taimen* fry. *Fish Physiology and Biochemistry*, 46(3):1011–1018, June 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00766-z`.

deAmaral:2020:MRA

[78] Amanda Pereira de Amaral, Elias Cristiano Candido da Silva, and Thaís Billalba Carvalho. Melatonin reduces aggressiveness and improves oxidative status of matrinxã (*Brycon amazonicus*) subjected to social challenge. *Fish Physiology and Biochemistry*, 46(3):1019–1024, June 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00768-x`.

Wang:2020:ESP

[79] Xue Wang, Xue liang Yang, and Yun Zhang. Effects of streptozotocin on pancreatic islet β-cell apoptosis and glucose metabolism in zebrafish

larvae. *Fish Physiology and Biochemistry*, 46(3):1025–1038, June 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00769-w`.

Liang:2020:STG

[80] Xiao Liang, Fengying Yan, and Dapeng Li. Sugar transporter genes in grass carp (*Ctenopharyngodon idellus*): molecular cloning, characterization, and expression in response to different stocking densities. *Fish Physiology and Biochemistry*, 46(3):1039–1052, June 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00770-3`.

Huang:2020:PEM

[81] Xiaoli Huang, Guanqing Xiong, and Lizi Yin. Protective effects of metallothionein and vitamin E in the trunk kidney and blood of cadmium poisoned *Ctenopharyngodon idellus*. *Fish Physiology and Biochemistry*, 46(3):1053–1061, June 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00771-2`.

Huang:2020:CBO

[82] Yung-Sen Huang, Xuan-Hao Wu, and Guan-Ru Chen. Correlation between the ovarian status and the androgen sensibility in the cultured Japanese eel, *Anguilla japonica*. *Fish Physiology and Biochemistry*, 46 (3):1063–1074, June 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00772-1`.

Antonopoulou:2020:EWT

[83] Efthimia Antonopoulou, Ioanna Chatzigiannidou, and Stavros Chatzifotis. Effect of water temperature on cellular stress responses in meagre (*Argyrosomus regius*). *Fish Physiology and Biochemistry*, 46(3):1075–1091, June 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00773-0`.

Luo:2020:EDE

[84] Jiaxiang Luo, Yi Li, and Qicun Zhou. Effects of dietary exogenous xylanase supplementation on growth performance, intestinal health, and carbohydrate metabolism of juvenile large yellow croaker, *Larimichthys crocea*. *Fish Physiology and Biochemistry*, 46(3):1093–1110, June 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00774-z`.

Pham:2020:SCT

[85] Hung Quoc Pham and Hoang Minh Le. Seasonal changes in three indices of gonadal maturation in male golden rabbitfish (*Siganus guttatus*): implications for artificial propagation. *Fish Physiology and Biochemistry*, 46(3):1111–1120, June 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00776-x`.

Iwaizumi:2020:PDE

[86] Masaki Iwaizumi, Hayato Yokoi, and Tohru Suzuki. Plasmid delivery by electroporation into fish skeletal muscle for recombinant protein secretion and uptake by oocytes. *Fish Physiology and Biochemistry*, 46 (3):1121–1130, June 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00775-y`.

Gokcek:2020:ABG

[87] Emel Özcan Gökçek and Raziye Işık. Associations between genetic variants of the insulin-like growth factor I (GF-I) gene and growth traits in European sea bass (*Dicentrarchus labrax*, L.). *Fish Physiology and Biochemistry*, 46(3):1131–1138, June 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00779-8`.

Yuan:2020:EFS

[88] Dengyue Yuan, Xin Zhang, and Zhiqiong Li. Effects of feeding status on *nucb1* and *nucb2A* mRNA expression in the hypothalamus of *Schizothorax davidi*. *Fish Physiology and Biochemistry*, 46(3):1139–1154, June 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00780-1`.

He:2020:ERS

[89] Zhi He, Faqiang Deng, and Taiming Yan. Expression and regulation of smad2 by gonadotropins in the protogynous hermaphroditic ricefield eel (*Monopterus albus*). *Fish Physiology and Biochemistry*, 46(3):1155–1165, June 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00778-9`.

Mohammadi:2020:EDE

[90] Ghasem Mohammadi, Gholamreza Rafiee, and Hisham A. Abdelrahman. Effects of dietary *Lactobacillus plantarum* (KC426951) in biofloc and

stagnant-renewal culture systems on growth performance, mucosal parameters, and serum innate responses of Nile tilapia *Oreochromis niloticus*. *Fish Physiology and Biochemistry*, 46(3):1167–1181, June 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00777-w`.

Salamat:2020:OSL

[91] Negin Salamat and Negin Derakhshesh. Oxidative stress in liver cell culture from mullet, *Liza klunzingeri*, induced by short-term exposure to benzo[a]pyrene and nonylphenol. *Fish Physiology and Biochemistry*, 46 (4):1183–1197, August 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00783-y`.

Koca:2020:RSS

[92] Seval Bahadir Koca, Nalan Ozgur Yigit, and Ozlem Ozmen. Reversible sterilization by supplementing turmeric (*Curcuma longa*) powder to diets of female *Pseudotropheus socolofi*. *Fish Physiology and Biochemistry*, 46 (4):1199–1205, August 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00781-0`.

Deng:2020:GTC

[93] Dapeng Deng, Xiao Yan, and Guoxing Nie. Glucose transporter 2 in common carp (*Cyprinus carpio* L.): molecular cloning, tissue expression, and the responsiveness to glucose, insulin, and glucagon. *Fish Physiology and Biochemistry*, 46(4):1207–1218, August 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00782-z`.

Choi:2020:GRH

[94] Ji Yong Choi and Cheol Young Choi. Gonadotropin-releasing hormone-independent effects of recombinant vertebrate ancient long opsin in the goldfish *Carassius auratus* reveal alternative reproduction pathways. *Fish Physiology and Biochemistry*, 46(4):1219–1227, August 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00784-x`.

Liu:2020:IPF

[95] Yan Liu, Si-Lan Han, and Zhen-Yu Du. Impaired peroxisomal fat oxidation induces hepatic lipid accumulation and oxidative damage in Nile tilapia. *Fish Physiology and Biochemistry*, 46(4):1229–1242, August 2020.

CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-020-00785-w.

Koya:2020:EPT

[96] Yasunori Koya, Ryoji Fujii, and Takaharu Natsumeda. Effects of preventing a temperature decrease during winter on reproduction of male small-egged Kajika, *Cottus pollux* SE. *Fish Physiology and Biochemistry*, 46(4):1243–1253, August 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-020-00787-8.

Li:2020:GTR

[97] Juan Li, Liangyi Xue, and Zhengjia Lou. Gill transcriptomes reveal expression changes of genes related with immune and ion transport under salinity stress in silvery pomfret (*Pampus argenteus*). *Fish Physiology and Biochemistry*, 46(4):1255–1277, August 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-020-00786-9.

Wu:2020:PFE

[98] Minglin Wu, Xiaowu Chen, and Yangyang Jiang. Pigmentation formation and expression analysis of tyrosinase in *Siniperca chuatsi*. *Fish Physiology and Biochemistry*, 46(4):1279–1293, August 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-020-00788-7.

Elbesthi:2020:ERP

[99] Randa Taher A. Elbesthi, Keriman Yürüten Özdemir, and Adem Yavuz Sönmez. Effects of ribwort plantain (*Plantago lanceolata*) extract on blood parameters, immune response, antioxidant enzyme activities, and growth performance in rainbow trout (*Oncorhynchus mykiss*). *Fish Physiology and Biochemistry*, 46(4):1295–1307, August 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-020-00790-z.

Biller:2020:USC

[100] Jaqueline Dalbello Biller, Leonardo Susumu Takahashi, and Elisabeth Criscuolo Urbinati. Under stress conditions, pacu *Piaractus mesopotamicus* modulates the metabolic allostatic load even after *Dolops carvalhoi* challenge to maintain self-protection mechanisms. *Fish Physiology and Biochemistry*, 46(4):1309–1321, August 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-020-00789-6.

Adeshina:2020:DTI

[101] Ibrahim Adeshina and Mohsen Abdel-Tawwab. Dietary taurine incorporation to high plant protein-based diets improved growth, biochemical, immunity, and antioxidants biomarkers of African catfish, *Clarias gariepinus* (B.). *Fish Physiology and Biochemistry*, 46(4):1323–1335, August 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00791-y`.

Meena:2020:DCN

[102] Lakan Lal Meena, Mukunda Goswami, and Dhanjit Kumar Das. Development and characterization of a new DRCF cell line from Indian wild strain zebrafish *Danio rerio* (Hamilton 1822). *Fish Physiology and Biochemistry*, 46(4):1337–1347, August 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00792-x`.

Goh:2020:RSR

[103] Pei-Tian Goh, Meng-Kiat Kuah, and Alexander Chong Shu-Chien. The requirements for sterol regulatory element-binding protein (Srebp) and stimulatory protein 1 (Sp1)-binding elements in the transcriptional activation of two freshwater fish *Channa striata* and *Danio rerio* elovl5 elongase. *Fish Physiology and Biochemistry*, 46(4):1349–1359, August 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00793-w`.

Duan:2020:DPD

[104] Xu-Dong Duan, Lin Feng, and Xiao-Qiu Zhou. The dynamic process of dietary soybean β-conglycinin in digestion, absorption, and metabolism among different intestinal segments in grass carp (*Ctenopharyngodon idella*). *Fish Physiology and Biochemistry*, 46(4):1361–1374, August 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00794-9`.

Adeshina:2020:DSE

[105] Ibrahim Adeshina, Musa Idi-Ogede Abubakar, and Bunmi Elizabeth Ajala. Dietary supplementation with *Lactobacillus acidophilus* enhanced the growth, gut morphometry, antioxidant capacity, and the immune response in juveniles of the common carp, *Cyprinus carpio*. *Fish Physiology and Biochemistry*, 46(4):1375–1385, August 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00796-7`.

Motlagh:2020:INS

[106] Hamidreza Ahmadniaye Motlagh, Ali Javadmanesh, and Omid Safari. Improvement of non-specific immunity, growth, and activity of digestive enzymes in *Carassius auratus* as a result of apple cider vinegar administration to diet. *Fish Physiology and Biochemistry*, 46(4):1387–1395, August 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00797-6`.

Pervin:2020:ADL

[107] Mst. Arzu Pervin, Halima Jahan, and Zakir Hossain. Appraisal of different levels of soybean meal in diets on growth, digestive enzyme activity, antioxidation, and gut histology of tilapia (*Oreochromis niloticus*). *Fish Physiology and Biochemistry*, 46(4):1397–1407, August 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00798-5`.

Liu:2020:EDD

[108] Hao Liu, Jun-Jiang Yang, and Yuan-Zhi Yang. Effects of different dietary carbohydrate-to-lipid ratios on growth, plasma biochemical indexes, digestive, and immune enzymes activities of sub-adult orange-spotted grouper *Epinephelus coioides*. *Fish Physiology and Biochemistry*, 46(4):1409–1420, August 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00799-4`.

deAssis:2020:PAE

[109] Rudney Weiber Silva de Assis and Elisabeth Criscuolo Urbinati. Physiological activity of *Aloe vera* in pacu (*Piaractus mesopotamicus*) inoculated with *Aeromonas hydrophila*. *Fish Physiology and Biochemistry*, 46 (4):1421–1430, August 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00800-0`.

Octavera:2020:PCR

[110] Anna Octavera and Goro Yoshizaki. Production of Chinese rosy bitterling offspring derived from frozen and vitrified whole testis by spermatogonial transplantation. *Fish Physiology and Biochemistry*, 46(4):1431–1442, August 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00802-y`.

Jafari:2020:SES

[111] Naghmeh Jafari, Hamed Abdollahpour, and Bahram Falahatkar. Stimulatory effects of short-term calcitonin administration on plasma calcium, magnesium, phosphate, and glucose in juvenile Siberian sturgeon *Acipenser baerii*. *Fish Physiology and Biochemistry*, 46(4):1443–1449, August 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00801-z`.

Olsen:2020:ECF

[112] K. Håkan Olsén and Hanna L. Olsén. Exposure to carbamate fungicide iodocarb does not affect reproductive behavior or milt volumes in precocious male brown trout (*Salmo trutta* L.) parr. *Fish Physiology and Biochemistry*, 46(4):1451–1460, August 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00803-x`.

Shaliutina-Kolesova:2020:SPF

[113] Anna Shaliutina-Kolešová, Saeed Ashtiani, and Rui Nian. Seminal plasma fractions can protect common carp (*Cyprinus carpio*) sperm during cryopreservation. *Fish Physiology and Biochemistry*, 46(4):1461–1468, August 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00805-9`.

Yang:2020:MIG

[114] Guokun Yang, Wenli Zhao, and Guoxing Nie. Molecular identification of grass carp *igfbp2* and the effect of glucose, insulin, and glucagon on *igfbp2* mRNA expression. *Fish Physiology and Biochemistry*, 46(4):1469–1482, August 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00804-w`.

Singh:2020:PES

[115] Aradhana Singh and Bela Zutshi. Photoperiodic effects on somatic growth and gonadal maturation in Mickey Mouse platy, *Xiphophorus maculatus* (Gunther, 1866). *Fish Physiology and Biochemistry*, 46(4):1483–1495, August 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00806-8`.

Okomoda:2020:EEO

[116] V. T. Okomoda, S. Mithun, and A. Hassan. Environmental effects on the oxygen consumption rate in juvenile *Epinephelus fuscoguttatus* (Forsskål,

1775). *Fish Physiology and Biochemistry*, 46(4):1497–1505, August 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00807-7`.

Ding:2020:TAB

[117] Weidong Ding, Liping Cao, and Xuwen Bing. Transcriptome analysis of blood for the discovery of sex-related genes in ricefield eel *Monopterus albus*. *Fish Physiology and Biochemistry*, 46(4):1507–1518, August 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00809-5`.

Cui:2020:CTA

[118] Wenxiao Cui, Aijun Ma, and Tingting Zhao. Comparative transcriptomic analysis reveals mechanisms of divergence in osmotic regulation of the turbot *Scophthalmus maximus*. *Fish Physiology and Biochemistry*, 46(4): 1519–1536, August 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00808-6`.

Chen:2020:ECE

[119] Yan Chen, Yucen Bai, and Shaogang Xu. Effects of chronic exposure of waterborne copper on the antioxidant system and tissue accumulation in golden trout (*Oncorhynchus mykiss aguabonita*). *Fish Physiology and Biochemistry*, 46(4):1537–1547, August 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00810-y`.

Zahran:2020:AIP

[120] Eman Zahran, Samia Elbahnaswy, and Mansour El-Matbouli. Antioxidative and immunoprotective potential of *Chlorella vulgaris* dietary supplementation against chlorpyrifos-induced toxicity in Nile tilapia. *Fish Physiology and Biochemistry*, 46(4):1549–1560, August 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00814-8`.

Asely:2020:EZM

[121] Amel El Asely, Aziza Amin, and Mahmoud A. O. Dawood. *Ziziphus mauritiana* supplementation of Nile tilapia (*Oreochromis niloticus*) diet for improvement of immune response to *Aeromonas hydrophila* infection. *Fish Physiology and Biochemistry*, 46(4):1561–1575, August 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00812-w`.

Fiocchi:2020:DMH

[122] Eleonora Fiocchi, Michele Civettini, and Amedeo Manfrin. Development of molecular and histological methods to evaluate stress oxidative biomarkers in sea bass (*Dicentrarchus labrax*). *Fish Physiology and Biochemistry*, 46(4):1577–1588, August 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00811-x`.

Zhou:2020:CIG

[123] Yang Zhou, Wei-Dan Jiang, and Xiao-Qiu Zhou. Cinnamaldehyde improves the growth performance and digestion and absorption capacity in grass carp (*Ctenopharyngodon idella*). *Fish Physiology and Biochemistry*, 46(4):1589–1601, August 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00813-9`.

Xu:2020:TDT

[124] Houguo Xu, Xiaoxue Meng, and Mengqing Liang. Tissue distribution of transcription for 29 lipid metabolism-related genes in *Takifugu rubripes*, a marine teleost storing lipid predominantly in liver. *Fish Physiology and Biochemistry*, 46(4):1603–1619, August 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00815-7`.

Lim:2020:DOR

[125] Leong-Seng Lim, Sin-Ying Tan, and Hon Jung Liew. Diel osmorespiration rhythms of juvenile marble goby (*Oxyeleotris marmorata*). *Fish Physiology and Biochemistry*, 46(4):1621–1629, August 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00817-5`.

Huang:2020:SED

[126] Chen cui Huang, Jian Sun, and Wei Deng. Systemic effect of dietary lipid levels and α-lipoic acid supplementation on nutritional metabolism in zebrafish (*Danio rerio*): focusing on the transcriptional level. *Fish Physiology and Biochemistry*, 46(5):1631–1644, October 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00795-8`.

Sun:2020:ICT

[127] Jian Sun, Handong Li, and Hong Ji. Identification and characterization of two isoforms of acyl-coenzyme a oxidase 1 gene and their expression

in fasting-induced grass carp *Ctenopharyngodon idella* adipocyte lipolysis. *Fish Physiology and Biochemistry*, 46(5):1645–1652, October 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-020-00816-6.

Yebra-Pimentel:2020:TTI

[128] Elena Santidrián Yebra-Pimentel, Bruno Reis, and Ron P. H. Dirks. Temperature training improves transcriptional homeostasis after heat shock in juvenile Atlantic sturgeon (*Acipenser oxyrinchus*). *Fish Physiology and Biochemistry*, 46(5):1653–1664, October 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-020-00818-4.

Lu:2020:GSP

[129] Rong-Hua Lu, Chao-Bin Qin, and Guo-Xing Nie. Grape seed proanthocyanidin extract ameliorates hepatic lipid accumulation and inflammation in grass carp (*Ctenopharyngodon idella*). *Fish Physiology and Biochemistry*, 46(5):1665–1677, October 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-020-00819-3.

Li:2020:IBP

[130] HuaTao Li, YuTing Ma, and Jun Jiang. Integrated biomarker parameters response to the toxic effects of high stocking density, $CuSO_4$, and trichlorfon on fish and protective role mediated by *Angelica sinensis* extract. *Fish Physiology and Biochemistry*, 46(5):1679–1698, October 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-020-00821-9.

Chen:2020:IEN

[131] Xiumei Chen, Qiuju Wang, and Guiqin Wang. Identification of the Nrf2 in the fathead minnow muscle cell line: role for a regulation in response to H_2O_2 induced the oxidative stress in fish cell. *Fish Physiology and Biochemistry*, 46(5):1699–1711, October 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-020-00822-8.

Cao:2020:RSA

[132] Danyu Cao, Jinfeng Li, and Zhongliang Wang. RNA-seq analysis reveals divergent adaptive response to hyper- and hypo-salinity in cobia, *Rachycentron canadum*. *Fish Physiology and Biochemistry*, 46(5):1713–1727, October 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-020-00823-7.

Ma:2020:TAR

[133] Zhenhua Ma, Xing Zheng, and Jian G. Qin. Transcriptional analysis reveals physiological response to acute acidification stress of barramundi *Lates calcarifer* (Bloch) in coastal areas. *Fish Physiology and Biochemistry*, 46(5):1729–1741, October 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00824-6`.

Chen:2020:IFC

[134] Hua pu Chen, Xue fan Cui, and Guang li Li. Identification, functional characterization, and estrogen regulation on gonadotropin-releasing hormone in the spotted scat, *Scatophagus argus*. *Fish Physiology and Biochemistry*, 46(5):1743–1757, October 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00825-5`.

Yin:2020:EDI

[135] Long Yin, Ye Zhao, and Jun Jiang. Effect of dietary isoleucine on skin mucus barrier and epithelial physical barrier functions of hybrid bagrid catfish *Pelteobagrus vachelli* × *Leiocassis longirostris*. *Fish Physiology and Biochemistry*, 46(5):1759–1774, October 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00826-4`.

Maciuszek:2020:EAI

[136] Magdalena Maciuszek, Lukasz Pijanowski, and Magdalena Chadzinska. 17β-estradiol affects the innate immune response in common carp. *Fish Physiology and Biochemistry*, 46(5):1775–1794, October 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00827-3`.

Wei:2020:ELL

[137] Yuliang Wei, Benxiang Li, and Mengqing Liang. Effects of lysine and leucine in free and different dipeptide forms on the growth, amino acid profile and transcription of intestinal peptide, and amino acid transporters in turbot (*Scophthalmus maximus*). *Fish Physiology and Biochemistry*, 46 (5):1795–1807, October 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00828-2`.

Rodrigues-Filho:2020:GRH

[138] J. A. Rodrigues-Filho, C. E. O. Garcia, and R. G. Moreira. Gonadal remodeling and hormonal regulation during sex change of juvenile dusky

grouper *Epinephelus marginatus* (Teleostei, Serranidae), an endangered protogynous hermaphrodite fish. *Fish Physiology and Biochemistry*, 46 (5):1809–1824, October 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00830-8`.

Beltran:2020:VGT

[139] Jorge F. Beltrán, Lisandra Herrera Belén, and Jorge G. Farias. The voltage-gated T-type Ca^{2+} channel is key to the sperm motility of Atlantic salmon (*Salmo salar*). *Fish Physiology and Biochemistry*, 46(5): 1825–1831, October 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00829-1`.

Stoehr:2020:TER

[140] Ashley A. Stoehr, Jeanine M. Donley, and Diego Bernal. Thermal effects on red muscle contractile performance in deep-diving, large-bodied fishes. *Fish Physiology and Biochemistry*, 46(5):1833–1845, October 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00831-7`.

Vijay:2020:SAC

[141] Pooja Vijay and Neeta Sehgal. Structural analysis and characterization of egg-envelope in the Indian freshwater murrel, *Channa punctatus*. *Fish Physiology and Biochemistry*, 46(5):1847–1856, October 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00834-4`.

Baldissera:2020:DOA

[142] Matheus D. Baldissera, Carine F. Souza, and Adalberto Luis Val. Disturbance of oxidant/antioxidant status and impairment on fillet fatty acid profiles in *Brycon amazonicus* subjected to acute heat stress. *Fish Physiology and Biochemistry*, 46(5):1857–1866, October 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00835-3`.

Serafini:2020:NOL

[143] Suélen Serafini, Carine de Freitas Souza, and Aleksandro Schafer Da Silva. Nitric oxide levels in brain, liver, and gills of silver catfish (*Rhamdia quelen*) exposed to the antiparasitic eprinomectin. *Fish Physiology and Biochemistry*, 46(5):1867–1872, October 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00836-2`.

Dong:2020:ETI

[144] Hong biao Dong, Yong xu Sun, and Jia song Zhang. The effect of teprenone on the intestinal morphology and microbial community of Chinese sea bass (*Lateolabrax maculatus*) under intermittent hypoxic stress. *Fish Physiology and Biochemistry*, 46(5):1873–1882, October 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00838-0`. See correction [188].

Paknejad:2020:DPE

[145] Hammed Paknejad, Seyed Pezhman Hosseini Shekarabi, and Soheila Rastegari. Dietary peppermint (*Mentha piperita*) powder affects growth performance, hematological indices, skin mucosal immune parameters, and expression of growth and stress-related genes in Caspian roach (*Rutilus caspicus*). *Fish Physiology and Biochemistry*, 46(5):1883–1895, October 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00839-z`.

Wang:2020:ECN

[146] Lu Wang, Zhenjie Cao, and Weiliang Guo. Establishment and characterization of a new cell line from the muscle of humpback grouper (*Cromileptes altivelis*). *Fish Physiology and Biochemistry*, 46(6):1897–1907, December 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00841-5`.

Javanmardi:2020:EDL

[147] Sina Javanmardi, Kamran Rezaei Tavabe, and Rana Bahadori. Effects of different levels of vitamin B_6 in tank water on the Nile tilapia (*Oreochromis niloticus*): growth performance, blood biochemical parameters, intestine and liver histology, and intestinal enzyme activity. *Fish Physiology and Biochemistry*, 46(6):1909–1920, December 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00840-6`.

Kovesi:2020:STE

[148] Benjámin Kövesi, Szabina Kulcsár, and Csilla Pelyhe. Short-term effects of deoxynivalenol, T-2 toxin, fumonisin B1 or ochratoxin on lipid peroxidation and glutathione redox system and its regulatory genes in common carp (*Cyprinus carpio* L.) liver. *Fish Physiology and Biochemistry*, 46(6): 1921–1932, December 2020. CODEN FPBIEP. ISSN 0920-1742 (print),

1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-020-00845-1.

Yang:2020:CIG

[149] Xinrui Yang, Yajun Gao, and Anying Zhang. Cloning and identification of grass carp transcription factor HSF1 and its characterization involving the production of fish HSP70. *Fish Physiology and Biochemistry*, 46(6): 1933–1945, December 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-020-00842-4.

Zang:2020:HOP

[150] Yuwei Zang, Shuting Zheng, and Wei Li. Heme oxygenase 1 plays a crucial role in swamp eel response to oxidative stress induced by cadmium exposure or *Aeromonas hydrophila* infection. *Fish Physiology and Biochemistry*, 46(6):1947–1963, December 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-020-00846-0.

Zhang:2020:ETK

[151] Fan Zhang, Kun Hu, and Jiming Ruan. Effects of two kinds of fishery drugs on the expressions of GAD and GABA-t mRNA in crucian carp (*Carassius auratus gibelio*). *Fish Physiology and Biochemistry*, 46(6): 1965–1973, December 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-020-00847-z.

Dzyuba:2020:SAS

[152] Viktoriya Dzyuba, Alexandre Ninhaus-Silveira, and Borys Dzyuba. Sperm antioxidant system in ocellate river stingray *Potamotrygon motoro* at transition from seminal vesicle to cloaca. *Fish Physiology and Biochemistry*, 46(6):1975–1980, December 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-020-00848-y.

Li:2020:AEB

[153] Hang Li, Qifang Lai, and Zhen Sun. Ammonia excretion and blood gas variation in naked carp (*Gymnocypris przewalskii*) exposed to acute hypoxia and high alkalinity. *Fish Physiology and Biochemistry*, 46(6): 1981–1990, December 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-020-00850-4.

Xu:2020:EDA

[154] Anle Xu, Jingbo Shang-Guan, and Qiang Chen. Effects of dietary asafoetida (*Ferula sinkiangensis* K. M. Shen) levels on feeding attraction activity, growth performance, healthiness, and digestive enzyme activity in juvenile *Lateolabrax japonicus*. *Fish Physiology and Biochemistry*, 46(6): 1991–2003, December 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00849-x`.

He:2020:EML

[155] Li He, Lin Liu, and Lili Wei. Effects of MC-LR on histological structure and cell apoptosis in the kidney of grass carp (*Ctenopharyngodon idella*). *Fish Physiology and Biochemistry*, 46(6):2005–2014, December 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00833-5`.

Wang:2020:VAN

[156] Jie Wang, Xu-Fang Liang, and Ping Ren. Valine acts as a nutritional signal in brain to activate TORC1 and attenuate postprandial ammonian excretion in Chinese perch (*Siniperca chuatsi*). *Fish Physiology and Biochemistry*, 46(6):2015–2025, December 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00767-y`.

Schnabel:2020:EAS

[157] Elyse Schnabel and Travis E. Wilcoxen. Effects of ammonium sulfate on stress physiology and innate immunity of Western mosquitofish (*Gambusia affinis*). *Fish Physiology and Biochemistry*, 46(6):2027–2035, December 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00855-z`.

Chen:2020:CPT

[158] Yan Chen, Wenkan Liu, and Hai Huang. Comprehensive physiological and transcriptomic analysis revealing the responses of hybrid grouper (*Epinephelus fuscoguttatus* [female sign] × *E. lanceolatus* [male sign]) to the replacement of fish meal with soy protein concentrate. *Fish Physiology and Biochemistry*, 46(6):2037–2053, December 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00851-3`.

Baldissera:2020:DEO

[159] Matheus D. Baldissera, Carine F. Souza, and Adalberto L. Val. Dietary exposure to ochratoxin a reduces growth performance and impairs hepatic purinergic signaling in tambaqui (*Colossoma macropomum*). *Fish Physiology and Biochemistry*, 46(6):2055–2064, December 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00854-0`.

Soni:2020:IHP

[160] Rakesh Soni and Sushant Kumar Verma. Impact of herbicide pretilachlor on reproductive physiology of walking catfish, *Clarias batrachus* (Linnaeus). *Fish Physiology and Biochemistry*, 46(6):2065–2072, December 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00853-1`.

Tian:2020:ITD

[161] Zhengzhi Tian, Shaoqi Xu, and Zhiqiong Li. Identification, tissue distribution, periprandial expression, and anorexigenic effect of spexin in Siberian sturgeon, *Acipenser baeri*. *Fish Physiology and Biochemistry*, 46(6): 2073–2084, December 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00856-y`.

Rong:2020:TPP

[162] Hua Rong, Fan Lin, and Xiaobo Wen. The TOR pathway participates in the regulation of growth development in juvenile spotted drum (*Nibea diacanthus*) under different dietary hydroxyproline supplementation. *Fish Physiology and Biochemistry*, 46(6):2085–2099, December 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00863-z`.

Li:2020:TET

[163] Ping Li and Zhi-Hua Li. Toxicity evaluation of triphenyltin in zebrafish larvae by embryonic malformation, retinal development, and GH/IGF axis. *Fish Physiology and Biochemistry*, 46(6):2101–2107, December 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00861-1`.

Mahgoub:2020:EFP

[164] Hebatallah A. Mahgoub, Mohamed A. M. El-Adl, and Christopher J. Martyniuk. The effect of fucoidan or potassium permanganate on growth

performance, intestinal pathology, and antioxidant status in Nile tilapia (*Oreochromis niloticus*). *Fish Physiology and Biochemistry*, 46(6):2109–2131, December 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00858-w`.

Yang:2020:ECS

[165] Sen Yang, Wenhua Huang, and Zining Meng. Effect of chilled storage on sperm quality of basa catfish (*Pangasius bocourti*). *Fish Physiology and Biochemistry*, 46(6):2133–2141, December 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00860-2`.

Elabd:2020:NSD

[166] Hiam Elabd, Han-Ping Wang, and Aya Matter. Nano spirulina dietary supplementation augments growth, antioxidative and immunological reactions, digestion, and protection of Nile tilapia, *Oreochromis niloticus*, against *Aeromonas veronii* and some physical stressors. *Fish Physiology and Biochemistry*, 46(6):2143–2155, December 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00864-y`.

Neves:2020:PMR

[167] Luanna do Carmo Neves, Gisele Cristina Favero, and Ronald Kennedy Luz. Physiological and metabolic responses in juvenile *Colossoma macropomum* exposed to hypoxia. *Fish Physiology and Biochemistry*, 46(6):2157–2167, December 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00868-8`.

Guller:2020:EDL

[168] Uğur Güller, Şükrü Önalan, and Ömer İrfan Küfrevioğlu. Effects of different LED light spectra on rainbow trout (*Oncorhynchus mykiss*): in vivo evaluation of the antioxidant status. *Fish Physiology and Biochemistry*, 46(6):2169–2180, December 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00865-x`.

Reda:2020:RDF

[169] Rasha M. Reda, Amel El Asely, and Mohamed A. Mahmoud. Replacement of dietary fish oil with plant oils improves the immunological responses and the antioxidant status in *Oreochromis niloticus* exposed to suboptimal temperature. *Fish Physiology and Biochemistry*, 46(6):2181–2196, De-

cember 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-020-00867-9.

Wang:2020:OFF

[170] Yuyu Wang, Suming Xie, and Gangchun Xu. Optimum feeding frequency of juvenile largemouth bass (*Micropterus salmoides*) reared in in-pond raceway recirculating culture system. *Fish Physiology and Biochemistry*, 46(6):2197–2212, December 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-020-00866-w.

Putland:2020:AEA

[171] Rosalyn Putland, Loranzie Rogers, and Allen Mensinger. Anesthetic effects of AQUI-S20E(R) (eugenol) on the afferent neural activity of the oyster toadfish (*Opsanus tau*). *Fish Physiology and Biochemistry*, 46(6): 2213–2226, December 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-020-00874-w.

Sun:2020:MRH

[172] Jun Long Sun, Liu Lan Zhao, and Song Yang. MicroRNA regulation in hypoxic environments: differential expression of microRNAs in the liver of largemouth bass (*Micropterus salmoides*). *Fish Physiology and Biochemistry*, 46(6):2227–2242, December 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-020-00877-7.

Wu:2020:EDV

[173] Chenglong Wu, Bin Lu, and Jinyun Ye. Effects of dietary vitamin D_3 on growth performance, antioxidant capacities and innate immune responses in juvenile black carp *Mylopharyngodon piceus*. *Fish Physiology and Biochemistry*, 46(6):2243–2256, December 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-020-00876-8.

Saunders:2020:MCT

[174] Janet Saunders, David J. Speare, and Sandra McConkey. Methemoglobin concentrations in three salmonid species following exposure to benzocaine or tricaine methanesulfonate. *Fish Physiology and Biochemistry*, 46(6): 2257–2263, December 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-020-00878-6.

Amri:2020:EMF

[175] Afef Amri, Kaouthar Kessabi, and Jamel Jebali. Effect of melatonin and folic acid supplementation on the growth performance, antioxidant status, and liver histology of the farmed gilthead sea bream (*Sparus aurata* L.) under standard rearing conditions. *Fish Physiology and Biochemistry*, 46(6): 2265–2280, December 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00879-5`.

Ellingsen:2020:SAS

[176] Ståle Ellingsen, Shailesh Narawane, and Ivar Rønnestad. Sequence analysis and spatiotemporal developmental distribution of the cat-1-type transporter *slc7a1a* in zebrafish (*Danio rerio*). *Fish Physiology and Biochemistry*, 46(6):2281–2298, December 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00873-x`.

Wang:2020:EIM

[177] Nan Wang, Zhengyao Guo, and Yuehong Li. Effect on intestinal microbiota, bioaccumulation, and oxidative stress of *Carassius auratus gibelio* under waterborne cadmium exposure. *Fish Physiology and Biochemistry*, 46(6):2299–2309, December 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00870-0`.

Huang:2020:EPG

[178] Xiaocheng Huang, Jian Sun, and Hong Ji. Perilipin 1–3 in grass carp *Ctenopharyngodon idella*: molecular characterization, gene structure, tissue distribution, and mRNA expression in DHA-induced lipid droplet formation in adipocytes. *Fish Physiology and Biochemistry*, 46(6):2311–2322, December 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00857-x`.

Islam:2020:EWA

[179] S. M. Majharul Islam, Md Mahiuddin Zahangir, and Md Shahjahan. Extreme warm acclimation temperature alters oxygen consumption, micronucleus formation in erythrocytes, and gill morphology of rohu (*Labeo rohita*) fingerlings. *Fish Physiology and Biochemistry*, 46(6): 2323–2330, December 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00886-6`.

Foroutani:2020:MMI

[180] Maryam Beheshti Foroutani, Christopher C. Parrish, and Matthew L. Rise. Minimizing marine ingredients in diets of farmed Atlantic salmon (*Salmo salar*): effects on liver and head kidney lipid class and fatty acid composition. *Fish Physiology and Biochemistry*, 46(6):2331–2353, December 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00862-0`.

Adorian:2020:LFM

[181] Taida Juliana Adorian, Patrícia Inês Mombach, and Leila Picolli da Silva. Linseed fibers modulate the production of short-chain fatty acids and improve performance and plasma and skin mucus parameters of silver catfish (*Rhamdia quelen*). *Fish Physiology and Biochemistry*, 46(6): 2355–2366, December 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00885-7`.

Andersen:2020:HGP

[182] Øivind Andersen, Juan Andrés Rubiolo, and Paulino Martinez. The hemoglobin Gly16β 1asp polymorphism in turbot (*Scophthalmus maximus*) is differentially distributed across European populations. *Fish Physiology and Biochemistry*, 46(6):2367–2376, December 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00872-y`.

Baldissera:2020:COD

[183] Matheus D. Baldissera, Carine F. Souza, and Adalberto L. Val. Consequences of oxidative damage on the fatty acid profile in muscle of *Cichlasoma amazonarum* acutely exposed to copper. *Fish Physiology and Biochemistry*, 46(6):2377–2387, December 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00884-8`.

Zhang:2020:MCE

[184] Chunnuan Zhang, Kangle Lu, and Changchang Pu. Molecular cloning, expression HSP70 and its response to bacterial challenge and heat stress in *Microptenus salmoides*. *Fish Physiology and Biochemistry*, 46(6): 2389–2402, December 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00883-9`.

Chaube:2020:EPK

[185] R. Chaube, S. Sharma, and K. P. Joy. Expression profile of kisspeptin2 and gonadotropin-releasing hormone2 mRNA during photo-thermal and melatonin treatments in the female air-breathing catfish *Heteropneustes fossilis*. *Fish Physiology and Biochemistry*, 46(6):2403–2419, December 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00888-4`.

Bera:2020:HMI

[186] Aritra Bera, Narinder Kumar Chadha, and Paramita Banerjee Sawant. Hypoxia-mediated inhibition of cholesterol synthesis leads to disruption of nocturnal sex steroidogenesis in the gonad of koi carp, *Cyprinus carpio*. *Fish Physiology and Biochemistry*, 46(6):2421–2435, December 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00887-5`.

Sony:2020:EMF

[187] Nadia Mahjabin Sony, Md. Sakhawat Hossain, and Saichiro Yokoyama. Efficacy of mozuku fucoidan in alternative protein-based diet to improve growth, health performance, and stress resistance of juvenile red sea bream, *Pagrus major*. *Fish Physiology and Biochemistry*, 46(6): 2437–2455, December 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00881-x`.

Dong:2020:CET

[188] Hong biao Dong, Yong xu Sun, and Jia song Zhang. Correction to: The effect of teprenone on the intestinal morphology and microbial community of Chinese sea bass (*Lateolabrax maculatus*) under intermittent hypoxic stress. *Fish Physiology and Biochemistry*, 46(6):2457, December 2020. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00889-3`. See [144].

Jia:2021:IRR

[189] Yong Y. Jia, Mei L. Chi, and Zhi M. Gu. Identification of reproduction-related genes and pathways in the *Culter alburnus* H–P–G axis and characterization of their expression differences in malformed and normal gynogenetic ovaries. *Fish Physiology and Biochemistry*, 47(1):1–20, February 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00859-9`.

Roychowdhury:2021:TSI

[190] Prasun Roychowdhury, Mohammad Aftabuddin, and Manoj Kumar Pati. Thermal stress–induced oxidative damages in the liver and associated death in fish, *Labeo rohita*. *Fish Physiology and Biochemistry*, 47(1): 21–32, February 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00880-y`.

Macedo-Garzon:2021:DEG

[191] Beatriz Macedo-Garzón, Rosaura Loredo-Ranjel, and Rodolfo Cárdenas. Distribution and expression of GnRH 1, kiss receptor 2, and estradiol α and ß receptors in the anterior brain of females of *Chirostoma humboldtianum*. *Fish Physiology and Biochemistry*, 47(1):33–47, February 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00891-9`.

Ranjan:2021:EPX

[192] Amit Ranjan, Sarvendra Kumar, and Ashutosh Dharmendra Deo. Exogenous phytase and xylanase supplementation of formulated diets for rohu (*Labeo rohita*): impact on haematology, histology and IGF I gene expression. *Fish Physiology and Biochemistry*, 47(1):49–58, February 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00893-7`.

Ahmadifar:2021:BML

[193] Ehsan Ahmadifar, Naser Kalhor, and Morteza Yousefi. The blood and mRNA levels of antioxidant-related factors in common carp (*Cyprinus carpio*) fed *p*-coumaric acid. *Fish Physiology and Biochemistry*, 47(1): 59–68, February 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00894-6`.

Zhong:2021:MCF

[194] Dongming Zhong, Mingqing Zhang, and Hu Shu. Molecular cloning and functional characterization of *growth hormone–releasing hormone* in *Mastacembelus armatus*. *Fish Physiology and Biochemistry*, 47(1): 69–78, February 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00895-5`.

Singh:2021:ETF

[195] Samar Pal Singh, Tauqueer Ahmad, and Rina Chakrabarti. Effect of temperature on food consumption, immune system, antioxidant enzymes, and

heat shock protein 70 of *Channa punctata* (Bloch, 1793). *Fish Physiology and Biochemistry*, 47(1):79–91, February 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00896-4`.

Zhai:2021:RRL

[196] Yi Zhai, Si-Ping Deng, and Ming-Hui Li. The reproductive regulation of LPXRFa and its receptor in the hypothalamo-pituitary-gonadal axis of the spotted scat (*Scatophagus argus*). *Fish Physiology and Biochemistry*, 47(1):93–108, February 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00898-2`.

Yin:2021:AIW

[197] Leiming Yin, Lei Chen, and Xiaoming Yu. An acute increase in water temperature can decrease the swimming performance and energy utilization efficiency in rainbow trout (*Oncorhynchus mykiss*). *Fish Physiology and Biochemistry*, 47(1):109–120, February 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00897-3`.

Perera:2021:EGE

[198] Erick Perera, Enrique Rosell-Moll, and Jaume Pérez-Sánchez. Effects of genetics and early-life mild hypoxia on size variation in farmed gilthead sea bream (*Sparus aurata*). *Fish Physiology and Biochemistry*, 47 (1):121–133, February 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00899-1`.

Ferreira:2021:EOE

[199] Andre Lima Ferreira, Gisele Cristina Favero, and Ronald Kennedy Luz. Essential oil of *Ocimum gratissimum* (Linnaeus, 1753): efficacy for anesthesia and transport of *Oreochromis niloticus*. *Fish Physiology and Biochemistry*, 47(1):135–152, February 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00900-x`.

Arani:2021:EEP

[200] Mojtaba Mohammadi Arani, Amir Parviz Salati, and Omid Safari. The effect of *Pediococcus acidilactici* on mucosal immune responses, growth, and reproductive performance in zebrafish (*Danio rerio*). *Fish Physiology and Biochemistry*, 47(1):153–162, February 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00903-8`.

Tinkir:2021:LVS

[201] Merve Tinkir, Devrim Memiş, and Otomar Linhart. Level of in vitro storage of the European catfish (*Silurus glanis* L.) eggs at different temperatures. *Fish Physiology and Biochemistry*, 47(1):163–171, February 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00902-9`.

Han:2021:RLS

[202] Si-Lan Han, Yan Liu, and Zhen-Yu Du. The reduction of lipid-sourced energy production caused by ATGL inhibition cannot be compensated by activation of HSL, autophagy, and utilization of other nutrients in fish. *Fish Physiology and Biochemistry*, 47(1):173–188, February 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00904-7`.

Xu:2021:CNC

[203] Yang Xu, Yang Tian, and Qingwei Li. Correction to: A novel CDK-2 homolog identified in lamprey, *Lampetra japonica*, with roles in apoptosis. *Fish Physiology and Biochemistry*, 47(1):189, February 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00890-w`. See [2].

Kitahashi:2021:LIC

[204] Takashi Kitahashi, Daisuke Kurokawa, and Hironori Ando. Light-induced and circadian expressions of melanopsin genes *opn4xa* and *opn4xb* in the eyes of juvenile grass puffer *Takifugu alboplumbeus*. *Fish Physiology and Biochemistry*, 47(2):191–202, April 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00901-w`.

Onxayvieng:2021:HSD

[205] Kommaly Onxayvieng, Marina Piria, and Dapeng Li. High stocking density alters growth performance, blood biochemical profiles, and hepatic antioxidative capacity in gibel carp (*Carassius gibelio*). *Fish Physiology and Biochemistry*, 47(2):203–212, April 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00905-6`.

Chang:2021:MCF

[206] Zhiguang Chang, Minghui Yang, and Hong Ji. Molecular characterization and functional analysis of apoptosis-inducing factor (AIF) in palmitic acid-induced apoptosis in *Ctenopharyngodon idellus* kidney (CIK) cells.

Fish Physiology and Biochemistry, 47(2):213–224, April 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00907-4`.

Zhang:2021:MSE

[207] Jiaojiao Zhang, Yujin Li, and Xiaoping Zhang. Molecular structure, expression, and function analysis of BAFF gene in Chinese sucker, *Myxocyprinus asiaticus*. *Fish Physiology and Biochemistry*, 47(2):225–238, April 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00906-5`.

Marinho:2021:TSN

[208] C. S. Marinho, M. V. F. Matias, and C. L. P. S. Zanta. Toxicity of silver nanoparticles on different tissues in adult *Danio rerio*. *Fish Physiology and Biochemistry*, 47(2):239–249, April 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00909-2`.

Liu:2021:EHA

[209] YaQiu Liu and ZhiJian Wang. Effect of hypoxia and air-breathing restricted on respiratory physiology of air-breathing loach (*Paramisgurnus dabryanus*). *Fish Physiology and Biochemistry*, 47(2):251–263, April 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00908-3`.

Kennedy:2021:PGI

[210] Christopher J. Kennedy. P-glycoprotein induction and its energetic costs in rainbow trout (*Oncorhynchus mykiss*). *Fish Physiology and Biochemistry*, 47(2):265–279, April 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00911-8`.

Fakriadis:2021:SQG

[211] Ioannis Fakriadis and Constantinos C. Mylonas. Sperm quality of greater amberjack *Seriola dumerili* throughout the reproductive season and in response to GnRHa treatment with controlled release implants. *Fish Physiology and Biochemistry*, 47(2):281–292, April 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00910-9`.

Issac:2021:TTP

[212] Praveen Kumar Issac, Christy Lite, and Jesu Arockiaraj. Tryptophan-tagged peptide from serine threonine-protein kinase of *Channa striatus*

improves antioxidant defence in L6 myotubes and attenuates caspase 3–dependent apoptotic response in zebrafish larvae. *Fish Physiology and Biochemistry*, 47(2):293–311, April 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00912-7`.

Debnath:2021:APT

[213] Sanjeet Debnath and Surjya Kumar Saikia. Absorption of protein in teleosts: a review. *Fish Physiology and Biochemistry*, 47(2):313–326, April 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00913-6`.

Alavi:2021:SRD

[214] Sayyed Mohammad Hadi Alavi, Azadeh Hatef, and Igor Babiak. Some recent data on sperm morphology and motility kinetics in Atlantic cod (*Gadus morhua* L.). *Fish Physiology and Biochemistry*, 47(2):327–338, April 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00915-4`.

Zhang:2021:SNP

[215] Bo Zhang, Kangkang Peng, and Baolong Bao. Single-nucleotide polymorphisms responsible for pseudo-albinism and hypermelanosis in Japanese flounder (*Paralichthys olivaceus*) and reveal two genes related to malpigmentation. *Fish Physiology and Biochemistry*, 47(2):339–350, April 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00916-3`.

Lin:2021:MCF

[216] Yan Lin, Ling-Hong Miao, and Xian-Ping Ge. Molecular cloning and functional characterization of the hypoxia-inducible factor-1α in bighead carp (*Aristichthys nobilis*). *Fish Physiology and Biochemistry*, 47(2):351–364, April 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00917-2`.

Rimoldi:2021:IMC

[217] Simona Rimoldi, Micaela Antonini, and Genciana Terova. Intestinal microbial communities of rainbow trout (*Oncorhynchus mykiss*) may be improved by feeding a *Hermetia illucens* meal/low-fishmeal diet. *Fish Physiology and Biochemistry*, 47(2):365–380, April 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00918-1`.

Solovyev:2021:SCK

[218] Mikhail M. Solovyev, Elena N. Kashinskaya, and Francisco J. Moyano. Seasonal changes in kinetic parameters of trypsin in gastric and agastric fish. *Fish Physiology and Biochemistry*, 47(2):381–391, April 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00919-0`.

Wang:2021:CCE

[219] Qing Wang, Fangmei Lin, and HuiHong Zhao. Cloning and characterization of *rec8* gene in orange-spotted grouper (*Epinephelus coioides*) and Dmrt1 regulation of rec8 promoter activity. *Fish Physiology and Biochemistry*, 47(2):393–407, April 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00920-7`.

Alkan:2021:IGM

[220] Zehra Alkan and Ahmet R. Oğuz. Investigation of gill mucus cells of Lake Van fish (*Alburnus tarichi*) during reproductive migration. *Fish Physiology and Biochemistry*, 47(2):409–419, April 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00921-6`.

Yuan:2021:CET

[221] Dengyue Yuan, Bin Wang, and Lijun Li. Characterization and evaluation of the tissue distribution of *crh*, *apelin*, and *gnrh2* reveal responses to feeding states in *Schizothorax davidi*. *Fish Physiology and Biochemistry*, 47(2):421–438, April 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00922-5`.

Li:2021:CNB

[222] Ying Li, Yanping Ma, and Yugu Li. Characterization of a novel brain cell line from Jian carp (*Cyprinus carpio* var. Jian). *Fish Physiology and Biochemistry*, 47(2):439–449, April 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00923-4`.

Noor:2021:DSM

[223] Zohaib Noor, Mannal Noor, and Ali Muhammad Yousafzai. Dietary supplementations of methionine improve growth performances, innate immunity, digestive enzymes, and antioxidant activities of rohu (*Labeo rohita*). *Fish Physiology and Biochemistry*, 47(2):451–464, April 2021. CODEN

FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-021-00924-x.

Saylor:2021:NNA

[224] Ryan K. Saylor, Pamela J. Schofield, and Wayne A. Bennett. Non-native Asian swamp eel, *Monopterus albus/javanensis* (Zuiew, 1973/Lacepede, 1800), responses to low temperatures. *Fish Physiology and Biochemistry*, 47(2):465–476, April 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-021-00925-w.

Kookaram:2021:EOA

[225] Kazem Kookaram, Bagher Mojazi Amiri, and Amirreza Abed Elmdoust. Effect of oral administration of GnRHa+nanoparticles of chitosan in oogenesis acceleration of goldfish *Carassius auratus*. *Fish Physiology and Biochemistry*, 47(2):477–486, April 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-021-00926-9.

Hasan:2021:TDA

[226] Muhammad Mehedi Hasan, Purnama Arafah, and Yoshihiro Ochiai. Thermal denaturation and autoxidation profiles of carangid fish myoglobins. *Fish Physiology and Biochemistry*, 47(2):487–498, April 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-021-00928-7.

He:2021:DBC

[227] Chang He, Xiaoyan Jia, and Dingdong Zhang. Dietary berberine can ameliorate glucose metabolism disorder of *Megalobrama amblycephala* exposed to a high-carbohydrate diet. *Fish Physiology and Biochemistry*, 47(2):499–513, April 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-021-00927-8.

Schafer:2021:IEO

[228] Nadine Schäfer, Yagmur Kaya, and Marieke Verleih. Insights into early ontogenesis: characterization of stress and development key genes of pikeperch (*Sander lucioperca*) in vivo and in vitro. *Fish Physiology and Biochemistry*, 47(2):515–532, April 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-021-00929-6.

Martinez:2021:WFA

[229] Danixa Martínez, Catalina Moncada-Kopp, and Luis Vargas-Chacoff. Warming and freshening activate the transcription of genes involved in the cellular stress response in *Harpagifer antarcticus*. *Fish Physiology and Biochemistry*, 47(2):533–546, April 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-00931-y`.

Mousavi:2021:CRT

[230] Shalaleh Mousavi, Najmeh Sheikhzadeh, and Poulin Shohreh. Changes in rainbow trout (*Oncorhynchus mykiss*) growth and mucosal immune parameters after dietary administration of grape (*Vitis vinifera*) seed extract. *Fish Physiology and Biochemistry*, 47(2):547–563, April 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-00930-z`.

Pan:2021:DEA

[231] ZhengJun Pan, ChuanKun Zhu, and Hui Wang. Differential expression analysis and identification of sex-related genes by gonad transcriptome sequencing in estradiol-treated and non-treated Ussuri catfish *Pseudobagrus ussuriensis*. *Fish Physiology and Biochemistry*, 47(2):565–581, April 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-00932-x`.

Bi:2021:GIJ

[232] Baoliang Bi, Yu Gao, and Qing Hu. Growth influence of juvenile golden trout (*Oncorhynchus mykiss*) in different osmotic conditions: implications for tissue histology, biochemical indicators, and genes transcription involved in GH/IGF system. *Fish Physiology and Biochemistry*, 47(2):583–597, April 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-00933-w`.

Giri:2021:IGS

[233] Abhay Kumar Giri, Narottam Prasad Sahu, and Gyanaranjan Dash. Improvement in the growth status and carbohydrate utilization of *Labeo rohita* (Hamilton, 1822) fingerlings with dietary supplementation of chromium picolinate. *Fish Physiology and Biochemistry*, 47(2):599–616, April 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-00934-9`.

Prabu:2021:ADS

[234] Dhanasekaran Linga Prabu, Sanal Ebeneezar, and Pananghat Vijayagopal. Antioxidant defence system based oxidative stress mitigation through dietary jamun tree leaf in experimentally infected snubnose pompano, *Trachinotus blochii*. *Fish Physiology and Biochemistry*, 47(2):617–637, April 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-00935-8`.

Jahanbakhshi:2021:SNS

[235] Abdolreza Jahanbakhshi, Sajjad Pourmozaffar, and Ashkan Ajdari. Selenium nanoparticle and selenomethionine as feed additives: effects on growth performance, hepatic enzymes' activity, mucosal immune parameters, liver histology, and appetite-related gene transcript in goldfish (*Carassius auratus*). *Fish Physiology and Biochemistry*, 47(2):639–652, April 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-00937-6`.

Kholodnyy:2021:ESI

[236] Vitaliy Kholodnyy, Borys Dzyuba, and Sergii Boryshpolets. Egg-sperm interaction in sturgeon: role of ovarian fluid. *Fish Physiology and Biochemistry*, 47(3):653–669, June 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00852-2`.

Cardona:2021:VRP

[237] Emilie Cardona, Jerome Bugeon, and Julien Bobe. VisEgg: a robust phenotyping tool to assess rainbow trout egg features and viability. *Fish Physiology and Biochemistry*, 47(3):671–679, June 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00844-2`.

Psenicka:2021:BCR

[238] Martin Pšenička and Roman Franěk. Brief communication: rapid elimination of egg stickiness using sodium hypochlorite in wels catfish *Silurus glanis*. *Fish Physiology and Biochemistry*, 47(3):681–685, June 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00843-3`.

Pataki:2021:EAM

[239] Bernadett Pataki, Berta Izabella Roberta, and Ákos Horváth. Effect of age on the mercury sensitivity of zebrafish (*Danio rerio*) sperm. *Fish*

Physiology and Biochemistry, 47(3):687–695, June 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00875-9`.

Beirao:2021:SWE

[240] J. Beirão, S. Flengstad, and I. Babiak. Spotted wolffish (*Anarhichas minor*) sperm cryopreservation in 5-mL cryovials. *Fish Physiology and Biochemistry*, 47(3):697–701, June 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00837-1`.

Golpour:2021:DAR

[241] Amin Golpour, Coralie Broquard, and Martin Pšenička. Determination of annual reproductive cycle in male sterlet, *Acipenser ruthenus* using histology and ultrasound imaging. *Fish Physiology and Biochemistry*, 47(3):703–711, June 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00892-8`.

Coetzee:2021:FOS

[242] Helené J. Coetzee, Kristina Naidoo, and Ina Wagenaar. A first observation of spermatogenesis in mature male scalloped hammerheads (*Sphyrna lewini*) from Zinkwazi, KwaZulu-Natal, South Africa. *Fish Physiology and Biochemistry*, 47(3):713–723, June 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00871-z`.

Gonzalez-Lopez:2021:IPS

[243] W. A. González-López, D. M. Patel, and J. Beirão. Is it possible to store spotted wolffish (*Anarhichas minor*) sperm by refrigeration? *Fish Physiology and Biochemistry*, 47(3):725–735, June 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00820-w`.

Siqueira-Silva:2021:FAS

[244] Diógenes H. Siqueira-Silva, Rafaela M. Bertolini, and George S. Yasui. Factors affecting secondary sex characteristics in the yellowtail tetra, *Astyanax altiparanae*. *Fish Physiology and Biochemistry*, 47(3):737–746, June 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00832-6`.

Quirino:2021:IIW

[245] Patricia Postingel Quirino, Maira da Silva Rodrigues, and Rosicleire Veríssimo-Silveira. The influence of increased water temperature on the duration of spermatogenesis in a neotropical fish, *Astyanax altiparanae* (Characiformes, Characidae). *Fish Physiology and Biochemistry*, 47(3):747–755, June 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00869-7`.

Cosson:2021:YJF

[246] Jacky Cosson. A 40 years journey with fish spermatozoa as companions as I personally experienced it. *Fish Physiology and Biochemistry*, 47(3):757–765, June 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00882-w`.

deSiqueira-Silva:2021:PST

[247] Diógenes Henrique de Siqueira-Silva, Amanda Pereira dos Santos Silva, and Rosicleire Veríssimo-Silveira. Preliminary study on testicular germ cell isolation and transplantation in an endangered endemic species *Brycon orbignyanus* (Characiformes: Characidae). *Fish Physiology and Biochemistry*, 47(3):767–776, June 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-019-00631-8`.

Baloch:2021:DED

[248] Abdul Rasheed Baloch, Roman Franěk, and Martin Pšenička. Dead-end (dnd) protein in fish — a review. *Fish Physiology and Biochemistry*, 47(3):777–784, June 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-018-0606-x`.

Herrera:2021:OFS

[249] Fabio Herrera, Olga Bondarenko, and Sergii Boryshpolets. Osmoregulation in fish sperm. *Fish Physiology and Biochemistry*, 47(3):785–795, June 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-00958-1`.

Paschoalini:2021:EOP

[250] Alessandro Loureiro Paschoalini, Lourenço Almeida Savassi, and Nilo Bazzoli. Evaluation of the oestrogenic potential of oestrone and bisphenol-A

on the reproduction of *Astyanax bimaculatus* males after subacute exposure. *Fish Physiology and Biochemistry*, 47(4):797–810, August 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-00938-5`.

Li:2021:GLP

[251] Jianshuang Li, Min Song, and Xin Qi. Gonadal lipidomics profile of an ovoviviparity teleost, black rockfish, during gonadal development. *Fish Physiology and Biochemistry*, 47(4):811–828, August 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-00936-7`.

Ale:2021:LTS

[252] Analía Ale, Carla Bacchetta, and Jimena Cazenave. Low temperature stress in a cultured fish (*Piaractus mesopotamicus*) fed with *Pyropia columbina* red seaweed-supplemented diet. *Fish Physiology and Biochemistry*, 47(4):829–839, August 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-00944-7`.

Carneiro:2021:DAL

[253] Mario Davi Dias Carneiro, Lucas Campos Maltez, and Luís André Sampaio. Does acidification lead to impairments on oxidative status and survival of orange clownfish *Amphiprion percula* juveniles? *Fish Physiology and Biochemistry*, 47(4):841–848, August 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-00942-9`.

Iwaizumi:2021:DEP

[254] Masaki Iwaizumi, Hayato Yokoi, and Tohru Suzuki. Delivery of exogenous proteins into eggs by injection into the mother's ovary (IMO) in zebrafish. *Fish Physiology and Biochemistry*, 47(4):849–855, August 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-00945-6`.

Zhang:2021:PAE

[255] Xing Zhang, Yunshan Zhang, and Chengliang Gong. Proteomic analysis of the exosomes secreted from *Ctenopharyngodon idellus* kidney cells infected with grass carp reovirus reveals their involvement in the cellular responses to viral infection. *Fish Physiology and Biochemistry*, 47 (4):857–867, August 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-00939-4`.

Dawood:2021:ICO

[256] Mahmoud A. O. Dawood, Mohamed F. Ali, and Hien Van Doan. The influence of coconut oil on the growth, immune, and antioxidative responses and the intestinal digestive enzymes and histomorphometry features of Nile tilapia (*Oreochromis niloticus*). *Fish Physiology and Biochemistry*, 47(4):869–880, August 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-00943-8`.

Mohajer:2021:VFC

[257] Leila El Mohajer, Rose Bulteau, and Sylvain Milla. In vitro follicle culture shows that progestagens are the maturation-inducing hormones (MIH) and possible regulators of the ovulation-mediating hormone PGE2 in female Eurasian perch *Perca fluviatilis*. *Fish Physiology and Biochemistry*, 47(4):881–894, August 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-00946-5`.

deFaria:2021:MII

[258] Camila de Fátima Pereira de Faria, Claudia Bueno dos Reis Martinez, and Elisabeth Criscuolo Urbinati. Modulation of the innate immune response, antioxidant system and oxidative stress during acute and chronic stress in pacu (*Piaractus mesopotamicus*). *Fish Physiology and Biochemistry*, 47(4):895–905, August 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-00940-x`.

Xia:2021:BTB

[259] Yun Xia, Ermeng Yu, and Wangbao Gong. Both TGF-β 1 and Smad4 regulate type I collagen expression in the muscle of grass carp, *Ctenopharyngodon idella*. *Fish Physiology and Biochemistry*, 47(4):907–917, August 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-00941-w`.

Yang:2021:HHB

[260] Yuting Yang, Zhen Wang, and Weijie Mu. Histopathological, hematological, and biochemical changes in high-latitude fish *Phoxinus lagowskii* exposed to hypoxia. *Fish Physiology and Biochemistry*, 47(4):919–938, August 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-00947-4`.

Fan:2021:PPP

[261] Lanfen Fan, Lei Wang, and Jixing Zou. The pivotal protein profile between the conjoined twins and normal mosquitofish *Gambusia affinis* based on iTRAQ proteomic analysis. *Fish Physiology and Biochemistry*, 47(4):939–950, August 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-00951-8`.

Mohammadzadeh:2021:URC

[262] Sedigheh Mohammadzadeh, Sylvain Milla, and Mahmoud A. O. Dawood. Is the use of recombinant cGnRH may be a future alternative to control the fish spawning? Let us go with the goldfish example. *Fish Physiology and Biochemistry*, 47(4):951–960, August 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-00953-6`.

Aly:2021:RGS

[263] Salah M. Aly, Safaa M. Sharaf, and Alaa Sh. Griesh. Relation of gilthead seabream (*Sparus aurata*) seasonal reproductive activity to hematology, serum biochemistry, histopathology, and Brdt gene expression. *Fish Physiology and Biochemistry*, 47(4):961–977, August 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-00955-4`.

Cornet:2021:MLM

[264] Valérie Cornet, Florian Geay, and Patrick Kestemont. Modulations of lipid metabolism and development of the Atlantic salmon (*Salmo salar*) fry in response to egg-to-fry rearing conditions. *Fish Physiology and Biochemistry*, 47(4):979–997, August 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-00959-0`.

Chang:2021:HEE

[265] Chia-Hao Chang and Tsung-Han Lee. Hypothermal effects on expression of regucalcin, a calcium-binding protein, in the livers of seawater- and fresh water–acclimated milkfish, *Chanos chanos*. *Fish Physiology and Biochemistry*, 47(4):999–1010, August 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-00960-7`.

Chandhini:2021:ILG

[266] S. Chandhini, Bushra Trumboo, and V. J. Rejish Kumar. Insulin-like growth factor signalling and its significance as a biomarker in fish and

shellfish research. *Fish Physiology and Biochemistry*, 47(4):1011–1031, August 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-00961-6`.

Kumari:2021:ODG

[267] Rakhi Kumari, Prakash Sharma, and P. P. Srivastava. Ontogeny and development of the gastrointestinal system in Indian walking catfish (*Clarias magur*) during its early development. *Fish Physiology and Biochemistry*, 47(4):1033–1052, August 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-00957-2`.

Salem:2021:AEA

[268] Mohamed Omar Abdalla Salem, Tarek A. Salem, and Kerim Güney. Antioxidant enzyme activities and immune responses in rainbow trout (*Onchorhynchus mykiss*) juveniles fed diets supplemented with dandelion (*Taraxacum officinalis*) and lichen (*Usnea barbata*) extracts. *Fish Physiology and Biochemistry*, 47(4):1053–1062, August 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-00962-5`.

Ceron:2021:DKA

[269] F. Juliane M. Ceron, Viviane Prodocimo, and Carolina A. Freire. Distribution of Na^+ /K^+-ATPase-immunoreactive ionocytes varies between two superorders of ray-finned fish: Ostariophysi and Acanthopterygii. *Fish Physiology and Biochemistry*, 47(4):1063–1071, August 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-00963-4`.

Raju:2021:RSS

[270] Stefi V. Raju, Arnab Mukherjee, and Jesu Arockiaraj. RM12 similar to substance P from tachykinin of freshwater murrel *Channa striatus* influence intracellular ROS in vitro fish erythrocytes and developmental toxicity and antioxidant enzymes in vivo zebrafish embryo. *Fish Physiology and Biochemistry*, 47(4):1073–1085, August 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-00950-9`.

Xu:2021:TAR

[271] Hao Xu, Shi-Qi Fan, and Yun Li. Transcriptome analysis reveals the importance of exogenous nutrition in regulating antioxidant defenses during the mouth-opening stage in oviparous fish. *Fish Physiology and Bio-*

chemistry, 47(4):1087–1103, August 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-00954-5`.

Andreyeva:2021:PKA

[272] Aleksandra Yu. Andreyeva, Ekaterina S. Kladchenko, and Stepan Gambaryan. Protein kinase a activity and NO are involved in the regulation of crucian carp (*Carassius carassius*) red blood cell osmotic fragility. *Fish Physiology and Biochemistry*, 47(4):1105–1117, August 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-00971-4`.

Karatas:2021:EPF

[273] Tayfun Karatas, Sukru Onalan, and Serkan Yildirim. Effects of prolonged fasting on levels of metabolites, oxidative stress, immune-related gene expression, histopathology, and DNA damage in the liver and muscle tissues of rainbow trout (*Oncorhynchus mykiss*). *Fish Physiology and Biochemistry*, 47(4):1119–1132, August 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-00949-2`.

Jia:2021:APR

[274] Yudong Jia, Yuntao Gao, and Changtao Guan. Altered physiological response and gill histology in black rockfish, *Sebastes schlegelii*, during progressive hypoxia and reoxygenation. *Fish Physiology and Biochemistry*, 47(4):1133–1147, August 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-00970-5`.

Yu:2021:MAR

[275] Kai Yu, Kai Huang, and Cuiqin Mo. Metabolism and antioxidation regulation of total flavanones from *Sedum sarmentosum* Bunge against high-fat diet-induced fatty liver disease in Nile tilapia (*Oreochromis niloticus*). *Fish Physiology and Biochemistry*, 47(4):1149–1164, August 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-00964-3`.

Henriques:2021:SEP

[276] Marcelo Barbosa Henriques, Karina Fernandes Oliveira Rezende, and Edison Barbieri. Sublethal effects of propiconazole on the metabolism of lambari *Deuterodon iguape* (Eigenmann 1907), a native species from Brazil. *Fish Physiology and Biochemistry*, 47(4):1165–1177, August 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-00968-z`.

Valenzuela-Gutierrez:2021:EGE

[277] Rocío Valenzuela-Gutiérrez, Asunción Lago-Lestón, and Marcel Martínez-Porchas. Exploring the garlic (*Allium sativum*) properties for fish aquaculture. *Fish Physiology and Biochemistry*, 47(4):1179–1198, August 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-00952-7`.

Nguyen:2021:DSP

[278] Hung Phuc Nguyen and Thinh Van Do. Digested soybean protein and taurine influence bile acid level, lipase activity, lipid digestibility, and growth performance of pompano (*Trachinotus blochii*). *Fish Physiology and Biochemistry*, 47(4):1199–1209, August 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-00972-3`.

Toledo-Solis:2021:CDE

[279] Francisco Javier Toledo-Solís, Andrea Guadalupe Hilerio-Ruiz, and Miguel Angel Sáenz de Rodrigáñez. Changes in digestive enzyme activities during the early ontogeny of the South American cichlid (*Cichlasoma dimerus*). *Fish Physiology and Biochemistry*, 47(4):1211–1227, August 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-00976-z`.

Ke:2021:ASM

[280] Xiaomei Ke, Runshuai Zhang, and Haobin Zhao. Alternative splicing of medaka *bcl6aa* and its repression by prdm1a and prdm1b. *Fish Physiology and Biochemistry*, 47(4):1229–1242, August 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-00980-3`.

Ni:2021:SDA

[281] Meng Ni, Mei Liu, and Zhimin Gu. Stocking density alters growth performance, serum biochemistry, digestive enzymes, immune response, and muscle quality of largemouth bass (*Micropterus salmoides*) in in-pond raceway system. *Fish Physiology and Biochemistry*, 47(4):1243–1255, August 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-00948-3`. See correction [313].

Chatzifotis:2021:LNE

[282] Stavros Chatzifotis, Abraham Gómez Gutiérrez, and Constantinos C. Mylonas. Lack of negative effects of fasting of gilthead seabream (*Sparus aurata*) breeders during the spawning period on maternal and egg nutrient

composition, fertilization success, and early embryo/larval development. *Fish Physiology and Biochemistry*, 47(4):1257–1270, August 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-021-00979-w.

Liu:2021:VCR

[283] Dongwu Liu, Yaqi Gu, and Hairui Yu. Vitamin C regulates the production of reactive oxygen species through wnt10b signaling in the gill of zebrafish. *Fish Physiology and Biochemistry*, 47(4):1271–1282, August 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-021-00982-1.

Ahi:2021:TSR

[284] Ehsan Pashay Ahi, Emmanouil Tsakoumis, and Monika Schmitz. Transcriptional study reveals a potential leptin-dependent gene regulatory network in zebrafish brain. *Fish Physiology and Biochemistry*, 47(4): 1283–1298, August 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-021-00967-0.

Chen:2021:IIG

[285] Yushi Chen, Wenbin Xu, and Ren Mu. Intraperitoneal injection of genistein affects the distribution and metabolism of cholesterol in female yellow catfish *Tachysurus fulvidraco*. *Fish Physiology and Biochemistry*, 47 (4):1299–1311, August 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-021-00985-y.

Ma:2021:DSP

[286] Pin Ma, Zhenyi Hu, and Rong Tang. Dietary selenium promotes the growth performance through growth hormone–insulin-like growth factor and hypothalamic–pituitary–thyroid axes in grass carp (*Ctenopharyngodon idella*). *Fish Physiology and Biochemistry*, 47(4):1313–1327, August 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-021-00974-1.

Kibler:2021:EAA

[287] Natalya A. Kibler, Vladimir P. Nuzhny, and Dmitry N. Shmakov. Effect of atrial artificial electrical stimulation on depolarization and repolarization and hemodynamics of the heart ventricle in rainbow trout *Oncorhynchus mykiss*. *Fish Physiology and Biochemistry*, 47(4):1329–1339, August 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-021-00983-0.

Liu:2021:SDD

[288] Yan Liu, Wenxiang Wang, and Feng You. Sexual dimorphism of DNA and histone methylation profiles in the gonads of the olive flounder *Paralichthys olivaceus*. *Fish Physiology and Biochemistry*, 47(5):1341–1352, October 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-00986-x`.

Patnaik:2021:ART

[289] Siddhi Patnaik, Lakshman Sahoo, and Paramananda Das. Activin receptor type IIB in rohu (*Labeo rohita*): molecular characterization, tissue distribution and immunohistochemical localization during different stages of gonadal maturation. *Fish Physiology and Biochemistry*, 47(5):1353–1367, October 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-00973-2`.

Liu:2021:MCF

[290] Yingying Liu, Jinmiao Zhong, and Qian Zhu. Molecular characterization and functional analysis of trx and trp14 in roughskin sculpin (*Trachidermus fasciatus*). *Fish Physiology and Biochemistry*, 47(5):1369–1382, October 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-00978-x`.

Dai:2021:TTD

[291] Yong-Shuang Dai, Wen-Li Pei, and Mei-Qin Zhuo. Topology, tissue distribution, and transcriptional level of SLC34s in response to pi and pH in grass carp *Ctenopharyngodon idella*. *Fish Physiology and Biochemistry*, 47 (5):1383–1393, October 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-00981-2`.

Yuan:2021:FRC

[292] Xiao-Chen Yuan, Xu-Fang Liang, and Wen-Jing Cai. The feedback regulation of carbohydrates intake on food intake and appetite in grass carp (*Ctenopharyngodon idella*). *Fish Physiology and Biochemistry*, 47 (5):1395–1403, October 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-020-00914-5`.

Zhang:2021:EIC

[293] Na Zhang, Xuelian Liu, and Xinyan Wang. Evaluation of ibuprofen contamination in local urban rivers and its effects on immune parameters of

juvenile grass carp. *Fish Physiology and Biochemistry*, 47(5):1405–1413, October 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-00987-w`.

Fu:2021:QCC

[294] Cheng Fu, Lian-Chun Yi, and Shi-Jian Fu. Qingbo, a common cyprinid fish, responds diversely in behavior and locomotion to predators with different hunting modes. *Fish Physiology and Biochemistry*, 47(5):1415–1427, October 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-00988-9`.

Pei:2021:EAH

[295] Xueying Pei, Mingxu Chu, and Shaowu Yin. Effects of acute hypoxia and reoxygenation on oxygen sensors, respiratory metabolism, oxidative stress, and apoptosis in hybrid yellow catfish "Huangyou-1". *Fish Physiology and Biochemistry*, 47(5):1429–1448, October 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-00989-8`.

Zhang:2021:MRC

[296] Yanpeng Zhang, Xu fang Liang, and Muhammad Shoaib Alam. Metabolic responses of Chinese perch (*Siniperca chuatsi*) to different levels of dietary carbohydrate. *Fish Physiology and Biochemistry*, 47(5):1449–1465, October 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-00965-2`.

Yang:2021:CSD

[297] Fang Yang, Huan Ye, and Dongdong Xu. Characterization of the sex differentiation and gonadal development in small yellow croaker (*Larimichthys polyactis*) and its hybrid (*L. polyactis* [female sign] $\times$ *L. crocea* [male sign]). *Fish Physiology and Biochemistry*, 47(5):1467–1476, October 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-00975-0`.

Hasan:2021:ECR

[298] Muhammad Mehedi Hasan, Hideki Ushio, and Yoshihiro Ochiai. Expression and characterization of rainbow trout *Oncorhynchus mykiss* recombinant myoglobin. *Fish Physiology and Biochemistry*, 47(5):1477–1488, October 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (elec-

tronic). URL https://link.springer.com/article/10.1007/s10695-021-00991-0.

Yu:2021:AEA

[299] Haojie Yu, Xiaoyu Wang, and Qingsong Tan. The attractive effects of amino acids and some classical substances on grass carp (*Ctenopharyngodon idellus*). *Fish Physiology and Biochemistry*, 47(5):1489–1505, October 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-021-00990-1.

Ellingsen:2021:ZCA

[300] Ståle Ellingsen, Shailesh Narawane, and Ivar Rønnestad. The zebrafish cationic amino acid transporter/glycoprotein-associated family: sequence and spatiotemporal distribution during development of the transport system $b^{0,+}$ (*slc3a1/slc7a9*). *Fish Physiology and Biochemistry*, 47(5): 1507–1525, October 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-021-00984-z.

Perez-Sirkin:2021:PSF

[301] Daniela Irina Pérez-Sirkin, María Paula Di Yorio, and Paula Gabriela Vissio. Post-spawning feed deprivation effects on testicular and ovarian maturation in the neotropical cichlid fish *Cichlasoma dimerus*. *Fish Physiology and Biochemistry*, 47(5):1527–1540, October 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-021-00993-y.

Teixeira:2021:DTS

[302] Cláudia Teixeira, Pedro Rodrigues, and António Paulo Carvalho. Dietary tryptophan supplementation does not affect growth but increases brain serotonin level and modulates the expression of some liver genes in zebrafish (*Danio rerio*). *Fish Physiology and Biochemistry*, 47(5):1541–1558, October 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-021-00994-x.

Ameer:2021:CEO

[303] Muhammad Wajahat Ameer, Farhat Jabeen, and Muhammad Akram. Comparative efficacy of Ovaprim and hMG (menotropin) to induce breeding in African catfish (*Clarias gariepinus*). *Fish Physiology and Biochemistry*, 47(5):1559–1564, October 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-021-01003-x.

Zhong:2021:CDE

[304] Zhaowei Zhong, Lulu Ao, and Yonghua Jiang. Comparison of differential expression genes in ovaries and testes of pearlscale angelfish *Centropyge vrolikii* based on RNA-seq analysis. *Fish Physiology and Biochemistry*, 47 (5):1565–1583, October 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-00977-y`.

He:2021:MCE

[305] Zhi He, Faqiang Deng, and Taiming Yan. Molecular characterization, expression, and apoptosis regulation of *siva1* in protogynous hermaphrodite fish ricefield eel (*Monopterus albus*). *Fish Physiology and Biochemistry*, 47 (5):1585–1596, October 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-00997-8`.

Ning:2021:TFH

[306] Yunfeng Ning, Miao Fan, and Weimin Zhang. Two Foxo1 homologues in the orange-spotted grouper *Epinephelus coioides*: sequences, expression, and possible involvement in the activation of *cyp19a1a* expression in the ovary. *Fish Physiology and Biochemistry*, 47(5):1597–1610, October 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-01002-y`.

Lu:2021:AMT

[307] Rong-Hua Lu, Meng-Jun Lin, and Guo-Xing Nie. Anti-miR33 therapy improved hepatopancreatic lipid and immune metabolism disorders in grass carp, *Ctenopharyngodon idella*. *Fish Physiology and Biochemistry*, 47 (5):1611–1622, October 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-00956-3`.

Campos-Sanchez:2021:SGE

[308] Jose Carlos Campos-Sánchez, Javier Mayor-Lafuente, and María Ángeles Esteban. In silico and gene expression analysis of the acute inflammatory response of gilthead seabream (*Sparus aurata*) after subcutaneous administration of carrageenin. *Fish Physiology and Biochemistry*, 47(5): 1623–1643, October 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-00999-6`.

Liu:2021:ENF

[309] Yixuan Liu, Caoying Wei, and Weiliang Guo. Establishment of a new fish cell line from the brain of humpback grouper (*Cromileptes altivelis*) and its application in toxicology and bacterial susceptibility. *Fish Physiology and Biochemistry*, 47(5):1645–1658, October 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-01006-8`.

Kumbar:2021:EAM

[310] Jyoti Kumbar and C. B. Ganesh. The effect of α -MSH treatment on the hypothalamic-pituitary-gonad axis in the cichlid fish *Oreochromis mossambicus*. *Fish Physiology and Biochemistry*, 47(5):1659–1668, October 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-01005-9`.

Bao:2021:CTA

[311] Mingxiu Bao, Fengqin Shang, and Xiuli Wang. Comparative transcriptomic analysis of the brain in *Takifugu rubripes* shows its tolerance to acute hypoxia. *Fish Physiology and Biochemistry*, 47(5):1669–1685, October 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-01008-6`.

Galkanda-Arachchige:2021:ESG

[312] Harsha S. C. Galkanda-Arachchige, Robert P. Davis, and D. Allen Davis. Effect of salinity on growth, survival, and serum osmolality of red snapper, *Lutjanus campechanus*. *Fish Physiology and Biochemistry*, 47(5):1687–1696, October 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-01009-5`.

Yuan:2021:CSD

[313] Julin Yuan, Meng Ni, and Zhimin Gu. Correction to: Stocking density alters growth performance, serum biochemistry, digestive enzymes, immune response, and muscle quality of largemouth bass (*Micropterus salmoides*) in in-pond raceway system. *Fish Physiology and Biochemistry*, 47(5):1697, October 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-00998-7`. See [281].

Backstrom:2021:SEA

[314] Tobias Backström, Per-Ove Thörnqvist, and Svante Winberg. Social effects on AVT and CRF systems. *Fish Physiology and Biochemistry*, 47(6): 1699–1709, December 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-00995-w`.

Song:2021:ECR

[315] Jin Ah Song, Heung-Sik Park, and Cheol Young Choi. Exogenous cortisol and red light irradiation affect reproductive parameters in the goldfish *Carassius auratus*. *Fish Physiology and Biochemistry*, 47(6): 1711–1724, December 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-01013-9`.

Lin:2021:HSI

[316] Genmei Lin, Shizhu Li, and Jianguo Lu. Hypoosmotic stress induced functional alternations of intestinal barrier integrity, inflammatory reactions, and neurotransmission along gut-brain axis in the yellowfin seabream (*Acanthopagrus latus*). *Fish Physiology and Biochemistry*, 47(6): 1725–1738, December 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-01011-x`.

Liao:2021:SRG

[317] Zhangbin Liao, Zhiyuan Sun, and Houguo Xu. Screening of reference genes in tiger puffer (*Takifugu rubripes*) across tissues and under different nutritional conditions. *Fish Physiology and Biochemistry*, 47(6): 1739–1758, December 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-01012-w`.

Heinrichs-Caldas:2021:HTT

[318] Waldir Heinrichs-Caldas and Vera Maria Fonseca de Almeida-Val. Hypoxia tolerance in two Amazon cichlids: mitochondrial respiration and cellular metabolism adjustments are result of species environmental preferences and distribution. *Fish Physiology and Biochemistry*, 47(6):1759–1775, December 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-01000-0`.

Papadaki:2021:HES

[319] Maria Papadaki, Manolis Mandalakis, and Constantinos C. Mylonas. Histological evaluation of sex differentiation and early sex identification in hatchery-produced greater amberjack (*Seriola dumerili*) reared in sea cages. *Fish Physiology and Biochemistry*, 47(6):1777–1792, December 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-01007-7`.

Porto:2021:LAS

[320] Livia de Assis Porto, Rafael Magno Costa Melo, and Gisele Cristina Favero. *Lophiosilurus alexandri*, a sedentary bottom fish, adjusts its physiological parameters to survive in hypoxia condition. *Fish Physiology and Biochemistry*, 47(6):1793–1804, December 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-00996-9`.

Chen:2021:DSB

[321] Weijun Chen, Kuo Chang, and Shiyang Gao. Dietary sodium butyrate supplementation attenuates intestinal inflammatory response and improves gut microbiota composition in largemouth bass (*Micropterus salmoides*) fed with a high soybean meal diet. *Fish Physiology and Biochemistry*, 47(6):1805–1819, December 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-01004-w`.

Bayse:2021:SSS

[322] Shannon M. Bayse, Amy M. Regish, and Stephen D. McCormick. Survival and spawning success of American shad (*Alosa sapidissima*) in varying temperatures and levels of glochidia infection. *Fish Physiology and Biochemistry*, 47(6):1821–1836, December 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-01018-4`.

Dragojevic:2021:ZED

[323] Jelena Dragojević, Nikola Marakovic, and Tvrtko Smital. Zebrafish (*Danio rerio*) Oatp2b1 as a functional ortholog of the human OATP2B1 transporter. *Fish Physiology and Biochemistry*, 47(6):1837–1849, December 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-01015-7`.

daSilva:2021:DEE

[324] Thamyres V. N. da Silva, Marcelo F. Torres, and Luis André L. Barbas. Dietary *Euterpe oleracea* mart. attenuates seizures and damage to lipids in the brain of *Colossoma macropomum*. *Fish Physiology and Biochemistry*, 47(6):1851–1864, December 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-01010-y`.

Liu:2021:HAO

[325] Lin Liu, Qiubai Zhou, and Lili Wei. Histological alterations, oxidative stress, and inflammatory response in the liver of swamp eel (*Monopterus albus*) acutely exposed to copper. *Fish Physiology and Biochemistry*, 47(6):1865–1878, December 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-01014-8`.

Coll-Llado:2021:PSI

[326] Clara Coll-Lladó, Felix Mittermayer, and Daniel Garcia de la serrana. Pilot study to investigate the effect of long-term exposure to high p CO_2 on adult cod (*Gadus morhua*) otolith morphology and calcium carbonate deposition. *Fish Physiology and Biochemistry*, 47(6):1879–1891, December 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-01016-6`.

Shi:2021:MRF

[327] Linjie Shi, Jiao Li, and Hui Liang. Memory regulation in feeding habit transformation to dead prey fish of Chinese perch (*Siniperca chuatsi*). *Fish Physiology and Biochemistry*, 47(6):1893–1907, December 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-01001-z`.

Koner:2021:MCS

[328] Debaprasad Koner, Bodhisattwa Banerjee, and Nirmalendu Saha. Molecular characterization of superoxide dismutase and catalase genes, and the induction of antioxidant genes under the zinc oxide nanoparticle-induced oxidative stress in air-breathing magur catfish (*Clarias magur*). *Fish Physiology and Biochemistry*, 47(6):1909–1932, December 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-01019-3`.

Pradhan:2021:SRD

[329] Chiranjiv Pradhan, Uzma Soharwardi, and Preetham Elumalai. Suitable ratio of dietary L-carnitine and α-ketoglutarate improves growth and health performance in Nile tilapia, *Oreochromis niloticus*. *Fish Physiology and Biochemistry*, 47(6):1933–1950, December 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-01020-w`.

Huang:2021:IEA

[330] Jian sheng Huang, Hong juan Li, and Gang Chen. Identification and expression analysis of cobia (*Rachycentron canadum*) liver-related miRNAs under hypoxia stress. *Fish Physiology and Biochemistry*, 47(6): 1951–1967, December 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-01017-5`.

Monteiro:2021:CCA

[331] Diana Amaral Monteiro, André Guelli Lopes, and Francisco Tadeu Rantin. Cardiac contractility of the African sharptooth catfish, *Clarias gariepinus*: role of extracellular ca^{2+}, sarcoplasmic reticulum, and β-adrenergic stimulation. *Fish Physiology and Biochemistry*, 47(6):1969–1982, December 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-01023-7`.

Hu:2021:EFQ

[332] Yu Hu, Ying Liu, and Zhen Ma. Effects of food quantity on aggression and monoamine levels of juvenile pufferfish (*Takifugu rubripes*). *Fish Physiology and Biochemistry*, 47(6):1983–1993, December 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-01026-4`.

Hieu:2021:SAG

[333] Dang Quang Hieu, Bui Thi Bich Hang, and Patrick Kestemont. Salinity affects growth performance, physiology, immune responses and temperature resistance in striped catfish (*Pangasianodon hypophthalmus*) during its early life stages. *Fish Physiology and Biochemistry*, 47(6):1995–2013, December 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-01021-9`.

Cao:2021:DPC

[334] Xiamin Cao, Shengjie Ren, and Yuantu Ye. Dietary pectin caused great changes in bile acid profiles of *Pelteobagrus fulvidraco*. *Fish Physiology and Biochemistry*, 47(6):2015–2025, December 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-01028-2`.

Azodi:2021:ESG

[335] Maryam Azodi, Mahmoud Nafisi Bahabadi, and Sakineh Avizhgan. Effects of salinity on gills' chloride cells, stress indices, and gene expression of Asian seabass (*Lates calcarifer*, Bloch, 1790). *Fish Physiology and Biochemistry*, 47(6):2027–2039, December 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-01024-6`.

Liu:2021:SRA

[336] Chang Liu, Li-Ping Zhao, and Yan-Qin Shen. A systematic review of advances in intestinal microflora of fish. *Fish Physiology and Biochemistry*, 47(6):2041–2053, December 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-01027-3`.

Angadi:2021:EHS

[337] Prateek Angadi, Moitreyi Das, and Ramaballav Roy. Effect of high salinity acclimation on glucose homeostasis in Mozambique tilapia (*Oreochromis mossambicus*). *Fish Physiology and Biochemistry*, 47(6):2055–2065, December 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-01022-8`.

Cho:2021:HSP

[338] Youn Su Cho, Tae Hyug Jeong, and Han Kyu Lim. Heat shock protein 70 gene expression and stress response of red-spotted (*Epinephelus akaara*) and hybrid (*E. akaara female* × *E. lanceolatus* male) groupers to heat and cold shock exposure. *Fish Physiology and Biochemistry*, 47(6):2067–2080, December 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-00966-1`.

Bhatnagar:2021:REZ

[339] Anita Bhatnagar and Sonal Saluja. Role of *Zingiber officinale* and autochthonous probiotic *Bacillus coagulans* in feeds of *Catla catla* (Hamilton, 1822) for growth promotion, immunostimulation, histoprotection,

and control of DNA damage. *Fish Physiology and Biochemistry*, 47(6): 2081–2100, December 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-01030-8`.

deLima:2021:EEL

[340] Cristiano Lopes de Lima, Ruben Dario Morales-Gamba, and Jaydione Luiz Marcon. Eugenol and *Lippia alba* essential oils as effective anesthetics for the Amazonian freshwater stingray *Potamotrygon wallacei* (Chondrichthyes, Potamotrygonidae). *Fish Physiology and Biochemistry*, 47(6):2101–2120, December 2021. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-01029-1`.

Yurchenko:2022:RHB

[341] Victoria Yurchenko and Alexey Morozov. Responses of hepatic biotransformation and antioxidant enzymes in Japanese medaka (*Oryzias latipes*) exposed to humic acid. *Fish Physiology and Biochemistry*, 48 (1):1–13, February 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-01034-4`.

Mehrim:2022:GRE

[342] Ahmed I. Mehrim, Mohamed M. Refaey, and Osama A. Zenhom. Ginseng(R) as a reproductive enhancer agent for African catfish, *Clarias gariepinus* (Burchell, 1822). *Fish Physiology and Biochemistry*, 48(1): 15–32, February 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-00969-y`.

Delavari:2022:MED

[343] Nik Mojtaba Delavari, Ahmad Gharaei, and Abolhasan Rastiannasab. Modulatory effect of dietary copper nanoparticles and vitamin C supplementations on growth performance, hematological and immune parameters, oxidative status, histology, and disease resistance against *Yersinia ruckeri* in rainbow trout (*Oncorhynchus mykiss*). *Fish Physiology and Biochemistry*, 48(1):33–51, February 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-01036-2`.

Almaida-Pagan:2022:MLM

[344] Pedro F. Almaida-Pagan, Alejandro Lucas-Sanchez, and Jorge de Costa. Membrane lipids and maximum lifespan in clownfish. *Fish Physiology and*

Biochemistry, 48(1):53–65, February 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-01037-1`.

Zhang:2022:EGA

[345] Xuhui Zhang, Zhiyuan Sun, and Fuliang Cao. Enhancement of growth, antioxidative status, nonspecific immunity, and disease resistance in gibel carp (*Carassius auratus*) in response to dietary *Flos populi* extract. *Fish Physiology and Biochemistry*, 48(1):67–83, February 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-00992-z`.

Nobrega:2022:ODN

[346] Renata Oselame Nobrega, Alcir Luiz Dafre, and Débora Machado Fracalossi. Oxidative damage in Nile tilapia, *Oreochromis niloticus*, is mainly induced by water temperature variation rather than *Aurantiochytrium* sp. meal dietary supplementation. *Fish Physiology and Biochemistry*, 48(1):85–99, February 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-01025-5`.

Peng:2022:EDC

[347] Di Peng, Xu-Fang Liang, and Qiwei Zhang. Effects of dietary carbohydrate to lipid ratios on growth, biochemical indicators, lipid metabolism, and appetite in Chinese perch (*Siniperca chuatsi*). *Fish Physiology and Biochemistry*, 48(1):101–116, February 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-01043-3`.

Jiang:2022:PEF

[348] Zhou Jiang, Meng Zhang, and Chuanju Dong. Phylogeny of the HO family in *cyprinus carpio* and the response of the HO-1 gene to adding *Bacillus coagulans* in feed under Cd^{2+} stress. *Fish Physiology and Biochemistry*, 48(1):117–131, February 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-01041-5`.

Jafari:2022:PRN

[349] Naghmeh Jafari, Hamed Abdollahpour, and Bahram Falahatkar. A potential role of nettle (*Urtica dioica*) extract on growth, biochemical changes and reproductive performance of convict cichlid (*Amatitlania nigrofasciata*). *Fish Physiology and Biochemistry*, 48(1):133–144, February 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-01039-z`.

Wang:2022:MTG

[350] Jun-Xian Wang, Samad Rahimnejad, and Zhen-Yu Du. Mildronate triggers growth suppression and lipid accumulation in largemouth bass (*Micropterus salmoides*) through disturbing lipid metabolism. *Fish Physiology and Biochemistry*, 48(1):145–159, February 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-01040-6`.

Othman:2022:EMM

[351] Rafidah Othman, Xiao-Jun Ron, and Han-Ping Wang. The effect of methyltestosterone (MT) on sex differentiation and growth in juvenile yellow perch (*Perca flavescens*). *Fish Physiology and Biochemistry*, 48 (1):161–171, February 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-01038-0`.

Lv:2022:NNN

[352] Feng Lv, Xiaojuan Ge, and Changsheng Chen. Neuron navigator 3 (NAV3) is required for heart development in zebrafish. *Fish Physiology and Biochemistry*, 48(1):173–183, February 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01049-5`.

Benini:2022:THT

[353] E. Benini, S. N. Politis, and S. Engrola. Type of hormonal treatment administered to induce vitellogenesis in European eel influences biochemical composition of eggs and yolk-sac larvae. *Fish Physiology and Biochemistry*, 48(1):185–200, February 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-01042-4`.

Moradi:2022:ARA

[354] Saeed Moradi, Sina Javanmardi, and Kamran Rezaei Tavabe. The ameliorative role of ascorbic acid against blood disorder, immunosuppression, and oxidative damage of oxytetracycline in rainbow trout (*Oncorhynchus mykiss*). *Fish Physiology and Biochemistry*, 48(1):201–213, February 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01045-9`.

Shang:2022:SEE

[355] Xinchi Shang, Bo Wang, and Yuehong Li. Selenium-enriched *Bacillus subtilis* reduces the effects of mercury-induced on inflammation and intestinal microbes in carp (*Cyprinus carpio var. specularis*). *Fish Physiology*

and Biochemistry, 48(1):215–226, February 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01046-8`.

Bhattacharya:2022:VIC

[356] Debapriya Bhattacharya, Shrabanti Sarkar, and Panchanan Nath. In vitro induction of catfish, *Clarias batrachus*, oocyte maturation by conspecific vitellogenin 1 (CFVg1). *Fish Physiology and Biochemistry*, 48 (1):227–239, February 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01050-y`.

Yu:2022:FCM

[357] Hui-Xia Yu, Yang Li, and Li-Xin Wang. Functional characterization of melanocortin-3 receptor in rainbow trout (*Oncorhynchus mykiss*). *Fish Physiology and Biochemistry*, 48(1):241–252, February 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-01033-5`.

Imamura:2022:ESL

[358] Satoshi Imamura, Sung-Pyo Hur, and Akihiro Takemura. Effect of short- and long-term melatonin treatments on the reproductive activity of the tropical damselfish *Chrysiptera cyanea*. *Fish Physiology and Biochemistry*, 48(1):253–262, February 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01051-x`.

Shuang:2022:EHR

[359] Liang Shuang, Xiao lei Su, and Shu ming Zou. Effects of hypoxia and reoxygenation on gill remodeling, apoptosis, and oxidative stress in hypoxia-tolerant new variety blunt snout bream (*Megalobrama amblycephala*). *Fish Physiology and Biochemistry*, 48(1):263–274, February 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01047-7`.

Bian:2022:ERS

[360] Chenchen Bian, Jian Sun, and Hong Ji. Endoplasmic reticulum stress is involved in lipid accumulation induced by oleic acid in adipocytes of grass carp (*Ctenopharyngodon idella*): focusing on the transcriptional level. *Fish Physiology and Biochemistry*, 48(1):275–284, February 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-01031-7`.

Yang:2022:CEF

[361] Long Yang, Shuting Zheng, and Wei Li. Characterization, expression, and function analysis of AKR1A1 gene from yellow catfish (*Tachysurus fulvidraco*). *Fish Physiology and Biochemistry*, 48(2):285–302, April 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-022-01048-6.

Zhong:2022:CEN

[362] Zhaowei Zhong, Yan Xu, and Yonghua Jiang. Characterization of the Nanog gene involved in the gonadal development in pearlscale angelfish (*Centropyge vrolikii*). *Fish Physiology and Biochemistry*, 48(2):303–319, April 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-022-01054-8.

Bruno:2022:TSE

[363] Daniel Osvaldo Bruno, María Eugenia Barrantes, and Daniel Alfredo Fernández. Temperature and salinity effects on whole-organism and cellular level stress responses of the sub-Antarctic notothenioid fish *Patagonotothen cornucola* yolk-sac larvae. *Fish Physiology and Biochemistry*, 48 (2):321–335, April 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-022-01057-5.

Guillen:2022:GIT

[364] Angela Carolina Guillen, Marcelo Eduardo Borges, and Lucélia Donatti. Gradual increase of temperature trigger metabolic and oxidative responses in plasma and body tissues in the Antarctic fish *Notothenia rossii*. *Fish Physiology and Biochemistry*, 48(2):337–354, April 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-021-01044-2.

Syropoulou:2022:EAS

[365] E. Syropoulou, E. Benini, and S. N. Politis. Early and abrupt salinity reduction impacts European eel larval culture. *Fish Physiology and Biochemistry*, 48(2):355–366, April 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-022-01056-6.

Sathiyanarayanan:2022:DCN

[366] Arjunan Sathiyanarayanan, Mukunda Goswami, and Dhanjit Kumar Das. Development and characterization of a new gill cell line from the striped catfish, *Pangasianodon hypophthalmus* (Sauvage, 1878). *Fish Physiology*

and Biochemistry, 48(2):367–380, April 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01053-9`.

Rawat:2022:ASG

[367] A. Rawat, R. Chaube, and K. P. Joy. Air sac and gill vasotocin receptor gene expression in the air-breathing catfish *Heteropneustes fossilis* exposed to water and air deprivation conditions. *Fish Physiology and Biochemistry*, 48(2):381–395, April 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01058-4`.

Dawood:2022:ARG

[368] Mahmoud A. O. Dawood, Mohamed Alkafafy, and Hani Sewilam. The antioxidant responses of gills, intestines and livers and blood immunity of common carp (*Cyprinus carpio*) exposed to salinity and temperature stressors. *Fish Physiology and Biochemistry*, 48(2):397–408, April 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01052-w`.

Adeyemi:2022:EPT

[369] Joseph A. Adeyemi, Germaine A. Ogunwole, and Chris O. Adedire. Effects of pre-treatment with waterborne selenium on redox homeostasis and humoral innate immune parameters in African catfish, *Clarias gariepinus* (Burchell, 1822), experimentally challenged with *Serratia marcescens*. *Fish Physiology and Biochemistry*, 48(2):409–418, April 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01059-3`.

Xu:2022:CEE

[370] Shaoqi Xu, Mei Wang, and Zhiqiong Li. Cloning and expression of kiss genes and regulation of feeding in Siberian sturgeon (*Acipenser baerii*). *Fish Physiology and Biochemistry*, 48(2):419–436, April 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01055-7`.

Shinde:2022:CEA

[371] Deepak Shinde and C. B. Ganesh. Chronic exposure to aquacultural stressors affects pituitary-testis axis in the Mozambique tilapia *Oreochromis mossambicus*. *Fish Physiology and Biochemistry*, 48(2):437–448, April 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01061-9`.

Wang:2022:MFC

[372] Yan Wang, Peng Zhu, and Quan Gong. Molecular and functional characterization of the retinol-binding protein 4 (RBP4) in hepatocytes of *Schizothorax prenanti* in response to palmitic acid. *Fish Physiology and Biochemistry*, 48(2):449–459, April 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01060-w`.

Abe:2022:GEL

[373] Takashi Abe, Masaki Ichimura, and Hideaki Kudo. Gene expression levels of synaptic exocytosis regulator *synaptophysin* in the brain and the olfactory organ of anadromous salmon. *Fish Physiology and Biochemistry*, 48(2):461–469, April 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01063-7`.

Shaughnessy:2022:IPC

[374] Ciaran A. Shaughnessy, Shannon K. Balfry, and Jason S. Bystriansky. The isosmotic point as critical salinity limit for growth and osmoregulation, but not survival, in the wolf eel *Anarrhichthys ocellatus*. *Fish Physiology and Biochemistry*, 48(2):471–480, April 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01064-6`.

Peng:2022:TMT

[375] Guofan Peng, Chao Zhu, and Wuzi Dong. Testicular miRNAs and tsRNAs provide insight into gene regulation during overwintering and reproduction of *Onychostoma macrolepis*. *Fish Physiology and Biochemistry*, 48(3):481–499, June 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01078-0`.

deOliveira:2022:EOE

[376] Iara Cruz de Oliveira, Rebeca Santos Matos Oliveira, and Carlos Eduardo Copatti. Essential oils from *Cymbopogon citratus* and *Lippia sidoides* in the anesthetic induction and transport of ornamental fish *Pterophyllum scalare*. *Fish Physiology and Biochemistry*, 48(3):501–519, June 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01075-3`.

Wei:2022:EKC

[377] Caoying Wei, Xin Yang, and Yongcan Zhou. An established kidney cell line from humpback grouper (*Cromileptes altivelis*) and its susceptibil-

ity to bacteria and heavy metals. *Fish Physiology and Biochemistry*, 48(3):521–533, June 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01065-5`.

Hou:2022:NPM

[378] Zhenxin Hou, Xiyuan Lu, and Lee A. Fuiman. Nutritional programming by maternal diet alters offspring lipid metabolism in a marine teleost. *Fish Physiology and Biochemistry*, 48(3):535–553, June 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01069-1`.

Shao:2022:DCP

[379] Yiru Shao, Zhiyong Xie, and Cuihong You. Dietary calcium pyruvate could improve growth performance and reduce excessive lipid deposition in juvenile golden pompano (*Trachinotus ovatus*) fed a high fat diet. *Fish Physiology and Biochemistry*, 48(3):555–570, June 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01077-1`.

Zhuo:2022:NIP

[380] Mei-Qin Zhuo, Jun Chen, and Wen-Biao Wang. Novel insights for PI3KC3 in mediating lipid accumulation in yellow catfish *Pelteobagrus fulvidraco*. *Fish Physiology and Biochemistry*, 48(3):571–583, June 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01071-7`.

Abdel-Tawwab:2022:DCN

[381] Mohsen Abdel-Tawwab, El-Sayed Hemdan Eissa, and Ragaa A. Ahmed. Dietary curcumin nanoparticles promoted the performance, antioxidant activity, and humoral immunity, and modulated the hepatic and intestinal histology of Nile tilapia fingerlings. *Fish Physiology and Biochemistry*, 48(3):585–601, June 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01066-4`.

Wang:2022:PFK

[382] Jingqian Wang, Zhao Liu, and Junquan Zhu. The potential function of KIF17 in large yellow croaker (*Larimichthys crocea*) spermatid remodeling: molecular characterization and expression pattern during spermiogenesis. *Fish Physiology and Biochemistry*, 48(3):603–616, June 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-021-01035-3`.

Amador:2022:SUP

[383] Molly H. B. Amador and M. Danielle McDonald. Is serotonin uptake by peripheral tissues sensitive to hypoxia exposure? *Fish Physiology and Biochemistry*, 48(3):617–630, June 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01083-3`.

Wang:2022:MCC

[384] Jing Wang, Xi Chen, and Weijie Mu. Molecular cloning, characterization and expression analysis of P53 from high latitude fish *Phoxinus lagowskii* and its response to hypoxia. *Fish Physiology and Biochemistry*, 48(3):631–644, June 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01072-6`.

Weinrauch:2022:SEE

[385] Alyssa M. Weinrauch, Frauke Fehrmann, and W. Gary Anderson. Sustained endocrine and exocrine function in the pancreas of the Pacific spiny dogfish post-feeding. *Fish Physiology and Biochemistry*, 48(3):645–657, June 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01070-8`.

Li:2022:CEE

[386] Hui Li, Minxin Kang, and Xiaojuan Cao. Cloning and expressions of chop in loach (*Misgurnus anguillicaudatus*) and its response to hydrogen peroxide (H_2O_2) stress. *Fish Physiology and Biochemistry*, 48(3):659–668, June 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01067-3`.

Jiang:2022:TAS

[387] Bingjie Jiang, Lanmei Wang, and Zaijie Dong. Transcriptome analysis of skin color variation during and after overwintering of Malaysian red tilapia. *Fish Physiology and Biochemistry*, 48(3):669–682, June 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01073-5`. See correction [405].

Ji:2022:PAS

[388] Shanghong Ji, Jian Sun, and Hong Ji. PKA/ATGL signaling pathway is involved in ER stress-mediated lipolysis in adipocytes of grass carp (*Ctenopharyngodon idella*). *Fish Physiology and Biochemistry*, 48

(3):683–691, June 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-021-01032-6.

Zhang:2022:IGE

[389] Xin Zhang, Hu Chen, and Zhiqiong Li. The insulin gene as an energy homeostasis biomarker in Yangtze sturgeon (*Acipenser dabryanus*). *Fish Physiology and Biochemistry*, 48(3):693–705, June 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-022-01079-z.

Li:2022:DNS

[390] Lanlan Li, Zhe Liu, and Jun Sun. Dietary nanoselenium supplementation for heat-stressed rainbow trout: effects on organizational structure, lipid changes, and biochemical parameters as well as heat-shock-protein- and selenoprotein-related gene expression. *Fish Physiology and Biochemistry*, 48(3):707–722, June 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-022-01084-2.

Wang:2022:CEE

[391] Congcong Wang, Qin Zhang, and Qianghua Xu. Characterization of EPO H131S as a key mutation site in the hypoxia-adaptive evolution of *Gymnocypris dobula*. *Fish Physiology and Biochemistry*, 48(3):723–733, June 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-022-01080-6.

Ota:2022:FFC

[392] Erika do Carmo Ota, Claudia Andrea Lima Cardoso, and Tarcila Souza de Castro Silva. Fish feed can show genotoxic damage. *Fish Physiology and Biochemistry*, 48(3):735–748, June 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-022-01068-2.

Sharma:2022:RCB

[393] Luni Sharma, Supriya Pipil, and Neeta Sehgal. Role of cathepsins B and D in proteolysis of yolk in the catfish *Clarias gariepinus*. *Fish Physiology and Biochemistry*, 48(3):749–765, June 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-022-01062-8.

Ismail:2022:OIL

[394] Taha Ismail, Elsayed Hegazi, and Mahmoud S. Gewaily. The optimized inclusion level of *Bacillus subtilis* fermented *Azolla pinnata* in Nile tilapia (*Oreochromis niloticus*) diets: immunity, antioxidative status, intestinal digestive enzymes and histomorphometry, and disease resistance. *Fish Physiology and Biochemistry*, 48(3):767–783, June 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01076-2`.

Prabu:2022:EHS

[395] Dhanasekaran Linga Prabu, Pananghat Vijayagopal, and Bose Ramar Muniswaran. Enzymological, histological, and serum biomarker responses of snubnose pompano on complete replacement of fishmeal using cottonseed meal supplemented with lysine and methionine in the diet. *Fish Physiology and Biochemistry*, 48(3):785–804, June 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01081-5`.

Du:2022:TEG

[396] Jinxing Du, Jiahui Zhou, and Linqiang Han. Timing of early gonadal differentiation and effects of estradiol-17β treatments on the sex differentiation in largemouth bass (*Micropterus salmoides*). *Fish Physiology and Biochemistry*, 48(3):805–815, June 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01074-4`.

Sam:2022:CIL

[397] Ka-Kei Sam, Nyok-Sean Lau, and Alexander Chong Shu-Chien. A complete inventory of long-chain polyunsaturated fatty acid biosynthesis pathway enzymes in the miniaturized cyprinid *Paedocypris micromegethes*. *Fish Physiology and Biochemistry*, 48(4):817–838, August 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01082-4`.

Zhang:2022:FLG

[398] Xiujuan Zhang, Guanyu Li, and Jinping Chen. Full-length gonad transcriptome analysis of Amur sturgeon Dmrt family genes: identification, characterization, and expression patterns during gonadal differentiation. *Fish Physiology and Biochemistry*, 48(4):839–852, August 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01087-z`.

Nguyen:2022:EGK

[399] Anh Tuan Nguyen, Erin L. Damsteegt, and P. Mark Lokman. Effects of gonadotropins, 11-ketotestosterone, and insulin-like growth factor-1 on target gene expression and growth of previtellogenic oocytes from short-finned eels, *Anguilla australis*, in vitro. *Fish Physiology and Biochemistry*, 48(4):853–867, August 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01090-4`.

Fan:2022:MCF

[400] Xiaoteng Fan, Tao Yan, and Zaizhao Wang. Mitochondrial changes in fish cells in vitro in response to serum deprivation. *Fish Physiology and Biochemistry*, 48(4):869–881, August 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01088-y`.

Younus:2022:SEF

[401] Naima Younus and Amina Zuberi. Significance of extrinsic factors for the optimization of dietary cobalt supplementation in *Tor putitora* fingerlings. *Fish Physiology and Biochemistry*, 48(4):883–897, August 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01089-x`.

Herrera:2022:PES

[402] Fabio Herrera, Sergey Boryshpolets, and Olga Bondarenko. Pikeperch (*Sander lucioperca*) spermatozoa motility and volume regulation under different osmotic and ionic conditions. *Fish Physiology and Biochemistry*, 48(4):899–910, August 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01086-0`.

Chen:2022:HIO

[403] FuJu Chen, Xiaodong Ling, and ShengYun Fu. Hypoxia-induced oxidative stress and apoptosis in gills of scaleless carp (*Gymnocypris przewalskii*). *Fish Physiology and Biochemistry*, 48(4):911–924, August 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01091-3`.

Solan:2022:EPS

[404] Megan E. Solan, Marco E. Franco, and Ramon Lavado. Effects of perfluoroalkyl substances (PFASs) and benzo[*a*]pyrene (BaP) co-exposure on phase I biotransformation in rainbow trout (*Oncorhynchus mykiss*).

Fish Physiology and Biochemistry, 48(4):925–935, August 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01093-1`.

Jiang:2022:CTA

[405] Bingjie Jiang, Lanmei Wang, and Zaijie Dong. Correction to: Transcriptome analysis of skin color variation during and after overwintering of Malaysian red tilapia. *Fish Physiology and Biochemistry*, 48(4):937, August 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01092-2`. See [387].

Murashita:2022:EOA

[406] Koji Murashita, Fumiaki Takakuwa, and Hirofumi Furuita. Effect of oral administration of a single bolus of six different protein sources on digestive physiology of red seabream *Pagrus major* juveniles. *Fish Physiology and Biochemistry*, 48(4):939–954, August 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01096-y`.

Shen:2022:LMD

[407] Yuedong Shen, Xuejiao Li, and Min Jin. Lipid metabolic disorders and physiological stress caused by a high-fat diet have lipid source-dependent effects in juvenile black seabream *Acanthopagrus schlegelii*. *Fish Physiology and Biochemistry*, 48(4):955–971, August 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01095-z`.

Elbialy:2022:EID

[408] Zizy I. Elbialy, Shrouk Gamal, and Doaa H. Assar. Exploring the impacts of different fasting and refeeding regimes on Nile tilapia (*Oreochromis niloticus* L.): growth performance, histopathological study, and expression levels of some muscle growth-related genes. *Fish Physiology and Biochemistry*, 48(4):973–989, August 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01094-0`.

Mookkan:2022:CCW

[409] Madhavi Mookkan, Kailasam Muniyandi, and Stalin Palaniyandi. Carotenoid composition in wild-caught spotted scat (*Scatophagus argus*) broodstocks: effects on gonad development. *Fish Physiology and Biochemistry*, 48(4):991–1009, August 2022. CODEN FPBIEP. ISSN 0920-

1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-022-01099-9.

Mustapha:2022:FAT

[410] Umar Farouk Mustapha, Fei Zhi, and Dong-Neng Jiang. First account of a transient intersex in spotted scat, *Scatophagus argus*: a marine gonochoristic fish. *Fish Physiology and Biochemistry*, 48(4):1011–1023, August 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-022-01097-x.

He:2022:FTA

[411] Chao-Fan He, Xiang-Fei Li, and Wen-Bin Liu. Feed types affect the growth, nutrient utilization, digestive capabilities, and endocrine functions of *Megalobrama amblycephala*: a comparative study between pelleted and extruded feed. *Fish Physiology and Biochemistry*, 48(4):1025–1038, August 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-022-01085-1.

Xiao:2022:MAP

[412] Ye Xiao, Xiang Lin, and Wenting Hu. Metabolomics analysis of the potential toxicological mechanisms of diquat dibromide herbicide in adult zebrafish (*Danio rerio*) liver. *Fish Physiology and Biochemistry*, 48(4): 1039–1055, August 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-022-01101-4.

Song:2022:AKO

[413] Lili Song, Kailiang Leng, and Shicui Zhang. Administration of krill oil extends lifespan of fish *Nothobranchius guentheri* via enhancement of antioxidant system and suppression of NF-κ B pathway. *Fish Physiology and Biochemistry*, 48(4):1057–1073, August 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-022-01102-3.

Xu:2022:TAR

[414] Hao Xu, Xiao-Min Miao, and Yun Li. Transcriptome analysis reveals the early resistance of zebrafish larvae to oxidative stress. *Fish Physiology and Biochemistry*, 48(4):1075–1089, August 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-022-01100-5.

Huang:2022:DLL

[415] Xinrui Huang, Xinxin Song, and Gen He. Dietary lysine level affects digestive enzyme, amino acid transport and hepatic intermediary metabolism in turbot (*Scophthalmus maximus*). *Fish Physiology and Biochemistry*, 48 (4):1091–1103, August 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01098-w`.

Kolesnikova:2022:EAH

[416] Evgenia E. Kolesnikova, Aleksandr A. Soldatov, and Aleksandr A. Sysoev. Effect of acute hypoxia on the brain energy metabolism of the scorpionfish *Scorpaena porcus* Linnaeus, 1758: the pattern of oxidoreductase activity and adenylate system. *Fish Physiology and Biochemistry*, 48(4): 1105–1115, August 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01103-2`.

Goikoetxea:2022:NCP

[417] Alexander Goikoetxea, Arianna Servili, and Benjamin Geffroy. Natural cortisol production is not linked to the sexual fate of European sea bass. *Fish Physiology and Biochemistry*, 48(4):1117–1135, August 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01104-1`.

Shiguemoto:2022:PGC

[418] Gustavo Fonseca Shiguemoto, Geovanna Carla Zacheo Coelho, Lucia Suárez López, Giselle Pessanha Pessoa, Silvio Carlos Alves dos Santos, José Augusto Senhorini, Paulo Sérgio Monzani, and George Shigueki Yasui. Primordial germ cell identification and traceability during the initial development of the Siluriformes fish *Pseudopimelodus mangurus*. *Fish Physiology and Biochemistry*, 48(5):1137–1153, October 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01106-z`.

Ferreira:2022:ASE

[419] Andre Lima Ferreira, Fábio Aremil Costa dos Santos, André de Sena Souza, Gisele Cristina Favero, Carlos Garrido Pinheiro, Berta Maria Heinzmann, Bernardo Baldisserotto, and Ronald Kennedy Luz. Anesthetic and sedative efficacy of essential oil of *Hesperozygis ringens* and the physiological responses of *Oreochromis niloticus* after biometric handling and simulated transport. *Fish Physiology and Biochemistry*, 48(5):1155–1166, October 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (elec-

tronic). URL https://link.springer.com/article/10.1007/s10695-022-01109-w.

Gao:2022:EWF

[420] Xiaoqiang Gao, Xinyi Wang, Xi Wang, Hongxu Li, Liang Xu, Yingying Fang, Shuquan Cao, Bin Huang, Haibin Chen, Rui Xing, and Baoliang Liu. Effect of winter feeding frequency on growth performance, biochemical blood parameters, oxidative stress, and appetite-related genes in *Takifugu rubripes*. *Fish Physiology and Biochemistry*, 48(5):1167–1181, October 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-022-01107-y.

Wang:2022:CPR

[421] Bingke Wang, Yanhui Wang, Tao Jia, Jianxin Feng, Changyi Qu, Xiaojun Wu, Xingli Yang, and Qin Zhang. Changes in physiological responses and immunity of blunt snout bream *Megalobrama amblycephala* from transport stress. *Fish Physiology and Biochemistry*, 48(5):1183–1192, October 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-022-01108-x.

Feng:2022:CTF

[422] Yan Feng, Zhao wei Zhong, Yan Xu, Ze yu Zhang, Lu lu Ao, Zhen Yang, Yi lei Wang, and Yong hua Jiang. Characterization of the transcription factor Sox3 regulating the gonadal development of pearlscale angelfish (*Centropyge vrolikii*). *Fish Physiology and Biochemistry*, 48(5):1193–1207, October 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-022-01110-3.

Soldatov:2022:CCB

[423] Aleksander A. Soldatov, Tatyana A. Kukhareva, Valentina N. Rychkova, Ekaterina S. Kladchenko, and Aleksandra Yu. Andreyeva. Cellular composition of the black scorpionfish (*Scorpaena porcus*, L. 1758) blood and head kidney under short-time acute exposure to hypoxia. *Fish Physiology and Biochemistry*, 48(5):1209–1220, October 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-022-01115-y.

Beine:2022:IBA

[424] K. Beine, S. Dahms-Verster, and R. Greenfield. An integrated biomarker assessment of biochemical responses in a freshwater fish species after vanadium pentoxide (v_2O_5) exposure. *Fish Physiology and Biochemistry*, 48

(5):1221–1233, October 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01113-0`.

Zhang:2022:VVA

[425] Songpei Zhang, Yu Cheng, Zuzana Linhartová, Vladimíra Rodinová, Nurshopa Eskander Shazada, Qing Wu, and Otomar Linhart. In vivo and in vitro aging of common carp *Cyprinus carpio* sperm after multiple hormonal application and stripping of males. *Fish Physiology and Biochemistry*, 48(5):1235–1250, October 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01114-z`.

Lee:2022:ELP

[426] Dae-Won Lee, Jin Ah Song, Heung-Sik Park, and Cheol Young Choi. The effects of low pH and high water temperature on oxidative stress and cell damage in juvenile olive flounder *Paralichthys olivaceus*: comparison of single and combined environmental conditions. *Fish Physiology and Biochemistry*, 48(5):1251–1264, October 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01112-1`. See correction [427].

Lee:2022:CEL

[427] Dae-Won Lee, Jin Ah Song, Heung-Sik Park, and Cheol Young Choi. Correction to: The effects of low pH and high water temperature on oxidative stress and cell damage in juvenile olive flounder *Paralichthys olivaceus*: comparison of single and combined environmental conditions. *Fish Physiology and Biochemistry*, 48(5):1265, October 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01117-w`. See [426].

Azevedo:2022:PGI

[428] Vinicius C. Azevedo and Christopher J. Kennedy. P-glycoprotein inhibition affects ivermectin-induced behavioural alterations in fed and fasted zebrafish (*Danio rerio*). *Fish Physiology and Biochemistry*, 48(5):1267–1283, October 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01111-2`.

Wang:2022:ADM

[429] Shifeng Wang, Liangjin Tian, Yue Wu, Yongcan Zhou, Boyuan Guan, Jianlong Li, and Yan Cai. An accidental discovery of mannan-oligosaccharide's protection effect against air exposure and its potential

mechanism in hybrid grouper (*Epinephelus lanceolatus* [female sign] × *Epinephelus fuscoguttatus* [male sign]). *Fish Physiology and Biochemistry*, 48(5):1285–1297, October 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01118-9`.

Kumar:2022:ATL

[430] Manoj Kumar, Shefalee Singh, Shikha Dwivedi, Indrani Dubey, and Sunil P. Trivedi. Altered transcriptional levels of autophagy-related genes, induced by oxidative stress in fish *Channa punctatus* exposed to chromium. *Fish Physiology and Biochemistry*, 48(5):1299–1313, October 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01119-8`.

Lei:2022:DST

[431] Xin yu Lei, Dong ming Zhang, Qiu ju Wang, Gui qin Wang, Yue hong Li, Yu rou Zhang, Men nan Yu, Qi Yao, Yu ke Chen, and Zhi xin Guo. Dietary supplementation of two indigenous *Bacillus* spp on the intestinal morphology, intestinal immune barrier and intestinal microbial diversity of *Rhynchocypris lagowskii*. *Fish Physiology and Biochemistry*, 48 (5):1315–1332, October 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01121-0`.

Li:2022:CBP

[432] Haixia Li, Jie Wang, Xu Zhang, Yu Hu, Ying Liu, and Zhen Ma. Comparing behavioral performance and physiological responses of *Sebastes schlegelii* with different aggressiveness. *Fish Physiology and Biochemistry*, 48(5):1333–1347, October 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01123-y`.

Zeng:2022:EOM

[433] Xiangbing Zeng, Hongbiao Dong, Jingru Wu, Wenhao Wang, Yafei Duan, Jian Chen, and Jiasong Zhang. Essential oil of *Magnolia denudata* is an effective anesthetic for spotted seabass (*Lateolabrax maculatus*): a test of its effect on blood biochemistry, physiology, and gill morphology. *Fish Physiology and Biochemistry*, 48(5):1349–1363, October 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01124-x`.

Zhang:2022:ELT

[434] Mengqian Zhang, Qian Yang, Rui Shi, Jialin Wang, Ziwei Zhang, Yingming Yang, Wenlong Li, Songlin Chen, and Na Wang. Effects of long-term sex steroid hormones (estradiol and testosterone)-supplemented feeds on the growth performance of Chinese tongue sole (*Cynoglossus semilaevis*). *Fish Physiology and Biochemistry*, 48(5):1365–1375, October 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01125-w`.

Li:2022:ECL

[435] Yaya Li, Yang Yang, Youyi Zhang, Jiabao Hu, Man Zhang, Jiachu Sun, Xinyue Tian, Yuxuan Jin, Dingyuan Zhang, Yajun Wang, Shanliang Xu, and Xiaojun Yan. Expression and cellular localization of insulin-like growth factor 3 in gonads of the seasonal breeding teleost silver pomfret (*Pampus argenteus*). *Fish Physiology and Biochemistry*, 48(5):1377–1387, October 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01122-z`.

Chen:2022:IMJ

[436] Yan Chen, Yang Liu, Yucen Bai, Shaogang Xu, Xiaofei Yang, and Bo Cheng. Intestinal metabolomics of juvenile lenok (*Brachymystax lenok*) in response to heat stress. *Fish Physiology and Biochemistry*, 48(5): 1389–1400, October 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01128-7`. See correction [449].

Burns:2022:ESS

[437] Alton Burns and Delbert M. Gatlin III. Effects of sustained swimming exercise on growth and body composition responses of Nile tilapia (*Oreochromis niloticus*), red drum (*Sciaenops ocellatus*), and hybrid striped bass (*Morone chrysops* × *M. saxatilis*). *Fish Physiology and Biochemistry*, 48(5):1401–1411, October 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01129-6`.

Vilhena:2022:CRT

[438] Cecília Soares Vilhena, Renan Amaral da Silva, Brenda Maria Pereira Alho da Costa, Marcelo Ferreira Torres, Vanessa Jóia de Mello, Renata Coelho Rodrigues Noronha, Joyce Kelly do Rosário da Silva, Moisés Hamoy, Luis André Luz Barbas, and Luís Adriano Santos do Nascimento. Cardiac response in tambaqui *Colossoma macropomum* anaesthetised with *Piper divaricatum* essential oil. *Fish Physiology and Biochemistry*, 48

(5):1413–1425, October 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01132-x`.

Pradhan:2022:BSY

[439] Debashish Pradhan, Arabinda Mahanty, Sasmita Mohanty, Kasturi Samantaray, and Bimal Prasanna Mohanty. Brewer's spent yeast replacement in carp diet leads to muscle biomass production, recycling, waste management and resource conservation. *Fish Physiology and Biochemistry*, 48(6):1427–1442, December 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01133-w`.

Kekelou:2022:SEM

[440] Athina Kekelou, Anastasia Dimitriadi, and George Koumoundouros. Sublethal exposure to *Microcystis aeruginosa* extracts during the yolk-sac larval stage reduces aerobic swimming speed in juvenile zebrafish. *Fish Physiology and Biochemistry*, 48(6):1443–1447, December 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01151-8`.

Magnabosco:2022:TNP

[441] Amanda Rodrigues dos Santos Magnabosco, Ester Inácio Damião Quinova, Matheus Victor Viana de Melo, Paulo Eduardo da Silva Bastos, Thamiris Pinheiro Santos, Ivanildo Inácio da Silva Júnior, André Lucas Corrêa de Andrade, Renata Meireles Oliveira Padilha, Jadson Freitas da Silva, Fabrício Bezerra de Sá, Marília Ribeiro Sales Cadena, and Pabyton Gonçalves Cadena. Testosterone nanoemulsion produced masculinized Nile tilapia (*Oreochromis niloticus*). *Fish Physiology and Biochemistry*, 48(6):1449–1462, December 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01156-3`.

Faheem:2022:MOA

[442] Mehwish Faheem, Saba Khaliq, Rao Zahid Abbas, and Abdallah Tageldein Mansour. *Moringa oleifera* alleviated oxidative stress, physiological and molecular disruption induced by acute thermal stress in grass carp, *Ctenopharyngodon idella*. *Fish Physiology and Biochemistry*, 48(6):1463–1473, December 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01147-4`.

Zhong:2022:MRM

[443] Zhaowei Zhong, Yilei Wang, Yan Feng, Yan Xu, Liping Zhao, Yonghua Jiang, and Ziping Zhang. The molecular regulation mechanism of dmrt1 — based on the establishment of the testis cell line derived from two-spot puffer *Takifugu bimaculatus*. *Fish Physiology and Biochemistry*, 48(6): 1475–1494, December 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-022-01150-9.

Sari:2022:HCI

[444] Dian Novita Sari, Julie Ekasari, Hasan Nasrullah, Muhammad Agus Suprayudi, and Alimuddin Alimuddin. High carbohydrate increases amylase, plasma glucose, and gene expression related to glycolysis in giant gourami *Osphronemus goramy*. *Fish Physiology and Biochemistry*, 48(6): 1495–1505, December 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-022-01155-4.

Aya:2022:EDF

[445] Frolan A. Aya, Mohammad Moniruzzaman, Gregoria S. Pagador, Seonghun Won, Ali Hamidoghli, Taesun Min, and Sungchul C. Bai. Evaluation of dietary fermented tuna by-product meal as partial replacement for unprocessed tuna by-product meal in fishmeal-based diets for juvenile olive flounder *Paralichthys olivaceus*. *Fish Physiology and Biochemistry*, 48(6): 1507–1519, December 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-022-01141-w.

Xu:2022:FXR

[446] Jia Xu, Xinzhou Yao, Xiaoyue Li, Shiwei Xie, Shuyan Chi, Shuang Zhang, Junming Cao, and Beiping Tan. Farnesoid X receptor regulates PI_3 K/AKT/mTOR signaling pathway, lipid metabolism, and immune response in hybrid grouper. *Fish Physiology and Biochemistry*, 48(6): 1521–1538, December 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-022-01130-z.

Yu:2022:FEI

[447] Tingting Yu, Xiaowen Xu, Huiling Mao, Xue Han, Yulong Liu, Hongying Zhang, Jingli Lai, Jianfeng Gu, Mengling Xia, Chengyu Hu, and Dongming Li. Fenpropathrin exposure induces neurotoxicity in zebrafish embryos. *Fish Physiology and Biochemistry*, 48(6):1539–1554, December 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (elec-

tronic). URL https://link.springer.com/article/10.1007/s10695-022-01134-9.

Long:2022:RSP

[448] Jing Long, Yiguo Xia, Hanxun Qiu, Xiaojun Xie, and Yulian Yan. Respiratory substrate preferences in mitochondria isolated from different tissues of three fish species. *Fish Physiology and Biochemistry*, 48(6):1555–1567, December 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-022-01137-6.

Chen:2022:CIM

[449] Yan Chen, Yang Liu, Yucen Bai, Shaogang Xu, Xiaofei Yang, and Bo Cheng. Correction to: Intestinal metabolomics of juvenile lenok (*Brachymystax lenok*) in response to heat stress. *Fish Physiology and Biochemistry*, 48(6):1569, December 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-022-01135-8. See [436].

Li:2022:LRM

[450] ChangShun Li, You Wu, HaoTian Li, Hai Wang, and Jing-Xia Liu. Lipid-related metabolism during zebrafish embryogenesis under unbalanced copper homeostasis. *Fish Physiology and Biochemistry*, 48(6):1571–1586, December 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-022-01127-8.

Garcia-Perez:2022:SFM

[451] Oscar Daniel García-Pérez, Rosa María Sanchez-Casas, Gustavo Moreno-Degollado, Carlos Alberto García Munguía, David Villarreal-Cavazos, and Julián Gamboa-Delgado. Substitution of fish meal with Madagascar cockroach (*Gromphadorhina portentosa*) meal in diets for juvenile Nile tilapia (*Oreochromis niloticus*): effects on growth, nutrient assimilation, and nitrogen turnover rates. *Fish Physiology and Biochemistry*, 48(6): 1587–1597, December 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-022-01153-6.

Zhang:2022:EAL

[452] Yibo Zhang, Shun Zhang, Shanliang Xu, and Danli Wang. Effects of acute low-salinity stress on osmoregulation, antioxidant capacity, and growth of the black sea bream (*Acanthopagrus schlegelii*). *Fish Physiology and Biochemistry*, 48(6):1599–1617, December 2022. CODEN FPBIEP. ISSN

0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-022-01144-7.

Lu:2022:DMP

[453] Ke Lu, Xu-Fang Liang, Tong Liu, Wenjing Cai, Wuyuan Zhuang, Yanpeng Zhang, and Asima Bibi. DNA methylation of pck1 might contribute to the programming effects of early high-carbohydrate diets feeding to the glucose metabolism across two generations in zebrafish (*Danio rerio*). *Fish Physiology and Biochemistry*, 48(6):1619–1633, December 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-022-01149-2.

Xu:2022:ESF

[454] Wenxuan Xu, Wenxing Huang, Chuanwei Yao, Yongtao Liu, Zhaoyang Yin, Kangsen Mai, and Qinghui Ai. Effects of supplemental ferulic acid (FA) on survival, growth performance, digestive enzyme activities, antioxidant capacity and lipid metabolism of large yellow croaker (*Larimichthys crocea*) larvae. *Fish Physiology and Biochemistry*, 48(6):1635–1648, December 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-022-01120-1.

Liu:2022:EES

[455] Qiao Liu, Hong Wang, Jiayu Ge, Jie Luo, Kuo He, Haoxiao Yan, Xin Zhang, Rabia Tahir, Wei Luo, Zhiqiong Li, Song Yang, and Liulan Zhao. Enhance energy supply of largemouth bass (*Micropterus salmoides*) in gills during acute hypoxia exposure. *Fish Physiology and Biochemistry*, 48(6):1649–1663, December 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-022-01139-4.

Panteli:2022:AUM

[456] Nikolas Panteli, Maria Demertzioglou, Konstantinos Feidantsis, Stelios Karapanagiotis, Nikoletta Tsele, Kalliopi Tsakoniti, Konstantinos Gkagkavouzis, Constantinos C. Mylonas, Konstantinos Ar. Kormas, Eleni Mente, and Efthimia Antonopoulou. Advances in understanding the mitogenic, metabolic, and cell death signaling in teleost development: the case of greater amberjack (*Seriola dumerili*, Risso 1810). *Fish Physiology and Biochemistry*, 48(6):1665–1684, December 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-022-01146-5.

Li:2022:GWI

[457] Xiaohuan Li, Sijia Liu, Delin Qi, Hongfang Qi, Yang Wang, Kai Zhao, and Fei Tian. Genome-wide identification and expression of the *peroxisome proliferator-activated receptor* gene family in the Tibetan highland fish *Gymnocypris przewalskii*. *Fish Physiology and Biochemistry*, 48(6): 1685–1699, December 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01152-7`.

Zhang:2022:SIM

[458] Xiaotian Zhang, Haibo Yu, Xianfang Yan, Pengju Li, Chi Wang, Cheng Zhang, Hong Ji, Qinfeng Gao, and Shuanglin Dong. Selenium improved mitochondrial quality and energy supply in the liver of high-fat diet-fed grass carp (*Ctenopharyngodon idella*) after heat stress. *Fish Physiology and Biochemistry*, 48(6):1701–1716, December 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01140-x`.

Lan:2022:DSB

[459] Ying Lan, Chi Wang, Cheng Zhang, Pengju Li, Jinding Zhang, Hong Ji, and Haibo Yu. Dietary sea buckthorn polysaccharide reduced lipid accumulation, alleviated inflammation and oxidative stress, and normalized imbalance of intestinal microbiota that was induced by high-fat diet in zebrafish *Danio rerio*. *Fish Physiology and Biochemistry*, 48(6): 1717–1735, December 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01105-0`.

Salkova:2022:IIE

[460] Eva Šálková, Heike Schmidt-Posthaus, Ilka Lutz, Hana Kocour Kroupová, and Christoph Steinbach. Immunohistochemical investigation of epithelial, mesenchymal, neuroectodermal, immune and endocrine markers in sterlet (*Acipenser ruthenus*), shortnose sturgeon (*Acipenser brevirostrum*) and common carp (*Cyprinus carpio*). *Fish Physiology and Biochemistry*, 48(6):1737–1749, December 2022. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01145-6`.

Elbialy:2023:MMR

[461] Zizy I. Elbialy, Eman Atef, Ibrahim I. Al-Hawary, Abdallah S. Salah, Ali A. Aboshosha, Muyassar H. Abualreesh, and Doaa H. Assar. Myostatin-mediated regulation of skeletal muscle damage post-acute

Aeromonas hydrophila infection in Nile tilapia (*Oreochromis niloticus* L.). *Fish Physiology and Biochemistry*, 49(1):1–17, February 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01165-2`.

Sidiq:2023:ARD

[462] M. Junaid Sidiq, E. G. Jayaraj, Sanjay Singh Rathore, Raja Aadil Hussain Bhat, Muhammad Abdullah-Al Mamun, and Ajay S. Khandagale. Ameliorative role of dietary acidifier potassium formate on growth metrics, blood chemistry, gut health and well-being indices of rohu, *Labeo rohita* fingerlings. *Fish Physiology and Biochemistry*, 49(1):19–37, February 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01171-y`.

Colombo:2023:ASA

[463] Stefanie M. Colombo, Suzanne M. Budge, Jennifer R. Hall, Jovana Kornicer, and Nolan White. Atlantic salmon adapt to low dietary $n-3$ PUFA and warmer water temperatures by increasing feed intake and expression of $n-3$ biosynthesis-related transcripts. *Fish Physiology and Biochemistry*, 49(1):39–60, February 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01157-2`.

Yu:2023:IMM

[464] Hui-Xia Yu, Yang Li, De-Bin Zhong, Xin Ren, Hao-Lin Mo, Ze-Bin Jiang, Jia-Jia Yu, Dong-Mei Xiong, Hai-Xia Liu, and Li-Xin Wang. The interaction of MC3R and MC4R with MRAP2a in rainbow trout (*Oncorhynchus mykiss*). *Fish Physiology and Biochemistry*, 49(1):61–74, February 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01159-0`.

Guroy:2023:EDC

[465] Derya Güroy, Betül Güroy, Soner Bilen, Osman Nezih Kenanoğlu, İzzet Şahin, Ertuğrul Terzi, Onur Karadal, and Serhan Mantoğlu. Effect of dietary celery (*Apium graveolens*) on the growth performance, immune responses, and bacterial resistance against *Vibrio anguillarum* of European seabass (*Dicentrarchus labrax*). *Fish Physiology and Biochemistry*, 49(1):75–95, February 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01158-1`.

Madaro:2023:ASR

[466] Angelico Madaro, Jonatan Nilsson, Paul Whatmore, HyeongJin Roh, Søren Grove, Lars H. Stien, and Rolf Erik Olsen. Acute stress response on Atlantic salmon: a time-course study of the effects on plasma metabolites, mucus cortisol levels, and head kidney transcriptome profile. *Fish Physiology and Biochemistry*, 49(1):97–116, February 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01163-4`.

Babio:2023:LRO

[467] Lucila Babio, Erin L. Damsteegt, and P. Mark Lokman. Lipoprotein receptors in ovary of eel, *Anguilla australis*: molecular characterisation of putative vitellogenin receptors. *Fish Physiology and Biochemistry*, 49 (1):117–137, February 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01169-6`.

Jiang:2023:PEF

[468] Dongxue Jiang, Shengnan Li, Yuexia Liang, Junqi Ma, Bingke Wang, and Chunnuan Zhang. Protective effects of the fructooligosaccharide on the growth performance, biochemical indexes, and intestinal morphology of blunt snout bream (*Megalobrama amblycephala*) infected by *Aeromonas hydrophila*. *Fish Physiology and Biochemistry*, 49(1):139–153, February 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01162-5`.

Mo:2023:MCF

[469] Haolin Mo, Huixia Yu, Yang Li, Timothy P. C. Ezeorba, Zhihao Zhang, Mingxin Yao, Jiajia Yu, Dongmei Xiong, Haixia Liu, and Lixin Wang. Molecular cloning and functional characterization of melanocortin-3 receptor in grass carp (*Ctenopharyngodon idella*). *Fish Physiology and Biochemistry*, 49(1):155–167, February 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01164-3`.

Messina:2023:EFR

[470] Maria Messina, Lucilla Iacumin, Giulia Pascon, Francesca Tulli, Emilio Tibaldi, and Gloriana Cardinaletti. Effect of feed restriction and refeeding on body condition, digestive functionality and intestinal microbiota in rainbow trout (*Oncorhynchus mykiss*). *Fish Physiology and Biochemistry*, 49(1):169–189, February 2023. CODEN FPBIEP. ISSN 0920-1742 (print),

1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-023-01170-z.

Bhatnagar:2023:ICA

[471] Anita Bhatnagar and Pragati Rathi. Isolation and characterization of autochthonous probiotics from skin mucus and their in vivo validation with dietary probiotic bacteria on growth performance and immunity of *Labeo calbasu* (Hamilton, 1822). *Fish Physiology and Biochemistry*, 49 (2):191–208, April 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-022-01168-z.

Grimpampi:2023:OES

[472] Aggeliki Grimpampi, Eleni Kakaridi, Ioannis E. Papadakis, Asbjørn Bergheim, and Pavlos Makridis. Oxygenation of European seabass (*Dicentrarchus labrax* L.) in cages through aeration and effect on lipid metabolism. *Fish Physiology and Biochemistry*, 49(2):209–218, April 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-023-01174-9.

Dubey:2023:EDT

[473] Maneesh Kumar Dubey, Biju Sam Kamalam, Manchi Rajesh, Debajit Sarma, Anupam Pandey, Pratibha Baral, and Prakash Sharma. Exposure to different temperature regimes at early life stages affects hatching, developmental morphology, larval growth, and muscle cellularity in rainbow trout, *Oncorhynchus mykiss*. *Fish Physiology and Biochemistry*, 49(2):219–238, April 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-023-01175-8.

Zhao:2023:FES

[474] Shan-Shan Zhao, Xiao-Lei Su, Hui-Qi Yang, Guo-Dong Zheng, and Shu-Ming Zou. Functional exploration of SNP mutations in HIF2α b gene correlated with hypoxia tolerance in blunt snout bream (*Megalobrama amblycephala*). *Fish Physiology and Biochemistry*, 49(2):239–251, April 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-023-01173-w.

Hua:2023:MGE

[475] Yizhuo Hua, Wangwang Huang, Fan Wang, Zhao Jing, Juntao Li, Qingchao Wang, and Yuhua Zhao. Metabolites, gene expression, and gut microbiota profiles suggest the putative mechanisms via which dietary creatine increases the serum taurine and g-ABA contents in *Megalobrama amblycephala*. *Fish Physiology and Biochemistry*, 49(2):253–274, April 2023.

CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-023-01177-6.

Waheed:2023:IBC

[476] Ahmad Waheed, Hina Naz, Muhammad Wajid, and Muhammad Saleem Khan. Impact of background colorations on growth, movement behavior, and some body physiological factors of Nile tilapia, *Oreochromis niloticus*. *Fish Physiology and Biochemistry*, 49(2):275–287, April 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-023-01180-x.

Buyinza:2023:ECO

[477] Isaac Buyinza, Rebecca Lochmann, Amit K. Sinha, Michele Thompson, Nicholas Romano, and Grace Ramena. Elevated concentrations of organic and inorganic forms of iron in plant-based diets for channel catfish prevent anemia but damage liver and intestine, respectively, without impacting growth performance. *Fish Physiology and Biochemistry*, 49(2):289–305, April 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-023-01183-8.

Sumithra:2023:PTD

[478] T. G. Sumithra, S. R. Krupesha Sharma, Vishnu Prasad, Ambarish P. Gop, Suja Gangadharan, S. Gayathri, Antony Ambrose, R. Rajisha, S. K. Panda, M. K. Anil, and P. K. Patil. Pharmacokinetics and tissue distribution of florfenicol and florfenicol amine in snubnose pompano (*Trachinotus blochii*) following oral administration. *Fish Physiology and Biochemistry*, 49(2):307–320, April 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-023-01179-4.

Wu:2023:PEA

[479] Kaizheng Wu, Jing Xu, Zhao Jia, Junya Wang, Zixuan Wang, Jianhua Feng, Xiaozhen Zhu, Qin Liu, Bangjie Wang, Mingjie Li, Yue Pang, and Jun Zou. Phylogeny and expression of ADAM10 and ADAM17 homologs in lamprey. *Fish Physiology and Biochemistry*, 49(2):321–334, April 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-023-01184-7.

Thawkar:2023:BMS

[480] Baban S. Thawkar and Ginpreet Kaur. Betanin mitigates scopolamine-induced cognitive impairment by restoring cholinergic function, boosting brain antioxidative status, and increasing BDNF level in the zebrafish

model. *Fish Physiology and Biochemistry*, 49(2):335–349, April 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01185-6`.

Karacaoglan:2023:ESH

[481] Arif Karacaoğlan, Kürşat Fırat, Müge Aliye Hekimoğlu, Şahin Saka, Cüneyt Suzer, Sema Midilli, Birsen Kırım, Atife Tuba Beken, Mürsel Özdoğan, Şükrü Yıldırım, and Deniz Çoban. Enzymatic, skeletal, and histological ontogeny of shi drum (*Umbrina cirrosa*) larvae under intensive culture conditions. *Fish Physiology and Biochemistry*, 49(2):351–370, April 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01186-5`. See correction [495].

Nargesi:2023:DSM

[482] Erfan Akbari Nargesi and Bahram Falahatkar. Dietary supplementation of multi-strain probiotic in male rainbow trout (*Oncorhynchus mykiss*) broodstock: Effects on feed efficiency, hemato-biochemical parameters, immune response, and semen quality. *Fish Physiology and Biochemistry*, 49(2):371–384, April 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01181-w`.

Amano:2023:NRM

[483] Masafumi Amano, Noriko Amiya, Naoyuki Yamamoto, and Yoshitaka Sakakura. Neuronal responses of melanin-concentrating hormone and corticotropin-releasing hormone to background color in the self-fertilizing fish, *Kryptolebias marmoratus*. *Fish Physiology and Biochemistry*, 49 (2):385–398, April 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01178-5`.

Janes:2023:DCG

[484] Douglas Janes, Jr., Blaine Suehs, and Delbert M. Gatlin III. Dietary creatine and guanidinoacetic acid supplementation have limited effects on hybrid striped bass. *Fish Physiology and Biochemistry*, 49(3):399–407, June 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01196-3`.

Blodorn:2023:MQN

[485] Eduardo B. Blödorn, William B. Domingues, Amanda W. S. Martins, Eduardo N. Dellagostin, Eliza R. Komninou, Mariana H. Remião, Tony L. R.

Silveira, Gilberto L. Collares, Janice L. Giongo, Rodrigo A. Vaucher, and Vinicius Farias Campos. MicroRNA qPCR normalization in Nile tilapia (*Oreochromis niloticus*): Effects of acute cold stress on potential reference targets. *Fish Physiology and Biochemistry*, 49(3):409–423, June 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01190-9`.

Kabeya:2023:DDE

[486] Naoki Kabeya, Kazunori Kimura, Yoshiyuki Matsushita, Satoshi Suzuki, Yasuhiro Nagakura, Ryuhei Kinami, Hiroyuki Noda, Koji Takagi, Kazutoshi Okamoto, Misako Miwa, Yutaka Haga, Shuichi Satoh, and Goro Yoshizaki. Determination of dietary essential fatty acids in a deep-sea fish, the splendid alfonsino *Beryx splendens*: functional characterization of enzymes involved in long-chain polyunsaturated fatty acid biosynthesis. *Fish Physiology and Biochemistry*, 49(3):425–439, June 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01192-7`.

Terzi:2023:DEG

[487] Funda Terzi, Beste Demirci, Ümit Acar, Süleyman Yüksel, Çağatay Salum, Huseyin Serkan Erol, and Osman Sabri Kesbiç. Dietary effect of grape (*Vitis vinifera*) seed extract mitigates hepatic disorders caused by oxidized fish oil in rainbow trout (*Oncorhynchus mykiss*). *Fish Physiology and Biochemistry*, 49(3):441–454, June 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01193-6`.

Wang:2023:ESI

[488] Xiaowen Wang, Huijuan Li, Rong Zhang, Lili Liu, and Hua Zhu. Effects of saline immersion on the physiological alterations of grass goldfish (*Carassius auratus*) during subsequent recovery in freshwater. *Fish Physiology and Biochemistry*, 49(3):455–470, June 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01187-4`.

Zeng:2023:DCT

[489] Lin Zeng, Yong-Hong Wang, Chun-Xiang Ai, Hui Zhang, Yu-Cong Huang, and Wei-Guang Zou. Different cold tolerances among three strains of large yellow croaker: related to antioxidant defense and energy metabolism. *Fish Physiology and Biochemistry*, 49(3):471–486, June 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01201-9`.

Acosta:2023:NPR

[490] Omar D. Moreno Acosta, Agustín F. Boan, Ricardo S. Hattori, and Juan Ignacio Fernandino. Notch pathway is required for protection against heat stress in spermatogonial stem cells in medaka. *Fish Physiology and Biochemistry*, 49(3):487–500, June 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01200-w`.

Sarangi:2023:EPI

[491] Prerana Sarangi, Lilesh Kumar Pradhan, Pradyumna Kumar Sahoo, Nishant Ranjan Chauhan, and Saroj Kumar Das. Di-2-ethylhexyl phthalate-induced neurobehavioural transformation is associated with altered glutathione biosynthesis and neurodegeneration in zebrafish brain. *Fish Physiology and Biochemistry*, 49(3):501–514, June 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01197-2`.

Paul:2023:SDD

[492] Ganjai Vikram Paul, Agatha Cecilia Sihite, and Todd Hsu. Susceptibility of DNA damage recognition activities linked to nucleotide excision and mismatch repair in zebrafish (*Danio rerio*) early and mid-early embryos to 2.5 to 4.5 ^{o}C heat stress. *Fish Physiology and Biochemistry*, 49(3):515–527, June 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01198-1`.

Elamawy:2023:DIN

[493] Anwar Elamawy, Elsayed Hegazi, Eldsokey Nassef, Tarek K. Abouzed, Abeer G. Zaki, and Taha Ismail. Dietary inclusion of nano-phosphorus improves growth performance, carcass quality, and growth-related traits of Nile tilapia (*Oreochromis niloticus*) and alleviates water phosphorus residues. *Fish Physiology and Biochemistry*, 49(3):529–542, June 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01199-0`.

Costa:2023:NAC

[494] Fabiano Gonçalves Costa, Chayrra Chehade Gomes, Mateus Contar Adolfi, Mayra Costa da Cruz Gallo de Carvalho, Marco Antônio Zanoni, Fábio Rodrigues Ferreira Seiva, and Maria Inês Borella. New approaches concerning the testis of *Astyanax lacustris* (Characidae): immunohistochemical studies. *Fish Physiology and Biochemistry*, 49(3):543–556, June 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (elec-

tronic). URL https://link.springer.com/article/10.1007/s10695-023-01194-5.

Karacaoglan:2023:CES

[495] Arif Karacaoğlan, Kürşat Fırat, Müge Aliye Hekimoğlu, Şahin Saka, Cüneyt Suzer, Sema Midilli, Birsen Kırım, Atife Tuba Beken, Mürsel Özdoğan, Şükrü Yıldırım, and Deniz Çoban. Correction to: Enzymatic, skeletal, and histological ontogeny of shi drum (*Umbrina cirrosa*) larvae under intensive culture conditions. *Fish Physiology and Biochemistry*, 49(3):557, June 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-023-01202-8. See [481].

Marc:2023:ONA

[496] Adrien F. Marc, Jarrod L. Guppy, Hayley Marshall, Dean R. Jerry, Donna Rudd, and Damien B. B. P. Paris. Optimization of a non-activating medium for short-term chilled storage of barramundi (*Lates calcarifer*) testicular spermatozoa. *Fish Physiology and Biochemistry*, 49(4):559–576, August 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-023-01191-8.

dosSantos:2023:TCI

[497] Tania Maria Lopes dos Santos, Elen Monique de Oliveira Sousa, Monica Yumi Tsuzuki, Alex Pires de Oliveira Nuñer, and Leonardo José Gil Barcellos. Tank color influences the response of tomato clownfish (*Amphiprion frenatus*) to an acute stress challenge. *Fish Physiology and Biochemistry*, 49(4):577–584, August 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-023-01203-7.

Wang:2023:LTH

[498] Min Wang, Shujia Liao, Xuechun Zang, Zhineng Fu, Shaowu Yin, and Tao Wang. Long-term hypoxia stress-induced oxidative stress, cell apoptosis, and immune response in the intestine of *Pelteobagrus vachelli*. *Fish Physiology and Biochemistry*, 49(4):585–597, August 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-023-01204-6.

Moradi:2023:NAE

[499] Shadieh Moradi, Samyar Ashouri, Fereshteh Pirani, Seyed Ali Johari, Hoi Pin Kim, Il Je Yu, and Edris Ghaderi. Nutritional and ameliorative effects of dietary curcumin and its nano-silica and nano-zeolite encapsulated forms on growth, biochemical and fatty acid profile of common carp

(*Cyprinus carpio*). *Fish Physiology and Biochemistry*, 49(4):599–612, August 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-023-01209-1.

Cigarroa-Ruiz:2023:ABG

[500] L. A. Cigarroa-Ruiz, F. J. Toledo-Solís, S. A. Frías-Gómez, R. Guerrero-Zárate, S. Camarillo-Coop, C. S. Alvarez-Villagómez, E. S. Peña-Marín, M. A. Galaviz, R. Martínez-García, and C. A. Álvarez-González. Addition of β-glucans in diets for tropical gar (*Atractosteus tropicus*) larvae: effects on growth, digestive enzymes and gene expression of intestinal epithelial integrity and immune system. *Fish Physiology and Biochemistry*, 49(4):613–626, August 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-023-01207-3.

Xu:2023:DCA

[501] Dan Xu, Ye Gong, Xiaojun Xiang, Yongtao Liu, Kangsen Mai, and Qinghui Ai. Discovery, characterization, and adipocyte differentiation regulation in perirenal adipose tissue of large yellow croaker (*Larimichthys crocea*). *Fish Physiology and Biochemistry*, 49(4):627–639, August 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-023-01208-2.

Zhou:2023:ETP

[502] Yangchen Zhou, Xiaolong Yin, Weiye Li, Yang Gao, and Zhangjie Chu. Effects of transportation on physiological indices and metabolomics of the large yellow croaker *Larimichthys crocea*. *Fish Physiology and Biochemistry*, 49(4):641–654, August 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-023-01216-2.

Retcheski:2023:YLB

[503] Milena Cia Retcheski, Luiz Vitor Maximowski, Keveen Jhonathan Soares Escorsin, Jéssica Kimie de Almeida Rosa Kurosaki, Silvia Romão, Thiago Bergler Bitencourt, Jorge Erick Garcia Parra, and Luisa Helena Cazarolli. *Yarrowia lipolytica* biomass — a potential additive to boost metabolic and physiological responses of Nile tilapia. *Fish Physiology and Biochemistry*, 49(4):655–670, August 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-023-01219-z.

Luo:2023:MTC

[504] Xu Luo, Zhanxiang Du, Jinyuan Hu, Vladimir Retyunskiy, Bo Ma, Shan Liu, Xing Gao, Ye Zhao, and Qi Zhang. Multi- and transcriptomic changes of chronic exposure to bisphenol A reveals reproductive toxicity in male zebrafish. *Fish Physiology and Biochemistry*, 49(4):671–685, August 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01214-4`.

Said:2023:TEC

[505] Ahmed Abdou Said, Rasha M. Reda, Mohamed M. M. Metwally, and Heba M. Abd El-Hady. Therapeutic efficacy of coriander (*Coriandrum sativum*) enriched diets in *Oreochromis niloticus*: effect on hepatic-renal functions, the antioxidant-immune response and resistance to *Aeromonas veronii*. *Fish Physiology and Biochemistry*, 49(4):687–709, August 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01220-6`.

Narwal:2023:MCB

[506] Ritu Narwal, Rishikesh Krishan Laxmi, Varunendra Singh Rawat, and Neeta Sehgal. Molecular cloning and bioinformatic characterization of Gonadotropin Inhibitory Hormone (GnIH) and its receptors in the freshwater murrel, *Channa punctatus* (Bloch, 1793). *Fish Physiology and Biochemistry*, 49(4):711–736, August 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01211-7`.

Huang:2023:SDI

[507] Ling Huang, Fang Han, Ying Huang, Jieping Liu, Xinjun Liao, Zigang Cao, and Wanbo Li. `Sphk1` deficiency induces apoptosis and developmental defects and premature death in zebrafish. *Fish Physiology and Biochemistry*, 49(4):737–750, August 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01215-3`.

Wong:2023:SLK

[508] Marty Kwok Shing Wong, Yousuke Tsuneoka, and Takehiro Tsukada. Subcellular localization of Na^+ /K^+-ATPase isoforms resolved by in situ hybridization chain reaction in the gill of chum salmon at freshwater and seawater. *Fish Physiology and Biochemistry*, 49(4):751–767, August 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01212-6`.

Ming:2023:EDB

[509] Jian-Hua Ming, Ting Wang, Ting-Hui Wang, Jin-Yun Ye, Yi-Xiang Zhang, Xia Yang, Xian-Ping Shao, and Zhong-Ying Ding. Effects of dietary berberine on growth performance, lipid metabolism, antioxidant capacity and lipometabolism-related genes expression of AMPK signaling pathway in juvenile black carp (*Mylopharyngodon piceus*) fed high-fat diets. *Fish Physiology and Biochemistry*, 49(5):769–786, October 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01143-8`.

Sibiya:2023:RHB

[510] Ashokkumar Sibiya, Jeyaraj Jeyavani, Manoharan Saravanan, Mohammed F. Albeshr, Marcello Nicoletti, Marimuthu Govindarajan, and Baskaralingam Vaseeharan. Response of hepatic biochemical parameters and neurotoxicity to carbamazepine and ibuprofen in *Oreochromis mossambicus*. *Fish Physiology and Biochemistry*, 49(5):787–799, October 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01172-x`.

Lu:2023:RSW

[511] Ke Lu, Xu-Fang Liang, Shu-Lin Tang, Jiaqi Wu, Lixin Zhang, Yuye Wang, and Farui Chai. Role of short-wave-sensitive 1 (`sws1`) in cone development and first feeding in larval zebrafish. *Fish Physiology and Biochemistry*, 49 (5):801–813, October 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01213-5`.

Bahrami:2023:MLP

[512] Zahra Bahrami, Laleh Roomiani, Narges Javadzadeh, Aboalfazl Askary Sary, and Mehran Javaheri Baboli. Microencapsulation of *Lactobacillus plantarum* in the alginate/chitosan improves immunity, disease resistance, and growth of Nile tilapia (*Oreochromis niloticus*). *Fish Physiology and Biochemistry*, 49(5):815–828, October 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01224-2`.

Candebat:2023:EPP

[513] Caroline Lourdes Candebat, Thibault Eddie, Adrien Francois Marc, Fernando Fernando, and Leo Nankervis. Exploring the physiological plasticity of giant grouper (*Epinephelus lanceolatus*) to dietary sulfur amino acids and taurine to measure dietary requirements and essentiality. *Fish*

Physiology and Biochemistry, 49(5):829–851, October 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01222-4`.

Onukwufor:2023:ORC

[514] John O. Onukwufor, Derek A. Somo, Jeffrey G. Richards, and Chris M. Wood. Osmo-respiratory compromise in the mosshead sculpin (*Clinocottus globiceps*): effects of temperature, hypoxia, and re-oxygenation on rates of diffusive water flux and oxygen uptake. *Fish Physiology and Biochemistry*, 49(5):853–866, October 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01226-0`.

Sivaramakrishnan:2023:CDE

[515] Thirugnanamurthy Sivaramakrishnan, Kondusamy Ambasankar, Nathan Felix, Aritra Bera, Biju Sam Kamalam, K. P. Kumaraguru Vasagam, and Muniyandi Kailasam. Changes in digestive enzyme activities during the early ontogeny of milkfish, *Chanos chanos* larvae. *Fish Physiology and Biochemistry*, 49(5):867–882, October 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01225-1`.

Rodrigues:2023:DPD

[516] Keyla Rodrigues, Hemily Batista-Silva, Kieiv Resende Sousa de Moura, Glen Van Der Kraak, and Fátima Regina Mena Barreto Silva. Dibutyl phthalate disrupts energy metabolism and morphology in the gills and induces hepatotoxicity in zebrafish. *Fish Physiology and Biochemistry*, 49 (5):883–893, October 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01227-z`.

Pan:2023:AES

[517] En-Zhuang Pan, Yue Xin, Xue-Qing Li, Xin-Yu Wu, Xue-Lian Tan, and Jing-Quan Dong. Ameliorative effects of silybin against avermectin-triggered carp spleen mitochondrial dysfunction and apoptosis through inhibition of PERK–ATF4-CHOP signaling pathway. *Fish Physiology and Biochemistry*, 49(5):895–910, October 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01228-y`.

Aizen:2023:RSP

[518] Joseph Aizen, Sandhya Sharma, Abigail Elizur, K. P. Joy, and Radha Chaube. Regulation of steroid production and key genes in catfish *Heteropneustes fossilis* using recombinant gonadotropins. *Fish Physiology*

and Biochemistry, 49(5):911–923, October 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01230-4`.

Malintha:2023:EDP

[519] G. H. T. Malintha, Joon Bum Jeong, Buddhi E. Gunathilaka, Mirasha Hasanthi, Kwan-Sik Yun, and Kyeong-Jun Lee. Effects of dietary piperine supplementation on innate immunity, growth performance, feed utilization and intestinal morphology of olive flounder (*Paralichthys olivaceus*). *Fish Physiology and Biochemistry*, 49(5):925–937, October 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01229-x`.

Yu:2023:EHG

[520] Xin xin Yu, Yan rui Zhang, Shan shan Li, Guo dong Zheng, and Shu ming Zou. Effects of hypoxia on the gill morphological structure, apoptosis and hypoxia-related gene expression in blunt snout bream (*Megalobrama amblycephala*). *Fish Physiology and Biochemistry*, 49(5):939–949, October 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01233-1`.

Zhou:2023:AKA

[521] Zuliang Zhou, Jianhua Zhao, Clement R. de Cruz, Hong Xu, Liansheng Wang, and Qiyou Xu. Alpha-ketoglutaric acid mitigates the detrimental effects of soy antigenic protein on the intestinal health and growth performance of mirror carp *Cyprinus carpio*. *Fish Physiology and Biochemistry*, 49(5):951–965, October 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01234-0`.

Octavera:2023:VSB

[522] Anna Octavera, Kohju Yamakawa, and Goro Yoshizaki. The volume and shape of bitterling eggs are more strongly influenced by germ cell autonomy than by the surrounding somatic cells. *Fish Physiology and Biochemistry*, 49(5):967–981, October 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01235-z`.

Yu:2023:NBN

[523] Weixing Yu, Shangyong Qian, Xinai Li, Lihong Zhang, and Weimin Zhang. Neuropeptide B (NPB) and NPB receptor 2b (NPBWR2b) in the ricefield eel *Monopterus albus*: expression and potential involvement

in the regulation of gonadotropins. *Fish Physiology and Biochemistry*, 49 (5):983–1003, October 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01237-x`.

Bhardwaj:2023:ROF

[524] Shivani Bhardwaj, Kushal Thakur, Amit Kumar Sharma, Dixit Sharma, Bhavna Brar, Danish Mahajan, Sunil Kumar, and Rakesh Kumar. Regulation of omega-3 fatty acids production by different genes in freshwater fish species: a review. *Fish Physiology and Biochemistry*, 49(5):1005–1016, October 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01236-y`.

Peng:2023:DZL

[525] Di Peng, Linwei Yang, Xu-Fang Liang, and Farui Chai. Dietary zinc levels affect growth, appetite, and lipid metabolism of Chinese perch (*Siniperca chuatsi*). *Fish Physiology and Biochemistry*, 49(5):1017–1030, October 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01238-w`.

Huang:2023:FAA

[526] Ming Huang, Qinfeng Gao, Xiaogang Yang, Wenxin Jiang, Lin Hao, Yining Yu, and Yuan Tian. Free amino acids in response to salinity changes in fishes: relationships to osmoregulation. *Fish Physiology and Biochemistry*, 49(5):1031–1042, October 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01244-y`.

Long:2023:ECS

[527] Xianmei Long, Wangwang Chen, Guoqing Liu, Wenguang Hu, and Qingsong Tan. Establishment and characterization of a skeletal myoblast cell line of grass carp (*Ctenopharyngodon idellus*). *Fish Physiology and Biochemistry*, 49(5):1043–1061, October 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01246-w`.

Xie:2023:DSP

[528] Rui-Peng Xie, Xu-Fang Liang, Di Peng, Qi-Wei Zhang, Dong-Liang Wu, Jun-Liang Chen, and Ming Zeng. Dietary supplementation of pyridoxine can enhance the growth performance and improve the protein, lipid utilization efficiency of mandarin fish (*Siniperca chuatsi*). *Fish Physiology and*

Biochemistry, 49(6):1063–1078, December 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01223-3`.

Abasubong:2023:HFD

[529] Kenneth Prudence Abasubong, Guang-Zhen Jiang, Hui xing Guo, Xi Wang, Xiang-Fei Li, Dong Yan-zou, Wen bin Liu, and Hesham Eed. Desouky. High-fat diet alters intestinal microbiota and induces endoplasmic reticulum stress via the activation of apoptosis and inflammation in blunt snout bream. *Fish Physiology and Biochemistry*, 49(6): 1079–1095, December 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01240-2`.

Wu:2023:DSL

[530] Dongliang Wu, Di Peng, Xu-Fang Liang, Ruipeng Xie, Ming Zeng, Junliang Chen, Jie Lan, Ru Yang, Jiacheng Hu, and Peisong Lu. Dietary soybean lecithin promoted growth performance and feeding in juvenile Chinese perch (*Siniperca chuatsi*) could be by optimizing glucolipid metabolism. *Fish Physiology and Biochemistry*, 49(6):1097–1114, December 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01241-1`.

Shen:2023:MCC

[531] Yuedong Shen, Wenli Zhao, Yangguang Bao, Jiayun Zhu, Lefei Jiao, Xuemei Duan, Tingting Pan, Óscar Monroig, Qicun Zhou, and Min Jin. Molecular cloning and characterization of endoplasmic reticulum stress related genes grp78 and atf6α from black seabream (*Acanthopagrus schlegelii*) and their expressions in response to nutritional regulation. *Fish Physiology and Biochemistry*, 49(6):1115–1128, December 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01242-0`.

Eom:2023:FDM

[532] Junho Eom and Chris M. Wood. The first direct measurements of ventilatory flow and oxygen utilization after exhaustive exercise and voluntary feeding in a teleost fish, *Oncorhynchus mykiss*. *Fish Physiology and Biochemistry*, 49(6):1129–1149, December 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01247-9`.

Prakash:2023:OWS

[533] Patekar Prakash, Sikendra Kumar, Parimal Sardar, Sukham Munilkumar, Sujata Sahoo, M. Satheesh, Halpati Reena, Vijayakumar Mannur, and Anusha Patel. Optimization of weaning strategy in the climbing perch (*Anabas testudineus*, Bloch 1792) larvae on growth, survival, digestive, metabolic and stress responses. *Fish Physiology and Biochemistry*, 49(6): 1151–1169, December 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01248-8`.

Xu:2023:MAE

[534] Xuhui Xu, Mengyuan Zhou, Kunmei Xie, Shuai Zhang, Xiaomeng Ji, Ying Sun, Qiulu Li, and Zibo Dong. Mitigation of avermectin exposure-induced brain tissue damage in carp by quercetin. *Fish Physiology and Biochemistry*, 49(6):1171–1185, December 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01249-7`.

Carbajal:2023:EEE

[535] Annaïs Carbajal, Michael J. Lawrence, Kathleen M. Gilmour, Manel Lopez-Bejar, and Steven J. Cooke. Evaluation of the effects of exogenous cortisol manipulation and the glucocorticoid antagonist, RU486, on the exploratory tendency of bluegill sunfish (*Lepomis macrochirus*). *Fish Physiology and Biochemistry*, 49(6):1187–1198, December 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01250-0`.

Pelyhe:2023:ICM

[536] Csilla Pelyhe and Joachim Sturve. Isolation and characterization of the morphology, size and particle number of rainbow trout (*Oncorhynchus mykiss*) and zebrafish (*Danio rerio*) cell line derived large and small extracellular vesicles. *Fish Physiology and Biochemistry*, 49(6):1199–1214, December 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01251-z`.

Wang:2023:PAM

[537] Fang Wang, Yong-Yong Feng, Xu-Guang Wang, Mi Ou, Xin-Cheng Zhang, Jian Zhao, Kun-Ci Chen, and Kai-Bin Li. Production of all-male non-transgenic zebrafish by conditional primordial germ cell ablation. *Fish Physiology and Biochemistry*, 49(6):1215–1227, December 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01252-y`.

Tian:2023:LLL

[538] Zhiqi Tian, Mingkui Wei, Rongrong Xue, Lei Song, Handong Li, Hong Ji, and Jian Sun. lpla (*lipoprotein lipase a*) is a marker of early adipogenesis rather than late adipogenesis in grass carp (*Ctenopharyngodon idellus*). *Fish Physiology and Biochemistry*, 49(6):1229–1239, December 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-023-01253-x. See correction [556].

Lipscomb:2023:LDS

[539] Taylor N. Lipscomb, Roy P. Yanong, Shane W. Ramee, and Matthew A. DiMaggio. Larval digestive system ontogeny and early weaning in neon tetra *Paracheirodon innesi*. *Fish Physiology and Biochemistry*, 49(6): 1241–1255, December 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-023-01254-w.

Phetlum:2023:PCA

[540] Suthathip Phetlum and Chamaiporn Champasri. Purification and characterization of amylases from three freshwater fish species providing new insight application as enzyme molecular markers for zymography. *Fish Physiology and Biochemistry*, 49(6):1257–1276, December 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-023-01255-9.

Yang:2023:PSM

[541] Yang Yang, Lei Lu, Ruiyi Chen, Liechao Yu, Weihua Hu, and Dongdong Xu. Production of sterile mono-sex triploid yellow drum (*Nibea albiflora*): genotypic females and sex-reversed phenotypic males with emphasis on utilization as surrogate broodstock. *Fish Physiology and Biochemistry*, 49(6):1277–1294, December 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-023-01256-8.

Dhivyakumari:2023:DCN

[542] Sekar Dhivyakumari, Aparna Chaudhari, Manoj P. Brahmane, Dhanjit Kumar Das, Arjunan Sathiyanarayanan, B. S. Yashwanth, Nevil Pinto, and Mukunda Goswami. Development and characterization of a new muscle cell culture system from *Clarias magur* (Hamilton, 1822). *Fish Physiology and Biochemistry*, 49(6):1295–1302, December 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-023-01257-7.

Singh:2023:ACI

[543] Jyoti Singh, Ayan Srivastava, Ashwini Kumar Nigam, Usha Kumari, Swati Mittal, and Ajay Kumar Mittal. Alterations in certain immunological parameters in the skin mucus of the carp, *Cirrhinus mrigala*, infected with the bacteria, *Edwardsiella tarda*. *Fish Physiology and Biochemistry*, 49(6): 1303–1320, December 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01258-6`.

Lehotzky:2023:EEA

[544] Dávid Lehotzky, Annika I. Eske, and Günther K. H. Zupanc. The effect of eugenol anesthesia on the electric organ discharge of the weakly electric fish *Apteronotus leptorhynchus*. *Fish Physiology and Biochemistry*, 49(6): 1321–1338, December 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01259-5`.

Das:2023:EPS

[545] Abhijit Das, Farhana Hoque, Munusamy Ajithkumar, Jitendra Kumar Sundaray, Parthapratim Chakrabarti, Gadadhar Dash, and Gouranga Biswas. Effect of photoperiod on serum biochemistry, electrolytic balance, acute phase response and histopathology of butter catfish, *Ompok bimaculatus* (Bloch, 1794). *Fish Physiology and Biochemistry*, 49(6): 1339–1355, December 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01260-y`.

Rajesh:2023:EED

[546] Venugopalan Rajesh and Pachangattupalayam Karuppusamy Divya. Embryonic exposure to decitabine induces multiple neural tube defects in developing zebrafish. *Fish Physiology and Biochemistry*, 49(6):1357–1379, December 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01261-x`.

Peron:2023:NLS

[547] Mickaël Péron, Victor Simon, Fabienne Le Grand, Philippe Soudant, David Mazurais, and Marie Vagner. Non-lethal sampling method for the analysis of white muscle fatty acid profiles in European sea bass (*Dicentrarchus labrax*). *Fish Physiology and Biochemistry*, 49(6):1381–1390, December 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01262-w`.

Khieokhajonkhet:2023:ETS

[548] Anurak Khieokhajonkhet, Marisa Phoprakot, Niran Aeksiri, Gen Kaneko, and Wutiporn Phromkunthong. Effects of thermal stress responses in goldfish (*Carassius auratus*): growth performance, total carotenoids and coloration, hematology, liver histology, and critical thermal maximum. *Fish Physiology and Biochemistry*, 49(6):1391–1407, December 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01263-9`.

Homaei:2023:ESL

[549] Ahmad Homaei, Khosro Khajeh, Reyhaneh Sariri, and Ehsan Kamrani. An emphatic study on the luciferin-luciferase bioluminescence system of *Benthosema pterotum*. *Fish Physiology and Biochemistry*, 49(6): 1409–1419, December 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01264-8`.

Hu:2023:ERC

[550] Fengxiao Hu, Wen Li, Hongkai Wang, Hangke Peng, Jiabo He, Jieyu Ding, and Weini Zhang. Environmentally relevant concentrations of tris (2-chloroethyl) phosphate (TCEP) induce hepatotoxicity in zebrafish (*Danio rerio*): a whole life-cycle assessment. *Fish Physiology and Biochemistry*, 49(6):1421–1433, December 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01265-7`.

Palaniyappan:2023:PAB

[551] Sivagaami Palaniyappan, Arun Sridhar, Zulhisyam Abdul Kari, Guillermo Téllez-Isaías, and Thirumurugan Ramasamy. Potentials of *Aloe barbadensis* inclusion in fish feeds on resilience to *Aeromonas hydrophila* infection in freshwater fish *Labeo rohita*. *Fish Physiology and Biochemistry*, 49(6): 1435–1459, December 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01266-6`.

Dawood:2023:CEW

[552] Mahmoud A. O. Dawood, Mahmoud Gewaily, and Hani Sewilam. Combined effects of water salinity and ammonia exposure on the antioxidative status, serum biochemistry, and immunity of Nile tilapia (*Oreochromis niloticus*). *Fish Physiology and Biochemistry*, 49(6):1461–1477, December 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01267-5`.

Ji:2023:GTT

[553] Yan Ji, Bing Hu, Youzhen Wang, Guifang Dong, Chi Zhang, and Denghang Yu. Glycerol tributylate (*Triacylglycerol tributanoate*) promoted the liver lipid metabolism by cultivating the intestinal flora of grass carp (*Ctenopharyngodon idellus*). *Fish Physiology and Biochemistry*, 49(6): 1479–1488, December 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01268-4`.

Chaube:2023:KMN

[554] Radha Chaube, Sandhya Sharma, and Keerikkattil Joy. Kisspeptin modulation of nonapeptide and cytochrome P450 aromatase mRNA expression in the brain and ovary of the catfish *Heteropneustes fossilis*: *in vivo* and *in vitro* studies. *Fish Physiology and Biochemistry*, 49(6):1489–1509, December 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01270-w`.

Mubashshir:2023:EMI

[555] Muhammad Mubashshir, Nabeel Ahmad, Tripti Negi, Renu Bala Sharma, Helen Nilsson Sköld, and Mohd Ovais. Exploring the mechanisms and impacts of melatonin on fish colouration. *Fish Physiology and Biochemistry*, 49(6):1511–1525, December 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01271-9`.

Tian:2023:ACL

[556] Zhiqi Tian, Mingkui Wei, Rongrong Xue, Lei Song, Handong Li, Hong Ji, and Jian Sun. Author correction: lpla (*lipoprotein lipase a*) is a marker of early adipogenesis rather than late adipogenesis in grass carp (*Ctenopharyngodon idellus*). *Fish Physiology and Biochemistry*, 49 (6):1527, December 2023. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01269-3`. See [538].

Wang:2024:SNS

[557] Shaodan Wang, Guohuan Xu, and Jixing Zou. Soluble non-starch polysaccharides in fish feed: implications for fish metabolism. *Fish Physiology and Biochemistry*, 50(1):1–22, February 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01131-y`.

Yang:2024:HWT

[558] Xin Yang, Qinjiang Weng, Xueshan Li, Kangle Lu, Ling Wang, Kai Song, Chunxiao Zhang, and Samad Rahimnejad. High water temperature raised the requirements of methionine for spotted seabass (*Lateolabrax maculatus*). *Fish Physiology and Biochemistry*, 50(1):23–40, February 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01136-7`.

Yao:2024:GAS

[559] Shibin Yao, Shengjie Ren, Chunfang Cai, Xiamin Cao, Ye Shi, Ping Wu, and Yuantu Ye. Glycocholic acid supplementation improved growth performance and alleviated tissue damage in the liver and intestine in *Pelteobagrus fulvidraco* fed a high-pectin diet. *Fish Physiology and Biochemistry*, 50(1):41–57, February 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01148-3`.

Huang:2024:DBT

[560] Wangwang Huang, Yizhuo Hua, Fan Wang, Jia Xu, Lv Yuan, Zhao Jing, Weimin Wang, and Yuhua Zhao. Dietary betaine and/or TMAO affect hepatic lipid accumulation and glycometabolism of *Megalobrama amblycephala* exposed to a high-carbohydrate diet. *Fish Physiology and Biochemistry*, 50(1):59–75, February 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01160-7`.

Wang:2024:DCS

[561] Sen Wang, Zhixin Guo, Xin Wang, Ning Wang, Jiajing Wang, Nan Zheng, Rongxin Zheng, Wenhao Fang, Yuke Chen, Qiuju Wang, and Dongming Zhang. Dietary L-carnitine supplementation changes lipid metabolism and glucose utilization of *Rhynchocypris lagowskii* fed diets with different lipid sources. *Fish Physiology and Biochemistry*, 50(1):77–96, February 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01166-1`.

Elbahnaswy:2024:RPP

[562] Samia Elbahnaswy and Gehad E. Elshopakey. Recent progress in practical applications of a potential carotenoid astaxanthin in aquaculture industry: a review. *Fish Physiology and Biochemistry*, 50(1):97–126, February 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01167-0`.

Xu:2024:MLT

[563] Jia Xu, Menglin Shi, Liutong Chen, Shuyan Chi, Shuang Zhang, Junming Cao, Beiping Tan, and Shiwei Xie. Muscular lipidomics and transcriptomics reveal the effects of bile acids on lipid metabolism in high-fat diet-fed grouper. *Fish Physiology and Biochemistry*, 50(1):127–143, February 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01176-7`.

Melo:2024:GSM

[564] Debora Sayumi Doami Melo, André Luiz Alves de Sá, Sávio Lucas de Matos Guerreiro, Joane Natividade, Paola Fabiana Fazzi Gomes, Rodrigo Takata, Ednaldo da Silva Filho, Glauber David Almeida Palheta, Nuno Filipe Alves Correia de Melo, Fabio Carneiro Sterzelecki, and Igor Hamoy. Growth, survival, and myogenic gene expression in the post-larvae of *Colossoma macropomum* provisioned with *Artemia* nauplii. *Fish Physiology and Biochemistry*, 50(1):145–155, February 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01182-9`.

Bastiancic:2024:HRE

[565] Lucija Bastiančić, Ivan Vlahek, Valerija Benko, Marin Lovrić, Damir Valić, and Snježana Kužir. Histochemical research of enzymes involved in cellular digestion in the digestive tract of tub gurnard, *Chelidonichthys lucerna*. *Fish Physiology and Biochemistry*, 50(1):157–170, February 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01188-3`.

Marudhupandi:2024:ILG

[566] Thangapandi Marudhupandi, Nagarajan Balachandran Dhayanithi, Sridharan Jeyaprakashsabari, Sugatha Dhas Deepa, Thipramalai Thangappan Ajith Kumar, and Uttam Kumar Sarkar. Insulin-like growth factor II, a marker gene for determining the optimum dietary protein level in clownfish *Amphiprion ocellaris*. *Fish Physiology and Biochemistry*, 50 (1):171–182, February 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01189-2`.

Xiao:2024:MAI

[567] Kang Xiao, Xi Wang, Mang mang Wang, Hui-Xing Guo, Wen-Bin Liu, and Guang-Zhen Jiang. Metabolism, antioxidant and immunity in acute and chronic hypoxic stress and the improving effect of vitamin C in the channel catfish (*Ictalurus punctatus*). *Fish Physiology and Biochemistry*,

50(1):183–196, February 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-023-01205-5.

Swamy:2024:DSN

[568] Jayashri Mahadev Swamy, M. Ganapathi Naik, Sanjay Singh Rathore, K. H. Srinivasa, and K. S. Monica. Dietary supplementation of Nile tilapia (*Oreochromis niloticus*) diets with bay laurel (*Laurus nobilis*): alleviation of oxidative stress and amelioration of immune response, serum biochemistry, and resistance against *Aeromonas hydrophila*. *Fish Physiology and Biochemistry*, 50(1):197–208, February 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-023-01210-8.

Luc:2024:MCS

[569] Quenum Crespin Luc, Chris Major Ncho, Souleima Dhahbi, and Olumide Samuel Olowe. Mitigation of cold stress in Nile tilapia (*Oreochromis niloticus*) through dietary lipids supplementation: a preliminary network meta-analysis. *Fish Physiology and Biochemistry*, 50(1):209–223, February 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-023-01217-1.

Chen:2024:DSV

[570] Junliang Chen, Ming Zeng, Xu-Fang Liang, Di Peng, Ruipeng Xie, and Dongliang Wu. Dietary supplementation of VA enhances growth, feed utilization, glucose and lipid metabolism, appetite, and antioxidant capacity of Chinese perch (*Siniperca chuatsi*). *Fish Physiology and Biochemistry*, 50(1):225–237, February 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-023-01221-5.

Kumar:2024:PRS

[571] Neeraj Kumar, Supriya Tukaram Thorat, Pooja Bapurao Patole, Archana Gite, and Kotha Sammi Reddy. Protective role of selenium and selenium-nanoparticles against multiple stresses in *Pangasianodon hypophthalmus*. *Fish Physiology and Biochemistry*, 50(1):239–258, February 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-023-01231-3.

Oshiro:2024:EDP

[572] Amanda Miyuki Oshiro, Kifayat Ullah Khan, Gabriela Castellani Carli, Eduardo Pahor-Filho, Nilva Kazue Sakomura, João Batista Kochenborger

Fernandes, and Leonardo Susumu Takahashi. Effect of digestible protein on intermediate metabolism, hepatic enzyme activities, energy reserves, and growth performance of pacu (*Piaractus mesopotamicus*) in the finishing growth phase. *Fish Physiology and Biochemistry*, 50(1): 259–271, February 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01243-z`.

Li:2024:PPE

[573] Deng-Lai Li, Si-Ying Liu, Rui Zhu, Si-Tong Meng, Yin-Tao Wang, Zhi-Yong Yang, Liang Li, Xiao-Fang Wei, Guo-Jun Shang, Hao-Tong Wang, Zi-Hui Qu, Ya-Nan Quan, and Li-Fang Wu. Potential protective effects of sodium butyrate on glycinin-induced oxidative stress, inflammatory response, and growth inhibition in *Cyprinus carpio*. *Fish Physiology and Biochemistry*, 50(1):273–293, February 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01276-4`.

Zhao:2024:PRL

[574] Tingting Zhao, Aijun Ma, Zhihui Huang, Zhifeng Liu, Zhibin Sun, Liguang Zhu, and Haowen Chang. pparβ regulates lipid catabolism by mediating acox and cpt-1 genes in *Scophthalmus maximus* under heat stress. *Fish Physiology and Biochemistry*, 50(1):295–305, February 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01313-w`.

Kari:2024:RIA

[575] Zulhisyam Abdul Kari, Guillermo Téllez-Isaías, Martina Irwan Khoo, Wendy Wee, Muhammad Anamul Kabir, Romalee Cheadoloh, and Lee Seong Wei. Resveratrol impacts on aquatic animals: a review. *Fish Physiology and Biochemistry*, 50(1):307–318, February 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01319-4`.

Ding:2024:IDS

[576] Fei-Fei Ding, Miao Li, Tong Wang, Nan-Nan Zhou, Fang Qiao, Zhen-Yu Du, and Mei-Ling Zhang. Influence of dietary sodium taurocholate on the growth performance and liver health of Nile tilapia (*Oreochromis niloticus*). *Fish Physiology and Biochemistry*, 50(1):319–330, February 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01116-x`.

Shao:2024:DLS

[577] Ming Shao, Hualiang Liang, Gangchun Xu, Jian Zhu, Songlin Li, and Mingchun Ren. Dietary leucine supplementation improves growth performance, metabolic responses of liver via GCN2/ATF4, and insulin signaling pathways in largemouth bass (*Micropterus salmoides*). *Fish Physiology and Biochemistry*, 50(1):331–347, February 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01126-9`.

Yi:2024:ADP

[578] Changguo Yi, Hualiang Liang, Gangchun Xu, Jian Zhu, Yongli Wang, Songlin Li, Mingchun Ren, and Xiaoru Chen. Appropriate dietary phenylalanine improved growth, protein metabolism and lipid metabolism, and glycolysis in largemouth bass (*Micropterus salmoides*). *Fish Physiology and Biochemistry*, 50(1):349–365, February 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01138-5`.

Ma:2024:EAH

[579] Qiang Ma, Houguo Xu, Yuliang Wei, and Mengqing Liang. Effects of acute hypoxia on nutrient metabolism and physiological function in turbot, *Scophthalmus maximus*. *Fish Physiology and Biochemistry*, 50(1): 367–383, February 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01154-5`.

Wang:2024:IED

[580] Mang mang Wang, Yang yang Huang, Wen bin Liu, Kang Xiao, Xi Wang, Hui xing Guo, Yi lin Zhang, Jing-Wei Fan, Xiang fei Li, and Guang zhen Jiang. Interactive effects of dietary leucine and isoleucine affect amino acid profile and metabolism through AKT/TOR signaling pathways in blunt snout bream (*Megalobrama amblycephala*). *Fish Physiology and Biochemistry*, 50(1):385–401, February 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01161-6`.

Wang:2024:BIH

[581] Ying Wang, Jie Wu, Dagang Wang, Mengqi Wan, Xue Li, Li Zhang, Dou Yang, Fasheng Liu, Jiejun Liu, Kehao Li, Shouhua Zhang, and Huiqiang Lu. BPA induces hepatotoxicity in zebrafish through oxidative stress and apoptosis pathways. *Fish Physiology and Biochemistry*, 50(2):403–412, April 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (elec-

tronic). URL https://link.springer.com/article/10.1007/s10695-023-01284-4.

Kasihmuddin:2024:EDT

[582] Sonia Mohd Kasihmuddin, Zaidi Che Cob, Noorashikin Md Noor, and Simon Kumar Das. Effect of different temperature variations on the physiological state of catfish species: a systematic review. *Fish Physiology and Biochemistry*, 50(2):413–434, April 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-024-01323-8.

Zhou:2024:TAS

[583] Jianshe Zhou, Shuaijie Sun, Ruiting Li, Huifeng Xu, Ming Li, and Zhichao Li. Transcriptome analysis of *Schizothorax oconnori* (Cypriniformes: Cyprinidae) oocytes: The role of K^+ in promoting yolk globule fusion and regulating oocyte maturation. *Fish Physiology and Biochemistry*, 50(2):435–448, April 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-023-01272-8.

Liu:2024:EES

[584] Qingyuan Liu, Jinchun Hu, Yurui Lin, Xinrui Wu, Yujun Feng, Jiazheng Ye, Kai Zhang, and Shanjian Zheng. Effects of exogenous steroid hormones on growth, body color, and gonadal development in the *Opsariichthys bidens*. *Fish Physiology and Biochemistry*, 50(2):449–461, April 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-023-01275-5.

Villalba:2024:UUC

[585] Andrea Martínez Villalba, Álvaro De la Llave-Propín, Jesús De la Fuente, Concepción Pérez, Elisabet González de Chavarri, María Teresa Díaz, Almudena Cabezas, Roberto González-Garoz, Fernando Torrent, Morris Villarroel, and Rubén Bermejo-Poza. Using underwater currents as an occupational enrichment method to improve the stress status in rainbow trout. *Fish Physiology and Biochemistry*, 50(2):463–475, April 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-023-01277-3.

Vicentini:2024:DRF

[586] Maiara Vicentini, Jacqueline Beatriz Kasmirski Pessatti, Maiara Carolina Perussolo, Juliana Roratto Lirola, Fellip Rodrigues Marcondes, Natalia Nascimento, Maritana Mela, Marta Margarete Cestari, Viviane

Prodocimo, Denina Simmons, and Helena Cristina Silva de Assis. Different response of females and males neotropical catfish (*Rhamdia quelen*) upon short-term temperature increase. *Fish Physiology and Biochemistry*, 50(2):477–494, April 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01278-2`.

Fang:2024:EVC

[587] Dan Fang, Chi Zhang, Jun Mei, Weiqiang Qiu, and Jing Xie. Effects of vitamin C combined with sodium alginate on serum biochemistry, oxidative stress, gill tissue morphology, and muscle quality of pearl gentian grouper during waterless transport. *Fish Physiology and Biochemistry*, 50(2):495–512, April 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01280-8`.

Liu:2024:MCF

[588] Yingying Liu, Haiyan Cong, Caihong Bi, Haidong Zha, Shanshan Yu, Lihua Zhao, and Qian Zhu. Molecular characterization and functional analysis of peroxiredoxin 1 (Prx1) from roughskin sculpin (*Trachidermus fasciatus*). *Fish Physiology and Biochemistry*, 50(2):513–526, April 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01281-7`.

Fierro-Castro:2024:AEB

[589] Camino Fierro-Castro, Lluís Tort, Fábio Erminio Mingatto, and Jaqueline Dalbello Biller. Assessing the effect of β-glucan diets on innate immune response of tilapia macrophages against trichlorfon exposure: an in vitro study. *Fish Physiology and Biochemistry*, 50(2):527–541, April 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01283-5`.

Salem:2024:MED

[590] Mohamed E. Salem, Hebatollah M. Almisherfi, Abdel-Fattah M. El-Sayed, Sarah O. Makled, and Heba M. Abdel-Ghany. Modulatory effects of dietary prickly pear (*Opuntia ficus-indica*) peel on high salinity tolerance, growth rate, immunity and antioxidant capacity of Nile tilapia (*Oreochromis niloticus*). *Fish Physiology and Biochemistry*, 50(2):543–556, April 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01289-z`.

Jagannivasan:2024:PAB

[591] Amritha Jagannivasan, Sumithra Thangalazhy Gopakumar, Krupesha Sharma S R, Gayathri Suresh, Dhanutha Nikathil Raveendranathan, Reynold Peter, Ambarish Puracka ttu Gop, and Gopalakrishnan Achamveetil. Profiling the antioxidant biomarkers in marine fish larvae: a comparative assessment of different storage conditions to select the optimal strategy. *Fish Physiology and Biochemistry*, 50(2):557–574, April 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01290-6`.

Zhang:2024:ECC

[592] Dongyun Zhang, Taihang Tian, Linqiang Han, Jinxing Du, Tao Zhu, Caixia Lei, Hongmei Song, and Shengjie Li. Expression characteristics of the `cyp19a1b` aromatase gene and its response to 17β-estradiol treatment in largemouth bass (*Micropterus salmoides*). *Fish Physiology and Biochemistry*, 50(2):575–588, April 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01291-5`.

Ciji:2024:HIB

[593] Alexander Ciji, M. S. Akhtar, Priyanka H. Tripathi, Maneesh Kumar Dubey, and Prakash Sharma. Higher intake of β-glucan impairs reproduction in a female teleost, *Tor putitora* (Hamilton, 1822). *Fish Physiology and Biochemistry*, 50(2):589–603, April 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01292-4`.

Okomoda:2024:STC

[594] Victor Tosin Okomoda, Safiya Isah, Shola Gabriel Solomon, and Mhd Ikhwanuddin. Salinity tolerance in *Clarias gariepinus* (Burchell, 1822): insight on blood parameter variations and gill histological changes. *Fish Physiology and Biochemistry*, 50(2):605–616, April 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01293-3`.

daSilva:2024:APR

[595] Diego Ortiz da Silva, Jonathan Ratko, Ana Paula Nascimento Côrrea, Niumaique Gonçalves da Silva, Diego Mauro Carneiro Pereira, Ieda Cristina Schleger, Ananda Karla Alvez Neundorf, Maria Rosa Dmengeon Pedreiro de Souza, Tatiana Herrerias, and Lucélia Donatti. Assessing physiological responses and oxidative stress effects in *Rhamdia voulezi* exposed to high temperatures. *Fish Physiology and Biochemistry*, 50(2):617–633,

April 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-023-01294-2.

Zhang:2024:HDW

[596] Bi-Yun Zhang, Hong-Ling Yang, Qing-Jie Nie, Yu Zhang, Guo-He Cai, and Yun-Zhang Sun. High dietary wheat starch negatively regulated growth performance, glucose and lipid metabolisms, liver and intestinal health of juvenile largemouth bass, *Micropterus salmoides*. *Fish Physiology and Biochemistry*, 50(2):635–651, April 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-023-01295-1.

Liu:2024:ASB

[597] Sian-Tai Liu, Chun-Yung Chang, Kuang-Yung Lee, Sok-Keng Tong, Han-Liang Huang, Hsi Chen, Jiun-Lin Horng, and Ming-Yi Chou. Alternation of social behaviors for zebrafish (*Danio rerio*) in response to acute cold stress. *Fish Physiology and Biochemistry*, 50(2):653–666, April 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-024-01296-8.

Filice:2024:FSM

[598] Mariacristina Filice, Alfonsina Gattuso, Sandra Imbrogno, Rosa Mazza, Daniela Amelio, Alessia Caferro, Claudio Agnisola, José Manuel Icardo, and Maria Carmela Cerra. Functional, structural, and molecular remodelling of the goldfish (*Carassius auratus*) heart under moderate hypoxia. *Fish Physiology and Biochemistry*, 50(2):667–685, April 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-024-01297-7.

Li:2024:EAE

[599] Handong Li, Shanghong Ji, Xiangtong Yuan, Yunhe Li, Gen Kaneko, Jian Sun, and Hong Ji. Eicosapentaenoic acid (EPA) improves grass carp (*Ctenopharyngodon idellus*) muscle development and nutritive value by activating the mTOR signaling pathway. *Fish Physiology and Biochemistry*, 50(2):687–703, April 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-024-01299-5.

Zhao:2024:NNR

[600] Nannan Zhao, Ke Jiang, Xiaoyu Ge, Jing Huang, Caiming Wu, and Shi Xi Chen. Neurotransmitter norepinephrine regulates chromatosomes aggregation and the formation of blotches in coral trout *Plectropomus leopardus*.

Fish Physiology and Biochemistry, 50(2):705–719, April 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01300-1`.

Parolini:2024:ICI

[601] Marco Parolini, Rocco Iacobuzio, Bruno Bassano, and Roberta Pennati. Interspecific competitive interactions affect body size and oxidative status of two nonnative salmonid species. *Fish Physiology and Biochemistry*, 50(2):721–732, April 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01301-0`.

Shinde:2024:OPB

[602] Deepak Shinde, Shilpa K. Bhat, and C. B. Ganesh. The opioid peptide β-endorphin interferes with the pituitary-testis axis in the Mozambique tilapia *Oreochromis mossambicus*. *Fish Physiology and Biochemistry*, 50 (2):733–743, April 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01302-z`.

Li:2024:DSB

[603] Xiaoqin Li, Xia Lin, Wenjie Chen, and XiangJun Leng. Dietary sodium butyrate positively modulated intestinal microbial community, but did not promote growth of largemouth bass (*Micropterus salmoides*). *Fish Physiology and Biochemistry*, 50(2):745–755, April 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01303-y`.

Houdelet:2024:PCP

[604] Camille Houdelet, Eva Blondeau-Bidet, Xavier Mialhe, Stéphane Lallement, Samson Devilliers, Jean-Claude Falguière, and Benjamin Geffroy. Plasma cortisol and production of miRNAs in red drum (*Sciaenops ocellatus*) exposed to three distinct challenges. *Fish Physiology and Biochemistry*, 50(2):757–766, April 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01304-x`.

Mahboub:2024:SNA

[605] Heba H. Mahboub, Wafaa M. Gad, Enas K. Aziz, Mona Abdelghany Nasr, Esraa M. Fahmy, Dina Mohamed Mansour, Nesma Rasheed, Hanaa S. Ali, Sameh H. Ismail, and Afaf N. Abdel Rahman. Silica nanoparticles alleviate the immunosuppression, oxidative stress, biochemical, behavioral, and histopathological alterations induced by *Aeromonas veronii* infection in

African catfish (*Clarias gariepinus*). *Fish Physiology and Biochemistry*, 50(2):767–783, April 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01274-6`.

Zhang:2024:PUH

[606] Nihe Zhang, Xiaoyuan Wang, Zhihao Han, Ye Gong, Xuxiong Huang, Naisong Chen, and Songlin Li. The preferential utilization of hepatic glycogen as energy substrates in largemouth bass (*Micropterus salmoides*) under short-term starvation. *Fish Physiology and Biochemistry*, 50 (2):785–796, April 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01285-3`.

Maciuszek:2024:SAE

[607] Magdalena Maciuszek, Lukasz Pijanowski, Lidy Verburg van Kemenade, and Magdalena Chadzinska. Season affects the estrogen system and the immune response of common carp. *Fish Physiology and Biochemistry*, 50(2):797–812, April 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01286-2`.

Wahyudi:2024:DSC

[608] Imam Tri Wahyudi, Dedi Jusadi, Mia Setiawati, Julie Ekasari, and Muhammad Agus Suprayudi. Dietary supplementation of cinnamaldehyde positively affects the physiology, feed utilization, growth, and body composition of striped catfish *Pangasianodon hypophthalmus*. *Fish Physiology and Biochemistry*, 50(2):813–826, April 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01287-1`.

Singh:2024:UZS

[609] Rima Singh, Deepali Sharma, Anoop Kumar, Charan Singh, and Arti Singh. Understanding zebrafish sleep and wakefulness physiology as an experimental model for biomedical research. *Fish Physiology and Biochemistry*, 50(2):827–842, April 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01288-0`.

Sultana:2024:GCS

[610] Mehwish Sultana, Muhammad Tayyab, Shakeela Parveen, Muhammad Hussain, and Laiba Shafique. Genetic characterization, structural analysis, and detection of positive selection in small heat shock proteins of

Cypriniformes and Clupeiformes. *Fish Physiology and Biochemistry*, 50 (3):843–864, June 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-024-01337-2.

Moreira:2024:EEO

[611] Anuzhia Paiva Moreira, Fúlvia Cristina Oliveira, Andre Lima Ferreira, Patrini Rodrigues de Almeida, Deliane Cristina Costa, Claudia Andrea Lima Cardoso, Francisco Célio Maia Chaves, Edsandra Campos Chagas, and Cristiane Meldau de Campos. Efficacy of essential oil from ginger (*Zingiber officinale*) for anesthesia and transport sedation of pacu (*Piaractus mesopotamicus*). *Fish Physiology and Biochemistry*, 50(3):865–880, June 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-024-01346-1.

Nwachi:2024:PCI

[612] Oster Francis Nwachi, Arnold Ebuka Irabor, Michael Chukwuemeka Umehai, Truth Omonigho, and Jovita Oghenenyerhovwo Sanubi. Pattern of color inheritance in African catfish (*Clarias gariepinus*): an expression of a Mendelian law. *Fish Physiology and Biochemistry*, 50(3):881–889, June 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-023-01282-6.

Shi:2024:SFF

[613] Mengmeng Shi, Emmanuel J. Rupia, Pengxin Jiang, and Weiqun Lu. Switch from fight-flight to freeze-hide: The impacts of severe stress and brain serotonin on behavioral adaptations in flatfish. *Fish Physiology and Biochemistry*, 50(3):891–909, June 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-024-01298-6.

Zhan:2024:STS

[614] Fanbin Zhan, Qingqing Li, Huiwen Feng, Ruikang Lin, Weiming Liang, Li Lin, and Zhendong Qin. A short-term of starvation improved the antioxidant activity and quality of African catfish (*Clarias gariepinus*). *Fish Physiology and Biochemistry*, 50(3):911–925, June 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-024-01306-9.

Mi:2024:ETF

[615] Hongbo Mi, Ting Zhang, Yue Lu, Jingxin Chen, and Xuepeng Li. Effect of temperature fluctuation on the physiological stress response of hybrid

pearl gentian grouper during waterless keeping alive. *Fish Physiology and Biochemistry*, 50(3):927–939, June 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01307-8`.

Zhang:2024:NFG

[616] Shupeng Zhang, Yongpei Lu, Yanling Liu, Mei Wang, Shaoqi Xu, Ya Li, Hongwei Wu, Qaolin Pei, Lei Yang, Lu Lu, Yixiao Xiong, Youlian Liu, Shuhuang Chen, Qin Yao, Qin Kang, Yingzi Li, Defang Chen, Xin Zhang, Ni Tang, and Zhiqiong Li. Neglected function of gastrin to reduce feeding in Siberian sturgeon (*Acipenser baerii*) via cholecystokinin receptor B. *Fish Physiology and Biochemistry*, 50(3):941–954, June 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01308-7`.

Mansour:2024:EED

[617] Abdallah Tageldein Mansour, Ahmed H. Arisha, Rewan Abdelaziz, Khairiah Mubarak Alwutayd, Hien Van Doan, Abd Elhakeem El-Murr, and Walaa El-Houseiny. Effects of extended dietary supplementation with *Santalum album* essential oil on hemato-biochemical changes, innate immune response, antioxidant status, and expression of related gene in Nile tilapia (*Oreochromis niloticus*). *Fish Physiology and Biochemistry*, 50 (3):955–971, June 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01309-6`.

Wang:2024:LST

[618] Fan Wang, Zhiwen Wang, Junming Cao, and Yishan Lu. Long- and short-term dietary β-glucan improves intestinal health and disease resistance in pearl gentian grouper (*Epinephelus lanceolatus* [male sign] $\times$ *Epinephelus fuscoguttatus* [female sign]). *Fish Physiology and Biochemistry*, 50(3):973–988, June 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01310-z`.

Zhang:2024:AAK

[619] Yufei Zhang, Jiacheng Hu, Peisong Lu, Ru Yang, Xu-Fang Liang, and Liwei Liu. Addition of α-ketoglutaric acid (AKG) reduces deamination in Chinese perch (*Siniperca chuatsi*) fed with fermented soybean meal as a substitute for fishmeal. *Fish Physiology and Biochemistry*, 50(3):989–1002, June 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01312-x`.

Rimoldi:2024:IDC

[620] Simona Rimoldi, Ambra Rita Di Rosa, Marianna Oteri, Biagina Chiofalo, Imam Hasan, Marco Saroglia, and Genciana Terova. The impact of diets containing *Hermetia illucens* meal on the growth, intestinal health, and microbiota of gilthead seabream (*Sparus aurata*). *Fish Physiology and Biochemistry*, 50(3):1003–1024, June 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01314-9`.

Zare:2024:CBP

[621] Mahyar Zare, Mohammad Kazempour, Seyedeh Mahsa Hosseini Choupani, Sobhan R. Akhavan, Michael Salini, Artur Rombenso, and Noah Esmaeili. The crosstalk between photoperiod and early mild stress on juvenile oscar (*Astronotus ocellatus*) after acute stress. *Fish Physiology and Biochemistry*, 50(3):1025–1046, June 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01316-7`.

Sundararajan:2024:DPP

[622] Atshaya Sundararajan, Narottam P. Sahu, Nazeemashahul Shamna, Manish Jayant, Parimal Sardar, Vasanthakumaran, Naveen S. Krishnamenan, Soumyodeep Bhattacharya, Manojkumar Chandraprakasham, and Sangeetha Sankar. Dietary papaya peel extract ameliorates the crowding stress, enhances growth and immunity in *Labeo rohita* fingerlings. *Fish Physiology and Biochemistry*, 50(3):1047–1064, June 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01317-6`.

Phonsiri:2024:ESE

[623] Khanakorn Phonsiri, Benjamin Geffroy, Jep Lokesh, Alexander Goikoetxea, Sandrine Skiba-Cassy, and Stephane Panserat. Early starvation in European seabass (*Dicentrarchus labrax*) larvae has no drastic effect on hepatic intermediary metabolism in juveniles. *Fish Physiology and Biochemistry*, 50(3):1065–1077, June 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01320-x`.

Silva:2024:HBO

[624] Sidney dos Santos Silva, Imaculada de Morais Carvalho Ananias, Thamara Bentivole Magalhaes, André de Sena Souza, Fábio Aremil Costa dos Santos, Naiara Melo, Luis David Solis Murgas, Gisele Cristina Favero, and Ronald Kennedy Luz. Hematological, biochemical and oxidative responses induced by thermal shock in juvenile Tambaqui (*Colos-*

soma macropomum) and its hybrid Tambatinga (*Colossoma macropomum* × *Piaractus brachypomus*). *Fish Physiology and Biochemistry*, 50 (3):1079–1092, June 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01321-w`.

Pereira:2024:DCT

[625] Esmeralda Pereira, André Jorge, Bernardo Quintella, Marco Gomes da Silva, Pedro R. Almeida, and Maria João Lança. Do catadromous thinlip grey mullet benefit from shifting to freshwater? A perspective from fatty acid signature analysis. *Fish Physiology and Biochemistry*, 50(3):1093–1108, June 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01322-9`.

Zhu:2024:EAS

[626] Yingying Zhu, Qipeng Zhang, Jilong Pan, Tiesong Li, Hao Wang, Jindi Liu, Lei Qian, Ting Zhu, Yue Pang, Qingwei Li, and Yan Chi. Evolutionary analysis of SLC10 family members and insights into function and expression regulation of lamprey NTCP. *Fish Physiology and Biochemistry*, 50(3):1109–1122, June 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01324-7`.

Wang:2024:CMF

[627] Jingya Wang, Jing Wu, Yanping Ma, Le Hao, Wen Huang, Zhenxing Liu, and Yugu Li. Characterization of a membrane Fcγ receptor in largemouth bass (*Micropterus saloumoides*) and its response to bacterial challenge. *Fish Physiology and Biochemistry*, 50(3):1123–1140, June 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01325-6`.

Zhang:2024:PAS

[628] Yan-Yu Zhang, Jun-Xian Wang, Fang Qiao, Mei-Ling Zhang, Yuan Luo, and Zhen-Yu Du. Pparα activation stimulates autophagic flux through lipid catabolism-independent route. *Fish Physiology and Biochemistry*, 50(3):1141–1155, June 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01327-4`.

Guo:2024:EFB

[629] Haoji Guo, Guoquan Liu, Mengdu Tian, Chunsheng Liu, Haoran Zhang, Shuqi Wang, Xiaobo Wen, and Fan Lin. Effect of faba bean *Vicia faba*

L. water/alcohol extract on growth performance, antioxidant capacity, textural properties, and collagen deposition in the swim bladder of juvenile *Nibea coibor*. *Fish Physiology and Biochemistry*, 50(3):1157–1169, June 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01328-3`.

Verma:2024:EQA

[630] Arvind Verma, Shanthanagouda A. Holeyappa, Neelam Bansal, and Vaneet Inder Kaur. Efficacy of quercetin in ameliorating hypoxia-induced hematological and histopathological alterations in rohu *Labeo rohita*. *Fish Physiology and Biochemistry*, 50(3):1171–1187, June 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01329-2`.

Wang:2024:DIV

[631] Yueyue Wang, Jiaxi Liu, Haoran Xiao, Hao Sun, Hengyi Hu, Xiaoyu Ma, Anying Zhang, and Hong Zhou. Dietary intakes of vitamin D promote growth performance and disease resistance in juvenile grass carp (*Ctenopharyngodon idella*). *Fish Physiology and Biochemistry*, 50(3): 1189–1203, June 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01330-9`.

Panase:2024:IAE

[632] Paiboon Panase, Thitiwut Vongkampang, Eakapol Wangkahart, and Nantaporn Sutthi. Impacts of astaxanthin-enriched *Paracoccus carotinifaciens* on growth, immune responses, and reproduction performance of broodstock Nile tilapia during winter season. *Fish Physiology and Biochemistry*, 50(3):1205–1224, June 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01331-8`.

Chen:2024:RCS

[633] Haijin Chen, Yaoyi Feng, Jinghui Cui, and Xiaojie Wang. Response of CRH system in brain and gill of marine medaka to seawater acidification. *Fish Physiology and Biochemistry*, 50(3):1225–1236, June 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01332-7`.

Yang:2024:DOA

[634] Ru Yang, Xuange Liu, Yong Liu, Qingda Tian, Ziwei Wang, Dejie Zhu, Zhisong Qian, Yi Yi, Jiacheng Hu, Yan Li, Xu-Fang Liang, Liwei Liu,

and Jianmei Su. Dissolved oxygen and ammonia affect ammonia production via GDH/AMPK signaling pathway and alter flesh quality in Chinese perch (*Siniperca chuatsi*). *Fish Physiology and Biochemistry*, 50 (3):1237–1249, June 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01333-6`.

Mao:2024:DAR

[635] Xinyuan Mao, Yue Wang, Ting Zhang, Junlei Ma, Jihao Zhao, and Dongpo Xu. Dietary arginine regulates the growth performance, antioxidant capacity, and immune response in *Culter alburnus*. *Fish Physiology and Biochemistry*, 50(3):1251–1264, June 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01334-5`.

Ding:2024:AMH

[636] Yibin Ding, Jincan Li, Yao Gao, Xiaolin Wang, Yang Wang, Chao Zhu, Qimin Liu, Lijuan Zheng, Meng Qi, Lijun Zhang, Hong Ji, Fangxia Yang, Xiaoteng Fan, and Wuzi Dong. Analysis of morphology, histology characteristics, and circadian clock gene expression of *Onychostoma macrolepis* at the overwintering period and the breeding period. *Fish Physiology and Biochemistry*, 50(3):1265–1279, June 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01336-3`.

Frohn:2024:GPR

[637] Laura Frohn, Diogo Peixoto, Frédéric Terrier, Benjamin Costas, Jérôme Bugeon, Christel Cartier, Nadège Richard, Karine Pinel, and Sandrine Skiba-Cassy. Gut physiology of rainbow trout (*Oncorhynchus mykiss*) is influenced more by short-term fasting followed by refeeding than by feeding fishmeal-free diets. *Fish Physiology and Biochemistry*, 50(3): 1281–1303, June 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01339-0`.

Metin:2024:EFF

[638] Secil Metin, Hakan Didinen, Nalan Ozgur Yigit, Hasan Eralp, Ozlem Ozmen, and Meric Lutfi Avsever. Efficacy of fennel (*Foeniculum vulgare*) and anise (*Pimpinella anisum*) essential oils as anaesthesics in common carp (*Cyprinus carpio* L. 1758). *Fish Physiology and Biochemistry*, 50 (3):1305–1314, June 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01341-6`.

Vijayaram:2024:SRH

[639] Seerengaraj Vijayaram, Hary Razafindralambo, Hamed Ghafarifarsani, Yun-Zhang Sun, Seyed Hossein Hoseinifar, and Hien Van Doan. Synergetic response on herbal and probiotic applications: a review. *Fish Physiology and Biochemistry*, 50(3):1315–1329, June 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01318-5`.

Hossain:2024:ESB

[640] Forhad Hossain, Shakhawat Hossain, Maisum Sarwar Jyoti, Yuki Omori, and Toshinobu Tokumoto. Establishment of a steroid binding assay for goldfish membrane progesterone receptor (mPR) by coupling with graphene quantum dots (GQDs). *Fish Physiology and Biochemistry*, 50 (3):1331–1339, June 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01315-8`.

Chelebieva:2024:RFM

[641] Elina S. Chelebieva, Ekaterina S. Kladchenko, Igor V. Mindukshev, Stepan Gambaryan, and Alexandra Yu. Andreyeva. ROS formation, mitochondrial potential and osmotic stability of the lamprey red blood cells: effect of adrenergic stimulation and hypoosmotic stress. *Fish Physiology and Biochemistry*, 50(4):1341–1352, August 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01342-5`.

Kumar:2024:CKK

[642] Thushar P. Kumar, Pathakota Gireesh-Babu, Dileep Vasudevan, Annam Pavan-Kumar, and Aparna Chaudhari. Characterization of Kiss/Kissr system and expression profiling through developmental stages indicate kiss1 to be the active isotype in *Clarias magur*. *Fish Physiology and Biochemistry*, 50(4):1353–1373, August 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01343-4`.

Shamas:2024:OIL

[643] Javeria Shamas, Amina Zuberi, Muhammad Aleem Khan, Shanza Gul, Mashooq Ali, and Muhammad Kamran. Optimization of inclusion level of lipid in larval diet of *Labeo rohita* (Hamilton, 1822). *Fish Physiology and Biochemistry*, 50(4):1375–1389, August 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01344-3`.

Li:2024:EGM

[644] Boyu Li, Limin Ye, Cheng Zhang, Ruofan Liu, Chi Wang, Xiaotian Zhang, Hong Ji, and Haibo Yu. Effects of glycerol monolaurate on estradiol and follicle-stimulating hormones, offspring quality, and mRNA expression of reproductive-related genes of zebrafish (*Danio rerio*) females. *Fish Physiology and Biochemistry*, 50(4):1391–1408, August 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01345-2`.

Zarei:2024:EHI

[645] Sevda Zarei, Hossein Ghafoori, Leila Vahdatiraad, Tooraj Sohrabi, and Behrooz Heidari. Effects of HSP inducers on the gene expression of Heat Shock Proteins(HSPs) in cells extracted from sterlet sturgeon under temperature stress with antioxidant and immunity responses. *Fish Physiology and Biochemistry*, 50(4):1409–1428, August 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01347-0`.

Saravia:2024:TIC

[646] Julia Saravia, Daniela Nualart, Kurt Paschke, Juan Pablo Pontigo, Jorge M. Navarro, and Luis Vargas-Chacoff. Temperature and immune challenges modulate the transcription of genes of the ubiquitin and apoptosis pathways in two high-latitude notothenioid fish across the Antarctic Polar Front. *Fish Physiology and Biochemistry*, 50(4):1429–1443, August 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01348-z`.

Khalifa:2024:TRA

[647] Hesham A. Khalifa, Esraa Sharawy, Elsayed M. Younis, Abdelwahab A. Abdelwarith, Rowida E. Ibrahim, Shimaa A. Amer, Simon J. Davies, and Azza M. A. Abo-Elmaaty. The therapeutic role of *Azadirachta indica* leaves ethanolic extract against detrimental effects of *Aeromonas veronii* infection in Nile tilapia, *Oreochromis niloticus*. *Fish Physiology and Biochemistry*, 50(4):1445–1460, August 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01349-y`.

Ferreira:2024:ORS

[648] Andre Lima Ferreira, Walisson de Souza e Silva, Hugo Napoleão Pereira da Silva, Carine de Freitas Milarch, Glauber David Almeida Palheta, Berta Maria Heinzmann, Carlos Garrido Pinheiro, Bernardo Baldisserotto, Gisele Cristina Favero, and Ronald Kennedy Luz. Oxidative re-

sponses in small juveniles of *Colossoma macropomum* anesthetized and sedated with *Ocimum gratissimum* L. essential oil. *Fish Physiology and Biochemistry*, 50(4):1461–1481, August 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01350-5`.

Gao:2024:EDP

[649] Ya Gao, Chengdong Liu, Xuan Wang, Huihui Zhou, Kangsen Mai, and Gen He. EPA and DHA promote cell proliferation and enhance activity of the Akt-TOR-S6K anabolic signaling pathway in primary muscle cells of turbot (*Scophthalmus maximus* L.). *Fish Physiology and Biochemistry*, 50 (4):1483–1494, August 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01351-4`.

Qiu:2024:IHH

[650] Junyi Qiu, Luhan You, Zhaojun Lv, Yajun Zhu, Chengxun Chen, Xueliang Sun, Hongyue Shi, and Zhenzhen Fang. Influence of *Herba Houttuyniae* added to fodder on the morphological structure of the intestinal tract, the digestive enzymes, the intestinal flora, and immune function of koi carp (*Cyprinus carpio*) infected with *Aeromonas veronii*. *Fish Physiology and Biochemistry*, 50(4):1495–1512, August 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01352-3`.

Cai:2024:CAE

[651] Xin Cai, Ying Li, Aijun Cui, Yan Jiang, Bin Wang, Zhaojun Meng, and Yongjiang Xu. Characterization of adaptive expression regulation of yellowtail kingfish (*Seriola lalandi*) leptin, receptor, and receptor overlapping transcript genes in response to fasting and re-feeding strategies. *Fish Physiology and Biochemistry*, 50(4):1513–1526, August 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01353-2`.

Tonissen:2024:PMT

[652] Katrin Tönißen, George P. Franz, Elke Albrecht, Philipp Lutze, Ralf Bochert, and Bianka Grunow. Pikeperch muscle tissues: a comparative study of structure, enzymes, genes, and proteins in wild and farmed fish. *Fish Physiology and Biochemistry*, 50(4):1527–1544, August 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01354-1`.

Valcarce:2024:ESE

[653] David G. Valcarce, Alba Sellés-Egea, Marta F. Riesco, María-Gracia De Garnica, Beatriz Martínez-Fernández, María Paz Herráez, and Vanesa Robles. Early stress exposure on zebrafish development: effects on survival, malformations and molecular alterations. *Fish Physiology and Biochemistry*, 50(4):1545–1562, August 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01355-0`.

Liang:2024:MCF

[654] Zhengyuan Liang, Songqin Hu, Yalun Dong, Linghong Miao, Wenbin Zhu, Bingbing Feng, Jianjun Fu, Mingkun Luo, Lanmei Wang, and Zaije Dong. Molecular characterization and function of hif 1 a and fih 1 in response to acute thermal stress in American shad (*Alosa sapidissima*). *Fish Physiology and Biochemistry*, 50(4):1563–1581, August 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01356-z`.

Yuan:2024:FOR

[655] Xiangtong Yuan, Ruofan Liu, Mingkui Wei, Handong Li, Jian Sun, and Hong Ji. Fish oil replacement with different vegetable oils in *Onychostoma macrolepis*: Effects on fatty acid metabolism based on whole-body fatty acid balance method and genes expression. *Fish Physiology and Biochemistry*, 50(4):1583–1603, August 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01357-y`.

Picoli:2024:BSA

[656] Fernanda Picoli, Alana D. de Oliveira, Suelyn O. Marques, Deise C. Terhorst, Suélen Serafini, Luísa Nora, Fabio F. Neves, Maurício G. C. Emerenciano, Diogo L. A. Lopes, Aleksandro S. da Silva, and Thiago E. H. P. Fabregat. A biofloc system avoids the adverse effects of diets with suboptimal protein levels on zootechnical performance, intestinal histomorphometry, and protein metabolism of Nile tilapia juvenile fed *Spirulina* biomass (*Arthrospira platensis*) as an alternative protein source. *Fish Physiology and Biochemistry*, 50(4):1605–1620, August 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01358-x`.

Zheng:2024:ILG

[657] Jichang Zheng, Wenjing Zhang, Yongjiang Xu, Aijun Cui, Yan Jiang, and Bin Wang. Insulin-like growth factor binding protein-3 (igfbp-3) and

igfbp-5 in yellowtail kingfish (*Seriola lalandi*): molecular characterization and expression levels under different nutritional status and stocking density. *Fish Physiology and Biochemistry*, 50(4):1621–1633, August 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-024-01359-w.

Ogihara:2024:MRT

[658] Atsushi Ogihara, Takashi Abe, Kazutaka Shimoda, Takafumi Sasaki, and Hideaki Kudo. Messenger RNA transcription levels of neuronal soluble N-ethylmaleimide-sensitive factor attachment protein receptor complex components in the olfactory nerve system of the anadromous Pacific salmon, masu salmon *Oncorhynchus masou*. *Fish Physiology and Biochemistry*, 50 (4):1635–1650, August 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-024-01360-3.

dosSantos:2024:BES

[659] Murilo Farias dos Santos, Lorena Meirelis do Nascimento, Clarissa Araújo da Paz, Tays Mata Câmara, Yan Kenzo Monteiro Motomya, Rayllan da Cunha Ferreira, Yris da Silva Deiga, Erika Monteiro, Sildiane Martins Cantanhêde, Lílian Lund Amado, and Moisés Hamoy. Behavioral and electrophysiological study in *Colossoma macropomum* treated with different concentrations of *Nepeta cataria* oil in an immersion bath revealed a therapeutic window for anesthesia. *Fish Physiology and Biochemistry*, 50 (4):1651–1665, August 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-024-01361-2.

Liu:2024:CIM

[660] Mingyang Liu, Chang He, Tingting Zhu, Xiaoyan Jia, Li Zhang, Weibo Jiang, Cheng Chi, Xiangfei Li, Guangzhen Jiang, Hengtong Liu, and Dingdong Zhang. Characterizing and identifying of miRNAs involved in berberine modulating glucose metabolism of *Megalobrama amblycephala*. *Fish Physiology and Biochemistry*, 50(4):1667–1682, August 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-024-01362-1.

Li:2024:RSM

[661] Yaxue Li, Xing Lu, Lixue Dong, Di Peng, Jianmin Zhang, Zongbin Cui, Hua Wen, Juan Tian, and Ming Jiang. Replacing soybean meal with fermented rapeseed meal in diets: potential effects on growth performance, antioxidant capacity, and liver and intestinal health of juvenile tilapia (*Oreochromis niloticus*). *Fish Physiology and Biochemistry*, 50

(4):1683–1699, August 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-024-01363-0.

Mouri:2024:PIL

[662] Takumi Mouri, Syunsuke Usa, and Toshinobu Tokumoto. Pax7 is involved in leucophore formation in goldfish and gene knockout improves the transparency of transparent goldfish. *Fish Physiology and Biochemistry*, 50 (4):1701–1710, August 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-024-01364-z.

Zargari:2024:MTE

[663] Ashkan Zargari, Mohammad Mazandarani, Roghieh Safari, Hossein Hoseinifar, and Aliakbar Hedayati. Modulation of toxic effects of ammonia on growth, pathology of liver and kidney tissues and relative expression of GH and IGF-1 genes by CoQ_{10} supplementation in *Oncorhynchus mykiss*. *Fish Physiology and Biochemistry*, 50(4):1711–1729, August 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-024-01365-y.

Nofouzi:2024:GPM

[664] Katayoon Nofouzi, Najmeh Sheikhzadeh, Gholamreza Hamidian, Amir Ali Shahbazfar, Mehdi Soltani, and Amin Marandi. Growth performance, mucosal immunity and disease resistance in goldfish (*Carassius auratus*) orally administered with *Escherichia coli* Strain Nissle 1917. *Fish Physiology and Biochemistry*, 50(4):1731–1743, August 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-024-01366-x.

Gao:2024:TAL

[665] Yang Gao, Xuming Huang, Yanli Liu, Huirong Lv, Xiaolong Yin, Weiye Li, and Zhangjie Chu. Transcriptome analysis of large yellow croaker (*Larimichthys crocea*) at different growth rates. *Fish Physiology and Biochemistry*, 50(4):1745–1757, August 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-024-01367-w.

Ping:2024:SAA

[666] Kaixin Ping, Yan Xia, Xiaohui Jin, Yannan Xiang, Haitao Yang, Enzhuang Pan, Guangquan Ji, and Jingquan Dong. Silybin attenuates avermectin-induced oxidative damage in carp respiration by modulating

the cGAS-STING pathway and endoplasmic reticulum stress. *Fish Physiology and Biochemistry*, 50(4):1759–1775, August 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01368-9`.

Fuentes:2024:EBS

[667] J. Fuentes, S. F. Gregório, F. Fonseca, R. Robles-Arozarena, J. A. Martos-Sitcha, and F. J. Moyano. Effect of bile salts on intestinal epithelial function in gilthead seabream (*Sparus aurata*). *Fish Physiology and Biochemistry*, 50(4):1777–1790, August 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01369-8`.

Liu:2024:GSI

[668] Bo Liu, Yin-Yin Liang, Hua-Yang Guo, Bao-Suo Liu, Jing-Wen Yang, Nan Zhang, Lin Xian, Ke-Cheng Zhu, and Dian-Chang Zhang. Genomic structures of insulin-like growth factor from golden pompano (*Trachinotus ovatus*) and their expression responses to the feed types. *Fish Physiology and Biochemistry*, 50(4):1791–1809, August 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01370-1`.

Ramamurthy:2024:TAD

[669] Karthikeyan Ramamurthy, Selvam Madesh, P. Snega Priya, Rashid Ayub, Hossam M. Aljawdah, Selvaraj Arokiyaraj, Ajay Guru, and Jesu Arockiaraj. Textile azo dye, Sudan Black B, inducing hepatotoxicity demonstrated in *in vivo* zebrafish larval model. *Fish Physiology and Biochemistry*, 50(4):1811–1829, August 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01371-0`.

Zhu:2024:CSD

[670] Lingwei Zhu, Xiangtong Yuan, Hong Ji, Ruofan Liu, Ying Xie, Handong Li, Jian Sun, Haibo Yu, Jishu Zhou, and Wuzi Dong. A comparative study of dietary amino acid patterns: unveiling growth, composition, and molecular signatures in juvenile *Onychostoma macrolepis*. *Fish Physiology and Biochemistry*, 50(4):1831–1847, August 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01372-z`.

Mendes:2024:NTG

[671] Rodrigo Mendes, Luís E. C. Conceição, Jorge Dias, Sofia Engrola, and Francisco J. Sánchez-Vázquez. Nile tilapia and gilthead seabream dietary

self-selection of alternative feeds. *Fish Physiology and Biochemistry*, 50 (4):1849–1860, August 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01373-y`.

Zhuang:2024:EFA

[672] Ruyu Zhuang, Zihao Yan, Yicheng Gao, Ayqeqan Nurmamat, Shuyuan Zhang, Min Xiu, Yuesi Zhou, Ya Pang, Ding Li, Liang Zhao, Xin Liu, and Yinglun Han. Evolutionary and functional analysis of metabotropic glutamate receptors in lampreys. *Fish Physiology and Biochemistry*, 50 (4):1861–1877, August 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01374-x`.

Diaz-Navarrete:2024:SNS

[673] Paola Díaz-Navarrete, Patricio Dantagnan, Daniela Henriquez, Robinson Soto, David Correa-Galeote, and Alberto Sáez-Arteaga. Selenized non-*Saccharomyces* yeasts and their potential use in fish feed. *Fish Physiology and Biochemistry*, 50(4):1879–1894, August 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01340-7`.

Liu:2024:MSR

[674] Qi Liu and Takeshi Naganuma. Metabolomics in sturgeon research: a mini-review. *Fish Physiology and Biochemistry*, 50(4):1895–1910, August 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01377-8`.

Zarski:2024:EIW

[675] Daniel Żarski, Mariola Dietrich, and Joanna Nynca. 8th edition of International Workshop on the Biology of Fish Gametes — a turning point for the community. *Fish Physiology and Biochemistry*, 50(5):1911–1914, October 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01410-w`.

Wang:2024:EDS

[676] Ying da Wang, Xin Meng, Yong chao Guan, Ze lin Zhao, Luo tao Tao, Jin shuo Gong, Xin lan Liu, Yan Zhao, and Xiao feng Shan. The effects of dietary supplementation of ginseng stem and leaf saponins on the antioxidant capacity, immune response, and disease resistance of crucian carp, *Carassius auratus*. *Fish Physiology and Biochemistry*, 50(5):

1915–1930, October 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-022-01142-9`.

Hernandez-Rodriguez:2024:AMR

[677] Ana Hernández-Rodríguez, Carla Sousa-Santos, Fátima Gil, Elsa Cabrita, Pedro M. Guerreiro, and Victor Gallego. Assessment of male reproductive traits in endangered leuciscids from the Iberian Peninsula: first attempts to store gametes both at short- and long-term. *Fish Physiology and Biochemistry*, 50(5):1931–1945, October 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01195-4`.

Ocalewicz:2024:QFE

[678] Konrad Ocalewicz. Quality of fish eggs and production of androgenetic and gynogenetic doubled haploids (DHs). *Fish Physiology and Biochemistry*, 50(5):1947–1957, October 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01206-4`.

Oliveira:2024:EST

[679] Catarina C. V. Oliveira, Leonor Ferrão, Victor Gallego, Cláudia Mieiro, Isabel B. Oliveira, Ana Carvalhais, Mário Pachedo, and Elsa Cabrita. Exposure to silver and titanium dioxide nanoparticles at supra-environmental concentrations decreased sperm motility and affected spermatozoa subpopulations in gilthead seabream, *Sparus aurata*. *Fish Physiology and Biochemistry*, 50(5):1959–1970, October 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01218-0`.

Cabrita:2024:PTQ

[680] Elsa Cabrita, Tiziana Pacchiarini, Elvira Fatsini, Carmen Sarasquete, and María Paz Herráez. Post-thaw quality assessment of testicular fragments as a source of spermatogonial cells for surrogate production in the flatfish *Solea senegalensis*. *Fish Physiology and Biochemistry*, 50(5):1971–1985, October 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01232-2`.

Valcarce:2024:IDL

[681] David G. Valcarce, Marta F. Riesco, Juan Manuel Martínez-Vázquez, José Luis Rodríguez Villanueva, and Vanesa Robles. Impact of different levels of handling on *Solea senegalensis* culture: effects on growth and molecular markers of stress. *Fish Physiology and Biochemistry*, 50(5):1987–2000,

October 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01239-9`.

Bokor:2024:GPP

[682] Zoltán Bokor, Zete Levente Láng, Levente Várkonyi, Ferenc Fodor, Borbála Nagy, Endre Csókás, József Molnár, Balázs Csorbai, Zsolt Csenki-Bakos, Bence Ivánovics, Jeffrey Daniel Griffitts, Béla Urbányi, and Gergely Bernáth. The growth performance of pond-reared common carp (*Cyprinus carpio*) larvae propagated using cryopreserved sperm. *Fish Physiology and Biochemistry*, 50(5):2001–2012, October 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01245-x`.

Samarin:2024:VPO

[683] Azin Mohagheghi Samarin, Azadeh Mohagheghi Samarin, Swapnil Gorakh Waghmare, Marianne Danielsen, Hanne Søndergård Møller, Tomáš Policar, Otomar Linhart, and Trine Kastrup Dalsgaard. In vitro post-ovulatory oocyte ageing in grass carp *Ctenopharyngodon idella* affects H4K12 acetylation pattern and histone acetyltransferase activity. *Fish Physiology and Biochemistry*, 50(5):2013–2024, October 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01273-7`.

Rosero:2024:TPG

[684] Jenyffer Rosero, Paulo Sérgio Monzani, Giselle Pessanha Pessoa, Geovanna Carla Zacheo Coelho, Gabriella Braga Carvalho, Lucia Suárez López, José Augusto Senhorini, Silvio Carlos Alves dos Santos, and George Shigueki Yasui. Traceability of primordial germ cells in three neotropical fish species aiming genetic conservation actions. *Fish Physiology and Biochemistry*, 50(5):2025–2042, October 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-023-01279-1`.

Muller:2024:ULH

[685] Tamás Müller, Árpád Ferincz, András Weiperth, Bence Ivánovics, Balázs Tóth, Bence Bógó, József Horváth, Béla Urbányi, and András Specziár. Uncommon life history and winter spawning of common carp (*Cyprinus carpio*) in a natural thermal spring, under temperate climate. *Fish Physiology and Biochemistry*, 50(5):2043–2051, October 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01305-w`.

Sanchez:2024:EST

[686] Malbelys P. Sanchez, Thales S. França, Wendy A. González-López, Marina Morini, Juan F. Asturiano, and Luz Pérez. Effect of seawater temperature and pH on the sperm motility of the European eel. *Fish Physiology and Biochemistry*, 50(5):2053–2066, October 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01311-y`.

Kamouh:2024:SLR

[687] Marina El Kamouh, Aurélien Brionne, Amin Sayyari, Delphine Lallias, Catherine Labbé, and Audrey Laurent. Strengths and limitations of reduced representation bisulfite sequencing (RRBS) in the perspective of DNA methylation analysis in fish: a case-study on rainbow trout spermatozoa. *Fish Physiology and Biochemistry*, 50(5):2067–2082, October 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01326-5`.

Ma:2024:SMT

[688] Yuxuan Ma, Yining Chen, Yan Li, Shaoxian Chen, Chao Zhu, Qimin Liu, Long Li, Heran Cao, Zifang Wu, and Wuzi Dong. Seasonal modulation of the testis transcriptome reveals insights into hibernation and reproductive adaptation in *Onychostoma macrolepis*. *Fish Physiology and Biochemistry*, 50(5):2083–2097, October 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01335-4`.

Blanes-Garcia:2024:CPS

[689] Marta Blanes-García, Zoran Marinović, Juan Germán Herranz-Jusdado, Xuan Xie, Leonor Ferrão, Victor Gallego, Luz Pérez, Abdul Rasheed Baloch, Ákos Horváth, Martin Pšenička, Juan F. Asturiano, and Marina Morini. Characterization of potential spermatogonia biomarker genes in the European eel (*Anguilla anguilla*). *Fish Physiology and Biochemistry*, 50(5):2099–2115, October 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01338-1`.

Lopez:2024:CTS

[690] Lucia Suárez López, Paulo Sérgio Monzani, Gabriella Braga Carvalho, Diógenes Henrique de Siqueira Silva, Norberto Castro Vianna, George Shigueki Yasui, and José Augusto Senhorini. Cryopreservation and transplantation of spermatogonia stem cells in piracanjuba *Brycon orbignyanus* (Characiformes: Characidae), an endangered fish species. *Fish*

Physiology and Biochemistry, 50(5):2117–2135, October 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01406-6`.

Anonymous:2024:JN

[691] Anonymous. Journal navigation. *Fish Physiology and Biochemistry*, 50(5): ??, October 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic).

PereiradaSilva:2024:PHE

[692] Hugo Napoleão Pereira da Silva, Juan Lameira Dornelles, Guerino Bandeira Junior, André Barany, Lenise Vargas Flores da Silva, Rosa Helena Veras Mourão, Matheus Dellaméa Baldissera, Carine de Freitas Milarch, Valerio Marques Portela, Gonzalo Martínez-Rodríguez, Juan Miguel Mancera, Juan Antonio Martos-Sitcha, and Bernardo Baldisserotto. *Protium heptaphyllum* essential oil from the fruit as a sedative and anesthetic in *Rhamdia quelen*: influence in cardiac frequency, biochemical, and oxidative parameters. *Fish Physiology and Biochemistry*, 50(6):2137–2147, December 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01380-z`.

Johnston:2024:PMP

[693] Christina U. Johnston and Christopher J. Kennedy. Potency and mechanism of *p*-glycoprotein chemosensitizers in rainbow trout (*Oncorhynchus mykiss*) hepatocytes. *Fish Physiology and Biochemistry*, 50(6):2149–2164, December 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01376-9`.

Saputra:2024:ENN

[694] Febriyansyah Saputra, Shao-Yang Hu, and Mitsuyo Kishida. Exposure to nitrate and nitrite disrupts cardiovascular development through estrogen receptor in zebrafish embryos and larvae. *Fish Physiology and Biochemistry*, 50(6):2165–2178, December 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01381-y`.

Gressler:2024:IDB

[695] Luciane Tourem Gressler, João Rogério Centenaro, Paulo Henrique Braz, Samay Zillmann Rocha Costa, Eduardo Kelm Battisti, Leticia Trevisan Gressler, Isabela Andres Finamor, and Fernando Jonas Sutili. Influence of dietary bitter orange peel powder on growth, body composition, blood parameters, gut morphometry, and thermal tolerance of Nile

tilapia (*Oreochromis niloticus*). *Fish Physiology and Biochemistry*, 50(6): 2179–2190, December 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01383-w`.

Zeng:2024:AMM

[696] Xiangbing Zeng, Xiaoting Zheng, Jingru Wu, Hongbiao Dong, and Jiasong Zhang. Assessment of the molecular mechanism in fish using eugenol as anesthesia based on network pharmacology. *Fish Physiology and Biochemistry*, 50(6):2191–2205, December 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01382-x`.

Yan:2024:YDM

[697] Haoxiao Yan, Yifan Hu, Ji Liang, Kuo He, Xu Kuang, Qiao Liu, Liulan Zhao, and Song Yang. Yinchenhao Decoction mitigates intestinal impairment induced by high carbohydrate diet in largemouth bass (*Micropterus salmoides*): insights from inflammation, apoptosis, oxidative stress, tight junctions, and microbiota homeostasis. *Fish Physiology and Biochemistry*, 50(6):2207–2223, December 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01388-5`.

Silva:2024:DSM

[698] Vitor F. Silva, José Luiz P. Mouriño, Maurício L. Martins, Pedro L. P. F. Carvalho, Edgar D. Rodrigues, Delbert M. Gatlin, Matt J. Griffin, Caitlin E. Older, and Fernando Y. Yamamoto. Dietary supplementation of mineral nanoparticles for channel catfish (*Ictalurus punctatus*). *Fish Physiology and Biochemistry*, 50(6):2225–2236, December 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01378-7`.

Adjoumani:2024:MAH

[699] Jean-Jacques Yao Adjoumani, Kenneth Prudence Abasubong, Ling Zhang, Wen-Bin Liu, Xiang-Fei Li, and Hesham Eed Desouky. Metformin attenuates high-carbohydrate diet-induced redox imbalance, inflammation, and mitochondrial dysfunction in *Megalobrama amblycephala*. *Fish Physiology and Biochemistry*, 50(6):2237–2253, December 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01386-7`.

Wang:2024:ILF

[700] Ping Wang, Xianfang Yan, Xiaotian Zhang, Zilin Zhu, Qinglai Xu, Jingjing Hou, Jun Chen, Enric Gisbert, and Jishu Zhou. Increasing lev-

els of fishmeal replacement by defatted black soldier fly larvae meal reduced growth performance without affecting fillet quality in largemouth bass (*Micropterus salmoides*). *Fish Physiology and Biochemistry*, 50(6): 2255–2274, December 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-024-01390-x.

Li:2024:PSE

[701] Xinyi Li, Liuling Gao, Fang Chen, Junfeng Guan, Shuqi Wang, Dizhi Xie, and Qing Pan. Protein-sparing effects of lipids in the diet of golden pompano (*Trachinotus ovatus*): evaluation of growth, feed utilization, and lipid metabolism. *Fish Physiology and Biochemistry*, 50(6):2275–2286, December 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-024-01392-9.

Yang:2024:RLM

[702] Lulu Yang, Ronghua Lu, Kunkun Cao, Mengdi Chen, Xinxin Xu, Xianglin Cao, Yuru Zhang, and Guoxing Nie. Regulation of lipid metabolism in grass carp primary hepatocytes by exosomes derived from fatty hepatocytes though GRP78. *Fish Physiology and Biochemistry*, 50(6):2287–2299, December 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-024-01384-9.

Yao:2024:CSS

[703] Xiaoli Yao, Yunhong Zhou, Kenneth Nyirenda, Yindu Song, Chenxi Ma, Kelin Qian, Yan Zhao, Shoujie Tang, and Jinliang Zhao. Characterization of sexual size dimorphism in mandarin fish and association with igfbp-5a/b regulation. *Fish Physiology and Biochemistry*, 50(6):2301–2313, December 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-024-01385-8.

Kim:2024:HEP

[704] Jin A Kim, Young-Su Park, Jun-Hwan Kim, and Cheol Young Choi. Hyposalinity elicits physiological responses and alters intestinal microbiota in Korean rockfish *Sebastes schlegelii*. *Fish Physiology and Biochemistry*, 50(6):2315–2326, December 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-024-01387-6.

Natnan:2024:OAE

[705] Maya Erna Natnan, Chen-Fei Low, Chou-Min Chong, Muhammad Shuhaily Mohd Jasmany, and Syarul Nataqain Baharum. Oleic acid enriched diet affects the metabolome composition of the hybrid grouper infected with vibriosis. *Fish Physiology and Biochemistry*, 50(6):2327–2342, December 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01389-4`.

Ezatrahimi:2024:SMI

[706] Narmin Ezatrahimi, Siyavash Soltanian, and Seyed Hossein Hoseinifar. Skin mucosal immune parameters and expression of the immune-relevant genes in *Danio rerio* treated by white button mushroom (*Agaricus bisporus*). *Fish Physiology and Biochemistry*, 50(6):2343–2356, December 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01375-w`.

Sevgili:2024:DSC

[707] Hüseyin Sevgili, Adem Kurtoğlu, Masahiro Oikawa, Faruk Pak, Özgür Aktaş, Firdevs Mert Sivri, and O. Tufan Eroldoğan. Dietary salt concentrations influence growth, nutrient utilization, and fatty acid profiles of turbot (*Scophthalmus maximus*) reared in brackish water. *Fish Physiology and Biochemistry*, 50(6):2357–2372, December 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01391-w`.

Li:2024:PAL

[708] Yuru Li, Shiwen Chen, Yijun Liu, Pingping Liu, Songlin Li, and Ning Liu. PI3KR1 and AKT1 in largemouth bass (*Micropterus salmoides*): molecular cloning, characterization, and its involvement in the alleviation of hepatic glycogen deposition caused by insulin inclusion in vitro. *Fish Physiology and Biochemistry*, 50(6):2373–2388, December 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01379-6`.

Koner:2024:MCH

[709] Debaprasad Koner, Revelbornstar Snaitang, Kanhu Charan Das, and Nirmalendu Saha. Molecular characterization of heat shock protein 70 and 90 genes and their expression analysis in air-breathing magur catfish (*Clarias magur*) while exposed to zinc oxide nanoparticles. *Fish Physiology and Biochemistry*, 50(6):2389–2406, December 2024. CODEN FPBIEP. ISSN

0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-024-01397-4.

Jia:2024:LTH

[710] Yudong Jia, Feng Wang, Shuaiyu Chen, Jiawei Wang, and Yuntao Gao. Long-term hypoxia-induced physiological response in turbot *Scophthalmus maximus* L. *Fish Physiology and Biochemistry*, 50(6):2407–2421, December 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-024-01398-3.

Geffroy:2024:EFD

[711] Benjamin Geffroy, Alexander Goikoetxea, Nadège Villain-Naud, and Anne-Sophie Martinez. Early fasting does not impact gonadal size nor vasa gene expression in the European seabass *Dicentrarchus labrax*. *Fish Physiology and Biochemistry*, 50(6):2423–2435, December 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-024-01395-6.

Hernandez-Tellez:2024:HSD

[712] Ana Rosa Hernández-Téllez, Gustavo Alejandro Rodríguez-Montes de Oca, José Cristóbal Román-Reyes, Juan Antonio Tello-Ballinas, Mario Alberto Galaviz-Espinoza, and Carlos Alfonso Álvarez-González. Histological study of the development of the digestive system during larval feeding in the pike silverside *Chirostoma estor*. *Fish Physiology and Biochemistry*, 50(6):2437–2452, December 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-024-01396-5.

Tian:2024:SRY

[713] Zhenfang Tian, Zhihua Yu, Yongjiang Xu, Aijun Cui, Yan Jiang, Hai Huang, and Bin Wang. Spexin and its receptors in the yellowtail kingfish (*Seriola lalandi*): identification, expression profiles and reproductive function. *Fish Physiology and Biochemistry*, 50(6):2453–2474, December 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-024-01394-7.

Xu:2024:EIG

[714] Wenya Xu, Yahui Feng, Songlin Chen, Huihu Wang, Jian Wen, Guodong Zheng, Ganxiang Wang, and Shuming Zou. Establishment and identification of the gill cell line from the blunt snout bream (*Megalobrama amblycephala*) and its application in studying gill remodeling under hypoxia.

Fish Physiology and Biochemistry, 50(6):2475–2488, December 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-024-01393-8.

Ferrao:2024:ECS

[715] L. Ferrão, M. Morini, W. A. González-Lopéz, V. Gallego, A. Felip, L. Pérez, and J. F. Asturiano. Effects of cold seawater pre-treatments on induction of early sexual maturation and sperm production in European eel (*Anguilla anguilla*). *Fish Physiology and Biochemistry*, 50(6): 2489–2503, December 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-024-01402-w.

Quesada:2024:EHR

[716] Carina Gisele Quesada and Leandro Andrés Miranda. Effects of hypoxia on the reproductive endocrine axis of the pejerrey (*Odontesthes bonariensis*). *Fish Physiology and Biochemistry*, 50(6):2505–2517, December 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-024-01401-x.

Khieokhajonkhet:2024:EDH

[717] Anurak Khieokhajonkhet, Piluntasoot Suwannalers, Niran Aeksiri, Korntip Kannika, Gen Kaneko, Kumrop Ratanasut, Pattaraporn Tatsapong, Wilasinee Inyawilert, and Wutiporn Phromkunthong. Effects of dietary *Hericium erinaceus* extract on growth, nutrient utilization, hematology, expression of genes related immunity response, and disease resistance of Nile tilapia (*Oreochromis niloticus*). *Fish Physiology and Biochemistry*, 50(6):2519–2534, December 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-024-01399-2.

Arechiga-Palomera:2024:CDE

[718] Martín Alonso Aréchiga-Palomera, Fernando Vega-Villasante, Karen Noemi Nieves-Rodríguez, Olimpia Carrillo-Farnés, and Héctor Nolasco-Soria. Characterization of the digestive enzymes of juvenile *Dormitator latifrons* (Richardson, 1844). *Fish Physiology and Biochemistry*, 50(6): 2535–2550, December 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-024-01400-y.

Gayen:2024:ACD

[719] Tuhina Gayen, Anchal Tripathi, Swati Mittal, and Usha Kumari. Assessment of cell death in the liver of *Labeo rohita* on exposure to an emerging

contaminant aspirin: an immunofluorescent, flow cytometric and biochemical investigation. *Fish Physiology and Biochemistry*, 50(6):2551–2562, December 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01405-7`.

Kari:2024:EDP

[720] Zulhisyam Abdul Kari, Suniza Anis Mohamad Sukri, Guillermo Téllez-Isaías, Walter G. Bottje, Martina Irwan Khoo, Ajay Guru, Jehad Zuhair Tayyeb, Muhammad Anamul Kabir, El-Sayed Hemdan Eissa, Albaris B. Tahiluddin, and Lee Seong Wei. Effects of dietary powdered *Ficus deltoidea* on the growth and health performance of African catfish, *Clarias gariepinus* production. *Fish Physiology and Biochemistry*, 50(6): 2563–2582, December 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01403-9`.

Liu:2024:IBF

[721] Xiaojuan Liu, Yu Wang, and Chunfang Wang. Interactions between feed protein source and feeding frequency on growth performance and health status of largemouth bass (*Micropterus salmoides*). *Fish Physiology and Biochemistry*, 50(6):2583–2604, December 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01404-8`.

Mahdabi:2024:DIS

[722] Mahdad Mahdabi, Mehdi Shamsaie Mehrgan, and Houman Rajabi Islami. Deciphering the impact of stickwater hydrolysate on growth performance, immune response, and IGF-1/PI3K/AKT/mTOR signaling pathway in Siberian sturgeon (*Acipenser baerii*) fingerlings. *Fish Physiology and Biochemistry*, 50(6):2605–2618, December 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01407-5`.

Morris:2024:UPP

[723] Carolyn Morris, Samantha Zulian, D. Scott Smith, Colin J. Brauner, and Chris M. Wood. Using physicochemical properties to predict the impact of natural dissolved organic carbon on transepithelial potential in the freshwater rainbow trout (*Oncorhynchus mykiss*) at neutral and acidic pH. *Fish Physiology and Biochemistry*, 50(6):2619–2635, December 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01409-3`.

Pacheco-Carlon:2024:TEE

[724] Nairoby Pacheco-Carlón, Marco A. Hernández de Dios, Hector Nolasco-Soria, Dariel Tovar-Ramírez, Minerva Maldonado-García, Mario A. Galaviz, and Deneb Maldonado-García. Transition from endogenous to exogenous feeding in longfin yellowtail *Seriola rivoliana* larvae under simultaneous effects of daily temperature fluctuation and rotifer *Brachionus rotundiformis* enrichment. *Fish Physiology and Biochemistry*, 50(6): 2637–2649, December 2024. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01408-4`.

Tanvir:2025:MPR

[725] Md. Razain Tanvir, Takumi Mouri, Eisei Tsutsumi, Umme Habiba Mustary, Md. Almamun Farid, Md. Forhad Hossain, Yuki Omori, Chihiro Yamamoto, Akiteru Maeno, and Toshinobu Tokumoto. Membrane progesterone receptor ε(paqr9)$is necessary for chorion elevation in zebrafish. Fish Physiology and Biochemistry, 51$(1) :??, $February 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-$5168(electronic). URL$ `httpslinkspringercomarticle101007s10695024014351`. $See correction$[729].

Chen:2025:CTA

[726] Jinfeng Chen, Mingtao Hu, Meiyuan Li, Chenqi Wang, Liu Wang, Yushun Tian, Hongwei Yan, Qi Liu, Xinyan Liang, and Xiuli Wang. Comparative transcriptome analysis identified genes involved in testicular development in *Takifugu rubripes*. *Fish Physiology and Biochemistry*, 51(1):??, February 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01439-x`.

Talukdar:2025:EGN

[727] Sandipan Talukdar and Koushik Ghosh. Evaluation of growth, nutrient utilization, and metabolic function in rohu, *Labeo rohita* (Hamilton), fed diets incorporated with fermented *Saraca asoca* leaf meal. *Fish Physiology and Biochemistry*, 51(1):??, February 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01422-6`.

Li:2025:EDH

[728] Qing Li, Min Fu, Shengqin Zhu, Juan Liu, Yanqing Li, Zhiyong Xue, Zhigang Zhou, and Lijuan Yu. Effects of dietary hydroxy-cinnamic acid derivatives on growth, muscle, and intestinal parameters of tilapia (*Oreochromis niloticus*). *Fish Physiology and Biochemistry*, 51(1):??, February 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01438-y`.

Tanvir:2025:CMP

[729] Md. Razain Tanvir, Takumi Mouri, Eisei Tsutsumi, Umme Habiba Mustary, Md. Almamun Farid, Md. Forhad Hossain, Yuki Omori, Chihiro Yamamoto, Akiteru Maeno, and Toshinobu Tokumoto. Correction to: Membrane progesterone receptor ε (paqr9) is necessary for chorion elevation in zebrafish. *Fish Physiology and Biochemistry*, 51(1):??, February 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-024-01441-3. See [725].

Monier:2025:GPA

[730] Mohamed N. Monier, Asmaa S. Abd El-Naby, Reham M. Fawzy, Fatma Samir, Sherien H. H. Shady, Youssif Shehata Grana, Najah M. Albaqami, and Mohsen Abdel-Tawwab. Growth performance, antioxidant, and immune responses of Nile tilapia (*Oreochromis niloticus*) fed on low-fishmeal diets enriched with sodium chloride and its adaptability to different salinity levels. *Fish Physiology and Biochemistry*, 51(1):??, February 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-024-01426-2.

Kumar:2025:DEG

[731] Vasanthakumaran Kumar, Pallath Muhammed Nuzaiba, Subodh Gupta, Subrata Dasgupta, Sunil Kumar Nayak, Arya Prabhakaran, Chandan Gowramma Mahadevaswamy, Atshaya Sundararajan, Sangeetha Sankar, and Tincy Varghese. Disruptive effects of genistein and daidzein on steroidogenesis, testicular development and maturation of *Cyprinus carpio* (Linn., 1758) males. *Fish Physiology and Biochemistry*, 51(1):??, February 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-024-01443-1.

Dahran:2025:DPP

[732] Naief Dahran, Badriyah S. Alotaibi, Yasmina M. Abd-Elhakim, Amany Abdel-Rahman Mohamed, Rowida E. Ibrahim, Mohamed M. M. Metwally, Tarek Khamis, Areej A. Eskandrani, Manal E. Alosaimi, Mohamed Y. M. Aly, Nouf A. Babteen, Wafa S. Alansari, and Samah S. Abuzahrah. Dietary purslane (*Portulaca oleracea* L.) leaf powder maintains growth and intestinal health in *Oreochromis niloticus* under chronic water-borne cadmium exposure by strengthening the gut barriers, modulating the intestinal nutrient transporters, and relieving oxidative stress. *Fish Physiology and Biochemistry*, 51(1):??, February 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL https://link.springer.com/article/10.1007/s10695-024-01415-5.

deFaria:2025:PRP

[733] Camila de Fátima Pereira de Faria, Beatriz Ullian de Andrade, and Elisabeth Criscuolo Urbinati. Physiological responses of pacu (*Piaractus mesopotamicus*) to intermittent cold exposure: A comprehensive analysis of stress, immunity, antioxidant, and metabolic adaptations. *Fish Physiology and Biochemistry*, 51(1):??, February 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01445-z`.

Peixoto:2025:TSD

[734] Diogo Peixoto, Juan Antonio Martos-Sitcha, Benjamín Costas, Rita Azeredo, and Juan Miguel Mancera. Tryptophan-supplemented diet modulates the metabolic response of European seabass (*Dicentrarchus labrax*) juveniles reared under space-confined conditions and submitted to acute inflammation. *Fish Physiology and Biochemistry*, 51(1):??, February 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01427-1`. See correction [761].

Futami:2025:RPS

[735] Kunihiko Futami, Hayato Ito, and Takayuki Katagiri. Resistance to premature senescence in the *Epithelioma papulosum cyprini* fish cell line is associated with the absence of PML nuclear bodies. *Fish Physiology and Biochemistry*, 51 (1):??, February 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01423-5`.

deMello:2025:ALT

[736] Mariana Maluli Marinho de Mello, Allan Emilio Piedade, Camila de Fátima Pereira de Faria, and Elisabeth Criscuolo Urbinati. Acute low temperature and lipopolysaccharide differentially modulated the innate immune and antioxidant responses in a subtropical fish, the pacu (*Piaractus mesopotamicus*). *Fish Physiology and Biochemistry*, 51(1):??, February 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01425-3`.

Gajula:2025:PBR

[737] Sadaya Kumar Gajula, Anand Konkala, and Madhusudan Reddy Narra. Physiological and biochemical responses of *Labeo rohita* to neonicotinoids imidacloprid, clothianidin, and their mixture. *Fish Physiology and Biochemistry*, 51(1): ??, February 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01412-8`.

Shazada:2025:EAE

[738] Nururshopa Eskander Shazada, Mohammad Abdul Momin Siddique, Songpei Zhang, Zhijun Ma, Marek Rodina, and Otomar Linhart. Effect of appropriate extenders to maintain sperm functionality during short-term storage of sterlet (*Acipenser ruthenus*) sperm with fertilization assay under hatchery conditions. *Fish Physiology and Biochemistry*, 51(1):??, February 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01413-7`.

ALKAN:2025:EGW

[739] Zehra ALKAN, Boran KARATAŞ, and Ahmet SEPİL. Evaluation of global warming effects on juvenile rainbow trout: focus on immunohistochemistry and osmoregulation. *Fish Physiology and Biochemistry*, 51(1):??, February 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01431-5`.

Musatova:2025:ECS

[740] Iryna Musatova, Borys Dzyuba, Serhii Boryshpolets, Azeem Iqbal, Anatolii Sotnikov, Vitaliy Kholodnyy, and Viktoriya Dzyuba. Evaluation of carp sperm respiration: fluorometry with optochemical oxygen sensor versus polarography. *Fish Physiology and Biochemistry*, 51(1):??, February 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01418-2`.

Huang:2025:CDE

[741] Weiren Huang, Yong Zhang, Xiaoping Jia, Xilan Ma, Shuisheng Li, Yun Liu, Pei Zhu, Danqi Lu, Huihong Zhao, Wenna Luo, Shibai Yi, Xiaochun Liu, and Haoran Lin. Correction to: Distinct expression of three estrogen receptors in response to bisphenol A and nonylphenol in male Nile tilapias (*Oreochromis niloticus*). *Fish Physiology and Biochemistry*, 51(1):??, February 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01432-4`. See [1].

Bayir:2025:SSB

[742] Hilal Bayir and Telat Yanik. Supplementation of sea buckthorn (*Hippophae rhamnoides* L.) oil in the diets of freshwater rainbow trout (*Oncorhynchus mykiss* W.) led to enhanced growth and better meat quality. *Fish Physiology and Biochemistry*, 51(1):??, February 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01433-3`.

Yu:2025:MOA

[743] Haodong Yu, Yukang Nie, Xinping Ran, Shaoyun Li, Keming Rong, and Xuezhen Zhang. Multi-omics analysis and longitudinal study of reprogramming by dietary creatine to endogenous metabolism in largemouth bass (*Micropterus salmoides*). *Fish Physiology and Biochemistry*, 51(1):??, February 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01417-3`.

Sousa:2025:UMT

[744] Elen Monique de Oliveira Sousa, Nayara Yoshimini de Oliveira, Ianka Agra da Silva, Renata Ávila Ozório, Emilly Monteiro Lopes, Maurício Laterça Martins, and Mônica Yumi Tsuzuki. Use of the microalgae *Tisochrysis lutea* in a "green water" system increases the absorption area in the intestine of larvae of the seahorse *Hippocampus reidi* Ginsburg, 1933. *Fish Physiology and Biochemistry*, 51(1):??, February 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01428-0`.

Liu:2025:RFS

[745] Yuanyi Liu, Changchang Pu, Zhuo Pei, Weichuan Zhang, Zihui Wei, Hongyu Chen, and Yong Huang. Retrospect of fishmeal substitution in largemouth bass (*Micropterus salmoides*): a review. *Fish Physiology and Biochemistry*, 51 (1):??, February 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01429-z`.

Liu:2025:MAC

[746] Qiao Liu, Hong Wang, Jiayu Ge, Lipeng Guo, Rabia Tahir, Jie Luo, Kuo He, Haoxiao Yan, Xin Zhang, Quanquan Cao, Zhang Cheng, Liulan Zhao, and Song Yang. Mechanism of acclimation to chronic intermittent hypoxia in the gills of largemouth bass (*Micropterus salmoides*). *Fish Physiology and Biochemistry*, 51(1):??, February 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01419-1`.

Li:2025:FIA

[747] Lukuan Li, Yu Wang, Xianjun Zhou, and Chunfang Wang. Fishmeal intervention after short-term novel proteins stimulates compensatory growth and affects intestinal health in largemouth bass (*Micropterus salmoides*). *Fish Physiology and Biochemistry*, 51(1):??, February 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01436-0`.

Yan:2025:CHS

[748] Hanwei Yan, Jinxing Du, Shengjie Li, Caixia Lei, Tao Zhu, Linqiang Han, and Hongmei Song. Chronic heat stress is capable of reducing the growth performance, causing damage to the liver structure, and altering the liver glucose metabolism and lipid metabolism in largemouth bass (*Micropterus salmoides* L.). *Fish Physiology and Biochemistry*, 51(1):??, February 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01416-4`.

Vieira:2025:BMB

[749] Raquel S. F. Vieira, Carlos A. S. Venâncio, and Luís M. Félix. Behavioral, metabolic, and biochemical alterations caused by an acute stress event in a zebrafish larvae model. *Fish Physiology and Biochemistry*, 51(1):??, February 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01421-7`.

Saxena:2025:CCT

[750] Vaishnavi Saxena, Jumman Bakhasha, Neeti Arya, Rashmi Singh, Raveena Singh, Rubina Khan, Ritu Singh, Sunil P. Trivedi, Manoj Kumar, Kamlesh K. Yadav, and Abha Trivedi. The cascade of cadmium toxicity: from cellular damage to pyroptotic responses in fish *Channa punctatus*. *Fish Physiology and Biochemistry*, 51(1):??, February 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01434-2`.

Le:2025:DSA

[751] My Phuong Le, Warren Burggren, and Gil Martinez-Bautista. Development and sex affect respiratory responses to temperature and dissolved oxygen in the air-breathing fishes *Betta splendens* and *Trichopodus trichopterus*. *Fish Physiology and Biochemistry*, 51(1):??, February 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01411-9`.

Ciftci:2025:PGT

[752] Bekir Çiftçi, Arzu Koçak Mutlu, and Ebru Akkemik. Purification of glutathione S-transferase enzyme from liver tissue of shabout (*Barbus grypus* Heckel) and investigation of the inhibition effect of some metal ions under in vitro conditions. *Fish Physiology and Biochemistry*, 51(1):??, February 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01424-4`.

Ju:2025:SHF

[753] Zhonglei Ju, Xishan Li, Xin Li, Cen Liang, Zhu Xu, Huishu Chen, and Deqi Xiong. Stranded heavy fuel oil exposure causes deformities, cardiac dysfunction, and oxidative stress in marine medaka *Oryzias melastigma* using an oiled-gravel-column system. *Fish Physiology and Biochemistry*, 51(1):??, February 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01437-z`.

Kolesnikova:2025:DEC

[754] Tatiana O. Kolesnikova, Nikita O. Prokhorenko, Sahil V. Amikishiev, Vadim S. Nikitin, Anton D. Shevlyakov, Aleksey N. Ikrin, Radmir R. Mukhamadeev, Anastasiia D. Buglinina, Kirill V. Apukhtin, Anastasia M. Moskalenko, Nikita P. Ilyin, Murilo S. de Abreu, Konstantin A. Demin, and Allan V. Kalueff. Differential effects of chronic unpredictable stress on behavioral and molecular (cortisol and microglia-related neurotranscriptomic) responses in adult leopard (leo) zebrafish. *Fish Physiology and Biochemistry*, 51(1):??, February 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01446-y`.

Mahmoud:2025:PBA

[755] Yasmina K. Mahmoud, Shaimaa A. A. Ahmed, Heba H. Mahboub, Abdelwahab A. Abdelwarith, Elsayed M. Younis, Ahmed A. Elnegiry, Sherif M. Shawky, Sahar H. Orabi, Sameh H. Ismail, Simon J. Davies, and Mahmoud I. M. Darwish. Physiological, biochemical, apoptosis-linked gene expression, and histopathological insights in Nile catfish subjected to toxicity by magnetite nanogel. *Fish Physiology and Biochemistry*, 51(1):??, February 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01420-8`.

Elabd:2025:DDC

[756] Hiam Elabd, Heba H. Mahboub, Heba S. Hamed, Abdelwahab A. Abdelwarith, Elsayed M. Younis, Samar Kamel, Amany Ramah, Sahar H. Orabi, Sherif M. Shawky, Simon J. Davies, and Zeinab Hassan. Dietary deacetylated chitin nanoparticles confer protection against diazinon toxicity in male African catfish: evaluation of immune-biochemical, antioxidant, and reproductive profiles. *Fish Physiology and Biochemistry*, 51(1):??, February 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01414-6`.

Branco:2025:OAC

[757] Giovana Souza Branco, Monica Cassel, Chayrra Chehade, Marília de Paiva Camargo, Gisele Cristiane de Melo Dias, Maria Ines Borella, and Lázaro Wender Oliveira de Jesus. Ontogeny of adenohypophyseal cells, pituitary gland

development, and structure in adults of *Astyanax lacustris* (Teleostei, Characiformes): an emerging neotropical model fish species. *Fish Physiology and Biochemistry*, 51(1):??, February 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01448-w`.

Solovyev:2025:MPD

[758] Mikhail Solovyev, Anastasiya Shokurova, Ekaterina Kondakova, Vadim Vasilenko, Nikolai Bochkarev, Elena Kashinskaya, and Enric Gisbert. Morpho-physiological digestive features of genetically closely related sympatric lacustrine whitefish forms with different feeding habits. *Fish Physiology and Biochemistry*, 51(1):??, February 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01440-4`.

Abraham:2025:MBR

[759] Thangapalam Jawahar Abraham, Anwesha Roy, Jasmine Singha, Ravindran Rajisha, Ranjit Kumar Nadella, and Prasanna Kumar Patil. Muscle biochemistry and residue accretion in male *Oreochromis niloticus* fries administered therapeutic, subtherapeutic and overdoses of dietary oxytetracycline. *Fish Physiology and Biochemistry*, 51(1):??, February 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01447-x`.

Filice:2025:CRG

[760] Mariacristina Filice, Rosa Mazza, Alfonsina Gattuso, Alessia Caferro, Gaetana Napolitano, Gianluca Fasciolo, Paola Venditti, Sandra Imbrogno, and Maria Carmela Cerra. The cardiac response of the goldfish *Carassius auratus* to environmental hypoxia: from hemodynamics to mitochondria. *Fish Physiology and Biochemistry*, 51(1):??, February 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-025-01452-8`.

Peixoto:2025:CTD

[761] Diogo Peixoto, Juan Antonio Martos-Sitcha, Benjamín Costas, Rita Azeredo, and Juan Miguel Mancera. Correction to: Tryptophan-supplemented diet modulates the metabolic response of European seabass (*Dicentrarchus labrax*) juveniles reared under space-confined conditions and submitted to acute inflammation. *Fish Physiology and Biochemistry*, 51(1):??, February 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-025-01451-9`. See [734].

Carrillo-Munoz:2025:NTR

[762] Aldo Isaac Carrillo-Muñoz, Sharet Y. R-Jaimes, Guadalupe C. Hernández-Hernández, and Francisco Castelán. Neurotrophins and their receptors in the peripheral nervous system and non-nervous tissue of fish. *Fish Physiology and Biochemistry*, 51(1):??, February 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-025-01453-7`.

Heden:2025:APA

[763] Ida Hedén, Jonathan Armand Charles Roques, Marica Andersson, Niklas Warwas, Raneesha de Fonseka, Darragh Doyle, James Hinchcliffe, Elisabeth Jönsson, Kristina Sundell, and Henrik Sundh. Aquaculture potential of Atlantic wolffish (*Anarhichas lupus*): stress and physiological responses to acute handling. *Fish Physiology and Biochemistry*, 51(1):??, February 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-025-01456-4`.

Assar:2025:DCS

[764] Doaa H. Assar, Abdallah S. Salah, Aya G. Rashwan, Ibrahim I. Al-Hawary, Basma M. Hendam, Ahmed Elsheshtawy, Amer Al Ali, Humood Al Shmrany, and Zizy I. Elbialy. Dietary l-carnitine supplementation recovers the hepatic damage induced by high-fat diet in Nile tilapia (*Oreochromis niloticus* L.) via activation of Nrf2/Keap pathway and inhibition of pro-inflammatory cytokine. *Fish Physiology and Biochemistry*, 51(1):??, February 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01430-6`. See correction [788].

El-Sayed:2025:DOA

[765] Abdel-Fattah M. El-Sayed, El-Sayed Hemdan Eissa, Basma M. Hendam, Hagar Sedeek Dighiesh, Heba E. Abd Elnabi, Yasmin M. Abd El-Aziz, Moaheda E. H. Eissa, and Sara F. Ghanem. Dietary organic acid blend modulates hemato-immunological parameters, digestive and reproductive performances in red tilapia (*Oreochromis niloticus* × *O. mossambicus*) broodstock. *Fish Physiology and Biochemistry*, 51(1):??, February 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-025-01459-1`.

Coimbra:2025:CSD

[766] Vanessa Conceição Coimbra, Jeane Rodrigues, Raquel Santos dos Santos, Rômulo Batista Rodrigues, Danilo Streit-Jr, Ana Luiza de Souza Caldas, Eduardo Silva do Nascimento Albuquerque, Evagno Junior da Silva Ferreira, Caio Maximino, and Diógenes Henrique de Siqueira-Silva. Cryopreserved sperm does

not affect larval ontogeny and quality in *Rhamdia quelen*. *Fish Physiology and Biochemistry*, 51(1):??, February 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-025-01455-5`.

Ullah:2025:EDS

[767] Sami Ullah, Fengqin Feng, Minjie Zhao, Jinzhi Zhang, and Qingjun Shao. Effect of dietary supplementation of lauric acid on growth performance, digestive enzymes, serum immune and antioxidant parameters, and intestinal morphology in black sea bream. *Fish Physiology and Biochemistry*, 51(1):??, February 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-025-01457-3`.

Panda:2025:EMO

[768] Prangya Parimita Panda, Prem Kumar, Bairagi Charan Mallick, Neeraj Kumar, and Tapas Kumar Ghoshal. Effects of *Moringa oleifera* seed extract on growth and immunophysiology of whisker catfish (*Mystus gulio*) fingerlings. *Fish Physiology and Biochemistry*, 51(1):??, February 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-025-01454-6`.

Syanya:2025:RNS

[769] Fredrick Juma Syanya, Harikrishnan Mahadevan, A. R. Nikhila Khanna, Wilson Munala Mathia, and Paul Mumina. Role of a non-steroidal aromatase inhibitor on growth performance, body composition, reproductive and serum biochemical indices, and intestinal histomorphology in hybrid red tilapia (*Oreochromis* spp.). *Fish Physiology and Biochemistry*, 51(1):??, February 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-025-01458-2`.

Albaqami:2025:IDA

[770] Najah M. Albaqami and Mohamed N. Monier. Impacts of dietary α-tocopherol acetate on physiological response, antioxidant activity, innate immunity, and histopathological status of Nile tilapia, *Oreochromis niloticus* under heat and salinity stress. *Fish Physiology and Biochemistry*, 51(1):??, February 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-025-01460-8`.

Lakshmi:2025:AET

[771] Sreeja Lakshmi, Nandhakumar, Ritam Guha, Alex Wang, Eakapol Wangkahart, Tiehui Wang, and Preetham Elumalai. Analysis of the efficacy of two molecular adjuvants, flagellin and IFN-γ, on the immune response against *Streptococcus*

agalactiae in Nile tilapia (*Oreochromis niloticus*). *Fish Physiology and Biochemistry*, 51(1):??, February 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-025-01464-4`.

Metwaly:2025:MSR

[772] Sameh Metwaly, Hala Nasr, Khalifa Ahmed, and Mohamed Fathi. Multifaceted stress response in Nile tilapia (*Oreochromis niloticus*) fingerlings: integrative analysis of salinity, ammonia, and stocking density effects on growth, physiology, and gene expression. *Fish Physiology and Biochemistry*, 51(1):??, February 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-025-01462-6`.

Li:2025:RYD

[773] Haidong Li, Kangjia Su, Ruiyi Chen, Weihua Hu, Huan Ye, and Dongdong Xu. Reproduction in yellow drum (*Nibea albiflora*): insights from endocrine regulation and intestinal microbiota changes during reproductive season. *Fish Physiology and Biochemistry*, 51(1):??, February 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-025-01463-5`.

Samori:2025:IFT

[774] Elisa Samorì, Inmaculada Rodríguez, José Antonio Oliver, Francisco Javier Sánchez-Vázquez, and José Fernando López-Olmeda. Influence of feeding time on daily rhythms of locomotor activity, clock genes, and epigenetic mechanisms in the liver and hypothalamus of the European sea bass (*Dicentrarchus labrax*). *Fish Physiology and Biochemistry*, 51(1):??, February 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-025-01461-7`.

Anonymous:2025:JNa

[775] Anonymous. Journal navigation. *Fish Physiology and Biochemistry*, 51(1):??, February 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic).

Wei:2025:PAH

[776] Mingkui Wei, Zhiqi Tian, Niankun Zhang, Lu Zhou, Handong Li, Hong Ji, Gen He, Jianlu Zhang, and Jian Sun. Promoting adipocyte hyperplasia ameliorates high-carbohydrate diet-induced inflammation, oxidative stress, and metabolic disorders and enhances growth performance and immune function in grass carp (*Ctenopharyngodon idellus*). *Fish Physiology and Biochemistry*, 51(2):??, April 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-025-01466-2`.

Ahmad:2025:EBI

[777] Shabbir Ahmad, Hasnain Akmal, Farhat Jabeen, and Khurram Shahzad. Exposure to bisphenol S induces organ toxicity by disrupting oxidative and antioxidant defense system and blood physiology in *Labeo rohita* (Hamilton, 1822). *Fish Physiology and Biochemistry*, 51(2):??, April 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-025-01467-1`.

Zhou:2025:HCC

[778] Xinhong Zhou, Xiaofei Yang, Xinyue Liu, Li Jiang, and Yilong Jiang. Hexavalent chromium (Cr^{6+}) induces oxidative stress, inflammatory response, apoptosis, and DNA damage in the liver of largemouth bass by inhibiting the Nrf2-Keap1 signal pathway. *Fish Physiology and Biochemistry*, 51(2):??, April 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-025-01469-z`.

Wang:2025:CGP

[779] Qianfeng Wang, Zechao Ruan, Yuebin Wang, Yan Zhang, and Xuejun Chai. Comparison of growth performance, oxidative stress, and intestinal microbiota of rockfish (*Sebastiscus marmoratus*) in different culture modes. *Fish Physiology and Biochemistry*, 51(2):??, April 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-025-01450-w`.

vanStaden:2025:NCA

[780] Cailin van Staden, Karin Finger-Baier, David Weinshenker, Tarryn L. Botha, Linda Brand, and De Wet Wolmarans. The number of conspecific alarm substance donors notably influences the behavioural responses of zebrafish subjected to a traumatic stress procedure. *Fish Physiology and Biochemistry*, 51 (2):??, April 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-025-01468-0`.

Sanguino-Ortiz:2025:EFM

[781] Wilmer Sanguino-Ortiz, Cristóbal Espinosa-Ruiz, María Ángeles Esteban Abad, Críspulo Perea Román, and José Luis Hoyos-Concha. Effect of fish meal substitution with trout viscera protein hydrolysate on the innate immune response of red tilapia (*Oreochromis* spp). *Fish Physiology and Biochemistry*, 51(2):??, April 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01444-0`.

Dheeran:2025:PEP

[782] Panneerselvam Dheeran and Binu Varghese. Positional effects of passive integrated transponder tags on rejection, survival, and health biomarkers in pearlspot cichlid (*Etroplus suratensis*). *Fish Physiology and Biochemistry*, 51 (2):??, April 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-025-01472-4`.

Espirito-Santo:2025:ISE

[783] Carlos Espírito-Santo, Francisco A. Guardiola, Rodrigo O. A. Ozório, and Leonardo J. Magnoni. Induced swimming in European seabass (*Dicentrarchus labrax*): effects on the stress response, immune, and antioxidant status. *Fish Physiology and Biochemistry*, 51(2):??, April 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-025-01474-2`.

Hanif:2025:SEE

[784] Saba Hanif, Danish Riaz, Syed Makhdoom Hussain, Shafaqat Ali, Khalid A. Al-Ghanim, and Pallab K. Sarker. Supplementation of exogenous enzymes in *Catla catla* diets: effects on the physiology and antioxidant enzyme activity. *Fish Physiology and Biochemistry*, 51(2):??, April 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-025-01476-0`.

Heshmati:2025:EEP

[785] Aref Heshmati, Abdolmohammad Abedian Kenari, Roghieh Safari, and Ghasem Rashidian. Exogenous enzyme pretreatment improves utilization of high-carbohydrate diets in rainbow trout (*Onchorhynchus mykiss*): effects on growth, digestibility, fillet quality, and gene expression. *Fish Physiology and Biochemistry*, 51(2):??, April 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-025-01478-y`.

Wang:2025:HTP

[786] Feng Wang, Ting Xie, Jingming Wang, Shuaiyu Chen, Zhifei Liu, and Yudong Jia. Hypoxia tolerance and physiological coping strategies in fat greenling (*Hexagrammos otakii*). *Fish Physiology and Biochemistry*, 51(2):??, April 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-025-01471-5`.

Satkanov:2025:BPM

[787] Mereke Satkanov, Zhadyrassyn Nurbekova, Alikhan Bilyalov, Diana Tazhibay, Masalimov Zhaksylyk, Maral Kulatayeva, Zhaoqi Wang, Junfang Cui, and

Zerekbay Alikulov. Biochemical properties of molybdenum cofactor isolated from fish liver. *Fish Physiology and Biochemistry*, 51(2):??, April 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-025-01473-3`.

Assar:2025:CDL

[788] Doaa H. Assar, Abdallah S. Salah, Aya G. Rashwan, Ibrahim I. Al-Hawary, Basma M. Hendam, Ahmed Elsheshtawy, Amer Al Ali, Humood Al Shmrany, and Zizy I. Elbialy. Correction to: Dietary l-carnitine supplementation recovers the hepatic damage induced by high-fat diet in Nile tilapia (*Oreochromis niloticus* L.) via activation of Nrf2/Keap pathway and inhibition of pro-inflammatory cytokine. *Fish Physiology and Biochemistry*, 51(2):??, April 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-025-01477-z`. See [764].

Mu:2025:DCG

[789] Jiahang Mu, Tingting Zhou, Kun Meng, Yangyang Zhang, Junhua Fang, and Kefu Zhou. Development of colloidal gold test strip based on the BsVg819 gene fragment of vitellogenin of *Bostrichthys sinensis* for the detection of vitellogenin in multiple fish species. *Fish Physiology and Biochemistry*, 51(2):??, April 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-025-01449-3`.

Ali:2025:EPC

[790] Bulbul Ali, Neelam Sharma, Rohit Kumar Gautam, and Abha Mishra. Effects of pyrimidine on cellular and neuronal arrangement, oxidative stress and energy content in the brain of the freshwater catfish, *Heteropneustes fossilis*. *Fish Physiology and Biochemistry*, 51(2):??, April 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-025-01481-3`.

Ibrahim:2025:CAI

[791] Rowida E. Ibrahim, Abdelwahab A. Abdelwarith, Elsayed M. Younis, Amany Abdel-Rahman Mohamed, Tarek Khamis, Ali Osman, Mohamed M. M. Metwally, Simon J. Davies, and Yasmina M. Abd-Elhakim. Carbonate alkalinity induces stress responses and renal and metabolic disorders in Nile tilapia: mitigation by camel whey protein hydrolysate diet. *Fish Physiology and Biochemistry*, 51(2):??, April 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-024-01442-2`.

Ibrahim:2025:APP

[792] Rowida E. Ibrahim, Mohamed F. M. Farag, Mohammed S. Sobh, Abdelwahab A. Abdelwarith, Elsayed M. Younis, Shefaa M. Bazeed, Aya Elgamal,

Tarek Khamis, Simon J. Davies, and Afaf N. Abdel Rahman. Ameliorative potential of *Populus alba* leaf powder against hexaflumuron exposure in Nile tilapia: immune-antioxidant, biochemical, histological, and transcriptomic analysis. *Fish Physiology and Biochemistry*, 51(2):??, April 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-025-01465-3`.

Debnath:2025:EDE

[793] Chandan Debnath. Evaluating the dietary effects of curry and/or marigold leaf extracts on physiological and immunological responses of *Labeo rohita* and its resistance against *Saprolegnia parasitica* infection. *Fish Physiology and Biochemistry*, 51(2):??, April 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-025-01479-x`.

Dwivedi:2025:AAM

[794] Shraddha Dwivedi, Sunil P. Trivedi, Kamlesh K. Yadav, and Manoj Kumar. Antioxidant activity of *Mentha piperita* phenolics on arsenic induced oxidative stress, biochemical alterations, and cyto-genotoxicity in fish, *Channa punctatus*. *Fish Physiology and Biochemistry*, 51(2):??, April 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-025-01484-0`.

Abdel-Tawwab:2025:ITS

[795] Mohsen Abdel-Tawwab, Amira A. Omar, Riad H. Khalil, Talal A. M. Abo Selema, Salma. I. Elsamanooudy, Hend A. M. El-Saftawy, Eman A. Sabry, Reham M. Fawzy, and Nashwa Abdel-Razek. Influences of thermal stress on the growth biometrics, stress indicators, oxidative stress biomarkers, and histopathological alterations in European seabass, *Dicentrarchus labrax*, juveniles. *Fish Physiology and Biochemistry*, 51(2):??, April 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-025-01470-6`.

Balbuena-Pecino:2025:CEP

[796] Sara Balbuena-Pecino, Natàlia Riera-Heredia, Albert Sánchez-Moya, Miquel Perelló-Amorós, Joaquim Gutiérrez, Encarnación Capilla, and Isabel Navarro. Screening the effects of phytoestrogens on lipid metabolism in primary cultured adipocytes from rainbow trout (*Oncorhynchus mykiss*) and gilthead sea bream (*Sparus aurata*). *Fish Physiology and Biochemistry*, 51(2):??, April 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-025-01483-1`.

El-Fahla:2025:DGS

[797] Nadia A. El-Fahla, Heba M. A. Abdelrazek, Alyaa S. Fouad, Seham A. Helmy, Mohamed T. A. Soliman, Lobna A. Badawy, and Nahla S. El-Shenawy. Dietary grape seed extract mitigated growth retardation, hormonal delay, and gastrointestinal toxicity induced by insecticide imidacloprid in Nile tilapia. *Fish Physiology and Biochemistry*, 51(2):??, April 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-025-01475-1`.

Yu:2025:STP

[798] Jie Yu, Dayu Li, Jinglin Zhu, Zhiying Zou, Wei Xiao, Binglin Chen, and Hong Yang. Salt tolerance performance and associated gene analysis of three tilapia species (strains). *Fish Physiology and Biochemistry*, 51(2):??, April 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic). URL `https://link.springer.com/article/10.1007/s10695-025-01489-9`.

Anonymous:2025:JNb

[799] Anonymous. Journal navigation. *Fish Physiology and Biochemistry*, 51(2):??, April 2025. CODEN FPBIEP. ISSN 0920-1742 (print), 1573-5168 (electronic).