

# Nicholas Romano (PhD)

## PROFESSIONAL APPOINTMENTS

- 2017 - present      *Associate Professor*, Aquaculture  
Aquaculture/Fisheries Center  
University of Arkansas at Pine Bluff, Arkansas, USA
- 2013 – 2017      *Senior Lecturer*, Aquaculture  
Aquaculture Department, Agriculture Faculty  
Universiti Putra Malaysia, Serdang, Malaysia
- 2011 – 2013      *Post-doctoral Researcher*, Aquaculture  
Biological Sciences  
Universiti Sains Malaysia, Penang, Malaysia
- 2008 – 2010      *Research Assistant*, Aquaculture  
James Cook University, Townsville, Australia

## EDUCATION

- 2006 – 2010      *Doctor of Philosophy in Aquaculture*  
School of Tropical Marine Biology and Aquaculture  
James Cook University, Townsville, Australia  
*Dissertation title:* Investigating the survival, growth and osmoregulatory responses of blue swimmer crab, *Portunus pelagicus*, early juveniles to salinity and ammonia
- 2005 – 2006      *Graduate Diploma of Research Methods (Aquaculture)*  
School of Tropical Marine Biology and Aquaculture  
James Cook University, Townsville, Australia
- 2001 – 2004      *Bachelor of Applied Science (Aquaculture)*  
School of Tropical Marine Biology and Aquaculture  
James Cook University, Townsville, Australia

**Field of specialization:** aquaculture, nutritional physiology, biofloc, salinity, nutraceuticals, feeding management

**Associate editor:** Marine and Freshwater Behavior and Physiology (2017 – present)

## **PUBLICATIONS**

### **In press**

**Romano, N.**, Ashikin, M., Teh, J.C., Syukri, F., Karami, A. Effects of pristine polyvinyl chloride fragments on whole body histology and protease activity in silver barb *Barbodes gonionotus* fry. *Environmental Pollution*, *in press* (IF = 5.099).

Nepal, S., Kumar, V., Makkar, H.P.S., Stadtlander, T., **Romano, N.**, Becker, K. Comparative nutritional value of *Jatropha curcas* protein isolate and soy protein isolate in common carp. *Fish Physiology and Biochemistry* (*in press*) (IF = 1.442)

Babatunde, T.A., Amin, S.M., **Romano, N.**, Yusoff, F.M., Arshad, A., Esa, Y.B., Ebrahimi, M. Gonad maturation and spawning of cobia, *Rachycentron canadum* (Linnaeus, 1766) on the Dungun coast, Malaysia. *Journal of Applied Ichthyology*, *accepted manuscript* (IF = 0.783).

Zakaria, M.H., Amin, S.M., **Romano, N.**, Arshad, A. Embryonic and larval development of lemon fin barb hybrid ( $\sigma^{\text{Hypsibarbus wetmorei}} \times \text{♀ } \text{Barbonymus gonionotus}$ ). *Journal of Environmental Biology*, *accepted manuscript* (IF = 0.25)

**Romano, N.**, Aliff, A., Syukri, F. Improved performance of lemon fin barb hybrid ( $\sigma^{\text{Hypsibarbus wetmorei}} \times \text{♀ } \text{Barbonymus gonionotus}$ ) at elevated salinities. *Journal of Environmental Biology*, *accepted manuscript* (IF = 0.25)

Kumar, V., Sinha, A., **Romano, N.**, Allen, K.M., Bowman, B.A., Thompson, K.R., Tidwell, J.H. Metabolism and nutritive role of cholesterol in the growth, gonadal development, and reproduction of crustaceans. *Reviews in Fisheries Science and Aquaculture*, *accepted manuscript* (IF = 2.545).

Kumar, V., Makkar, H.P.S., Becker, K., **Romano, N.** Utilization of a byproduct from the *Jatropha* biodiesel industry as a fish meal replacer in common carp *Cyprinus carpio* L. diets. *Journal of Applied Aquaculture*, *accepted manuscript* (IF = 0.45).

### **2018**

Kanmani, N., **Romano, N.**, Ebrahimi, M., Amin, S.M.N., Kamarudin, M.S., Karami, A., Kumar, V. 2018. Improvement of feed pellet characteristics by dietary pre-gelatinized starch and their subsequent effects on growth and physiology in tilapia. *Food Chemistry* **239**, 1037-1046 (IF = 4.529)

Dauda, A.B., **Romano, N.**, Ebrahimi, M., Chin, T.J., Ajadi, A., Chong, C.M., Karim, M., Natrah, I., Kamarudin, M.S. 2018. Influence of carbon/nitrogen ratio on biofloc production and biochemical composition and subsequent effects on the growth, physiological status and disease resistance of African catfish (*Clarias gariepinus*) cultured in a glycerol-based biofloc system. *Aquaculture* **483**, 120-130. (IF = 2.041)

**Romano, N.**, Kanmani, N., Ebrahimi, M., Chong, C.M., Teh, J.C., Hoseinifar, S.H., Amin, S.M.N., Kamarudin, M.S., Kumar, V. 2018. Combination of dietary pre-gelatinized starch and isomaltooligosaccharides improved pellet characteristics, subsequent feeding efficiencies and physiological status in African catfish, *Clarias gariepinus*, juveniles. **Aquaculture** **484**, 293-302 (IF = 2.041)

Sheikhlar, A., Meng, G.Y., Alimon, R., **Romano, N.**, Ebrahimi, M. 2017. Dietary *Euphorbia hirta* extract improved the resistance of African catfish *Clarias gariepinus* to *Aeromonas hydrophila*. **Journal of Aquatic Animal Health** **29**, 225-235 (IF = 0.906)

Kamarudin, M.S., de Cruz, C.R., Saad, C.R., Romano, N., Ramezani-Fard, E. 2018. Effects of extruder die head temperature and pre-gelatinized taro and broken rice flour level on physical properties of floating fish pellets. **Animal Feed Science and Technology** **236**, 122-130 (IF = 1.755)

## **2017**

Muntaziana, A.M.P, S.M. Nurul Amin, S.M., Kamarudin, M.S., Rahim, A., **Romano, N.** 2017. Effects of feeding frequencies on the survival, growth and feeding efficiencies of snakehead, *Channa striatus* (Bloch) fry. **Aquaculture Research** **48**, 2602-2606 (IF = 1.203)

Hoseinifar, S.H., Zhou, H.K., Miandare, H.K., Van Doan, H., **Romano, N.**, Dadar, M. 2017. Enrichment of common carp (*Cyprinus carpio*) fingerlings diet with Medlar (*Mespilus germanica*) leaf extract: effects on growth performance and skin mucosal immunity. **Fish and Shellfish Immunology** **67**, 346-352 (IF = 3.025)

**Romano, N.**, Zeng, C. 2017. Cannibalism among decapod crustaceans and implications for their aquaculture: a review on its prevalence, influencing factors, and mitigating methods. **Reviews in Fisheries Science and Aquaculture** **25**, 42-69 (IF = 2.032)

Al-Khafaji, F.M., **Romano, N.**, Amin, S.M.N., Fadel, A.H.I., Ebrahimi, M., Karami, A., Arshad, A. 2017. Effects of feeding frequencies on the growth, plasma biochemistry, and liver glycogen of Jade Perch (*Scortum barcoo*) in a recirculating system. **North American Journal of Aquaculture** **79**, 216-223 (IF = 0.760)

**Romano, N.**, Syukri, F., Karami, A., Omar, N., Khalid, N. 2017. Salinity induced changes to the survival, growth and glycogen distribution in the early fry stage of silver barb, *Barbodes gonionotus* (Bleeker, 1850). **Journal of Applied Ichthyology** **33**, 509-514 (IF = 0.783)

Ehteshami, F., **Romano, N.**, Ramezani-Fard, E., Hoseinzadeh-Sahafi, H. 2017. Effects of different microalgae combinations on *Pinctada margaritifera* larval growth and survival and feasibility of microalgae replacement with a lipid emulsion. **Aquaculture Nutrition** **23**, 671-680 (IF = 1.395)

Karami, A., Golieskardi, A., Choo, C.K., **Romano, N.**, Ho, Y.B., Salamatinia, B. 2017. A high-performance protocol for extraction of microplastics in fish. **Science of the Total Environment** **578**, 485-494 (IF = 3.976)

Ebrahimi, M., Daeman, N.H., Chong, C.M., Karami, A., Kumar, V., Hoseinifar, S.H., **Romano, N.** 2017. Comparing the effects of different dietary organic acids on the growth, intestinal short chain fatty acids, and liver histopathology of red hybrid tilapia (*Oreochromis* sp.) and potential use of these as preservatives. **Fish Physiology and Biochemistry** **43**,1195-1207 (IF = 1.442)

Chen, W.W., **Romano, N.**, Ebrahimi, M., Natrah, I. 2017. The effects of dietary fructooligosaccharide on growth, intestinal short chain fatty acids level and hepatopancreatic condition of the giant freshwater prawn (*Macrobrachium rosenbergii*) post-larvae. **Aquaculture** **469** 95-101 (IF = 2.041)

Taher, S., **Romano, N.**, Arshad, A., Ebrahimi, M., Teh, J.C., Ng, W.K., Kumar, V. 2017. Assessing the feasibility of dietary soybean meal replacement for fishmeal to the swimming crab, *Portunus pelagicus*, juveniles. **Aquaculture** **469**, 88-94 (IF = 2.041)

Dauda, A.B., **Romano, N.**, Ebrahimi, M., Karim, M., Natrah, I., Kamarudin, M.S., Ekasari, J. 2017. Different carbon sources affected biofloc volume, water quality and the survival and physiology of African catfish (*Clarias gariepinus*) fingerlings. **Fisheries Science** **83**, 1037-1048 (IF = 0.839)

Fadel, A.H.I., Kamarudin, M.S., **Romano, N.**, Ebrahimi, M., Saad, C.R., Samsudin, A.A. Carob seed germ meal as a partial soybean meal replacement in the diets of red hybrid tilapia. **Egyptian Journal of Aquatic Research** **43**, 337-343 (IF = 0.48)

Ng, W.K., Lim, C.L., **Romano, N.**, Kua, B.C. 2017. Dietary short-chain organic acids enhanced resistance to bacterial infection and hepatopancreatic structural integrity of the giant freshwater prawn, *Macrobrachium rosenbergii*. **International Aquatic Research** **9**, 293-302 (IF = 0.24)

## **2016**

Karami, A., **Romano, N.**, Hamzah, H., Ismail, P. 2016. Virgin microplastic fragments caused toxicity and modulated the impacts of phenanthrene on biomarker responses in African catfish (*Clarias gariepinus*). **Environmental Research** **151**, 58-70 (IF = 3.088)

Karami, A., **Romano, N.**, Hamzah, H., Simpson, S.L., Yap, C.K. 2016. Acute phenanthrene toxicity to juvenile diploid and triploid African catfish (*Clarias gariepinus*): Molecular, biochemical and histopathological alterations. **Environmental Pollution** **212**, 155-165 (IF = 4.143)

Dauda, A., Teh, J.C., Amin, N.S.M., Kamarudin, M.S., **Romano, N.** 2016. Trypsin modulating oostatic factor (TMOF) decreased the survival, growth and digestive

enzymes of *Macrobrachium rosenbergii*. **Journal of Pesticide Science** **41**, 83-86 (IF = 0.84)

Koh, C.B., **Romano, N.**, Zahrah, A.S., Ng, W.K., 2016. Effects of dietary organic acids blend and oxytetracycline on the growth, nutrient utilization and total cultivable gut microbiota of the red hybrid tilapia, *Oreochromis* sp., resistance to *Streptococcus agalactiae*. **Aquaculture Research** **47**, 357-369 (IF = 1.203)

**Romano, N.**, Safee, M.A., Ebrahimi, M., Arshad, A., 2016. Fatty acid compositional changes during the embryonic development of the swimming crab, *Portunus pelagicus* (Portunidae: Decapoda). **Invertebrate Reproduction and Development** **60**, 112-117 (IF = 0.609)

Kareem, Z.H., Abdelhadi, Y.M., Christianus, A., Karim, M., **Romano, N.** 2016. Effects of some dietary crude plant extracts on the growth and gonadal maturity of Nile tilapia (*Oreochromis niloticus*) and their resistance to *Streptococcus agalactiae* infection. **Fish Physiology and Biochemistry** **42**, 757-769 (IF = 1.622)

**Romano, N.**, Simon, W., Ebrahimi, M., Fadel, A.H.I., Min, C.C., Kamarudin, M.S. 2016. Dietary sodium citrate improved oxidative stability in red hybrid tilapia (*Oreochromis* sp.) but reduced growth, health status, intestinal short chain fatty acids and induced liver damage. **Aquaculture** **458**, 170-178 (IF = 2.041)

Ramezani-Fard, E., **Romano, N.**, Goh, Y.M, Kamarudin, M.S., Ehteshami, F., Oskoueian, E., Ebrahimi, M. 2016. The effect of different cooking methods on fatty acid composition and antioxidant activity of n-3 PUFA fortified tilapia meat with or without clove essential oil. **Journal of Environmental Biology**, **37** (Special issue) 775-784 (IF = 0.56)

Roslan, S., Taher, S., Arshad, A., **Romano, N.**, 2016. Effects of dietary peppermint (*Mentha piperita*) essential oil on survival, growth, cannibalism and hepatopancreatic histopathology of the swimming crab, *Portunus pelagicus*, juveniles. **Journal of Environmental Biology** **37** (Special issue), 785-790 (IF = 0.56)

Sukor, S.A., Taher, S., Ehteshamei, F., Arshad, A., Ng, W.K., **Romano, N.**, 2016. Effects of different dietary organic acids on the survival, growth and hepatopancreatic histopathology of the blue swimmer crab, *Portunus pelagicus*. **Journal of Shellfish Research** **35**, 555-561 (IF = 0.791)

## **2015**

**Romano, N.**, Ayob, N.M., Amin, S.M.N., Kamarudin, M.S. 2015. Acute and sub-chronic toxicity of trypsin-modulating oostatic factor (TMOF) on the growth, body composition and histopathology of red hybrid tilapia, *Oreochromis* sp., as a non-target organism. **Journal of Biopesticides** **8**, 45-51 (IF = 0.534)

Ng, W.K., Koh, C.B., Teoh, C.Y., **Romano, N.** 2015. Farm-raised tiger shrimp, *Penaeus monodon*, fed commercial feeds with added organic acids showed enhanced nutrient utilization, immune response and resistance to *Vibrio harveyi* challenge. **Aquaculture** **449**, 69-77. (IF = 2.041)

**Romano, N., Koh, C.B., Ng, W.K.** 2015. Dietary microencapsulated organic acids blend enhances growth, phosphorus utilization, immune response, hepatopancreatic integrity and resistance against *Vibrio harveyi* in white shrimp, *Litopenaeus vannamei*. **Aquaculture** **435**, 228-236. (IF = 2.041)

Zeng, C., Tsuji, H., **Romano, N., Ye, H.**, 2015. Effects of prey type and density on molting and larval survival of the blue-legged gold coral banded shrimp, *Stenopus cyanoscelis*. **Fisheries Science** **81**, 731-736 (IF = 0.855)

Park, J.J., Shin, Y.K., Hung, S.S.O., **Romano, N., Cheon, Y.P., Kim, J.W.** 2015. Reproductive impairment and intersexuality in *Gomphina veneriformis* (Bivalvia: Veneridae) by the tributyltin compound. **Animal Cells and Systems** **19**, 61-68. (IF = 0.350)

Noordin, N.M., Zeng, C., Southgate, P., **Romano, N.**, 2015. Effects of dietary fish oil to soybean oil ratios on the survival, development and growth of blue swimmer crabs, *Portunus pelagicus*, early juveniles. **Journal of Shellfish Research** **34**, 1065-1072 (IF = 0.791)

## **2014**

Kim, Y.C., **Romano, N., Koh, C.K., Ng, W.K.** 2014. Effects of dietary probiotics on the growth and feeding efficiency of red hybrid tilapia, *Oreochromis* sp., and subsequent resistance to *Streptococcus agalactiae* challenge. **Journal of Applied Aquaculture** **26**, 22-31 (IF = 0.38)

**Romano, N., Wu, X., Zeng, C., Genodepa, J., Elliman, J.**, 2014. Growth, osmoregulatory responses and changes to the lipid and fatty acid composition of organs from the mud crab, *Scylla serrata*, over a broad salinity range. **Marine Biology Research** **10**, 460-471 (IF = 1.055)

## **2013**

**Romano, N., Zeng, C.**, 2013. Toxic effects of ammonia, nitrite and nitrate to decapod crustaceans: A review on factors influencing their toxicity, physiological consequences and coping mechanisms. **Reviews in Fisheries Science** **21**, 1-21 (IF = 1.946)

Zeng, C., **Romano, N.** 2013. Nitrogenous wastes: An often overlooked pollutant in aquatic environments. **Journal of Marine Science Research and Development** **3**, 1

Ng, W.K., **Romano, N.**, 2013. A review of the nutrition and feeding management of farmed tilapia throughout the culture cycle. **Reviews in Aquaculture** **5**, 220-254 (IF = 4.769)

Ng, W.K., Cheong-Yew, C., Wang, Y., **Romano, N.**, 2013. Effects of dietary fish and vegetable oils on the growth, tissue fatty acid composition, oxidative stability and

vitamin E content of red hybrid tilapia and efficacy of using fish oil finishing diets. **Aquaculture** **372-375**, **97-110** (IF = 2.041)

Kim, Y.C., **Romano, N.**, Lee, K.S., Teoh, C.Y., Ng, W.K., 2013. Effects of replacing dietary fish oil and squid liver oil with vegetable oils on the growth, tissue fatty acid profile and total carotenoids of the giant freshwater prawn, *Macrobrachium rosenbergii*. **Aquaculture Research** **44**, **1731-1740**. (IF = 1.203)

## **2012**

**Romano, N.**, Zeng, C., 2012. Osmoregulation in decapod crustaceans: implications to aquaculture productivity, methods for potential improvement and interactions with elevated ammonia exposure. **Aquaculture** **334-337**, **12-23** (IF = 2.041)

**Romano, N.**, Zeng, C., Noordin, N.M., Ng, W.K., 2012. Improving the survival, growth and hemolymph ion maintenance of early juvenile blue swimmer crabs, *Portunus pelagicus*, at hypo- and hyper-osmotic conditions through dietary long chain PUFA supplementation. **Aquaculture** **342-343**, **24-30** (IF = 2.041)

## **2011**

**Romano, N.**, Zeng, C., 2011. Importance of balanced Na<sup>+</sup>/K<sup>+</sup> ratios in seawater for early *Portunus pelagicus* juveniles to cope with elevated ammonia-N and differences between *in vitro* and *in vivo* gill Na<sup>+</sup>/K<sup>+</sup>-ATPase responses. **Aquaculture** **318**, **154-161** (IF = 2.041)

## **2010**

**Romano, N.**, Zeng, C., 2010. Survival, osmoregulation and ammonia-N excretion of blue swimmer crab, *Portunus pelagicus*, juveniles exposed to different ammonia-N and salinity combinations. **Comparative Biochemistry and Physiology** **151C**, **222-228** (IF = 2.616)

**Romano, N.**, Zeng, C. 2010. Changes to the histological gill structure and haemolymph composition of early juvenile blue swimmer crabs, *Portunus pelagicus*, during elevated ammonia exposure and the post-exposure recovery. **Aquaculture Research** **41**, **468-480** (IF = 1.203)

## **2009**

**Romano, N.**, Zeng, C., 2009. Evaluating the newly proposed protocol of incorporated potassium in nitrate toxicity experiments: A case study with the tiger prawn, *Penaeus monodon*, juveniles. **Aquaculture** **289**, **304-309** (IF = 2.041)

**Romano, N.**, Zeng, C., 2009. Subchronic effects of nitrite, potassium and their combination on the survival, growth, total haemocyte count and gill structure of juvenile blue swimmer crabs, *Portunus pelagicus*. **Ecotoxicology and Environmental Safety** **72**, **1287-1295** (IF = 2.294)

## 2007

**Romano, N.**, Zeng, C., 2007. Effects of potassium on nitrate mediated changes to osmoregulation in marine crabs. **Aquatic Toxicology** **85**, 202-208 (IF = 3.557)

**Romano, N.**, Zeng, C., 2007. Acute toxicity of ammonia and their effects on the haemolymph osmolality, ammonia-N, pH and ionic composition of early juvenile mud crabs, *Scylla serrata* (Forskål). **Comparative Biochemistry and Physiology** **148A**, 278-285 (IF = 2.235)

## 2006

**Romano, N.**, Zeng, C., 2006. The effects of salinity on the survival, growth and haemolymph osmolality of early juvenile blue swimmer crabs, *Portunus pelagicus*. **Aquaculture** **260**, 151-162. (IF = 2.041)

## Books and Chapters

### *Book editor*

Amin, N.S.M., Kamarudin, M.S., Arshad, A., **Romano, N.** 2014. Perspective of Fisheries and Aquaculture in Malaysia. *Publisher: Universiti Putra Malaysia Press*. Editors. pp. 1 – 211.

### *Book chapters*

Amin, N.S.M., Arshad, A., Ara, R., **Romano, N.**, Rahman, M.A. 2014. Reproductive Biology and Feeding Habits of Planktonic Shrimp (*Acetes* spp.). pp. 3 – 14. In: Perspective of Fisheries and Aquaculture in Malaysia. Eds: Amin, N.S.M., Kamarudin, M.S., Arshad, A., **Romano, N.** *Publisher: Universiti Putra Malaysia Press*.

**Romano, N.**, Amin, N.S.M. 2014. Application of Dietary Organic Acids in Aquaculture to Disease Management and Fish Growth. Pp. 179-187. In: Perspective of Fisheries and Aquaculture in Malaysia. Eds: Amin, N.S.M., Kamarudin, M.S., Arshad, A., **Romano, N.** *Publisher: Universiti Putra Malaysia Press*.

Zeng, C., Rotllant, G., Giménez, L., **Romano, N.** Chapter 7: Effects of Environmental Conditions on Larval Growth and Development. In: Natural History of the Crustacea Vol VII : Developmental Biology and Larval Ecology. Eds. Anger, K., Harzsch, S., Thiel, M. *Publisher: Oxford Press. Scheduled to be published in April, 2018.*

**Romano, N.**, Kumar, V. Chapter 5: Phytase in animal feeds. In: Enzymes in Human and Animal Nutrition: Principles and Perspectives. Eds. Nunes, C.S., Kumar, V. *Publisher: Elsevier, Academic Press. Scheduled to be published in February, 2018.*

**Romano, N.** Chapter 22: Alternative and new sources of feedstuffs. In: *Enzymes in Human and Animal Nutrition: Principles and Perspectives*. Eds. Nunes, C.S., Kumar, V. *Publisher: Elsevier, Academic Press. Scheduled to be published in February, 2018.*