

CHEN-HUEI HUANG



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CURRENT POSITION:

Distinguished Professor (lifetime)

EDUCATION:

Ph.D. (1991) University of Massachusetts, MA., USA
M.S. (1986) University of Maine, ME., USA
B.S. (1980) National Taiwan University, Taiwan

PROFESSIONAL EXPERIENCES:

Councilor, Asian Fisheries Society (2013-2019)

Visiting Professor, Kagoshima University, Kagoshima, Japan (2018/10-2018/11)

Dean, College of Life Sciences, National Chiayi University (2010/8-2013/7)

Visiting Scientist, DFO/UBC Centre for Aquaculture and Environmental Research, West Vancouver, Canada (2006/02-2007/01)

Professor, Department of Aquatic Biosciences, National Chiayi University (2000-current)

Professor, Department of Aquaculture, National Chiayi Institute of Technology (1998-2000)

Associate Professor, Department of Aquaculture, National Chiayi Institute of Technology (1992-1998)

Committee Member, Graduate Research Committee of Food Science Department, University of British Columbia, BC, Canada (2002-2009)

Visiting Scientist, West Vancouver Laboratory, Department of Fisheries & Oceans (DFO), Canada (2002/02-08)

Department Head, Department of Aquaculture, National Chiayi Institute of Technology (1993/8-1999/7)

Postdoctoral Fellow, Marine Station, University of Massachusetts at Amherst
(1991-1992)

Graduate Research Assistant, University of Maine and University of Massachusetts
(1984-1991)

Sales Specialist, Feed Additive Division, Bi-Chiang & Companies, Taipei (1982-1984)

SERVICES:

National:

Civic Service Officers Examination Committee – member
Higher Education Evaluation and Accreditation – member

University:

Faculty Evaluation Committee
Financial Auditing Committee
Curriculum Development Committee
University Development Committee
University Affairs Committee
Department Head Search Committee
University President Search Committee

Others:

Member, Review Committee for GMO Feeds or Feed Additives. Council of Agriculture,
Taiwan (2016-2018)
Consultant, Belize aquaculture project-ICDF Taiwan (11/2015)
Evaluator, Faculty member rank promotion
Lecturer, Aquaculture extension service
Referee, Government grants and awards

Students advised:

Ph.D.: 7 (committee member)
M.S.: 45

Journal Reviewer:

Asian Fisheries Science - Editorial Board member
Aquaculture
Aquaculture Nutrition
Aquaculture Research

Comparative Biochemistry and Physiology
Fish Physiology and Biochemistry
Fish and Shellfish Immunology
Fisheries Science
Journal of Fish Biology
Journal of Food Biochemistry
Journal of Herpetology
Journal of the Fisheries Society of Taiwan - Editorial Board member
Journal of Marine Science and Technology
Journal of the World Aquaculture Society
Zoological Studies

PROFESSIONAL MEMBERSHIP:

World Aquaculture Society, Asian Fisheries Society, Taiwan Association of Food Science and Technology, Fisheries Society of Taiwan

AWARDS AND HONORS:

National Science Council Research Award (1998)
Excellent course evaluated by students (2009)
Distinguished Professorship (2011-2016)
Lifetime Distinguished Professorship (2017)

RESEARCH GRANTS:

Investigation of dietary short-chain fatty acid supplementation on feed intake, growth, intestinal health, and immunity of soft-shelled turtle (Ministry of Science and Technology; PI; 2019-2022)

Investigation of dietary vitamin B₁ and B₆ requirements for soft-shelled turtles (Ministry of Science and Technology; PI; 2017-2019)

Investigation of dietary vitamin K requirement for soft-shelled turtles (Ministry of Science and Technology; PI; 2016-2017)

Investigation of dietary choline and inositol requirements for soft-shelled turtles (Ministry of Science and Technology; PI; 2014-2016)

Dietary requirement of ascorbic acid for soft-shelled turtle (National Science Council; PI; 2013-2014)

Dietary requirements of magnesium, selenium and manganese for soft-shelled turtle (National Science Council; PI; 2010-2013)

Evaluation of yam by-products for antioxidative and immunity enhancement for fish

(National Science Council; Co-PI; 2012-2013)

Enhancement of microalgae on the vitality and nutritional value of a seawater clam
(National Science Council; Co-PI; 2010-2012)

Dietary vitamin requirements of soft-shelled turtle (National Science Council; PI;
2007-2010)

Dietary zinc requirements of soft-shelled turtle (National Science Council; PI;
2006-2007)

Dietary copper requirements of soft-shelled turtle (National Science Council; PI;
2005-2006)

Dietary iron requirements of soft-shelled turtle (National Science Council; PI;
2004-2005)

Effect of substituting de-hulled soybean meal for fish meal in diets on growth of hybrid
tilapia (American Soybean Association; PI; 2003-2004)

Effect of dietary vitamin A and beta-carotene on growth and lipid oxidation of hybrid
tilapia (National Science Council; PI; 2002-2004)

Evaluating dietary antioxidative nutrient requirement of fish using tissue lipid oxidation
as the indicator (National Science Council short-term overseas research grant; 2002)

Dietary vitamin E requirement of hybrid tilapia under lipid oxidative stress (National
Science Council; PI; 2001-2002)

Improvement of nutrition and feeding of soft-shelled turtle (Council of Agriculture; PI;
1998-2002)

Influence of dietary nutrient on lipid peroxidation in biological membranes of fish
(National Science Council; PI; 2000-2001)

Study on nutrient requirements of stream fish in Taiwan (National Science Council; PI;
1997-2000)

Improvement of feeds and nutrition for cultured eels (Council of Agriculture; PI;
1993-1997)

Safety assurance of cultured fish products (Council of Agriculture; Co-PI; 1995-1998)

Studies of antioxidative packaging materials on the storage of fatty fish (National
Science Council; PI)

Research and development of tilapia products (Council of Agriculture; PI; 1993-1995)

Destruction of therapeutic agents in processed seafood products (Council of Agriculture; PI; 1993-1994)

RESEARCH INTERESTS:

Nutritional strategy for antioxidation in biological membranes of fish and shellfish

Dietary nutrient requirements for aquatic animals

Improvement of sensory quality of fish through dietary treatments

COURSES TAUGHT:

Fish Nutrition, Feed Analysis, Biostatistics, Graduate Seminars

PUBLICATIONS

JOURNAL ARTICLES:

1. Tsai, T.H. and Huang, C.H.* 2019. Thiamine requirement of Chinese soft-shelled turtle, *Pelodiscus sinensis* (Wiegmann). Aquaculture Research 50: 3212-3219.
2. Su, Y.T. and Hung, C.H.* 2019. Estimation of dietary vitamin K requirement of juvenile Chinese soft-shelled turtle, *Pelodiscus sinensis*. Aquaculture Nutrition 25: 1327-1333.
3. Chou, S.J. and Huang, C.H.* 2017. Effect of excessive dietary vitamin D on growth of soft-shelled turtle, *Pelodiscus sinensis*, under dark environment. Journal of the Fisheries Society of Taiwan 44: 249-254.
4. Hsieh, M.C., Huang, C.H., Yang, H.W., Chen, J.C. and Hsu, C.K. 2017. Black soybean seed coat containing diet enhancing the growth performance of juvenile hybrid tilapia *Oreochromis niloticus* × *O. aureus*. Aquaculture Research 48: 2593–2601.
5. Li, M.R. and Huang, C.H.* 2016. Effect of dietary zinc level on growth, enzyme activity, and body trace elements of hybrid tilapia, *Oreochromis niloticus* × *O. aureus*, fed soya bean meal-based diets. Aquaculture Nutrition 22:1320-1327.
6. Chen, C.Y. and Huang, C.H.* 2015. Effects of dietary magnesium on the growth, carapace strength, and tissue magnesium concentrations of soft-shelled turtle, *Pelodiscus sinensis* (Wiegmann). Aquaculture Research 46: 2116-2123.
7. Chen, L.P. and Huang, C.H.* 2015. Estimation of dietary vitamin A requirement of juvenile soft-shelled turtle, *Pelodiscus sinensis*. Aquaculture Nutrition 21: 457-463.
8. Wang, C.C. and Huang, C.H.* 2015. Effects of dietary vitamin C on growth, lipid oxidation, and carapace strength of soft-shelled turtle, *Pelodiscus sinensis*. Aquaculture 445: 1-4.
9. Chen, S.M., Tseng, K.Y. and Huang, C.H.* 2015. Fatty acid composition, sarcoplasmic reticular lipid oxidation, and immunity of hard clam (*Meretrix lusoria*) fed different dietary microalgae. Fish and Shellfish Immunology 45:141-145.
10. Chen, R.M., Chen, S.M. and Huang, C.H.* 2014. Effect of salbutamol supplementation on growth, muscle protein mass and residue salbutamol in muscle of hybrid tilapia. Journal of the Fisheries Society of Taiwan 41: 165-170.

11. Chen, C.Y., Chen, S.M. and Huang, C.H.* 2014. Dietary magnesium requirement of soft-shelled turtle, *Pelodiscus sinensis*, fed diets containing exogenous sodium phytate. Aquaculture 432: 80-84.
12. Guo, S.M. and Huang, C.H.* 2013. Dietary zinc requirements of soft-shelled turtle, *Pelodiscus sinensis*, fed diet with soybean meal as the major protein source. Journal of the Fisheries Society of Taiwan 40: 117-124.
13. Chou, S.J. and Huang, C.H.* 2013. Ultraviolet influences growth, tissue vitamin D status, and carapace strength of Chinese soft-shelled turtle, *Pelodiscus sinensis*. Journal of the Fisheries Society of Taiwan 40: 71-77.
14. Huang, S.C. and Huang, C.H.* 2012. Zinc requirements of soft-shelled turtles, *Pelodiscus sinensis*, fed diets containing phytic acid. Journal of the Fisheries Society of Taiwan 39:78-85.
15. Chen, L.P. and Huang, C.H.* 2011. Effects of dietary β -carotene levels on growth and liver vitamin A concentrations of the soft-shelled turtle, *Pelodiscus sinensis* (Wiegmann). Aquaculture Research 42: 1848-1854.
16. Tseng, K.Y., Chen, S.M. and Huang, C.H.* 2010. Some characteristics of iron-catalyzed NADH-dependent sarcoplasmic reticular lipid oxidation in a seawater clam (*Meretrix lusoria*) and freshwater clam (*Corbicula fluminea*). Journal of Food Biochemistry 34: 825-837
17. Huang, S.C., Chen, S.M. and Huang, C.H.* 2010. Effects of dietary zinc levels on growth, serum zinc, haematological parameters, and tissue trace elements of soft-shelled turtles, *Pelodiscus sinensis*. Aquaculture Nutrition 16:284-289.
18. Chu, J.H., Chen, S.M. and Huang, C.H.* 2009. Growth, haematological parameters and tissue lipid peroxidation of soft-shelled turtles, *Pelodiscus sinensis*, fed diets supplemented with different levels of ferrous sulphate. Aquaculture Nutrition 15: 54-59.
19. Chang W. B., Huang, C. H. Cheng, S. H. and Kuo, J. 2008. Fatty acid composition of copepods fed with different diets. Platax 5: 23-37.
20. Wu, G.S., Chen, C.C. and Huang, C.H.* 2008. Growth, tissue lipid peroxidation and hepatic trace element content of soft-shelled turtles, *Pelodiscus sinensis*, fed a Cu-loaded diet followed by a normal diet. Journal of the Fisheries Society of Taiwan 35: 195-200.
21. Wu, G.S. and Huang, C.H.* 2008. Estimation of dietary copper requirement of juvenile soft-shelled turtle, *Pelodiscus sinensis*. Aquaculture 280: 206-210.
22. Chu, J.H., Chen, S.M. and Huang, C.H.* 2007. Effect of dietary iron concentrations on growth, hematological parameters, and lipid peroxidation of soft-shelled turtle, *Pelodiscus sinensis*. Aquaculture 269: 532-537.
23. Lin, W.Y. and Huang, C.H.* 2007. Fatty acid composition and lipid peroxidation of soft-shelled turtle, *Pelodiscus sinensis*, fed different dietary lipid source. Comparative Biochemistry & Physiology Part C 144: 327-333.
24. Sutton, J., Balfry, S.K., Higgs, D.A., Huang, C.H. and Skura, B. 2006. Impact of iron-catalyzed dietary lipid peroxidation on growth performance, general health and flesh proximate and fatty acid composition of Atlantic salmon (*Salmo salar* L.) in seawater. Aquaculture 257: 534-557.
25. Hu, C.-J., Chen, S.M., Pan, C.H. and Huang, C.H.* 2006. Effects of dietary vitamin A or β -carotene concentrations on growth of juvenile hybrid tilapia, *Oreochromis niloticus* \times *O. aureus*. Aquaculture 253: 602-607.
26. Huang, C.H.*, Lin, W.Y. and Chu, J.H. 2005. Dietary lipid level influences fatty acid profiles, tissue composition, and lipid peroxidation of soft-shelled turtle, *Pelodiscus sinensis*.

Comparative Biochemistry & Physiology Part A 142:383-388.

27. Lin, W.Y., Chen, C.C., Du, M.C. and Huang, C.H.* 2004. Replacement of fish meal with de-hulled soybean meal in diets on growth of subadult hybrid tilapia, *Oreochromis niloticus* × *O. aureus*. Journal of the Fisheries Society of Taiwan 31: 263-268.
28. Huang, C.H.*, Higgs, D.A., Balfry, S.K. and Devlin, R.H. 2004. Effect of dietary vitamin E level on growth, tissue lipid peroxidation, and erythrocyte fragility of transgenic coho salmon, *Oncorhynchus kisutch*. Comparative Biochemistry & Physiology Part A 139: 199-204.
29. Huang, C.H.* and Huang, S.-L. 2004. Effect of dietary vitamin E on growth, tissue lipid peroxidation, and liver glutathione level of juvenile hybrid tilapia, *Oreochromis niloticus* × *O. aureus*, fed oxidized oil. Aquaculture 237: 381-389.
30. Huang, C.H.* and Lin, W.-Y. 2004. Effects of dietary vitamin E level on growth and tissue lipid peroxidation of soft-shelled turtle, *Pelodiscus sinensis* (Wiegmann) Aquaculture Research 35: 948-954.
31. Huang, S.-L., Weng, Y.-M. and Huang, C.H.* 2004. Lipid peroxidation in sarcoplasmic reticulum and muscle of tilapia is inhibited by dietary vitamin E supplementation. Journal of Food Biochemistry 28:101-111.
32. Wu, G.S., Chung, Y.M., Lin, W.Y., Chen, S.Y. and Huang, C.H.* 2003. Effect of substituting de-hulled or fermented soybean meal for fish meal in diets on growth of hybrid tilapia, *Oreochromis niloticus* × *O. aureus*. Journal of the Fisheries Society of Taiwan 30: 291-297.
33. Shih, S., Weng, Y.M., Chen, S., Huang, S.L., Huang, C.H. and Chen, W. 2003. FT-Raman spectroscopic investigation of lens proteins of tilapia treated with dietary vitamin E. Archives of Biochemistry and Biophysics 420: 79-86.
34. Huang, C.H.*, Lin, W.-Y. and Wu, S.-M. 2003. Effect of dietary calcium and phosphorus supplementation in fish meal-based diets on growth of soft-shelled turtle, *Pelodiscus sinensis*. Aquaculture Research 34: 843-848.
35. Lin, Y.-R., Huang, S.-L. and Huang, C.H.* 2003. Characteristics of NADH-dependent lipid peroxidation in sarcoplasmic reticulum of white shrimp, *Litopenaeus vannamei*, and freshwater prawn, *Macrobrachium rosenbergii*. Comparative Biochemistry & Physiology Part B 135:683-687.
36. Huang, C.H., Liang, M.-F. and Kam, Y.-C. 2003. Fatty acid compositions of oophagous tadpoles, *Chirixalus eiffingeri*, fed conspecific and chicken egg yolk. Comparative Biochemistry & Physiology Part A 135: 329-336.
37. Huang, C.H.*, Chang, R.-J., Huang, S.-L. and Chen, W. 2003. Dietary vitamin E supplementation affects tissue lipid peroxidation of hybrid tilapia, *Oreochromis niloticus* × *O. aureus*. Comparative Biochemistry & Physiology Part B 134: 265-270
38. Huang, C.H.* and Lin, W.-Y. 2002. Estimation of optimal dietary methionine requirement for softshell turtle, *Pelodiscus sinensis*. Aquaculture 207: 281-287.
39. Liang, M.-F., Huang, C.H. and Kam, Y.-C. 2002. Effects of intermittent feeding on the growth of oophagous (*Chirixalus eiffingeri*) and herbivorous (*Chirixalus idiotocus*) tadpoles from Taiwan. Journal of Zoology 256: 207-213.
40. Huang, C.H.*, Shyong, W.-J. and Lin, W.-Y. 2001. Dietary lipid supplementation effects the body fatty acid composition but not the growth of juvenile river chub, *Zacco barbata* (Regan). Aquaculture Research 32:1005-1010.
41. Huang, C.H.*, Huang, S.-L. and Chang, R.-J. 2001. Some characteristics of

- iron-catalyzed lipid peroxidation in sarcoplasmic reticulum of cultured grass shrimp (*Penaeus monodon*) and grass carp (*Ctenopharyngodon idellus*). Journal of the Fisheries Society of Taiwan 28: 27-33.
42. Huang, C.H.*, Shyong, W.-J. and Lin, W.-Y. 2000. Effect of varying dietary energy contents with two protein concentrations on growth and feed utilization of juvenile *Zacco barbata*. Journal of the Fisheries Society of Taiwan 27: 303-309.
 43. Huang, C.H.* and Lin, W.-Y. 1999. Effects of substituting fermented soybean meal for fish meal in diets on growth and body composition of juvenile soft-shelled turtle, *Trionyx sinensis*. Journal of the Fisheries Society of Taiwan 26:225-232.
 44. Huang, C.H.* and Shyong, W.-J. 1999. Effect of dietary lipid level on growth and muscle composition of *Varicorhinus barbatulus*. Journal of the Fisheries Society of Taiwan 26:95-102.
 45. Huang, C.H.*, Shyong, W.-J. and Kuo, S.-R. 1999. Effect of dietary lipid source on growth and muscle composition of *Varicorhinus barbatulus*. Journal of Biomass Energy Society of China 18:66-73.
 46. Huang, C.H.*, Lai, H.-T. and Weng, Y.-M. 1998. Suitability of hybrid tilapia (*Oreochromis niloticus* × *O. aureus*) muscle for gel formation. International Journal of Food Science & Technology 33:339-344.
 47. Shyong, W.-J., Huang, C.H.* and Chen, H.-C. 1998. Effects of dietary protein concentration on growth and muscle composition of juvenile *Zacco barbata*. Aquaculture 167: 35-42.
 48. Huang, C.H.* and Weng, Y.M. 1998. Inhibition of lipid oxidation in fish muscle by antioxidant incorporated polyethylene film. Journal of Food Processing & Preservation 22: 199-209.
 49. Huang, C.H.*, Huang, M.-C. and Hou, P.-C. 1998. Effect of dietary lipids on fatty acid composition and lipid peroxidation in sarcoplasmic reticulum of hybrid tilapia (*Oreochromis niloticus* × *O. aureus*). Comparative Biochemistry & Physiology Part B 120: 331-336.
 50. Lee, A.C., Huang, C.H. and Chin, T.S. 1998. Method for detecting the activity of a modulator, a modulating VDAC channel protein. Journal of Biomass Energy Society of China 17: 11-17.
 51. Huang, C.H.*, Huang, M.C. and Lee, A.C. 1998. Characteristics of lipid peroxidation in sarcoplasmic reticulum of tilapia. Food Science 25: 104-108.
 52. Huang, C.H.* and Shyong, W.-J. 1998. Effect of dietary protein levels on growth of *Varicorhinus barbartulus*. Chinese Bioscience 41: 1-10.
 53. Huang, C.H.* and Lee, A.-C. 1997. Effects of substituting peanut meal for fish meal in diets on growth of European eel, *Anguilla anguilla*. Journal of Biomass Energy Society of China 16: 135-143.
 54. Kuo, S.-R., Huang, C.H. and Shao, K.T. 1997. Species composition of the fishes in the mangrove swamps on the western coast of Taiwan. Journal of Biomass Energy Society of China 16: 63-72.
 55. Lai, H.-T. and Huang, C.H. 1997. Comparison of three water recycling systems on zooplankton communities in eel (*Anguilla japonica*) culture ponds. Journal of National Chiayi Institute of Agriculture 52: 109-121.
 56. Huang, L.-J., Huang, C.H. and Weng, Y.-M. 1997. Using antimicrobial polyethylene films and minimal microwave heating to control the microbial growth of tilapia fillets during cold storage. Food Science 24:263-268.

57. Lai, H.-T., Huang, C.H. and Lin, T.S. 1997. Study of four brush-filtering system on zooplankton communities in eel (*Anguilla anguilla*). Chinese Bioscience 41: 7-19.
58. Chin, T.-S., Chou, Y.-H. and Huang, C.H. 1996. Effects of highly unsaturated fatty acids in brookstock diets on spawning and egg quality of perch (*Lateolabrax japonicus*). Journal of Technology 11: 539-545.
59. Huang, C.H.* and Lai, H.-T. 1996. Effect of virginiamycin and rhizopus extract on growth performance of American eel (*Anguilla rostrata*). Journal of National Chiayi Institute of Agriculture 48:95-102
60. Huang, C.H.*, Chen, C.-C. and Chin, T.-S. 1996. Stability of feed grade fish oil and its effect on growth of Japanese eel (*Anguilla japonica*). Journal of National Chiayi Institute of Agriculture 46:101-110.
61. Chou, Y.-H., Chin, T.-S. and Huang, C.H. 1996. Effects of highly unsaturated fatty acids in brookstock diets on egg quality and hatching rate of yellowfin porgy (*Acanthopagrus latus*). Chinese Bioscience 39:19-27.
62. Huang, C.H.*, Shyong, W.-J and Chin, T.-S. 1995. Effect of heating on bioactivity of oxytetracycline in eel muscle. Journal of National Chiayi Institute of Agriculture 43:101-110.
63. Huang, C.H., Hultin, H.O. and Jafar, S.S. 1993. Some aspects of Fe(II)-catalyzed oxidation of fish sarcoplasmic reticular lipid. Journal of Agricultural & Food Chemistry 41:1886-1892.
64. Huang, C.H. and Hultin, H.O. 1992. Soluble and bound iron equally effect lipid oxidation of sarcoplasmic reticulum. Journal of Food Biochemistry 16:1-13.
65. Osinchak, J.E., Hultin, H.O., Zajicek, T.O., Kelleher, S.D. and Huang, C.H. 1992. Effect of NaCl on catalysis of lipid oxidation by the soluble fraction of fish muscle. Free Radical Biology & Medicine 12: 35-41.
66. Decker, E.A., Huang, C.H., Osinchak, J.E. and Hultin, H.O. 1989. Iron and copper: role in enzymic lipid oxidation of fish sarcoplasmic reticulum at *in situ* concentrations. Journal of Food Biochemistry 13:179-186.
67. Huang, C.H. and Bayer, R.C. 1989. Gastrointestinal absorption of various antibacterial agents in the American lobster (*Homarus americanus*). The Progressive Fish-Culturist 51:95-97.

BOOK CHAPTERS:

1. Huang, C.H. 2007. Feeds and nutrition of fish. In: Liao, Y., Hsu, J., Hsieh, Y., Ruan, Y. and Fung, Y. (eds), Introduction to Agriculture, National Chiayi University Press, Chiayi, Taiwan. Pp. 403-408.

CONFERENCE PROCEEDINGS AND ABSTRACTS:

1. Huang, C.H. and Hultin, H.O. 1990. Soluble and bound iron equally effect lipid oxidation of sarcoplasmic reticulum. 5th Biennial Meeting, International Society for Free Radical Research on Oxidation Damage and Repair, Pasadena, CA., USA.
2. Huang, C.H. and Hultin, H.O. 1992. Some aspects of Fe²⁺-catalyzed lipid oxidation in fish sarcoplasmic reticulum. Annual Meeting, Institute of Food Technologists, New Orleans, LA., USA.

3. Opiacha, J.O., Hultin, H.O., Huang, C.H. and Kelleher, S.D. 1997. Improvements in stability and functionality of fatty fish surimi. International Conference of Food Science and Technology of the Fine Particle Society and "John E. Kinsella Symposium on Food System Functionality", Las Vegas, NV., USA.
4. Huang, C.H. and Shyong, W.-J. 1997. Effect of dietary protein levels on growth of *Varicorhinus barbartulus*. Annual Meeting, Taiwan Fisheries Society, Pingtung, Taiwan.
5. Huang, C.H., Huang, M.-C. and Hou, P.-C. 1998. Effect of dietary lipids on fatty acid composition and lipid peroxidation of sarcoplasmic reticulum of hybrid tilapia, *Oreochromis niloticus* × *O. aureus*. Annual Meeting, Chinese Biosciences Society, Taipei, Taiwan.
6. Huang, C.H. and Shyong, W.-J. 1998. Effect of dietary lipid level on growth and muscle composition of *Varicorhinus barbatulus*. Annual Meeting, Taiwan Fisheries Society, Taipei, Taiwan.
7. Huang, C.H. 1999. Research for developing cost effective feeds for aquaculture in Taiwan. Joint South Africa-Taiwan Aquaculture, Fisheries Resources and Management Forum. Pretoria, South Africa.
8. Huang, C.H. and Lin, W. -Y. 1999. Effect of replacing fish meal with fermented soybean meal in diets on growth and body composition of juvenile soft-shelled turtle, *Trionyx sinensis*. Annual Meeting, Taiwan Fisheries Society, Kaoshiung, Taiwan.
9. Huang, C.H. and Shyong, W.-J. 2000. Effect of varying energy contents with two protein levels in diets on growth of *Zacco barbata*. The 9th International Symposium on Nutrition and Feeding in Fish, Miyazaki, Japan.
10. Huang, S.-L., Huang, C.H., Chang, R.-J. 2000. Some characteristics of iron-catalyzed lipid peroxidation in sarcoplasmic reticulum of cultured grass shrimp (*Penaeus monodon*) and grass carp (*Ctenopharyngodon idellus*). Annual Meeting, Taiwan Fisheries Society, Taiwan.
11. Huang, C.H., Chang, R.-J and Huang, S.-L. 2001. Effect of dietary vitamin E on growth and lipid peroxidation in hybrid tilapia, *Oreochromis niloticus* × *O. aureus*, tissues. Annual Meeting, Taiwan Fisheries Society, Kaoshiung, Taiwan.
12. Huang, C.H. and Lin, W. -Y. 2001. Estimation of optimal dietary methionine requirement for softshelled turtle, *Pelodiscus sinensis*. The 6th Asian Fisheries Forum, Kaoshiung, Taiwan.
13. Huang, C.H. and Lin, W. -Y. 2002. Dietary calcium supplementation improves the growth of cultured soft-shell turtle on fish meal based diets. The 10th International Symposium on Nutrition and Feeding in Fish, Rhodes, Greece.
14. Huang, C.H. 2003. Lipid peroxidation in fish nutrition and product quality. In: J Baker and IC Liao (eds) Joint Australia-Taiwan Aquaculture, Fisheries Resources and Management Forum III. 24 June - 1 July 2001, Australian Academy of Technological Science and Engineering, Melbourne, Australia. pp. 81-86.
15. Lin, W.-Y. and Huang, C.H. 2003. Effects of dietary vitamin E level on growth and tissue lipid peroxidation of soft-shelled turtle, *Pelodiscus sinensis* (Wiegmann). Annual Meeting, Taiwan Fisheries Society, Kaoshiung, Taiwan.
16. Lin, Y.-R., Huang, S.-L. and Huang, C.H. 2003. Characteristics of NADH-dependent lipid peroxidation in sarcoplasmic reticulum of white shrimp, *Litopenaeus vannamei*, and freshwater prawn, *Macrobrachium rosenbergii*. Annual Meeting, Taiwan Fisheries Society, Kaoshiung, Taiwan.
17. Hu, J.J. and Huang, C.H. 2003. Dietary vitamin A requirement of hybrid tilapia.

- Annual Meeting, Taiwan Fisheries Society, Kaoshiung, Taiwan.
18. Chu, J.H., Wu, G.S. and Huang, C.H. 2004. Effect of dietary iron level on hematological parameters of soft-shelled turtle. Annual Meeting, Taiwan Fisheries Society, Taipei, Taiwan.
 19. Huang, C.H. and Huang, S.-L. 2004. Effect of dietary vitamin E on growth, tissue lipid peroxidation, and liver glutathione level of juvenile hybrid tilapia, *Oreochromis niloticus* × *O. aureus*, fed oxidized oil. The 11th International Symposium on Nutrition and Feeding in Fish, Phuket Island, Thailand.
 20. Wu, G.S. and Huang, C.H. 2005. Effect of dietary iron level on growth and hematological parameters of soft-shelled turtle. Annual Meeting, Taiwan Fisheries Society, Pingtung, Taiwan.
 21. Huang, S.J. and Huang, C.H. 2006. Effect of dietary zinc level on growth and hematological parameters of soft-shelled turtle. Annual Meeting, Taiwan Fisheries Society, Taipei, Taiwan.
 22. Kuo, S.M. and Huang, C.H. 2006. Dietary zinc requirement of soft-shelled turtle fed soybean based diets. Annual Meeting, Taiwan Fisheries Society, Taipei, Taiwan.
 23. Tseng, K.Y., Chen, S.M., and Huang, C.H. 2007. Some characteristics of iron-catalyzed NADH or NADPH-dependent lipid oxidation in sarcoplasmic reticulum of seawater clam and freshwater clam. Annual Meeting, Institute of Food Technologists, Chicago, IL., USA.
 24. Chen, L.P. and Huang, C.H. 2007. Dietary vitamin A requirement of soft-shelled turtles. Annual Meeting, Taiwan Fisheries Society, Kaoshiung, Taiwan.
 25. Lu, J.S. and Huang, C.H. 2008. Effect of organic zinc on growth of soft-shelled turtles fed diets containing phytic acid. Annual Meeting, Taiwan Fisheries Society, Taipei, Taiwan.
 26. Chou, S.J. and Huang, C.H. 2008. Influence of dietary vitamin D level on growth of soft-shelled turtles. Annual Meeting, Taiwan Fisheries Society, Taipei, Taiwan.
 27. Huang, C.H., Chu, J.H. and Chen, S.M. 2008. Growth, haematological parameters and tissue lipid peroxidation of soft-shelled turtles, *Pelodiscus sinensis*, fed diets supplemented with different levels of ferrous sulfate. World Aquaculture 2008, Busan, Korea.
 28. Huang, C.H. and Wu, G.S. 2008. Effect of dietary copper on growth, trace mineral content, hematology, and lipid peroxidation of soft-shelled turtle, *Pelodiscus sinensis*. 5th World Fisheries Congress, Yokohama, Japan.
 29. Huang, C.H., Huang, S.J. and Chen, S.M. 2009. Growth, serum zinc, hematological parameters and tissue trace elements of soft-shelled turtles *Pelodiscus sinensis* fed different level of zinc sulfate. Asian-Pacific Aquaculture 2009, Kuala Lumpur, Malaysia.
 30. Lin, W.H. and Huang, C.H. 2010. Dietary attractants improve feed consumption and growth of soft-shelled turtles fed semi-purified diets. The 14th International Symposium on Nutrition and Feeding in Fish, Qingdao, China.
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