

REFERENCES

- Alam M.S., & Islam M.S. (2005) Population genetic structure of *Catla catla* (Hamilton) revealed by microsatellite DNA markers. *Aquaculture*, 246: 151-160
- Arif I.A., & Khan H.A. (2009) Molecular markers for biodiversity analysis of wildlife animals: a brief review. *Animal Biodiversity and Conservation*, 32:9-17
- Aung O., Nguyen T.T.T., Poompuang S., & Kamonrat W. (2010). Microsatellite DNA markers revealed genetic population structure among captive stocks and wild populations of mrigal, *Cirrhinus cirrhosus* Myanmar. *Aquaculture*, 299:37-43
- Bardach J.E., Ryther J.H., & McLarney W.O. (1972). Shrimp culture. *Aquaculture: The Farming and Husbandry of Freshwater and Marine Organisms* (pp. 619-628). New York: Wiley-Interscience
- Barker G.C. (2002) Microsatellite DNA: a tool for population genetic analysis. *Transaction of the Royal Society of Tropical Medicine and Hygiene*, 96:1-24
- Barman H.K., Barat A., Yadav B.M., Banerjee S., Meher P.K., Reddy P.V.G.K., & Jana R.K. (2003) Genetic variation between four species of Indian major carps as revealed by random amplified polymorphic DNA assay. *Aquaculture*, 217:115-123
- Beardmore, A.L., Mair, C.G., & Lewis, C.G. (1997) Biodiversity in aquatic systems in relation to aquaculture. *Aquaculture Research* 28, 829–839.
- Benjamini, Y. & Hochberg, Y. (1995) Controlling the false discovery rate -/ a practical and powerful approach to multiple testing. *J. R. Stat. Soc. B* 57: 289-300

- Brown J.H., New M.B., & Ismael D. (2009) Biology. In New M.B., Valenti W.C., Tidwell J.H., D'Abramo L.R., & Kutty M.N. (Eds.), *Freshwater Prawns Biology and Farming* (pp.18-40). United Kingdom: Blackwell Publishing Ltd.
- Cavalli R.O., Lavens P., & Sorgeloos P. (2001) Reproductive performance of *Macrobrachium rosenbergii* females in captivity. *Journal of the World Aquaculture*, 32:60-67
- Chareontawee K., Poompuang S., Na-Nakorn U., & Kamonrat W. (2007) Genetic diversity of hatchery stocks of giant freshwater prawn (*Macrobrachium rosenbergii*) in Thailand. *Aquaculture*, 271:121-129
- Chareontawee K., Poompuang S., & Na-Nakorn U. (2006) Isolation and characterization of microsatellites in giant freshwater prawn *Macrobrachium rosenbergii*. *Molecular Ecology Notes*, 6:823-825
- Cheng W., & Chen J.-C. (1998) *Enterococcus*-like infections in *Macrobrachium rosenbergii* are exacerbated by high pH and temperature but reduced by low salinity. *Dis Aquat Org*, 34:103-108
- Dakin E.E., & Avise J.C. (2004) Microsatellite null alleles in parentage analysis. *Heredity*, 93:504-509
- de Bruyn M., Wilson J.A. & Mather P.B. (2004) Huxley's line demarcates extensive genetic divergence between eastern and western forms of the giant freshwater prawn, *Macrobrachium rosenbergii*. *Molecular Phylogenetics and Evolution*, 30:251-257
- Department of Fisheries Malaysia. (1997-2008). *Annual Fisheries Statistics*. (n.d.), from <http://www.dof.gov.my/>
- Divu D., Khushiramani R., Malathi S., Karunasagar I. & Karunasagar I. (2008) Isolation, characterization and evaluation of macrosatellite DNA markers in giant freshwater prawn *Macrobrachium rosenbergii*, from South India. *Aquaculture*, 284: 281-284

- Dixon T.J., Coman G.J., Arnold S.J., Sellars M.J., Lyons R.E., Dierens L., Preston N.P., & Li Y. (2008) Shifts in genetic diversity during domestication of Black Tiger shrimp, *Penaeus monodon* monitored using two multiplexed microsatellite systems. *Aquaculture*, 283:1-6
- Erhardt G., & Weinmann C. (2007) Use of molecular markers for evaluation of genetic diversity and in animal production, *Arch. Latinoam. Prod. Anim.*, 15:63-66
- Esa Y.B., Siraj S.S., Daud S.K., Rahim K.A.A., Japning J.R.R., & Tan S.G. (2008) Mitochondrial DNA diversity of *Tor tambroides Valenciennes* (Cyprinidae) from five natural populations in Malaysia. *Zoological Studies*, 47:360-367
- Excoffier L., Laval G., & Schneider S. (2005) Arlequin ver. 3.0: An integrated software package for population genetics data analysis. *Evolutionary Bioinformatics Online* 1:47-50.
- Falush D., Stephens M., & Pritchard J. K. (2003). Inference of population structure: Extensions to linked loci and correlated allele frequencies. *Genetics*. 164:1567-1587.
- Falush D., Stephens M., & Pritchard J.K. (2007) Inference of population structure using multilocus genotype data: dominant markers and null alleles. *Molecular Ecology Notes*.
- Felsenstein J. (2005). PHYLIP (Phylogeny Inference Package) version 3.6. [free computer software]
- Food Agriculture Organization of United Nations. (2002). A manual for the culture of the giant river prawn (*Macrobrachium rosenbergii*). Rome: New, M.B.
- Garcia K.D., & Benzie J.A.H. (1995) RAPD markers of potential use in peanaeid prawn (*Penaeus monodon*) breeding programs. *Aquaculture*, 130:137-144

- Gilder J. (2004, Aug) *The technical artifacts of forensic STR testing: stutter, pull-up, spikes, blobs, and degradation*. Paper presented at Forensic Bioinformatics 3rd Annual Conference, University of Dayton, Ohio, United States.
- Glaubitz J.C. (2004). CONVERT: A user-friendly program to reformat diploid genotypic data for commonly used population genetic software packages. *Molecular Ecology Notes*. 4:309-310.
- Ha H.P., Nguyen T.T.T., Poompuang S., & Na-Nakaron U. (2009) Microsatellites revealed no genetic differentiation between hatchery and contemporary wild populations of striped catfish, *Pangasianodon hypophthalmus* (Sauvage 1878) in Vietnam. *Aquaculture*, 291:154-160
- Hayes B., Sonesson A.K., & Gjerde B. (2005) Evaluation of three strategies using DNA markers for traceability in aquaculture species. *Aquaculture*, 250:70-81
- Holthuis L.B., & Ng P.K.L. (2009) Nomenclature and Taxonomy. In New M.B., Valenti W.C., Tidwell J.H., D'Abramo L.R., & Kutty M.N. (Eds.), *Freshwater Prawns Biology and Farming* (pp. 12-17). United Kingdom: Blackwell Publishing Ltd.
- Jarne P., & Lagoda P.J.L. (1996) Microsatellites, from molecules to population and back. *Tree*, 11:424-429
- Jerry D.R., Evans B.S., Kenway M., & Wilson K. (2006) Development of a microsatellite DNA parentage marker suite for black tiger shrimp *Penaeus monodon*. *Aquaculture*, 255:542-547
- Lewis, P. O., & Zaykin, D. (2001). Genetic Data Analysis: Computer program for the analysis of allelic data. Version 1.0 (d16c) [free computer software].
- Li J., Wang G., & Bai Z. (2009a) Genetic variability in four wild and two farmed stocks of the Chinese freshwater pearl mussel (*Hyriopsis cumingii*) estimated by microsatellite DNA markers. *Aquaculture*, 287:286-291

- Li L., Ximing G., & Guofan Z. (2009b). Inheritance of 15 microsatellites in the Pacific oyster *Crassostrea gigas*: segregation and null allele identification for linkage analysis. *Chinese Journal of Oceanology and Limnology* 27:74-79
- Li Y., Wongprasert K., Shekhar M., Ryan J., Dierens L., Meadows J., Preston N., Coman G. & Lyons R.E. (2007a) Development of two microsatellite multiplex systems for black tiger shrimp *Penaeus monodon* and its application in genetic diversity study for two populations. *Aquaculture*, 266:279-288
- Li D., Kang D., Yin Q., Sun X., & Liang L. (2007b) Microsatellite DNA marker analysis of genetic diversity in wild common carp (*Cyprinus carpi* L.) populations. *Journal of Genetics and Genomics*, 34:984-993.
- Li Q., Park C., Endo T., & Kijima A. (2004) Loss of genetic variation at microsatellite loci in hatchery strains of the Pacific abalone (*Haliotis discus hannai*). *Aquaculture*, 235:207-222
- Li Y., Byrne K., Miggiano E., Whan V., Moore S., Keys S., Crocos P., Preston N., & Lehnert S. (2003) Genetic mapping of the kuruma prawn *Penaeus japonicus* using AFLP markers. *Aquaculture*, 219:143-156
- Liu Y.-G., Chen S.-L., Li J., & Li B.-F. (2006) Genetic diversity in three Japanese flounder (*Paralichthys olivaceus*) populations revealed by ISSR markers. *Aquaculture*, 255:565-572
- Liu Y.-G., Chen S.-L., Li B.-F., Wang Z.-J., & Liu Z. (2005a) Analysis of genetic variation in selected stocks of hatchery flounder, *Paralichthys olivaceus*, using AFLP markers. *Biochemical Systematics and Ecology*, 33:993-1005
- Liu Y., Chen S., & Li B. (2005b). Assessing the genetic structure of three Japanese flounder (*Paralichthys olivaceus*) stocks by microsatellite markers. *Aquaculture*, 243:103-111
- Liu Z.J., & Cordes J.F. (2004) DNA marker technologies and their applications in aquaculture genetics. *Aquaculture*, 238:1-37

- Liu, Z., Nichols, A., Li, P., & Dunham, R.A. (1998) Inheritance and usefulness of AFLP markers in channel catfish (*Ictalurus punctatus*), blue catfish (*I. furcatus*), and their F1, F2 and backcross hybrids. *Mol. Gen. Genet.* 258, 260–268.
- MacAvoy E.S., Wood A.R., & Gardner J.P.A. (2008) Development and evaluation of microsatellite markers for identification of individual Greenshell™ mussels (*Perna canaliculus*) in a selective breeding programme. *Aquaculture*, 274:41-48
- Magoulas, A. (1998). Application of molecular markers to aquaculture and broodstock management with special emphasis on microsatellite DNA. *In proceeding of the Seminar Genetics and Breeding of Mediterranean Aquaculture Species, Network on Technology of Aquaculture in the Mediterranean ŽTECAM held on 28-30 April 1997 at Zaragossa, Spain.* (pp. 153–168).
- Montaldo H.H., & Mez-Herrera C.A. (1998) Use of molecular markers and major genes in the genetic improvement of livestock. *Electronic Journal of Biotechnology*, 1:83-89
- Murakaeva A., Kohlmann K., Kersten P., Kamilov B., & Khabibullin D. (2003) Genetic characterization of wild and common carp (*Cyprinus carpio* L.) populations from Uzbekistan. *Aquaculture*, 218:153-166
- Na-Nakorn U., & Moeikum T. (2009) Genetic diversity of domesticated stocks of striped catfish, *Pangasianodon hypophthalmus* (Sauvage 1878), in Thailand: Relevance to broodstock management regimes, *Aquaculture*, 297:70-77
- Nei, M. (1978) Estimation of average heterozygosity and genetic distance from a small number of individuals. *Genetics*, 89:583-590.
- New M.B. (2005) Freshwater prawn farming: global status, recent research and a glance at the future. *Aquaculture Research*, 36:220-230
- Nhan D.T., Wille M., Hung L.T., & Sorgeloos P. (2009) Comparison of the reproductive performance and offspring quality of giant freshwater prawn

(*Macrobrachium rosenbergii*) broodstock from different regions. *Aquaculture*, 298:36-42

Ning Y., Liu X., Wang Z.Y., Guo W., Li Y., & Xie F. (2007) A genetic map of large yellow croaker *Pseudosciaena crocea*. *Aquaculture*, 264:16-26

O'Connell M. & Wright J.M. (1997) Microsatellite DNA in fishes. *Reviews in Fish Biology and Fisheries*, 7:331-363

O'Donovan P., Abraham M., & Cohen D. (1984) The ovarian cycle during the intermolt in ovigerous *Macrobrachium rosenbergii*. *Aquaculture* 36: 347-358.

O'Reilly P., & Wright J.M. (1995) The evolving technology of DNA fingerprinting and its application to fisheries and aquaculture. *J. Fish Biol.* 47: 29– 55.

Oda S., Oki E., Maehara Y., & Sugimachi K. (1997) Precise assessment of microsatellite instability using high resolution fluorescent microsatellite analysis. *Nucleic Acid Research*, 25:3415-3420

Ong C.C., Yusoff K., & Tan S.G. (2009) Genetic characterization of *Perna viridis* L. in peninsular Malaysia using microsatellite markers. *Journal of Genetics*, 88:153-163

Oosterhout C.V., Hutchinson W.F., Wills D.P.M., & Shipley P. (2004) MICRO-CHECKER: software for identifying and correcting errors in microsatellite data. *Molecular Ecology Notes*, 4:535-538

Osure G.O., & Phelps R.P. (2006) Evaluation of reproductive performance and early growth of four strains of Nile tilapia (*Oreochromis niloticus*, L) with different histories of domestication. *Aquaculture*, 253:485-494

Pritchard J.K., Stephens M., & Donnelly P. (2000) Inference of Population Structure Using Multilocus Genotype Data. *Genetics Society of America*, 945-959

- Rousset F. (2008). Genepop'007: a complete reimplementation of the Genepop software for Windows and Linux. *Mol. Ecol. Resources* 8:103-106.
- See L.M., Bhassu S., Hassan., Siraj S.S., Tan S.Y., & Tan S.G. (2007) A population genetics study on Malaysian wild stocks, *M. rosenbergii* using cross amplified microsatellite primers. *Pertanika J. Trop. Agric. Sci.*, 30:71-82
- Sekar M., Suresh E., Kumar N.S., Nayak S.K., & Balakrishna C. (2009) Microsatellite DNA markers, a fisheries perspective Part 1: The nature of microsatellites. *Aquaculture Asia Magazine*, 27-29.
- Shinde D., Lai Y., Sun F., & Arnheim N. (2003) Taq DNA polymerase slippage mutation rates measured by PCR and quasi-likelihood analysis: (CA/GT)_n and (A/T)_n microsatellites. *Nucleic Acids Research*, 31:974-980
- Skaala O., Hoyheim B., Glover K., & Dahle G. (2004) Microsatellite analysis in domesticated and wild Atlantic salmon (*Salmo salar* L.): allelic diversity and identification of individuals. *Aquaculture*, 240:131-143
- Supungul P., Sootanan P., Klinbunga S., Kamonrat W., Jarayabhand P., & Tassanakajon A. (2000) Microsatellite polymorphism and the population structure of the Black Tiger Shrimp (*Penaeus monodon*) in Thailand. *Marine Biotechnology*, 2:339-347
- Tayamen M.M. (2001) Biology and hatchery management of the giant freshwater prawn *Macrobrachium rosenbergii*-deMan. *NFFTC Aqua-Leaflet*, 2001-10
- Thai B.T., Burrige C.P., & Austin C.M. (2007) Genetic diversity of common carp (*Cyprinus carpio* L.) in Vietnam using four microsatellite loci. *Aquaculture*, 269:174-186
- Valencia D.M., & Campos M.R. (2007) Freshwater prawns of the genus *Macrobrachium* Bate, 1868 (Crustacea: Decapoda: Palaemonidae) of Colombia. *Zootaxa*, 1456:1-44

- Wagner A.P., Creel S., & Kalinowski S.T. (2006) Estimating relatedness and relationships using microsatellite loci with null alleles. *Heredity*, 97:336-365
- Walsh P.S., Fildes N.J., & Reynolds R. (1996) Sequence analysis and characterization of stutter products at the tetranucleotide repeat locus vWA. *Nucleic Acids Research*, 24:2807-2812
- Wang Z.Y., Tsoi K.H., & Chu K.H. (2004) Applications of AFLP technology in genetic and phylogenetic analysis of penaeid shrimp. *Biochemical Systematic and Ecology*, 32:399-407
- Ward R.D. (2000) Genetics in fisheries management. *Hydrobiologia* 420: 191-201.
- Wowor D., Muthu V., Meier R., Balke M., Cai Y., & Ng P.K.L. (2009) Evolution of life history traits in Asian freshwater prawn of the genus *Macrobrachium* (Crustacea: Decapoda: Palaemonidae) based on multilocus molecular phylogenetic analysis. *Mol. Phylogenet. Evol.*, doi:10.1016/j.ympev.2009.01.002
- Wowor D., & Ng P.K.L. (2007) The giant freshwater prawns of the *Macrobrachium rosenbergii* species group (Crustacea: Decapoda: Caridea: Palaemonidae). *The Raffles Bulletin of Zoology*, 55:321-336
- Wright, S. (1978) Evolution and the genetics of populations. Vol. 4. *Variability within and among natural populations*. University of Chicago Press, Chicago, IL.
- Wright J.M., & Bentzen P. (1994) Microsatellites: genetic markers for the future. *Reviews in Fish Biology and Fisheries*, 4:384-388
- Wuthisuthimethavee S., Lumubol P., Vanavichit A., & Tragoonrung S. (2003) Development of microsatellite markers in black tiger shrimp (*Penaeus monodon Fabricius*). *Aquaculture*, 224: 39-50
- Xu Z., Primavera J.H., de la Pena L.D., Pettit P., Belak J., & Alcivar-Warren A. (2001) Genetic diversity of wild and cultured Black Tiger Shrimp (*Penaeus monodon*) in the Philippines using microsatellites. *Aquaculture*, 199:13-40

- Yang C., Zhu X., & Sun X. (2008) Development of microsatellite markers and their utilization in genetic diversity analysis of cultivated and wild populations of the mud carp (*Cirrhina molitorella*). *Journal of Genetics and Genomics*, 35:201-206
- Yeh, F.C., Yang, R.C., & Boyle, T. (1999) POPGENE version 1.3.1. Microsoft Window-bases Freeware for Population Genetic Analysis. Available: (www.ualberta.ca/~fyeh/) University of Alberta and the Centre for International Forestry Research.
- Yeh, F.C., & Boyle, T.J.B. (1997). Population genetic analysis of co-dominant and dominant markers and quantitative traits. *Belgian Journal of Botany*. 129:157
- Yue G.H., Zhu Z.Y., Lo L.C., Wang C.M., Lin G., Feng F., Pang H.Y., Li J., Gong P., Liu H.M., Tan J., Chou R., Lim H., & Orban L. (2009) Genetic variation and population structure of Asian seabass (*Lates calcarifer*) in the Asia-Pacific region. *Aquaculture*, 293:22-28
- Yu D.H., & Chu K.H. (2006) Genetic variation in wild and cultured populations of the pearl oyster *Pinctada fucata* from southern China. *Aquaculture*, 258:220-227
- Yue G.H., Li Y., Lim L.C., & Orban L. (2004) Monitoring the genetic diversity of three Asian arowana (*Scleropages formosus*) captive stocks using AFLP and microsatellites. *Aquaculture*, 237:89-102
- Zhang X., Leung F.C., Chan D.K.O., & Wu C. (2002) Comparative analysis of allozyme, random amplified polymorphic DNA and microsatellite polymorphism on Chinese native chickens. *Poultry Science*, 81:1093-1098
- Zhao N., Ai W., Shao Z., Zhu B., Brosse S., & Chang J. (2005) Microsatellites assessment of Chinese sturgeon (*Acipenser sinensis* Gray) genetic variability. *J. Appl. Ichthyol*, 21:7-13
- Zhivotovsky L.A., & Feldman M.W. (1995) Microsatellite variability and genetic distances. *Proc. Natl. Acad. Sci. USA*, 92:11549-11552