

## CURRICULUM VITAE



As of Dec. 2011

1. **Name** **Mohamed Shariff bin Mohamed Din (Prof Dato' Dr)**  
  
*Date and place of Birth* 14 March 1949; Seremban, Malaysia  
  
*Marital status* Married with three children (age 38, 35 and 25 years)
2. **Work address**  
  
1) Faculty of Veterinary Medicine  
Universiti Putra Malaysia  
43400 Serdang, Selangor, Malaysia  
  
2) Director  
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3. **Home address** 9 Road 8, Tmn. Sg. Jelok, 43000 Kajang, Selangor, Malaysia  
Tel: 03 8374550
4. **Qualifications**  
1975 University of Agriculture, Faisalabad, Pakistan - **DVM**  
(Doctor of Veterinary Medicine)  
1977 University of Stirling, Scotland - **MSc**  
1985 University of Stirling, Scotland - **PhD**  
  
*Field of Specialization* Aquatic Veterinary Studies (Fish Pathology)
5. **Academic Appointments at Universiti Putra Malaysia (UPM)**  
  
1976-1977 **Tutor**  
1977-1987 **Lecturer**  
1988-1992 **Associate Professor**  
1993-present **Professor** (Fish Pathology)
6. **Languages** Good in English and Bahasa Malaysia, spoken and written.  
Can also speak Hindi, Urdu and Punjabi.

## 7. Administrative experience

### *At UPM Faculty level*

1. **Project Leader for Fish Health Research Programmes** funded by the International Development Research Centre (IDRC) of Canada: Phase I (1980-84), Phase II (1984-89) and Phase III (1990-1996). The project covered an array of studies on fish pathogens of freshwater and marine fishes in Peninsular Malaysia. I was the team leader with three other experts (parasitologist, microbiologist, and virologist) doing the research projects.
2. **Coordinator, Workshop on Advanced Protozoology**, 27 April to 2 May 1987, Serdang, Malaysia. Sponsored by IDRC of Canada.
3. **Coordinator, International Workshop on Histopathology**. 30 January to 4 February 1989, Serdang, Malaysia. Sponsored by IDRC
4. **Coordinator, Expert Consultation on Aquaculture Health Management** in the Asia-Pacific. 22-24 May 1995, Serdang, Malaysia. Sponsored by FAO and Asian Fisheries Society
5. **Coordinator, Postgraduate Programmes**. September 1997 - 1998
6. **Deputy Dean, Faculty of Veterinary Medicine** - January 1999 – 2002 January
7. **Member of Post Graduate Committee**. April 1979 – Present
8. **Member of Research Committee**. April 1979 – Present

### *At University level*

1. **Member of Centres of Excellence Committee** 1995, 2003 - present
2. **Member for Screening of Research Proposals Committee**, for Science Projects, funded through R & D funds. 1995 - present
3. **Member of Graduate Committee**. September 1997 – Jan 2001
4. **Member of Research Committee**. Jan 1999 – 2010
5. **Member of Patent Screening Committee**. Jan 2004 - 2010
6. **Director Innovation and Commercialisation Centre, UPM**. 2006 – 2010
7. **Co-opted Member of Permanent Search Committee for Vice Chancellor for UPM**. 2008 – present

8. **Chairman Patent Evaluation Committee. 2006 – 2010**
9. **Coordinator Marine Biotechnology Programme, Institute of Bioscience 2008-2011**
10. **Member of Selection Committee for National and International Exhibitions. 2006 – 2010**
11. **Member Steering Committee for Research and Innovation. 2006 – 2010**
12. **Member of Evaluation Committee for Intellectual Property - 2010 – Present**
13. **Director of Putra Science Park. April 2010 - Present**

*At National level*

1. **Vice Chairman, National Aquarium Committee. 1977-1997**
2. **Chairman, National Aquarium Committee. 1997 – 2000**
3. **Chairman, Animal Welfare Committee. 2000 - 2001**
4. **Advisor to the Department of Fisheries, Ministry of Agriculture on various aspects of fish health. 1980-present**
5. **Treasurer of Parents Teachers Association, Primary School Kajang. 1983-1984**
6. **Founder President of Malaysian Fisheries Society. 1987-1988**
7. **Vice-President of Malaysian Fisheries Society. 1989-1990, 2000 - 2001**
8. **Council Member, Malaysian Fisheries Society. 1991-1999, 2002-2007**
10. **Member of National Science Centre Advisory Committee. 1994-1996**
11. **Member of Panel for Fisheries for Screening Research Proposals funded through R & D Funds. 1995-2000**
12. **Chairman/Committee Member of Various IGS Research Proposals to Ministry of Science and Innovation. 1999 - 2007**
13. **Member of National Academic Award Selection Committee. 2006 - present**
14. **Chair, Member of Advisory Committee for Forest Research Institute Malaysia (FRIM) 2007 – Present**

**15. Member of Project Evaluation funded by the Ministry of Science and Innovation. 2010 – Present**

**16. Member of the working group “Top Malaysian Research Scientist” – Academy of Science Malaysia. 2009 - Present**

*At International level*

1. **Editor of Asian Fisheries Society Fish Health Newsletter. 1987-1995**
2. **Coordinator of the Asian Fish Health Network. 1988-1995.**  
Responsible for coordinating research on fish health, and for organizing workshops, training courses and seminars, for members of institutions recipient of IDRC, Canada projects. Countries involved in the network included, China, Indonesia, India, Malaysia, Philippines, Sri Lanka and Thailand.
3. **Coordinator, Postgraduate Tropical Fish Health Programme** sponsored by IDRC and Network of Aquaculture Centre in Asia (NACA). 1988-1989.  
Under this project I established the postgraduate Tropical Fish Health programme and obtained funds to sponsor 23 students from 11 countries. UPM was recognized as the regional centre of excellence for fish health training programmes.
4. **Chairman of 1st Symposium on Diseases in Asian Aquaculture, Bali, 26-29 November 1992**
5. **Chairman of 2nd Symposium on Diseases in Asian Aquaculture, Phuket, 25-29 October 1995.** For both symposia (Bali & Phuket) I worked closely with national counterparts in organizing the meetings which was attended by more than 150 participants from 20 countries during each Symposium.
6. **Scientific Advisor to the International Foundation for Science. 1994-present**
7. **Vice President, Asian Fisheries Society. 1992-1995**
8. **President, Asian Fisheries Society. 1995-1998**
9. **Director of Small Grants Committee, Asian Fisheries Society. 1994-2000.**  
The Small Grants solicits funds from donor agencies to support young potential fisheries scientist from the Asian Region. Scientist under the scheme was awarded US\$12,000 for each project.
10. **Member of Board of Trustees of International Centre for Living Aquatic Resources Management (ICLARM –the World Fish Centre)**

- a member of the Consultative Group on International Agricultural Research (CGIAR). 1994-2000

11. **Chairman of the ICLARM's site selection committee.** 1994-1998
12. **Chairman of ICLARM's Board of Trustees Nominating Committee.** 1996-2000
13. **Member - Regional Working Group- Network of Aquaculture Centres (NACA) in Asia-Pacific** for Quarantine Guidelines and Health Certification for the Responsible Movement of Animals in the Asia-Pacific. 1998 -2007
14. **Adviser to the Director General of ICLARM** (World Fish Centre) on Scientific and Government Affairs. 2000- 2003.
15. **Instrumental Role in Transfer of ICLARM HQ to Malaysia** – Played a major role in the successful transfer of ICLARM from the Philippines to Malaysia through negotiations between the Government of Malaysia and ICLARM. ICLARM is now base in Penang. This is the first International Research Headquarters based in Malaysia.
16. **Member of Steering & Scientific Committee** for the 7<sup>th</sup> Asian Fisheries Forum 2004.
17. **Editor** – Asian Fisheries Science (Journal of the Asian Fisheries Society)

## 8. Research Grant Awards

**Procured more than RM5 million for research projects**

Title of Project	Amount US\$	Source
1. Fish Parasite Malaysia Phase I (1980-1984)	40,000	IDRC
2. Fish Parasite Phase II (1984 - 1989)	144,000	IDRC
3. Fish Parasite Malaysia Phase III (1990-1996)	253,000	IDRC
4. Coordinator Asian Fish Health Network (1988-1995)	141,000	IDRC
5. Tropical Fish Health MS, PhD Program (1988-1994)	356,600	IDRC&NACA
6. Expert Consultation on Aquaculture Health	17,000	FAO

Management in the Asia-Pacific. (1995)

7. Development of Rapid Diagnostic Technologies for Screening and Control of Commercially Important Shrimp (1997-2001)	600,500	IRPA
8. Hazard analysis of antimicrobial resistance associated with Asian aquacultural environments project European Commission. (2001 – 2004)	216,000	EC
9. Improvement of shrimp health through bioremediation and natural health food. (2002-2005)	2,377,876	DBK
10. Investigation on the use of freeze dried reagents in the Fast Target White Spot Virus Detection Kit.	200,000	IRPA
11. Mass Production of Pure Microalgae using a Photobioreactor System (2006-2009) Biotechnology	500,000 Johore Satellite	
12. Mass Production of Pure Microalgae using MOSTI Clear acrylic & polyvinyl chloride automated tubular Photobioreactors with fiber optic illumination system (2009 – 2011)		420,000
13. Improvement of water quality in aquaculture systems using indigenous periphytic (Ongoing) microalgal mats (2009 – 2012)	30,000	RCS
14. Screening of bioactive compounds from tropical microalgae for their antibacterial, antifungal (Ongoing) and anticancer activities	169,000	RCS
15. Mass production of microalgae using clear acrylic Science and polyvinyl chloride automated tubular (Ongoing) photobioreactors with fibre optic illumination system	458,000	E-
16. Enhancement of high quality lipid production Science from selected indigenous tropical microalgae (2009-2011) (Ongoing)	231,480	E-

## 9. Patents

1. An Improved Method for the Detection of White Spot Syndrome Virus (WSSV) by Single-Tube Nested Deoxyribonucleic Acid Amplification and a Detection Kit  
– Patent Granted (MY131536A)
2. Detection of Monodon Baculovirus by Molecular Biology Method  
– Patent Granted (MY133317A)
3. Starter Kit for the Production of Pure and High Quality Microalgae – Patent Pending (PI20054861)
4. Periphyton-Based Apparatus for Improving Aquaculture Production and Method Preparing Thereof – Patent Pending (PI20063949)
5. Agent for the treatment of wastewater, method of preparation thereof and method of treatment of wastewater – Patent Pending (PI2010700040)

## 10. Research Awards

**Vice Chancellor Award for excellence in research in 2002.**

**Won 3 gold, 2 silver and 1 bronze for the development of the White Spot Virus Detection Kit that was sold in 9 countries. The novel technique using single tube method for the detection of white spot has obtained a patent.**

**In addition, also won several gold and silver medals for research projects**

**List of medals won;**

1. **Gold Medal World Intellectual Property Award (WIPO)** – Best overall winner for the invention of the **White Spot Detection Kit**, at the ITEX 2000 Exhibition Kuala Lumpur April 27-30 2000.
2. **Gold Medal Malaysian Invention and Design Society (MINDS)** – Winner of best overall invention of the **White Spot Detection Kit** at the ITEX 2000 Exhibition Kuala Lumpur April 27-30 2000.
3. **Gold Medal – Kandian Award** – Drafting of One Patent Specification at the ITEX 2000 Exhibition Kuala Lumpur April 27-30 2000.
4. **First Price** – For best invention (**White Spot Detection Kit**) at the Universiti Putra Malaysia Invention and Research Exhibition, 8<sup>th</sup> April 2000.

5. **Bronze Medal – White Spot Invention Kit.** Invention Exhibition, Geneva, Switzerland, 4 – 8 April 2001.
6. **Silver Medal - White Spot Invention Kit.** Invention New Product Exposition, Pittsburgh May 15 – 18 2002. (in the category of Science)
7. **Silver Medal - White Spot Invention Kit.** Invention New Product Exposition, Pittsburgh May 15 – 18 2002. (in the category of Food and Beverage)
8. **Vice Chancellor Fellowship Award** – For excellence in Research. 20 June 2002
9. **Silver Medal** – In Recognition of Inventive Excellence & Valuable Accomplishments in research entitled **Bioindication of oil Pollution.** 29-30 August 2002. Invention & Research Exhibition, Universiti Putra Malaysia
10. **Silver Medal** - In Recognition of Inventive Excellence & Valuable Accomplishments in research entitled **Beneficial Indigenous Microorganisms for Enhancement of Shrimp Production.** 29-30 August 2002. Research and Development Exhibition, Institute of Bioscience, Universiti Putra Malaysia
11. **Silver Medal:** In Recognition of Invention titled **Indigenous Bacteria for Improvement of Water Quality and Shrimp Health.** 19-20 August 2004. Research and Development Exhibition, Institute of Bioscience, Universiti Putra Malaysia
12. **Gold Medal:** In Recognition of Invention titled **High Omega 3 and 6 Enrich Diet Using Microalgae and Bacteria for Healthy Shrimp Production.** 19-20 August 2004. Research and Development Exhibition, Institute of Bioscience, Universiti Putra Malaysia
13. **Silver Medal:** In Recognition of Invention titled **Fungi as a Biocontrol of *Vibrio* Pathogens in Shrimp Culture.** 19-20 August 2004. Research and Development Exhibition, Institute of Bioscience, Universiti Putra Malaysia.
14. **Gold Medal:** In Recognition of Invention titled **Antioxidative activity of different extracts from microalgae.** 19-20 August 2004. Research and Development Exhibition, Institute of Bioscience, Universiti Putra Malaysia
15. **Gold Medal:** In Recognition of Invention titled **A high performance live food for improvement of shrimp larval production.** 19-20



August 2004. Research and Development Exhibition, Insitutte of Bioscience, Universiti Putra Malaysia.

16. **Bronze Medal:** - In Recognition of Inventive Excellence & Valuable Accomplishments in research entitled **Biofouling of different substrates in nutrient-enriched environment.** 19-20 August 2004. Research and Development Exhibition, Institute of Bioscience, Universiti Putra Malaysia
17. **Gold Medal:** - In Recognition of Inventive Excellence & Valuable Accomplishments in research entitled **High Quality Feed Supplement Using Microalgae and Bacteria for Healthy Shrimp Production.** 13 May 2005. Invention & Research Exhibition, Universiti Putra Malaysia.
18. **Gold Medal-** In Recognition of Inventive Excellence & Valuable Accomplishments in research entitled **Indigenous Fungal-Bacterial Consortium for Bioremediation of Aquatic Environmental Pollution.** 22-24 August 2006, Universiti Putra Malaysia
19. **Gold Medal:** - In Recognition of Inventive Excellence & Valuable Accomplishments in research entitled **Periphyton Rings: Effective Water Quality Enhancer in Aquaculture Systems.** 13 May 2005. Invention & Research Exhibition, Universiti Putra Malaysia.
20. **Silver Medal:** - In Recognition of Inventive Excellence & Valuable Accomplishments in research entitled **Periphyton Rings: For Superior Quality Shrimp Larvae Production.** Invention & Innovation Competition 2006. Malaysian Technology Expo. 23rd-26th February, 2006. Putra World Trade Center, Kuala Lumpur
21. **Gold Medal - Periphyton-bacteria complex: A novel system for improving water quality & shrimp survival without water exchange.** Invention New Product Exposition, Pittsburgh June 11 – 14 2008. (in the category of Agriculture)
22. **Silver Medal - Periphyton-bacteria complex: A novel system for improving water quality & shrimp survival without water exchange.** Invention New Product Exposition, Pittsburgh June 11 – 14 2008. (in the category of Science)
23. **Gold Medal** - Immobilized periphytic microalgae for rapid and efficient removal of toxic compounds from water. 20-23 July 2010. Invention & Research Exhibition, Universiti Putra Malaysia.

## 11. Excellent Service Award

**Excellence Service Awards -UPM.** 1994, 1998, 1999, 2000, 2001, 2002, 2006, 2011

## **12. Excellent Teaching Award**

- 1. Excellent teaching award for 2010, and Vice Chancellor Award**
2. National excellent teaching award for 2010 (Health Science Cluster), Anugerah Akademik Negara - 2010

## **13. Royal Award**

### **Sultan of Selangor Dataship Award.**

Award by the Sultan of the state of Selangor, Malaysia in a ceremony held in conjunction with the ruler's coronation in March 2003, I was bestowed the title of Dato' Sultan Sharafuddin Idris Shah (DSIS) which carries the honorific title "Dato".

## **13. Consultancies**

### **1. *International Development Research Centres (IDRC)***

Consultant for monitoring IDRC funded regional fish health projects in Southeast Asia. 1980-1988

Coordinator, Asian Fish Health Network. 1989-1995

The assignment involved identification, initiation, development, monitoring and evaluation of IDRC sponsored fish health projects in Asia. I also Organised training courses, workshops and seminars for the IDRC funded network members.

Resource person for training course in fish pathology. 21-23 May 1990, Bogor, Indonesia.

### **2. *United Nations Food and Agriculture Organization (FAO)***

- Strengthening Biosecurity in Southern Africa – Lusaka, Zambia (19 Dec 2008 -23 Feb 2009)
- Shrimp Health Expert for FAO mission to Iran 5 to 18 July 1998.
- International Consultant on Fish Health Management -

Indonesia 1 month 2003.

**3. *Network of Aquaculture Centres in Asia Pacific (NACA)***

Resource person for Workshop on Relationship between EUS and the Environment. 24-27 March 1989, Bangkok.

**4. *Department of Fisheries, Brunei***

Resource person for the training programme in fish health and advisor on fish disease control in Brunei. 1992 & 1994 & 2010

**5. *Intergovernmental Organization for Marketing Information and Technical Advisory Services for Fisheries Products in the Asia and Pacific Region (INFOFISH)***

Resource person for workshop on Aquaculture and Value Addition. 24 and 25 September 1993, Colombo, Sri Lanka.

**6. *Partnership for Development in Kampuchea (PADEK)***

Evaluation of PADEK's Aquaculture Program in Cambodia. 16-29 January 1994

**7. *Australian Centre for International Agriculture Research (ACIAR)***

Review of ACIAR Project Improving fish production in freshwater aquaculture and in estuaries by reducing losses due to epizootic ulcerative syndrome. 19 January - 2 February 1996

**8. *International Centre of Living Aquatic Resources Management (ICLARM – the World Fish Centre)***

Adviser to the Director General on Scientific and Government Affairs. 2000 – 2003

**9. *Convention on Biological Diversity (CBD) UNEP***

Ad hoc Technical Expert Group on Mariculture – The Biodiversity Effects of Mariculture, 1 - 5 July 2002.

**10. *Aquawalk Sdn. Bhd.***

Advisor for aquatic exhibits in the KLCC Aquarium. June 2005-2008

**11. *World Intellectual Property Organisation (WIPO)***

- Served as resource person to share experience on Funding & Knowledge Led Growth: The Status in Malaysia – at WIPO/IDB Regional Seminar on Intellectual Property and Transfer of Technology, held in Riyadh, Saudi Arabia (4-7 June 2007).
- Consultant to study Innovation Strategy of Morocco and make appropriate recommendation to enhance output. (2008)
- Served as resource person to share experience on R&D Technology Transfer to the private sector – Saudi Arab 2007, Brazil – 2009, Korea 2009, Sri Lanka 2009, Japan 2010, Morocco, 2008, 2010, 2011, Jordan 2011.
- Consultant to establish a transfer technology office in Mauritius (2011)

#### 14. Referee to Scientific Journals

Asian Fisheries Science  
 Asia-Pacific Journal of Molecular Biology and Biotechnology  
 Australian Journals of Science  
 Bioscience  
 Journal of Fish Diseases  
 Journal of Aquaculture in the Tropics  
 Malaysian Applied Biology  
 Tropical Biomedicine

#### 15. Teaching Experience

Teaching courses in fish diseases since 1977, to third and final year fisheries and veterinary undergraduates students. Also taught courses on fish pathology for MS and PhD programmes.

Give fish health lectures for short courses offered to Fisheries and Veterinary officers and fish farmers.

#### 16. Supervision of Research Students

Was the **main supervisor for 15 masters and 7 doctorate** students who have successfully completed their degrees and **currently the main supervisor for five masters and two doctorate** students. Also **co-supervisor for 5 masters 1 PhD** students.

## 17. Publications

Published **more than 130 articles on various** aspects of fish health including one book and eight co-edited volumes. **Also presented 60 papers** as an invited speaker at international and national meetings.

### *Published Work (only as corresponding author)*

1. SHARIFF, M., R.H. RICHARDS AND C. SOMMERVILLE (1980) The histopathology of acute and chronic infections of rainbow trout (*Salmo gairdneri*) with eye fluke, *Diplostomum* sp. *Journal of Fish Diseases* 3: 455-465.
2. SHARIFF, M. (1980) Occurrence and treatment of ectoparasitic diseases of aquarium fishes in Malaysia. *Malaysian Veterinary Journal* 7: 48-59.
3. SHARIFF, M. AND A.T. LAW (1981) An incidence of fish mortality in Bekok River, Johore, Malaysia. p. 153-162 In M. Nordin, A. Latiff, M.C. Mahani & S.C. Tan (eds), *Proceedings of International Symposium on Conservation Inputs from Life Sciences*, University Kebangsaan Malaysia, Bangi, Malaysia.
4. SHARIFF, M. (1981) The histopathology of the eye of bighead carp, *Aristichthys nobilis* (Richardson) infested with *Lernaea piscinae* Hardings 1950. *Journal of Fish Diseases* 4: 161-168.
5. SHARIFF, M. (1982) *Henneguya shaharini* sp.nov. (Protozoa: Myxozoa), a parasite of marble goby, *Oxyeleotris marmorata* (Bleeker). *Journal of Fish Diseases* 5: 37-45.
6. SHARIFF, M. (1982) Penyakit ikan di Puast Pembaikbiak Ikan di Tapah. (Fish diseases at Fish Breeding Station in Tapah) In Bahasa Malaysia. Unipertama 4 (4): 2-3.
7. SHARIFF, M. (1983) Present status of fish diseases in Malaysia and recommendations for their control. *The Malaysian Veterinary Journal* 7: 275. (Abstract)
8. SHARIFF, M. (1984) Occurrence of *Chilodonella hexasticha* (Kiernik, 1909) (Protozoa, ciliata) from bighead carp *Aristichthys nobilis* (Richardson) in Malaysia. *Tropical Biomedicine* 1: 69-75.
9. SHARIFF, M., Z. KABATA, AND C. SOMMERVILLE (1986) Host susceptibility to *Lernaea cyprinacea* L. and its treatment in a large aquarium system. *Journal of Fish Diseases* 9: 393-401.
10. SHARIFF, M., A.T. ZAINUDDIN AND H. ABDULLAH (1986) Pugheadedness in bighead carp *Aristichthys nobilis* (Richardson). *Journal of Fish Diseases* 9: 457-460.
11. SHARIFF, M. AND C. SOMMERVILLE (1986) Effects of *Lernaea polymorpha* on the growth of bighead carp, *Aristichthys nobilis*. p. 227. In M.J. Howell (ed.),

12. SHARIFF, M. AND C. SOMMERVILLE (1986) Host parasite relation-ships of *Lernaea polymorpha* and *L. cyprinacea*. p. 227. In M.J. Howell (ed.), *Handbook of Sixth International Congress of Parasitology.* Australian Academy of Science. (Abstract)
13. SHARIFF, M. AND C. SOMMERVILLE (1986) The life cycle of *Lernaea polymorpha* and *L. cyprinacea*. p. 273-278. In J.L. Mclean, L.B. Dizon and L.V. Hosillosa (eds.). *The First Asian Fisheries Forum.* Asian Fisheries Society, Manila Philippines.
14. SHARIFF, M. AND C. SOMMERVILLE (1986) Identification and distribution of *Lernaea* spp. in Peninsular Malaysia, p. 269-272. In J. L. Mclean, L.B. Dizon and L.V. Hosillos (eds). *The First Asian Fisheries Forum.* Asian Fisheries Society, Manila Philippines.
15. SHARIFF, M. AND A. VIJIARUNGAM. (1986) Occurrence of parasites at the fish-breeding stations in Peninsular Malaysia and their control. p.68-73. In H.H. Chan, K.J. Ang, A.T. Law, M. Ibrahim, & O. Ishak (eds.). *Inter. Conference on Development and Management of Tropical Living Aquatic Resources.* Universiti Pertanian Malaysia, August 2-5. 1983.
16. SHARIFF, M. (1987) Transmission of diseases from fish to man. *The Professional* 5: 57-60.
17. SHARIFF, M. (1987) Current status of programs for fish health certification and quarantine systems. p. 48-52. In J.R. Arthur, (ed.), *Fish Quarantine and Fish Diseases in Southeast Asia:1986 Update.* Asian Fish. Soc. Spec. Publ. 1. Asian Fisheries Society, Manila, Philippines.
18. SHARIFF, M., AND T. SINGH (1988) Fisheries education in Malaysia, P.70-85. In *Fisheries Education and Training in Asia: Workshop Proceedings.* Asian Fisheries Society Special Publication 2. Asian Fisheries Society, Manila, Philippines.
19. SHARIFF, M., TORRES J.L., LAW A.H., SHAMSUDIN, M.N. (1988) New fish disease threatens our aquaculture industry. *UPM Research News* 2(4)1: 7-8.
20. SHARIFF, M. (1989) Some basic concepts of fish disease for nutritionists. p. 101-111. In S.S. De Silva (ed.), *Fish Nutrition Research in Asia. Proceedings of the Third Asian Fish Nutrition Network Meeting.* Asian Fisheries Society Special Publication 4, 166 p. Asian Fisheries Society, Manila, Philippines.
21. SHARIFF, M. AND C. SOMMERVILLE (1989) Morphometrics of the larval stages of *Lernaea polymorpha* Yu and *L. cyprinacea* Linnaeus (Copepoda). *Crustaceana* 57: 134-139.
22. SHARIFF, M. AND R.J. ROBERTS (1989) The experimental histopathology of *Lernaea polymorpha* Yu 1938 infection in naive *Aristichthys nobilis* (Richardson) and a comparison with lesion in clinical resistant fish. *Journal of Fish Diseases* 12: 405-414.
23. SHARIFF, M. (1989) Diseases of aquarium fishes and their treatment, p. 67-81. In F.M. Yusoff and K.T. Siow (eds.). *Proceedings of aquarium fish industry - A New Frontier.* Malaysian Fisheries Society, Occasional Publication No. 2.

24. TORRES, J.L., M. SHARIFF AND A.T. LAW (1990) Identification and virulence screening of *Aeromonas* spp. isolated from healthy and epizootic ulcerative syndrome (EUS) -infected fish. p. 663-666. In Hirano. R and I. Hanyu (eds.), *The Second Asian Fisheries Forum*. Tokyo, April 17-22 1989. Asian Fisheries Society, Manila, Philippines.
25. SHARIFF, M. AND C. SOMMERVILLE (1990) Comparative morphology of the adult of *Lernaea polymorpha* Yu and *L. cyprinacea* Linnaeus. p. 717-720. In Hirano. R and I. Hanyu (eds.), *The Second Asian Fisheries Forum*. Tokyo, April 17-22 1989. Asian Fisheries Society, Manila, Philippines.
26. SHARIFF, M., AND R. SUBASINGHE (1990) Health aspects of Asian aquaculture. *INFOFISH International* 5: 35-38.
27. SHARIFF, M. AND R. SUBASINGHE (1992) Asia: Aspek kesihatan akuakultur (Fish health - an Asian perspective). *Warta Akuakultur*. 2 (1): 31-35.
28. SHARIFF, M. AND R. SUBASINGHE (1992) Aquarium fish health - do we really care? *INFOFISH International* . 6:43-47.
29. SHARIFF, M., AND R. SUBASINGHE (1992) Major diseases of cultured shrimp in Asia: An overview, p. 37-46. In W. Fulks and K.L. Main (eds) *Diseases of Cultured Penaeid Shrimp in Asia and the United States*. The Oceanic Institute, Hawaii, USA.
30. SHARIFF, M. AND R. SUBASINGHE (1993) Resource allocation to fisheries research in Malaysia. p. 97-110. In Davy, F.B. (ed.), *Resource Allocation to Fisheries Research in Asia*. Asian Fisheries Society Spec. Publ. 7, Asian Fisheries Society Manila, Philippines.
31. SHARIFF, M. AND R. SUBASINGHE (1993) Diseases in Malaysian aquaculture. p. 49-59. In R.P. Subasinghe and M. Shariff (eds.), *Diseases in Aquaculture: the Current Issues*. Malaysian Fisheries Society, c/o Faculty of Fisheries and Marine Science, 43400 UPM, Serdang, Selangor Darul Ehsan, Malaysia.
32. SHARIFF, M., T.E. CHUA., S.E.YU. AND M. IBRAHIM (1993) Tertiary level fisheries education in Malaysia. p. 110-134. In Liu H.C. and S.Y. Yeh, (eds.), *Fisheries Education and Training in Asia: Second Workshop Proceedings*. Asian Fisheries Society. Spec. Publ. 8, Asian Fisheries Society Manila, Philippines.
33. KULARATNE, M., M. SHARIFF AND R.P. SUBASINGHE (1994) Comparison of larval morphometrics of *Lernaea minuta*, a copepod parasite of *Puntius gonionotus* from Malaysia, with those of *L. cyprinacea* and *L. polymorpha*. *Crustaceana* 67: 288-295
34. SHARIFF, M. (1995) Health management in tropical aquaculture systems. p. 73-80. In Bagarinao TU, Flores EEC (eds.), *Towards Sustainable Aquaculture in Southeast Asia and Japan*. SEAFDEC Aquaculture Department, Iloilo, Philippines.
35. SHARIFF, M. AND ARULAMPALAM, P. (1996) Status and management of fish health in marine cage culture in Malaysia. p. 131-139. In K.L. Main & C. Rosenfeld (eds.) *Aquaculture Health Management Strategies for Marine Fishes*. The Oceanic Institute, Hawaii, USA.
36. SHARIFF, M. (1996) Role of Non-Governmental Organizations (NGOs) in fish health

- management in the Asia-Pacific. In R.P. Subasinghe, J.R. Arthur, & M.Shariff (eds.). p.51-59. *Health Management in Asian Aquaculture. Proceedings of the Regional Expert Consultation on Aquaculture Health Management in Asia and the Pacific*. FAO Fisheries Technical Paper No. 360, Rome, FAO, 1996. 142p
37. SHARIFF, M., G. NAGARAJ AND F.H.C. CHU (1997) The use of chemicals in Malaysia and Singapore. In *Use of Chemicals in Aquaculture in Asia*. JR Arthur, CR Lavilla Pitogo, & RP Subasinghe (eds) pp. 127-140 Southeast Asian Fisheries Development Centre, Aquaculture Department, Tigbauan, Iloilo, Philippines.
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