

## **12<sup>th</sup> Symposium on Diseases in Asian Aquaculture (DAA12)**

September 23–27, 2025; Hotel Leela Palace, Chennai, India



The 12<sup>th</sup> Symposium on Diseases in Asian Aquaculture (DAA12) was organized by the Fish Health Section (FHS) of the Asian Fisheries Society (AFS) in collaboration with ICAR-Central Institute of Brackishwater Aquaculture (CIBA), Chennai during September 23-27, 2025, at the Grand Ballroom of Hotel Leela Palace, Chennai, India. The event brought together 470 participants including leading scientists, academicians, students, policymakers, and aquaculture industry professionals, to share the latest research and innovations in aquatic animal health. With the overarching theme ‘Transformative Innovations Shaping the Future of Aquatic Animal Health Management’, the symposium focused on emerging diseases, biosecurity, vaccines, diagnostics, One Health, and sustainable technologies shaping the future of aquaculture in Asia, and it included 18 keynote/lead, 49 oral and 189 poster presentations.



**Inaugural Session of DAA12**



**FHS-AFS (2022-2025) ExCom members at DAA12**

The symposium was inaugurated on September 23 afternoon with registration, poster setup, and sponsor exhibitions, and it was inaugurated by the Chief Guest Hon'ble Shri George Kurian, Minister of State for Fisheries, Animal Husbandry & Dairying, and Minority Affairs, Government of India, in the presence of Dr. Kua B. C., Chairperson, FHS-AFS; Dr. J. K. Jena, Deputy Director General (Fisheries Science), ICAR; Dr. B. K. Behera, Chief Executive, National Fisheries Development Board; and Dr. Kuldeep K. Lal, Convenor, DAA12 and Director, ICAR-CIBA, Chennai. The inaugural session had a plenary presentation by Dr. C. V. Mohan, titled '*Aquatic Animal Health Research and Development in Asia: From 1975 to 2025 – How Far Have We Come?*'. Dr. Mohan reflected on five decades of advances in aquatic disease diagnostics, policy frameworks, and transboundary disease control.



**Plenary presentation by Dr. C. V. Mohan**

The plenary session was followed by presentations from three countries, namely Australia, Japan, and the Philippines that had expressed interest in hosting DAA13. The presentations were made by Dr. Stephen Pyecroft (Australia), Dr. Goshi Kato (Japan), and Dr. Joseph Adrian G. Loja (Philippines). The first day concluded with a cultural program and a welcome dinner.



**Presentations by Dr. Stephen Pyecroft (Australia), Dr. Goshi Kato (Japan), and Dr. Joseph Adrian G. Loja (Philippines) for deciding the host country for DAA13**



The second day began with Technical Session I: Finfish Health, which was chaired by Dr. Pravata Kumar Pradhan and Dr. Stephen B. Pyecroft. The Keynote speaker Dr. Andrew Shinn presented '*The Hidden Billion-Dollar Burden: Quantifying Asia's Aquatic Disease Crisis*', emphasizing the significant economic losses due to disease outbreaks. Subsequently there were two lead presentations by Dr. Sonal Jayesh Patel and Dr. P.K. Sahoo on '*Pathogen related biosecurity in Recirculating Aquaculture Systems*' and '*Fish vaccines: Global status, recent advances and Indian perspectives*', respectively. Thereafter, the oral presentations covered a range of studies, including the impacts of feed contaminants on barramundi, the immunomodulatory effects of lactoferrin, and novel therapies against *Nocardia seriolae* and Tilapia lake virus.



**Finfish Health Session: Keynote and lead presentations by Drs. Andrew Shinn, Sonal Jayesh Patel and P.K. Sahoo**

Technical Session II: Shrimp Health was chaired by Dr. Kalkuli M. Shankar and Dr. Devika Pillai. During the session, Dr. Kallaya Sritunyalucksana delivered a keynote presentation on '*Application of scientific knowledge to control EHP infection in shrimp*'. This was followed by lead presentation entitled '*Reverse genetics approaches in developing oral vaccines and therapeutics in fish and shrimp*' by Dr. Arun K. Dhar. Thereafter, the oral presentations were on white spot syndrome virus (WSSV) dynamics, Decapod iridescent virus (DIV1) surveillance, gut microbiome modulation, and genomic characterization of *Vibrio parahaemolyticus* linked to translucent post-larvae disease.



**Shrimp Health Session featured keynote and lead presentations by Drs. Kallaya Sritunyalucksana and Arun K. Dhar.**

The special session on 'Aquaculture: New Directions' was chaired by Dr. Grinson George and Dr. Celia Pitogo. Dr. Rohana P. Subasinghe made a presentation on '*Aquaculture Future: An African Focus*', emphasizing South-South cooperation and sustainable aquaculture models.



**Special session on ‘Aquaculture: New Directions’ with Dr. Rohana P. Subasinghe as the lead speaker**

On day 3, the Technical Session IV: Aquatic Animal Disease Diagnostics, Prophylactics, and Therapeutics, was chaired by Prof. Indrani Karunasagar and Dr. Basanta Kumar Das. In this session, there was a keynote presentation by Dr. Ha Thanh Dong on ‘*Promoting non-lethal methodologies in aquatic animal health research*’ and this was followed by a lead presentation by Dr. K.V. Rajendran on ‘*Ecytonucleospora hepatopenaei (EHP) in Indian shrimp aquaculture- A decadal review*’. Subsequent presentations explored nanocomposite antibacterial agents, probiotic-based vaccines, and nanobubble vaccination approaches.



**Aquatic Animal Disease Diagnostics, Prophylactics, and Therapeutics Technical Session featuring keynote speaker Dr. Ha Thanh Dong and lead speaker Dr. K. V. Rajendran.**

Technical Session V on Mollusc and Seaweed Health was chaired by Dr. Kallaya Sritunyalucksana-Dangtip and Dr. T. Raja Swaminathan. In this session, there were two keynote presentations by Dr. Naoki Itoh and Dr. Claire Gachon on ‘*Field-based insights for an integrated pest management system for mollusk diseases*’, and ‘*The diversity and ecoanthropology of algal pathogens in a rapidly changing world*’, respectively.



**Technical Session on Mollusc and Seaweed Health features keynote speaker Dr. Naoki Itoh, and Dr. Claire Gachon, who joined the session virtually**

Technical Session VI: Emerging Technologies was chaired by Dr. Kelly Bateman and Dr. Vindhya Mohindra. During this session, Dr. Agus Sunarto delivered a keynote presentation on ‘*Genome engineering in aquaculture: From genetic modification to gene editing*’, followed by Dr. Eduardo Leano’s lead presentation on ‘*Innovative technologies on alternatives to antimicrobials towards mitigation of Antimicrobial Resistance (AMR) in aquaculture*’. Thereafter, the oral presentations included cutting-edge studies including RNAi vaccines, nanosheet biosensors, and the use of microalgae for vaccine production. The day concluded with DAA12 Student Travel Awards Session, which was chaired by Dr. Shubhadeep Ghosh and Dr. Narottam Prasad Sahu. Young researchers (Brandon Rafael de Jesús Castillo-Corea, Naritoyo Ishibashi, Ashish Patige Madhusudhan, Bhupendra Singh, Kazuma Yoshimura, Shu-wen Cheng and Athiya Azzahidah) who were selected for exceptional contributions in aquatic animal health research, made the presentations.



**In the Emerging Technologies Technical Session, keynote speaker Dr. Agus Sunarto and lead speaker Dr. Eduardo Leano delivered the presentations.**

The session was followed by the FHS Triennial General Meeting (TGM13), which included a welcome address by Dr. Kua B.C., Chairperson, FHS-AFS (who had joined virtually), followed by presentation and adoption of the Secretary’s Report and Financial Report for the period 2022-2025 by Dr. Eduardo Leano, Secretary-cum-Treasurer, FHS-AFS, and a Report on DAA12 by Dr. P. K. Pradhan, Vice-Chairperson, FHS-AFS and Selection of ExCom for 2025-2028. During the TGM, the following members were elected to serve on the Twelfth Executive Committee (2025–2028) of FHS-AFS: Dr. P. K. Pradhan (India) as Chairperson, Dr. Goshi Kato (Japan) as Vice-Chairperson, and Prof. Desrina (Indonesia) as Secretary/Treasurer. The Committee also includes Dr. Kua Beng Chu (Malaysia, Past Chairperson), Dr. Agus Sunarto (Indonesia/Australia), Dr. Dong Ha (Vietnam/Thailand), Dr. Sonia Somga (Philippines), Dr. Stephen Pyecroft (Australia), Dr. Neeraj Sood (India), and Prof. Xuan Dong (China) as Members. Dr. Rohana Subasinghe, Dr. Melba Reantaso, Dr. Supranee Chinabut, and Dr. Celia L. Pitogo will serve as Senior Advisors, while the Observers are Mr. Joseph Carlo Vergel (Philippines/Japan), Ms. Shu-Wen Cheng (Taiwan), Mr. Abdul Salam Wafi Md Diah (Brunei Darussalam), and Mr. Kazuma Yoshimura (Japan). Additionally, Dr. Neeraj Sood (India) will serve as the Editor of the FHS eNewsletter, and the newly elected observers Mr. Joseph Carlo Vergel, Ms. Shu-Wen Cheng, Mr. Abdul Salam Wafi Md Diah, and Mr. Kazuma Yoshimura will act as members of the FHS eNewsletter team.





**The Thirteenth Triennial General Body Meeting of the FHS-AFS was held in hybrid mode**

On day 4, the Technical Session VII on One Health and Aquatic Animal Biosecurity was chaired by Dr. George Ninan and Dr. Andrew Shinn. In the session, Dr. Iddya Karunasagar and Dr. Melba Reantaso jointly delivered the keynote presentation entitled '*Antimicrobial resistance and emergence of new pathogens in aquaculture in one health context*', stressing the need for integrated surveillance and policy coordination. Thereafter, Dr. Victoria Alday-Sanz made a Lead presentation on '*A call for further research on epigenetics: Examples from the field*'. This was followed by oral presentations on antimicrobial resistance profiling, epidemiological cutoff values for *Vibrio* spp., and emerging zoonotic risks associated with aquaculture systems.



**Dr. Iddya Karunasagar and Dr. Melba Reantaso jointly delivered the keynote presentation, and Dr. Victoria Alday-Sanz made lead presentation in the One Health and Aquatic Animal Biosecurity Technical Session**

The Technical Session VIII entitled Epidemiology, Disease Surveillance, and Reporting Session was chaired by Dr. Kenton Lloyd Morgan and Dr. Iddya Karunasagar. This session featured Dr. Edmund Peeler's keynote presentation on '*Improving early detection of aquatic animal disease: More sophistication or back to basics?*' followed by lead presentation by Dr. Neeraj Sood's overview '*Aquatic animal disease surveillance in India*'. In the afternoon, Dr. Alicia Gallardo Lagno delivered a lead presentation on '*Challenges in implementing WOAH aquatic animal disease surveillance standards*'. Thereafter, researchers shared new data on pathogen prevalence, environmental correlates of Tilapia lake virus, and innovative modelling approaches for disease transmission dynamics. The discussions reinforced the importance of harmonizing national and regional surveillance efforts in line with the World Organisation for Animal Health (WOAH) standards.



**Technical Session on Epidemiology, Disease Surveillance, and Reporting Session with keynote speaker Dr. Edmund Peeler and lead speakers Dr. Neeraj Sood and Dr. Alicia Gallardo Lagno**

The symposium concluded with a valedictory ceremony chaired by Dr. Tarun Shridhar, Former Secretary, Department of Fisheries, Government of India. Dr. P.K. Pradhan, the newly elected Chairperson, Fish Health Section, AFS announced the venue for the next DAA symposium in Japan. The day concluded with the Best Oral and Poster Presentation Awards, recognizing excellence in scientific communication across technical sessions, followed by a farewell dinner sponsored by the FHS-AFS.



**Valedictory ceremony of DAA12 chaired by Dr. Tarun Shridhar, Former Secretary, Department of Fisheries, Government of India and address by Dr. Tarun Shridhar, Dr. Kuldeep K. Lal, Convenor, DAA12 & Director, ICAR-CIBA, and Dr. P.K. Pradhan, the newly elected Chairperson, FHS-AFS**





**Newly elected FHS-AFS (2025-2028) ExCom members at DAA12 along with the Chief Guest of the validictory session of DAA12 & Convenor, DAA12**







**The newly elected FHS-AFS Executive Committee (2025–2028) was introduced during the Valedictory Session of DAA12.**

The 12<sup>th</sup> Symposium on Diseases in Asian Aquaculture (DAA12), held in Chennai, India, reaffirmed Asia's leadership in advancing aquatic animal health science, innovation, and policy. Bringing together regional expertise, the event emphasized collective action in disease management, surveillance, and information sharing, while showcasing cutting-edge technologies such as genomics, gene editing, nanotechnology, and RNA-based vaccines. With a strong focus on sustainability and the One Health approach, DAA12 promoted integrated frameworks linking aquaculture, environmental integrity, and public health. The active participation of early-career scientists ensured continuity and capacity building within the sector. The collaborations and insights generated at DAA12 are set to guide the region's efforts toward resilient and sustainable aquaculture leading up to DAA13 to be hosted in 2028 in Japan.

### **Few more photos of DAA12**



**Some moments during inauguration ceremony**



Some interaction moments!



Cultural evening



Presentations by the delegates

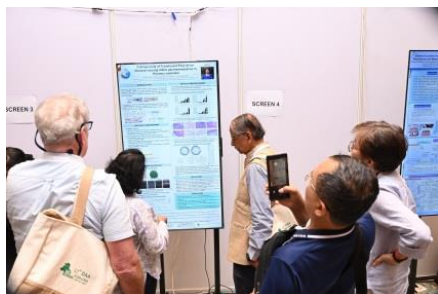




**Question and Answer Sessions after presentations**



**Felicitation of exhibitors**



**Poster presentations and evaluation by the experts**



**Felicitations of the Lead Speakers/Chairs of Sessions**



**Food court of DAA 12**