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WORKSHOP REPORT

The 12th Symposium on Diseases in Asian Aquaculture (DAA12)

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The 12th Symposium on Diseases in Asian Aquaculture (DAA12) was held from 23–27 September 2025 at Hotel Leela Palace, Chennai, India. The symposium was organized by the Fish Health Section (FHS) of the Asian Fisheries Society (AFS), in collaboration with the ICAR–Central Institute of Brackishwater Aquaculture (CIBA), Chennai, and Society of Coastal Aquaculture and Fisheries, Chennai under the theme "Transformative innovations shaping the future of aquatic animal health management." A total of 470 delegates from 21 countries, including scientists, students, policymakers, and aquaculture industry representatives from Asia and other regions, attended the meeting. The scientific programme was comprehensive, comprising 18 keynote and lead presentations, 49 oral presentations, and 189 poster presentations. Major thematic areas included finfish and shrimp health, mollusc and seaweed diseases, aquatic animal diagnostics and therapeutics, emerging technologies, One Health, biosecurity, and disease surveillance.

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The symposium was formally inaugurated on 23 September 2025. The inaugural plenary lecture was delivered by Dr. C. V. Mohan, entitled *'Aquatic animal health research and development in Asia: From 1975 to 2025 – how far have we come?'*, providing a comprehensive overview of five decades of progress in aquatic animal health research, diagnostics, and policy

Figure 1. Participants present during the opening ceremony of 12th Symposium on Diseases in Asian Aquaculture (DAA12) at Hotel Leela Palace, Chennai, India.

development. This was followed by presentations from Australia, Japan, and the Philippines, each expressing interest in hosting the next symposium (DAA13).

The second day began with Technical Session I: Finfish Health. The keynote lecture by Dr. Andrew Shinn, *'The Hidden Billion-Dollar Burden: Quantifying Asia's Aquatic Disease Crisis'*, highlighted the substantial economic impacts of aquatic diseases. Lead presentations by Dr. Sonal Jayesh Patel on pathogen-related biosecurity in recirculating aquaculture systems and Dr. P. K. Sahoo on the global status and recent advances in fish vaccines followed. Oral presentations addressed topics including feed contaminants in barramundi, immunomodulatory effects of lactoferrin, and novel therapeutic approaches for *Nocardia seriolae* and Tilapia lake virus. In the second day, the Technical Session II: Shrimp Health featured a keynote presentation by Dr. Kallaya Sritunyalucksana on scientific approaches to controlling *Ecytonucleospora hepatopenaei* (EHP) infections, followed by a lead presentation by Dr. Arun K. Dhar on reverse genetics approaches for developing oral vaccines and therapeutics in fish and shrimp. Subsequent oral presentations focused on white spot syndrome virus dynamics, surveillance of decapod iridescent virus (DIV1), gut microbiome modulation, and genomic characterization of *Vibrio parahaemolyticus* associated with translucent post-larvae disease. A special session on *Aquaculture: New Directions* included a presentation by Dr. Rohana P. Subasinghe on *'Aquaculture Future: An African Focus'*, emphasizing South–South cooperation and sustainable aquaculture models.

On day three, Technical Session IV on Aquatic Animal Disease Diagnostics, Prophylactics, and Therapeutics featured a keynote lecture by Dr. Ha Thanh Dong on promoting non-lethal methodologies in aquatic animal health research, followed by a lead presentation by Dr. K. V. Rajendran reviewing a decade of EHP in Indian shrimp aquaculture. Presentations explored nanocomposite antibacterial agents, probiotic-based vaccines, and nanobubble vaccination approaches. Technical Session V on Mollusc and Seaweed Health included keynote lectures by Dr. Naoki Itoh on integrated

pest management for mollusc diseases and Dr. Claire Gachon on the diversity and ecoanthropology of algal pathogens in a changing world. This was followed by Technical Session VI: Emerging Technologies, with a keynote by Dr. Agus Sunarto on genome engineering in aquaculture and a lead presentation by Dr. Eduardo Leano on alternatives to antimicrobials to mitigate antimicrobial resistance (AMR). Oral presentations covered RNAi vaccines, nanosheet biosensors, and microalgae-based vaccine production.The day concluded with the FHS-AFS DAA12 Student Travel Awards Session, during which selected early-career researchers presented their work. Awardees included Brandon Rafael de Jesús Castillo-Corea, Naritoyo Ishibashi, Ashish Patige Madhusudhan, Bhupendra Singh, Kazuma Yoshimura, Shu-wen Cheng, and Athiya Azzahidah.

The symposium also hosted the 13th Triennial General Meeting of the Fish Health Section, which included presentation and adoption of the Secretary's and Financial Reports for the 2022–2025 period, a report on DAA12, and the election of the new Executive Committee for the 2025–2028 term. It was announced that DAA13 will be hosted by Japan in 2028.

On the final day, Technical Session VII on One Health and Aquatic Animal Biosecurity featured a joint keynote by Dr. Iddya Karunasagar and Dr. Melba Reantaso on antimicrobial resistance and emerging pathogens within a One Health framework, followed by a lead presentation by Dr. Victoria Alday-Sanz on epigenetics in aquatic animal health. Technical Session VIII on Epidemiology, Disease Surveillance, and Reporting included keynote and lead presentations by Dr. Edmund Peeler, Dr. Neeraj Sood, and Dr. Alicia Gallardo Lagno, highlighting challenges and innovations in disease detection, surveillance systems, and implementation of WOAH standards.

The symposium concluded with a valedictory ceremony chaired by Dr. Tarun Shridhar, Former Secretary, Department of Fisheries, Government of India, followed by Best Oral and Poster Presentation Awards and a farewell dinner. DAA12 was a highly successful meeting, providing valuable opportunities for networking, knowledge exchange, and collaboration, and reaffirmed the importance of regional cooperation and innovation in addressing current and emerging aquatic animal health challenges in Asia.

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