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# PRESTASI 3 Highlights

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## Preventing and Eradicating Fish Disease in Indonesia

*As a USAID PRESTASI 3 scholar, Mochamad Aji Purbayu, “Aji”, studied for his Masters in Comparative Medicine and Integrative Biology at Michigan State University. After graduating in August 2018, Aji returned to Indonesia to work as a veterinarian and laboratory analyst for the Fish Quarantine and Inspection Agency, the Indonesian agency that ensures the health, quality, and safety of fishery products for export and import.*

Aji began his Master’s degree in the U.S. under the PRESTASI 3 program in August 2016. While pursuing his degree at MSU, Aji spent much of his time in the university’s Aquatic Animal Health Laboratory (AAHL) researching fish virology. Although Aji had no previous experience studying virology in depth, with guidance from three of his professors and in collaboration with his labmates, Aji gained a strong understanding of molecular virology and cell culture techniques. Also, he had the opportunity to learn about fish disease control policymaking from his interactions with personnel from the Michigan Department of Natural Resources (DNR), to whom the AAHL is contracted to provide fish health testing and analysis for the Great Lakes.

Following his graduation, Aji began his new position as a veterinarian and laboratory analyst within the Biology, Molecular and Histopathology Lab at FQIA. There, he was tasked with leading and training team members within the fish disease research unit. From his studies at MSU, Aji has been able to train his colleagues on cell culture techniques, a challenging process to isolate a virus along with its biological characteristics for in depth analysis.

At FQIA, Aji has also been chosen to support the development of an international laboratory network. Currently, Aji is leading the communication for the three-year partnership between his lab and the Yellow Sea Fisheries Research Institute (YSFRI) in China. One of the main goals of this partnership is to transfer knowledge and technology to Aji’s lab in preparation to apply to become a World Organisation for Animal Health (OIE) designated lab for shrimp disease. Following the end of the partnership in two years, Aji’s lab will be eligible to apply. This designation would allow for Aji’s lab to contribute to the intergovernmental organization’s scientific information on shrimp disease, which would then be made available to all Member Countries to help them to improve their methods to control and eradicate the disease.

Due to his background knowledge on disease control strategies and policymaking that he learned from the Michigan DNR, Aji has been invited several times to FQIA’s central office to help draft and discuss policies. Additionally, FQIA’s central office asked him to participate in a forum in Borneo to contribute to the creation of a plan of action to protect Borneo from exotic fish disease. Aji has also attended conferences in Singapore and Thailand to speak on his knowledge of fish disease control strategies and to support the development of fish virology research within ASEAN countries.



## Aji’s Impact

Aji’s studies in the U.S. gave him the knowledge needed to make a positive impact on his work environment in Indonesia. He modernized his lab’s techniques to analyze fish viruses by training his colleagues on the advanced cell culture techniques that he learned at MSU. These techniques help Aji and his team to better understand fish viruses and assist FQIA in determining the best disease control strategies. This helps to ensure the health of the people that consume Indonesia’s imported and exported fish products. It also benefits Indonesian fishers, whose livelihoods depend greatly on the health of the fish they cultivate.

Aji has also played an important role in his lab’s international partnership with the YSFRI lab in China. By coordinating the communication between the two labs, Aji is contributing to building the capacity of his lab to conduct advanced research on fish virology. This partnership also supports Aji’s lab’s efforts to become an OIE designated lab for shrimp disease. This selection would help to position Indonesia, the world’s largest shrimp exporter, to play a more critical role in researching and controlling shrimp disease.

Aji has taken initiative to spread his knowledge on fish disease control strategies both in and outside of work. By presenting at national and international conferences and forums, Aji has contributed not only to the control of fish disease in Indonesia, but also in the overall ASEAN region.