



The research visit funded by LaMer led to visits to laboratories and discussion with professor in the Center for Marine Environmental Studies.

Research Meeting: Analysis of microorganisms in environmental samples and MOU between MSU-IIT and Ehime University

Participants: Prof. Kozo Watanabe, Assist. Prof. Kohei Hamamoto and Prof. Hernando P. Bacosa

Analysis of bacterial community and virus particles in environmental samples such as microplastics and particulate matter that contain low number of DNA and RNA is challenging and requires optimization of method. It was suggested that a student dedicated on this work can be sent to Ehime University for a minimum stay of six months. The possibility of cross-appointment of Dr. Bacosa in Ehime University so that a research proposal can be submitted in Japan that will benefit both MSU-IIT and Ehime University was also discussed during the visit. The Memorandum of Understanding (MOU) on academic exchange and research collaboration was discussed to provide faculty and student mobility between MSU-IIT and Ehime University.

Research Meeting: Analysis of pollutants in the environment

Participants: Prof. Tatsuya Kunisue, Assoc. Prof. Rumi Tanoue, and Prof. Hernando P. Bacosa

The discussion on the analysis of environmental pollutants in the environment aiming for a collaborative work between MSU-IIT and Ehime University was done. It was suggested that determination of polycyclic aromatic hydrocarbons (PAHs), and emerging

pollutants such as per- and polyfluoroalkyl substances (PFAS) and plastic additives in dried fish is a potential area of research. Unravelling the level of contamination of these chemicals in commercial dried fish can predict the risk potential towards consumers and reduce its flow from the source. Analysis can be performed in CMES using GC-MS and LC-MS for PAHs and PFAS, respectively. It was also decided that graduate students can be sent to conduct this work while learning new techniques and analytical methods. Prof. Kunisue also gave a tour of the lab showing the analytical instruments and the capability of the lab to perform analysis of various environmental matrices.



Research meeting: Toxicity of microplastics and plastic additive

Participants: Prof. Hisato Iwata and Prof. Hernando Bacosa

Research on the toxicity of pollutants in the Philippines is still in its infancy stage. This meeting with Prof. Iwata aims to identify possible collaborative work on determining the toxicity of micro-/nanoplastics and plastic additives to organisms. Prof. Iwata suggested that an *in-silico* approach using the platform established in their lab is a useful way to determine the potential toxicity of a target chemical to organism. Another technique is the *in ovo* exposure of chicken embryo to pollutant that gives a visual observation on changes in certain organ of the developing embryo. Sending of a graduate student to learn these techniques, while generating publishable data was also discussed.

