

Ilongga scientist to expand research on new antibiotics from marine sediments

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By Philippine News Agency

Ilongga scientist Dr. Doralyn Dalisay is expanding her research to discover new antibiotics derived from marine sediments with the help of a P35-million grant from the Department of Science and Technology-National Research Council of the Philippines (DOST-NCRP).

The study will be officially launched on Wednesday, March 29, at the University of San Agustin (USA) in Iloilo City where Dalisay will present the initial result of her expedition.

The university through its Gregor Mendel Professorial Chairman provided the seed money that was used for the initial exploration, she said.



Dr. Doralyn Dalisay

(Facebook / MANILA BULLETIN)

Prior to the grant, Dr. Dalisay said she had to convince the NCRP that the university's Gregor Mendel Research Laboratories have the facilities and capabilities to handle the study.

Also, she presented a preliminary result to convince the NCRP panel that the project is feasible.

“I was able to have two research expeditions in Gigantes Island and Romblon. The preliminary results that I gathered, I used for the grant proposal presented to DOST,” she explained.

Dubbed as “Marine Sediment-Derived Actinobacteria: New Vista for Natural Products Discover in the Philippines” is a three-year program in three phases.

The first phase was to look for anti-microbial actino-bacteria from marine sediments in surrounding islands of Panay, Negros Occidental, Bohol and Cebu.

The second will be to look for marine sediments in Batanes, Eastern Visayas, Palawan, Tubbataha Reef in Sulu Sea and Tawi-tawi.

“This is looking into a bigger perspective now of finding this noble actino-bacterium because in our preliminary results we just looked into Gigantes. And now we are expanding all over the Philippines. We are looking at the anti-microbial and also the anti-cancer this time,” she said.

Thereafter, they will determine the “mode of action,” which is to look into the mechanism why it kills cancer cells and pathogens.

“So this is looking into the biodiversity, bio-geology, and bio-activity of marine actinomycis against pathogens,” she added.

Currently, they are now screening the actinomycins from Gigantes Island in Carles, Iloilo and Romblon.

In the next two weeks, a research diving expedition will be launched in Secu Island, Mararison Island, Crocodile Island Sapatos Island all in Panay; Guimaras; Danjugan Island in Negros Occidental; Apo Island in Dumaguete; Balicasag Island in Bohol; and Sumilon Island in Cebu.

At the end of the study, they hope to find a new antibiotic, which she said is necessary because the “pipeline is drying up and as everybody knows there is resistance developed by microbes against antibiotics.” Antibiotics available in the market are sourced from micro-organisms from the land.

“What’s the difference now with our work is we are looking for the bacterium in the marine environment. I see more promising anti-microbial agents here because their habitat is very harsh compared with those from the land,” she explained.

She added that since the agents live in harsh environment, they developed defense mechanism that enable them to compete with other microorganisms in order to survive.

Dalisay involved the faculty of USA as well as hired science research assistants for the study.

The Ilongga scientist is a faculty of the USA College of Pharmacy. She is also a recipient of a P4.7 million grant from the United States Agency for International Development (USAID) under the Science Technology, Research and Innovation for Development (STRIDE).

The 12-month study looked into increasing the marketability of honey as a pharmaceutical raw material.

She was a recipient of the Balik Scientist Program of DOST, member of the American Chemical Society, American Association for the Advancement of Science and American Society for Pharmacognosy and was elected to Full Membership in the Philippine-American Academy of Science and Engineering in July 2015.

<http://news.mb.com.ph/2017/03/29/ilongga-scientist-to-expand-research-on-new-antibiotics-from-marine-sediments/>