

## Advanced Research Scholar – Post-doctoral

### Leni Yap-Dejeto, Ph.D.

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**Field of Study:**  
**Research Period**  
**US University**  
**US Professor**  
**Research Title**

*Marine Biology*  
*August 2016 – August 2017*  
*University of California Santa Cruz*  
*Dr. Marilou Sison-Mangus*  
*Phylogenetic assessment and screening of natural products of Sargassum (Fucales, Phaeophyceae) in Eastern Samar, Philippines*

#### Describe your research conducted in the US.

My research focused on the assessment of natural product content in *Sargassum*, a type of brown seaweed which is abundant but is underutilized in the Philippines. The research also included a pioneering and holistic study of taxonomy of the species by comparing their DNA with other *Sargassum* species.

#### What was the highlight of your research in the US?

The highlight of my research was discovering anti-cancer properties in some of the samples of brown seaweeds. This could bolster the nonexistent industry of *Sargassum* in the Philippines. This discovery further justifies the need to study this group of seaweeds. The first DNA sequences of *Sargassum* species in the Philippines were finally provided and their ancestries analyzed. These results are concrete actions to forward the *Sargassum*, (brown seaweed) industry in the Philippines.

#### In what way has the USAID scholarship changed you?

The molecular work that I did in UCSC is invaluable. I have experimented in different methods of DNA extraction, as *Sargassum* proved to be a recalcitrant genus. As a result, I gained a wide skill set of DNA extraction, purification, quantification. The experience taught me to be independent with my work, and life in general. I realized that one cannot rely on other people to do your work for you. It has taught me to be creative and resourceful. It has also taught me to be a little bit aggressive so that you get things done. At the same time, it has restored my faith in humanity, that all peoples in all races from all walks of life are naturally good and will readily and eagerly help you if they can.

#### How would you use the knowledge and skills gained through your research to contribute or influence economic growth in the country?

I will definitely transfer my knowledge and skills to my students. At the same time, I will pursue for the opening of a science graduate course in our college, build up our laboratories, and cultivate a scientific culture in the college. Usually, we do outreach programs for high school students and to communities through Private Organizations, cooperatives or NGO's. I will use these platforms to spread the message: that there is a more valuable, important and rewarding career other than politics or the movie/entertainment industry. It is in fact science and technology that moves a country forward. The sooner the majority of our countrymen realize that, the faster the progress of our nation.

#### As a young scientist, what do you envision for the Philippine science, technology and innovation ecosystem in the next 10 years?

Universities will be research universities. i.e., putting more value in original work rather than parroting text books to students. University graduates will imbibe scientific/technology culture. There will be more S&T start-ups. That's for the next 10 years. If this continues, this will lead to industries set up for building, producing scientific instruments, chemicals, technological tools, gadgets for daily life designed and made by Filipinos. There will be more work for scientists here, that they will not have to work abroad to quench their scientific mind. An environment of a balance of nature and technology will grow and flourish in our country.

*Leni is a professor and researcher at the University of the Philippines Visayas – Tacloban College. She is applying for research grants to be able to build a research laboratory in the university and, in the long term, establish a marine research center for Eastern Visayas.*

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