FROM THE EDITOR

In this issue, we feature four research articles. The first is from the group of Dr. Emmanuel Ryan C. de Chavez of the Institute of Biological Sciences, University of the Philippines Los Baños (UPLB). De Chavez and his team studied the diversity patterns of freshwater and land mollusks along Dakil River at the University of the Philippines Laguna Land Grant (UPLLG) in Paete, Laguna, Philippines. UPLLG is a naturally grown secondary forest, which was included as an Important Biodiversity Area (IBA) and a Key Conservation Site in the Philippines because of the many threatened and endemic birds that have been recorded in the area. The authors identified six gastropods and one bivalve species from six families of freshwater mollusks. As for land snails, seven species belonging to three families were identified. River velocity was found to be the most significant predictor for species richness of freshwater mollusks, while temperature and canopy cover were found to affect abundance. For land snails, altitude was found to be the most significant predictor for species richness, while canopy cover was found to significantly affect abundance.

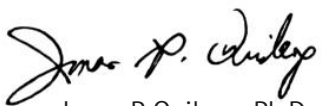
The second research article is from the group of Dr. Gil Penuliar of the Institute of Biology (IB), University of the Philippines Diliman (UPD). Penuliar and his student, Renz Joseph Artezuela, isolated fructophilic lactic acid bacteria (FLAB) from flowers of 14 plant species growing in the grounds of IB. FLAB are lactic acid bacteria that preferentially use fructose as their main source of carbohydrate under anaerobic conditions. Previous studies have shown that FLAB can be isolated from flowers and fruits. Penuliar and Artezuela were the first ones to conduct such a study using plant specimens from the Philippines. The authors were able to screen eight presumptive FLAB isolates for antimicrobial activity against test bacteria that are commonly associated with intestinal diseases. Four of these isolates were found to inhibit the activity of at least two test bacteria. Analysis of the DNA sequences of two of these promising isolates revealed that they could be novel species. The authors suggest that further studies be done on these two isolates for possible applications in food and medicine.

The third research article is from the group of Dr. Pablito Magdalita of the Institute of Crop Science and Institute of Plant Breeding in UPLB. Magdalita and his team evaluated the morphological responses of papayas to drought based on tree and fruit characters. In the Philippines, papayas are among the 10 leading fruit crops.

Information from this study is important for the selection of drought-tolerant lines of papaya. These selected lines can be used to produce drought-tolerant papaya varieties especially in the face of climate change. Magdalita and his team found that drought-affected papaya trees have significantly reduced fruit weight, length, width, flesh thickness, and seed weight; however, these fruits were found to be sweeter than those harvested during normal conditions. Trees that were tall, with thick stems and wide crowns, and still produced marketable yield even after exposure to drought were selected and marked as drought-tolerant. Selected drought-tolerant lines can be used for further breeding.

The fourth research article is from the group of Dr. Rheo Lamorena-Lim of the Institute of Chemistry, UPD. Lamorena-Lim and his team used a UV-Vis spectrophotometer with relative specular reflectance accessory in their effort to develop undergraduate laboratory experiments for the qualitative characterization of colored materials and quantitative determination of surface modification. The authors observed a differentiation of reflectance peaks in the spectra of offset-printed commercial colored paper and acrylic paints that were sprayed onto glass cover slips. Differences were also observed in the reflectance spectra of unsprayed and acrylic spray-painted surfaces of aluminum foil, plastic, and a mirror. For the calculation of band gap energy (BGE), the authors applied the Tauc plot method on the UV-Vis absorbance data of electrodeposited zinc oxide and zinc sulfide films. BGE can be used to determine whether a material is a metal, semiconductor, or insulator.

I thank the authors of these four research articles for their contribution to this journal. Since this is the last issue to be released with me as the Editor-in-Chief (EIC) of this journal, I would also like to thank the Editorial Board, the two managing editors, the editorial assistant, the layout artists, and the copyeditors for all their valuable contributionover the last three years. Our task was made more challenging during the last two years by the still ongoing COVID-19 pandemic, but still we were able to overcome these challenges. I welcome and wish all the best to the incoming EIC and the new members of the Editorial Board. With the infusion of new blood in the Editorial Board, I am confident that the journal will scale new heights in the coming years.



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Editor-in-Chief