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Top Filipino scientists honored

By **Jasmin Joyce P. Sevilla**, DOST-STII

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The six awardees proudly hold their plaque of recognition awarded by PhilAAST for their exemplary contribution in their respective fields in science and technology.

To mark its 68th year, the Philippine Association for the Advancement of Science and Technology (PhilAAST) recognized six Filipino scientists for their exemplary contributions in their respective fields. At the same time, PhilAAST announced a new set of awards for year 2020.

Two of the scientists who were recognized for their achievements were Dr. Carlo C. Arcilla and Academician Raymond R. Tan, who received the Gregorio Y. Zara Awards for Basic Science Research and Applied Science Research, respectively.

Dr. Arcilla is currently director of the Department of Science and Technology (DOST)-Philippine Nuclear Research Institute. Among his projects include the lowering of costs of cancer diagnosis through nuclear medicine, as well as researching for innovative nuclear applications in agriculture.

Academician Tan, on the other hand, is a professor of chemical engineering and current vice chancellor for research and innovation at the De La Salle University (DLSU). He is also a member of the National Academy of Science and Technology, Philippines. His researches are focused on the development of novel computational techniques for the design of sustainable industrial systems.

Established by the family of National Scientist Gregorio Y. Zara and the PhilAAST in 1968, the Gregorio Y. Zara Awards for Basic and Applied Science Research are given to local scientists for their valuable contributions in science and technology.

Further, Dr. Cleotilde H. How, professor emeritus from the University of the Philippines (UP) Manila, received the Dr. Paulo Campos Award for Health Research. This award was established by PhilAAST and the Campos

family in 2012 to honor outstanding medical researchers with utmost commitment to service and contributions for the betterment of the country.

"This is such a huge honor for me—to be recognized in the name of my late professor in UP, Dr. Paulo Campos," Dr. How mentioned. "His work in community health inspired me and made a huge impact in my career as a health researcher and practitioner," she continued.

Dr. How's contribution in health research has influenced the understanding, management, and diagnosis of tuberculosis (TB) among children and adolescents. With her expertise in the field, she worked for the World Health Organization core group for childhood TB in reviewing the essential list of drugs for TB in children in 2008.

"This award inspires me to do more work in reducing TB cases among children, especially in the community level," said Dr. How.



Three new PhilAAST awards will be added next year, named after (from left to right) former DOST Secretary Dr. Ceferino L. Folloasco, distinguished energy engineer Dr. Michael Robert Irvin Purvis, and renowned infectious disease specialist, the late Dr. Lourdes Espiritu-Campos.

Another scientist who received an award from PhilAAST was Dr. Susan M. Gallardo, who was bestowed the David M. Consunji Award for Engineering Research. Dr. Gallardo is a university fellow and retired professor of chemical engineering from DLSU.

Dr. Gallardo specializes in environmental engineering, specifically on industrial and hazardous waste treatment and management. Her technologies on water filtration system and photocatalyst of titania with activated carbon recently received a patent and a utility model registration, respectively.

Established by the PhilAAST and the DMCI Holdings, Inc., the David M. Consunji Award for Engineering Research aims to recognize outstanding researchers in the field of engineering.

In the field of agriculture, Dr. Emma K. Sales, professor at the University of Southern Mindanao and currently working with the Bureau of Plant Industry, received the Leads Agri Award for Agricultural Research.

Bestowed by the Leads Agricultural Products Corporation, the award recognizes committed researchers in the production of excellent products and programs contributing to the improvement of the lives of Filipino communities.

Among Dr. Sales' notable accomplishments was the establishment of the first tissue culture and biotechnology laboratory in Region XII. Her work as a crop scientist—developing molecular diagnostic tools in identifying varieties of durian, rubber, and mango—became a valuable tool in producing quality planting materials.

Another awardee was Engr. Robert O. Dizon who received the Mario Cruel Award. Engr. Dizon is the executive director of the DOST-Metals Industry Research and Development Center.

Engr. Dizon's involvement in spearheading the development of the first Filipino-made hybrid electric train led him to bag the Mario Cruel Award for Advanced Engineering Technology Application. The award recognizes individuals with notable contributions for the promotion, enhancement, and development of engineering and technology innovations in the country.

The awarding ceremony was conducted during the two-day annual convention of PhilAAST, held 11 to 12 September 2019 at Hotel Jen Manila in Pasay City, bearing the theme "Science for the People: Fostering Centers of Excellence in the Regions."

New awards for 2020

"PhilAAST is a strong partner of the DOST in promoting S&T in the country," DOST Secretary Fortunato T. de la Peña emphasized as he welcomed guests and awardees during the convention.

True to its mission of promoting public understanding, knowledge, and application and also of inculcating a culture of excellence and integrity among Filipino scientists and technologists, the PhilAAST will be adding three more awards to its current roster of five prestigious recognitions given to local scientists.

One of the new awards is the Dr. Ceferino L. Folloasco Award for Product and Process Innovation—named after the late Dr. Ceferino

L. Folloasco, a well-accomplished industrialist and former DOST secretary from 1989 to 1992.

The second addition to the list of awards is the Dr. Michael Purvis Award for Sustainability Research in honor of Dr. Michael Robert Irvin Purvis who was a distinguished energy engineer from the United Kingdom and served for 20 years in the academe of DLSU.

Lastly, the Lourdes Espiritu Campos Award for Research in Infectious Diseases, in honor of the late Dr. Lourdes Espiritu-Campos, will be given to outstanding scientists to recognize their significant work on infectious diseases research.

Nominations will be accepted next year and the first awardees for the three new recognitions will be announced in the 69th PhilAAST Annual Convention in 2020.

On top of the awarding ceremony, PhilAAST held six sessions throughout the two-day convention. Invited researchers and scientists from all over the country shared the development of centers of excellence in the regions, specifically in the fields of agriculture, medicine and social sciences, engineering, earth and environmental sciences, and information technology.

Founded in September 1951, the PhilAAST is a non-profit association of scientists and technologists in the country that aims to promote the value of science in the community.

ABOUT US

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Caraga studes slug it out for robotic supremacy

By Allan Mauro V. Marfal, DOST-STII

Photos from DOST-Caraga



Some of the highlights from the robotics competition held on 05 September 2019 during the last day of the Regional Science and Technology Week celebration in Bayugan City, Agusan del Sur.

Students from various secondary institutions in the Caraga Region showed off their robotics skills as they battled it out in a competition where the winners took home the title as robotics champs.

Ten teams composed of two senior high school students and two coaches-teachers from various school divisions in Caraga participated in the iMake Project Robotics Competition held on 05 September 2019 at the Bayugan City Gymnasium. The competition was part of the 2019 Regional Science and Technology Week of the Caraga Region which was held 03-05 September in Bayugan City, Agusan del Sur.

The iMake Project Robotics Competition was spearheaded by the Department of Science and Technology (DOST)-Caraga, in partnership with the DOST-Science Education Institute and the local government of Bayugan City.

The competition was divided into two categories: the SumoBot Challenge and the Obstacle AVOIDER MoBot Contest. In preparation for the competition, all participants and coaches were trained on audio microcontroller programming a day before the event.

For the SumoBot Challenge, the teams were given 30 minutes to code for the SumoBot's functionality. No modification was made on the SumoBot Kit. The opposing teams were given two minutes in the battle arena through a round robin format. A team was given two points per battle once the opposing team's SumoBot was out of the arena.

After the battles, the team from Cabadbaran City National High School got the most number of points, followed by the De La Salle John Bosco College. Agusan del Sur National High School finished third.

Meanwhile, there were five stages for the Obstacle AVOIDER MoBot Contest. The teams were given an allowable time of 20 minutes to code, adjust, and run their MoBots. The highest stage and length reached by the MoBot was marked as the official score of the team.

The teams with the MoBots that reached the longest length and the highest stage were proclaimed as winners. The team from Bayugan Comprehensive National High School emerged on top, followed by the Caraga Regional Science High School. At third place was Don Ruben Ecleo Sr. Memorial National High School.

Winners from the two categories received a plaque of recognition plus Php 5,000 for the first prize; Php 4,000 for the second prize; and Php 3,000 for the third prize.

"Celebrating an S&T Fair is not only about product display, seminar or career talks, but also letting the young generation appreciate the wonders of science in an effective and enjoyable way and, definitely, a robotics competition provides a great avenue for that," said Ricardo N. Varela, assistant regional director of DOST-Caraga.

Meanwhile, for Jansen Ramirez, one of the participants in the competition, the experience of competing in the robotic battle gave him an opportunity to appreciate all the lessons and projects that they do in school.

"When I saw the crowd from different schools cheering in the middle of our robotic competition, I told myself that I would like to experience this often. It gave me motivation to be part of our future robotics projects in school," said Ramirez.

He added, "In our school, our teachers have been emphasizing to us the potential contributions of robotics and its principles to help our country move forward. This competition was truly a learning experience and gave us reasons to be more excited to craft our next robotics projects."

DOST's Tuklas Lunas program leverages on PH biodiversity

By Jwynne Gwyneth Macan, DOST-PCHRD

In recent years, the government's efforts to develop cheaper medicines from natural sources has been successful with the lagundi and sambong medicinal products. These products were developed under the National Integrated Research Program on Medicinal Plants of the Department of Science and Technology-Philippine Council for Health Research and Development (DOST-PCHRD).

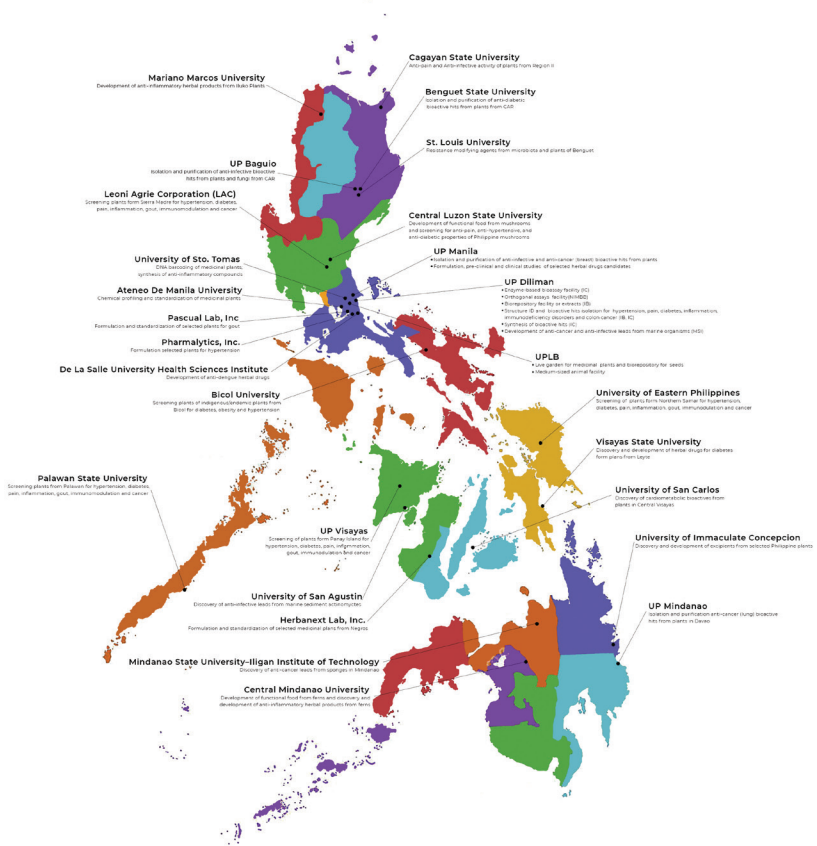
Because of the project's success with lagundi and sambong, the DOST-PCHRD established the Tuklas Lunas program to pursue drug discovery and development by leveraging on the country's very own biodiversity.

Given that most medicines available in the country were developed abroad and distributed by multinational companies, these products are usually offered at higher prices in the country. This in turn becomes a barrier for Filipinos to access treatment.

The Tuklas Lunas program's main objective is to develop drugs that are sourced locally, which makes these medicines more accessible and affordable to communities. The program also aims to help strengthen the capacities of both researchers and the local industry in drug discovery and development.

Tuklas Lunas targets to harness the potential of the country's own resources under two tracks—the herbal and drug tracks. In the Tuklas Lunas program, DOST-PCHRD partners with institutions in the regions to study the area's biodiversity potential for drug research. The institutions' diverse outputs are attributed to the resources that are peculiar and abundant to each region.

To date, the program has supported and partnered with 27 institutions nationwide for the implementation of projects that address the various stages of drug discovery and development.



Tuklas Lunas Centers in the Philippines

Some of the most advanced projects in terms of development include the clinical trial of fixed-dose combination of three plants for the management of dengue-associated symptoms by Pharmalytics, Corp. and De La Salle University Health Sciences Institute. Another is the ongoing formulation and standardization of 26 plants for gout, inflammation, hypertension, and blood-glucose lowering by the University of the Philippines Manila, Ateneo de Manila University, Pascual Lab, Inc., Pharmalytics, Corp. and Herbanext Lab, Inc.. Further, there

is also the development of functional food and herbal drug candidates from edible mushrooms and ferns by the Central Luzon State University and Central Mindanao University.

Aside from drug discovery and development, the DOST-PCHRD supports researches and projects—from conceptualization to technology transfer—that address some of the country's most pressing health concerns outlined in the National Unified Health Research Agenda and the Harmonized National Unified Health Research Agenda.

inFOCUS

DOST-Region IX RSTW showcases Filipino ingenuity. Zamboanga, one of the country's top producers of rubber trees, partnered with the Department of Science and Technology-Region IX to transform mature rubber trees into creative, functional pieces of furniture. Photos show a round table that can also function as chairs and storage. These wood pieces were showcased at the three-day celebration of the Regional Science and Technology Week, held 09-11 September at the Palacio de Sur in Zamboanga City.

