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## Virgin coconut oil as adjunctive therapy for COVID-19

By David Matthew C. Gopilan, DOST-STII

**C**onsidered as the Tree of Life, the coconut never stops giving. Right now, with the global health crisis, this has been proven again that the coconut could offer a life-saving solution to fight COVID-19 in the form of virgin coconut oil (VCO).

The Department of Science and Technology (DOST) is investing about PHP8.4M to explore the possible use of VCO as adjunctive therapy for hospitalized COVID-19 patients. Adjunctive therapy is given to assist the primary treatment provided to the patients.

In one project amounting to PHP4.8M, 74 eligible patients from the Philippine General Hospital will participate in a study that will monitor the safety of VCO. The patients will be randomly assigned either to a standard care or treatment group. The treatment group will receive 15ml or about one tablespoon of VCO every meal, three times a day on top of standard regular care for two weeks. During this period, their lipid profile, fasting blood sugar, creatinine, and efficacy of VCO through recovery from symptoms and virus clearance of the patients will be closely monitored. This project is under the supervision of Dr. Marissa M. Alejandria of the University of the Philippines Manila.

Results from this study will prove the efficacy of VCO in helping improve the overall health status and recovery of a COVID-19 patient.

In another project with DOST's own Food and Nutrition Research Institute (DOST-FNRI), VCO is given to suspect and probable cases of COVID-19 who are quarantined in a center or hospital so the cases will not be severe. Led by DOST-FNRI Director Imelda Angeles-Agdeppa, this PHP3.6M project aims to evaluate VCO's beneficial effects in terms of CRP level, all hematology tests (CBC differential count), pulmonary function, viral load or CD4+, lipid profile, diminishing/resolution of signs and symptoms, and the number of days in the center.

If the results of this study prove to be successful, VCO can be used as a potential supplement of suspect and probable cases of COVID-19 to prevent the worsening of the condition of the patient.

The VCO used in the DOST-FNRI's study was analyzed by the Laboratory Services Division of the Philippine Coconut Authority.

DOST funding on VCO studies was released through its Philippine Council for Health Research and Development.

So, what's in the VCO that makes it a candidate as adjunctive therapy for COVID-19? Derived from

the kernel or white meat of the coconut fruit, VCO contains lauric acid and monolaurin. Past studies suggest that these chemical compounds can stop the replication of the COVID-19 virus and the binding of the proteins of the virus to the cell membrane of the host.

These chemical properties of VCO are now being used against COVID-19 through adjunctive therapy.

In a separate development, Dr. Fabian M. Dayrit of the Ateneo de Manila University has strongly advocated the use of VCO in treating COVID-19. Dr. Dayrit is also an academican of the DOST-National Academy of Science and Technology, the highest collegial body of highly recognized scientists in the Philippines, and president of the Integrated Chemists of the Philippines, a professional organization that helps regulate the professional practice of chemistry in the country.

Dr. Dayrit is also involved in the DOST-FNRI study.

If proven as an effective adjunctive therapy, VCO can boost the coconut industry in the Philippines. Then, if the VCO will indeed be successful in addressing COVID-19, the market for VCO will increase because it will also become affordable and easily accessible to consumers.



## DOST-PCIEERD vies for international science engagement breakthrough award

By Hanah Tabios, DOST-PCIEERD



**T**he Department of Science and Technology-Philippine Council for Industry, Energy and Emerging Technology Research and Development (DOST-PCIEERD) enters the finals of the prestigious international science engagement competition called Falling Walls Engage 2021 for its science communication social media campaign "Pinoy Science" in partnership with TikTok.

Out of the 189 competitors from around the world, DOST-PCIEERD is among the Top 50 Finalists in the international tilt and will be vying to be included in the Top 20 winners that will be selected by the Falling Walls Advisory Board composed of renowned scientists, communicators, and consultants with a variety of backgrounds and a shared expertise in the evaluation of science engagement projects. This will be announced between 18-23 August 2021. From the Top

20 winners, a Breakthrough of the Year will be selected during the Falling Walls Conference to be held in November 2021.

The partnership between DOST-PCIEERD and TikTok was forged this year to promote science and technology specifically through the Pinoy Science TikTok account.

Through this collaboration, Filipinos were trained to use the social media platform for science communication, Filipino-made technologies were promoted, and hashtag contests such as the #PinoyInnovator challenge was conducted.

"We thank Falling Walls for this recognition, and we share this award with the game-changing innovations that our researchers come up with and share in this innovative platform. We thank TikTok for this partnership and giving us a channel to share to the world Filipino ingenuity," DOST-PCIEERD Executive Director Enrico C. Paringit said.

The Top 20 winners of the Falling Walls Engage Competition will get a chance to present their project on stage of the Falling Walls Conference in front of an international audience of global leaders in science, politics, business, and the media, which will also be the first in-person gathering since the pandemic erupted. This will take place in Berlin, Germany from 7-9 November 2021 on the anniversary of the historic fall of the Berlin Wall.

Falling Walls Engage is the global platform for science engagement, hosted by the Falling Walls Foundation in cooperation with the Robert Bosch Stiftung, which aims to provide a better understanding and public involvement in science that can help tackle global societal challenges through fact-based decision-making and contribute to the overall wellbeing of the society.

# PH bags six medals at the International Math Olympiad

By Marco D. Melgar, DOST-SEI

*A bountiful harvest. The Philippine team with each member winning medals placed the Philippines at 23rd out of the 107 countries that participated at the 62nd International Mathematical Olympiad. (Photo courtesy of Go for Gold Philippines IMO Team Facebook page)*

Every one of the six-member Philippine team to the recently concluded 62nd International Mathematical Olympiad (IMO) made the country proud by each winning a medal at one of the most difficult and most prestigious mathematics competitions in the world.

Immanuel Josiah Balete of St. Stephen's High School, Raphael Dylan Dalida of Philippine Science High School - Main Campus, Steven Reyes of Saint Jude Catholic School, and Bryce Ainsley Sanchez of Grace Christian College each won a silver medal in the Olympics of math competitions. Meanwhile, Sarji Elijah Bona of De La Salle University - Senior High School and Vincent Dela Cruz of Valenzuela City School of Mathematics and Science each took home a bronze medal.

The team was led by Dr. Christian Paul Chan Shio (Leader) and Mr. Raymond Joseph Fadri (Deputy Leader), on behalf of the Mathematical Society of the Philippines (MSP). Training for the contestants was handled by professors from the University of the Philippines Diliman and the Ateneo de Manila University, and included past team officials such as Dr. Richard Eden (Team Leader, 2016-2019) and Dr. Louie John Vallejo (Deputy Leader, 2015-2017).

Altogether, the team ranked 23rd out of 107 countries, a monumental jump from 2020, when the Philippines ended the competition in 43rd place. Hosted by St. Petersburg, Russia, the 62nd IMO is the second competition in a row held online due to the ongoing COVID-19 pandemic.

"This is a very good year for waving the Philippine banner in the international arena," said DOST Science Education Institute (DOST-SEI) Director Josette T. Biyo. "These students are showing the world that Filipinos are achievers in anything they put their minds to, be it sports or intellectual pursuits."

"These medals are hard-earned and well deserved," added Dr. Chan Shio. "They're no strangers to the rigors of competition, and their commitment and dedication paid off. They made us and the country very proud."

"The Philippine Team did particularly well this year, even doing better than historically strong teams like Japan, France, and Romania," said MSP President Jose Ernie C. Lope. "Once again, the Philippines has shown that it is not far behind from the world leaders in mathematics competitions. Huge congratulations to all our contestants and to lead coaches, Dr. Chan Shio and Mr. Fadri. On behalf of the MSP, I would like to thank DOST-SEI and HARI Foundation for generously supporting us in this important endeavor."

## ABOUT US

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# DOST Bicol Region launches new web series

By Engr. Domingo A. Peña Jr., DOST Regional Office V



**TEKNO-ASENSO**

**CAMBI INTEGRATED FARM**

**“STATE-OF-THE-ART” FARM, POSSIBLE SA DOST-SETUP**

**T**he Department of Science and Technology Region V (DOST-V) debuted its first web series “Alas-DOST Na! DOSTkusyon Na!” on 30 July 2021 broadcasted at the DOST Region V official Facebook page, with simulcast on Radyo Veritas Legazpi and Veritas TV.

Science time is happening every Friday, two o’clock in the afternoon for the DOST stakeholders and the general public.

Developed and produced by DOST-V’s S&T Promotion and Information Services Unit, the premiere was hosted by Regional Director Rommel Serrano and S&T Promo Officer-In-Charge Engr. Domingo A. Peña Jr. There were two segments for the pilot episode featuring key DOST programs: the Small Enterprise

Technology Upgrading Program or SETUP and DOST S&T Scholarship.

For the pilot episode, “Alas-DOST Na! featured topics such as Tekno-Asenso: ‘State-of-the-art’ farm, possible sa SETUP, where Mr. Ranulfo Cambi, a successful DOST technology cooperator, shares his story of Cambi Integrated Farm and its progress through the technology interventions of SETUP; “Oragon: Kwentong Tagumpay, Kwentong DOST Scholar,” featuring Hon. John Paul Erlano who talked about his experience and learnings as a DOST scholar, and its impacts on his endeavors as a

Board Member of the 2nd District of Sorsogon.

With the launch of the web series, DOST-V leverages on the trend of information dissemination through social media along with strengthening partnership with local media outlets.

Alas-DOST Na! further reinforces DOST’s presence in the Bicol Region through an informative and engaging presentation of its programs, projects, services and activities.

The pilot episode can be viewed at the DOST-V FB page at <https://www.facebook.com/dostro5>.



Ranulfo Cambi shares his story of Cambi Integrated Farm and how the venture succeeded through the help of technology interventions introduced by DOST’s SETUP.



Alas-DOST na, DOSTkusyon na! hosts DOST-V Regional Director Engr. Rommel Serrano (right) and DOST-V S&T Promotion OIC Engr. Domingo A. Peña Jr.