

Healthscape

SPECIAL COVID-19 ISSUE

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MANILA

MULA KAY

Chancellor...

Malapit nang matapos ang taong 2020 at kahit naririto pa rin sa ating komunidad ang COVID, napakaraming katuparan sa larangan ng pananaliksik na dapat nating ipagdiwang.

Kulang ang limang araw at kinailangan ang dalawang linggo upang mailahad ang ilan lamang sa mga pangunahing resulta ng mga pag-aaral at mga imbensyon na gamit kontra COVID sa *UP Manila Science and Technology 2020 Week* mula nuong Nobyembre 23 hanggang Disyembre 4! Ang tema ng nasabing S&T Week ay “Agap Agham: Responding to the Pandemic through Research”.

Pinangunahang inilahad sa naturang S&T Week ang Code of Research Ethics na gagabay sa lahat ng ating mga mananaliksik at siyentipiko upang sila ay pagkatiwalaan ng malawak na komunidad. Sisimulan din ang pagtatag ng Office of Research Integrity na tinalakay noong Nobyembre 24.

Mababasa rin sa isyung ito ang iba’t-ibang mga halamang gamot na napag-alamang nagbibigay ng mabisang lunas sa mga sakit. Magiging malaking tulong sa ating mga kababayan ang mga gamot na ito dahil sa kawalan nila ng mga side effects at napakahalagang dahilan pa, mas mura ang mga ito kaysa sintetikong gamot na nabibili ngayon.

Kahangahanga ang mga inilunsad ng UP Manila Surgical Innovation and Biotechnology Laboratory o SIBOL na mga teknolohiya na maraming paggagamitan maliban sa COVID. Bukod sa mahahalagang gamit ang mga ito na mahirap makuha ngayong pandemya, ang mga produktong ito ay magagawa sa mas mababang halaga na magiging malaking tulong sa bansa upang harapin ang iba pang unos na maaring dumating sa hinaharap.

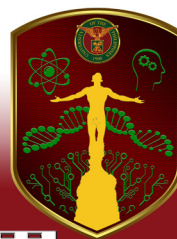
Bilang paghahanda sa darating na bagong taon at sa ano mang mga pagsubok, ang mga pinuno ng ating unibersidad ay sumailalim sa isang pagsasanay na may temang “Sustainable Leadership: UP Manila Beyond 2020”. Layon nitong mapalawak ang pag-iisip ng liderato at pag-ibayuhin ang pagpapataas ng antas ng ating pagtuturo, pananaliksik, at serbisyo sa bayan.

Tunay na labis-labis ang dapat nating ipagpasalamat. Kahit mayroon pa ring COVID, marami tayong mga aral na natutunan, umani tayo ng malalim na kaalaman, at hindi tayo nanghihina; bagkus ay may kakaibang lakas harapin ang ano mang hamon. Lahat ng mga ito ay dahil sa ating pagbabayanihan at basbas ng Maykapal.

UNIVERSITY OF THE PHILIPPINES MANILA
SCIENCE AND TECHNOLOGY WEEK 2020

**AGAP
AGHAM**

Responding to the
Pandemic through
RESEARCH



UP Manila's Code for Responsible Conduct of Research launched at S&T Week

To ensure that researchers and their work do not fall short of the strictest standards on data-gathering, data analyses, and treatment of their study population, UP Manila launched the **Code for Responsible Conduct of Research** during its Science and Technology Week on 23 November 2020. (The two-week event was held online due to the COVID-19 crisis.)

Dr. Edward HM Wang, head of the UPM Committee on Research Integrity, presented to Chancellor Carmencita D. Padilla the Code on behalf of the Office of Vice Chancellor for Research and the Committee that was held online.

Upon receiving the Code, Chancellor Padilla bid Dr. Wang to constitute the Office of Research Integrity (ORI) as early as possible as the University needs a unit which will not only guide people in doing their work, but will monitor the researchers and researches as well. (*To know more about the Code, please see the [UPM S&T 2020 program book](#)*)

For her part, Dir. Eva Maria Cutiongco-De La Paz of the National Institutes of Health, praised the creation of the Code and the soon-to-be created ORI. “Research integrity is vital because it creates trust and trust is at the heart of the research process. Researchers have a huge responsibility to produce trustworthy data that impact the

lives of our people. Our government entrusts to us people’s money in the form of grants to address the health needs of our country.”

The UPM S&T 2020 Week, themed “**AGAP AGHAM: Responding to the Pandemic through Research**”, was described by Vice Chancellor for Research Dr. Armando C. Crisostomo as carefully curated to present to the public the best researches among the 300+ the University has that are related to COVID-19. Chancellor Padilla characterized the event as allied with the national theme of “Agham at Teknolohiya: Sandigan ng Kalusugan, Kabuhayan, Kaayusan, at Kinabukasan”. “Ours reflect the swift, systematic, and science-based response of UP Manila and PGH to the pandemic,” she said.

After the turnover of the Code for Responsible Conduct of Research, the first session of presentations commenced. The researches were organized around the sub-theme, “Characterizing Treatment Approaches to COVID-19” by the College of Medicine and the Philippine General Hospital.

The UPM Science and Technology Week 2020 Committee was headed by Dr. Ricardo M. Manalastas Jr, Director for Research Management and Translation and co-headed by Dr. Mark Anthony Sandoval of the Research and Grants Administration Office (RGAO). **Fedelynn Jemena**

Biomedical devices and COVID technologies spotlighted on Teknolusugan event

Six biomedical and COVID-related technologies were presented to industry partners and government representatives on the second day of the Teknolusugan event for prospective partnerships in terms of further development, licensing, commercialization, and scaling up. The event formed part of the 2020 Science and Technology celebration of UP Manila. Below are the technologies and their presenting authors.

Development of Genetic Risk Score for the Prediction of Systemic Lupus Erythematosus (SLE) in Filipinos, Dr. Michael L. Tee

SLE is a complex prototypic autoimmune disease which is multi-factorial with genetic and environmental factors affecting its development. The study developed a Genetic Risk Score (GRS) to predict SLE in Filipinos. The GRS allows for the conversion of genetic data to a predictive measure of disease susceptibility by aggregating the risk effects of disease loci into a single risk score. The method is especially useful for SLE which has been associated with a strong genetic background.

However, no significant association between the GRS and the subphenotypes of the SLE patients in the study was observed. But it pointed to the possibility of using the selected 12 susceptibility Single Nucleotide Polymorphisms (SNPs) in classifying individuals with high risk of developing SLE. A larger sample size is required to assess risk of acquiring a particular SLE manifestation of subphenotype.

Pilot study on the use of V-R in cognitive behavioral screening competencies in adolescent's cohort, Dr. Francis Gregory Samonte

The study aimed to develop a portable Virtual Reality (V-R) device that can potentially bridge the gap in health care accessibility brought about by limited availability and/or access to qualified clinical specialists. The V-R can also serve as a tool in the assessment of neurocognitive and related disorders particularly in children and adults in



From left: MyBESHIE, Acquila VR, and Kerrison Rongeur.

poor resource areas, and during the COVID-19 pandemic when mental health problems are on the rise.

The device was used in a pilot study conducted in March 2020 on a cohort of students of the Subic National High School. Its key features are ability to quantify sensorimotor behavior; ability to support a broad range of behavioral tasks to objectively quantify brain function; and portability and wearability. The V-R includes early development skills test for toddlers such as attention and focus skills, memory skills, association skills, language skills, and fine motor skills. The prototype is awaiting patent application. There is need to optimize study through a higher number of cohorts.

Philippine Carrageenan Lyophilized Wafers, Razile Kay A. Quibin

Lyophilized wafers are porous, light, soft and non brittle structures produced via freeze drying of gels made from hydrophilic polymers. They are ideal for wound dressing, with a high absorption ability for excess fluids in the skin, and can be incorporated with topical drugs which can be administered directly on the wound site.

The Philippines is a leading producer of carrageenan that is widely used in the food industry and for personal care products and pet food products. The study explored the potential uses of carrageenan in topical drug delivery and wound management. In the study, wafers were successfully obtained from gels using Philippine Natural Grade carrageenan and traditionally refined carrageenan. A plasticizer and a topical antimicrobial drug were also added to

improve wafer properties and observe drug release, respectively. The wafers demonstrated properties that are useful for potential wound dressing and vehicle for topical drug delivery.

A patent has been filed for the product, the next status of which will be its clinical and cosmetics application.

Clinical Validation of an Ergonomically Designed Kerrison Rongeur, Dr. Rafael Bundoc

Endoscopic Spine Surgeries (ESS) necessitate the use of specialized scopes inserted percutaneously into the skin that transforms the surgery into an outpatient procedure and results in a much shorter recovery time for the patient. Orthopedic and spine surgeons use the surgical instrument Kerrison Rongeur (KR) in 70% of ESS surgeries after some modification of making it long and narrow, but rendering it very fragile. Many endoscopic surgeons are forced to handle this instrument in a very awkward position that strains their hands, wrists, elbows, and shoulders during the surgery causing the surgeons to develop musculoskeletal disorders.

To reduce the strain on spine surgeons, the study modified the KR further by developing axial handles that put the hands and wrist in their natural position during ESS. Several tests were performed on a simulation spine dummy using the classical and new ergonomic KR. Results showed that the ergonomic KR was able to reduce the strain on the operator's hand and wrists by 40%. The modified KR is for patent application.

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Agreements with 3 industry partners signed on health research and innovations

The Teknolusugan events held on Nov. 25 and 27, 2020 saw the ceremonial signing of agreements between UP Manila and three companies for the next steps of the technology development process.

The first industry partnership was the license agreement between UP Manila and Greenext Lifescience Corporation represented by its president, Mr. Noel Morada. The licensed technology was **Hemoxyther**, an herbal food and dietary supplement for iron deficiency anemia and other hematological disorders developed by College of Pharmacy professor and Institute of Pharmaceutical Sciences Director Erna Arollado. Greenext Lifescience Corporation is breaking into new frontiers, new areas of science and technology in the Philippines, in addition to its manufacture of personal care products with fresh seaweed as its main component.

This was followed by a research collaboration agreement with Rohto Pharmaceutical Company (Osaka, Japan) for further development and production of a prototype broad spectrum anti infective ophthalmic solution. Dr Leo Cubillan is the inventor of the technology targeted for the initial management of conjunctivitis in the Philippines seen in almost half of eye patients during consults. The multinational company that develops pharmaceutical products such as eye drops and skin care items was represented by Mr. Takahiro Kurose during the signing.

The third agreement was signed

with D & L Industries, a company that manufactures products from food ingredients, chemicals for personal and home care use, raw materials for plastic, and aerosol products. Its President and Chief Operating Officer, Dean Armando Lao, expressed delight to be working with UP Manila and expressed desire to continue the ties between the academe and business in developing

technology for Filipinos by the Filipinos.

The industry partnerships are manifestations of the engaging dealings of UP Manila with companies with whom it forges a mutually beneficial relationship to move forward the health innovation agenda in the country.

“We look forward to more fruitful years of partnerships and collaboration with each of you even beyond this pandemic. Let us become partners towards ensuring the Filipinos’ optimal health by making these technologies accessible to all,” stated UP Manila Chancellor Carmencita D. Padilla. **Cynthia Villamor and Charmaine Lingdas**

BIOMEDICAL DEVICES... **MyBESHIE for Patient Care and Health Workers’ Safety,** Dr. Prospero C. Naval, Jr

The myB.E.S.H.I.E. or My Bot Ensuring Safety and Health in Isolated Environments, is a UP Manila Surgical Innovation and Biotechnology Laboratory (SIBOL)-developed telepresence device. It is a remote-controlled robot that allows clear wireless video communication that could also work in areas with limited internet connectivity. It allows interactions between the potentially infectious patients and doctors, nurses, social workers, chaplains, or even relatives outside the danger zone; through a device that displays a life-sized face, independently standing, and requires no operation by the sick.

This serves essential functions in treating and assuring patients while also protecting health care workers who then do not need to be physically at bedside to provide care. The myB.E.S.H.I.E uses are in doing rounds on admitted patients, clinic supervision and referrals, reception and tracing, operating room, observation and coaching, and clinical teaching. Features of the prototype based on the feedback from pilot tests include clear and efficient video communication, seamless internet-independent wireless connection (within premises), remote controlled mobilization, and portability and modularity.

Sanipod Disinfection Cubicle, Engr. Eduardo R Magdaluyo, Jr and Dr. Edward Wang

There are problems with the existing technologies used to disinfect healthcare workers prior to doffing PPE. These include manual spraying of HCW that leads to viral exposure to other HCWs, spraying of disinfectants that results in flooding of contaminated fluid, and walk-through tents or cubicles that leads to contaminated cubicles.

The SaniPod is self-contained; hence, there is less chance of contaminating other HCWs. The self-disinfecting cubicle has mechanisms to decrease contamination through controlled release of disinfectants, automated disinfection process, and portable and intuitive user interface. There are evidences for safety, efficacy, and other parameters based on tests made on the prototype.

It can also be used in other situations and facilities such as during other health crises and pandemics and disasters where victims are in crowded evacuation centers. The second iteration is being worked on to incorporate some more improvements. Invention patent including other succeeding steps for compliance and regulatory mechanisms are pending. *(Based on the abstracts in the souvenir program and oral presentations during the event)*



Tsaang Gubat



Yerba buena



Ulasimang bato



Mentha cordifolia

Herbal technologies presented at Teknolusugan event

The first day of the Teknolusugan event conducted by the UP Manila Technology Transfer and Business Development Office (TTBDO) on Nov. 25 saw the presentation of six herbal medicine preparations before technology developers and industry representatives. The event was part of the Science and Technology Week celebration from Nov. 25 to Dec. 4, 2020.

Ophthalmic Solution for Prophylaxis and Treatment of Ocular Infections

In response to the shortage of ophthalmologists in the country, **Dr. Leo D.P. Cubillan**, Philippine Eye Research Institute (PERI) director, reports a collaboration with DOH in the creation of a service program which is integrated into the universal healthcare system for use in all municipal health office clinics by primary eye care physicians.

The frequently used initial treatment for eye conditions is fluoroquinolones which may cause bacterial resistance. An ophthalmic solution being developed by his team can be used instead before referral to an ophthalmologist.

This product was registered as a utility model on 27 April 2020 and has several prototypes. Currently, the team is working on another prototype that will undergo test for efficacy, safety, and stability to make it commercially viable. Once the test is done, it will undergo a clinical trial with the final prototype before manufacturing and distribution. He added that this product has less bacterial resistance compared to fluoroquinolones.

Natural Preservatives for Food and Other Preparations

The current available solution to prevent food-borne diseases and microbial spoilage makes use of synthetic preservatives for various kinds of food and pharmaceutical products; however, studies demonstrated that synthetic preservatives cause undesirable effects such as allergic reactions, carcinogenicity, behavioral changes, and even mental outcomes.

Dr. Erna C. Arollado, Director of the Institute of Pharmaceutical Sciences shared numerous reports demonstrating the antimicrobial property of extracts of common Philippine plants that may become sources of affordable, accessible, and safe alternatives to existing chemical preservatives. The studies utilized natural antimicrobial preservatives sourced from plants for products particularly liquid oral pharmaceutical preparations. Preservative capacity of their formulated suspensions was evaluated and a decrease in the number of *E. coli* and *S. aureus* colonies was seen which indicates their potent preservative qualities.

Tsaang Gubat Tablet for Biliary and Gastrointestinal Colic

Mr. Essel N. Tolosa, Senior Researcher of the National Integrated Research Program on Medicinal Plants (NIRPROMP) reported that clinical trials comparing the anti-spasmodic effect of *Tsaang gubat* oral tablet and dicycloverine among patients with mild, moderate, or severe biliary colic or gastrointestinal spasm showed comparable results. Based on the total pain relief, it was found that the relief

of pain by *Tsaang gubat* was within 30 minutes with complete relief of all pain within two and a half hours. He emphasized that the competitive advantage of *Tsaang Gubat* tablet over other synthetic drugs is that it is cheaper with no unwanted side effects such as stomach ulcers, heart failure, dry mouth, trouble urinating, or allergic reactions.

Yerba buena as Analgesia

Post-operative pain management aims to improve pain relief, early mobilization of patients, reduce the risk of complications, and timely or early discharge of patients; thus improving clinical outcomes.

Dr. Jaime M. Purificacion, NIRPROMP Researcher and Research Faculty of UP Manila, presented *Yerba buena*, scientifically known as *Mentha cordifolia* Opiz., a herbal plant that contains menthalactone, beta-sitosterol and beta-sitosteryl, and beta glycoside which has been shown to have analgesic or pain relieving activity. Clinical trials 1-3 showed that it is safe and effective in relieving post-operative moderate to severe pain after circumcision, dental extractions, and childbirth; which is equivalent to the analgesic effect of paracetamol. Its onset of action is within 10 minutes with total pain relief in 30 minutes to 1 hour. Its competitive advantage over other pain relief drugs is that it is cheaper with no unwanted side effects like bleeding, stomach ulcers, and renal injury which are seen in synthetic preparations.

Ulasimang bato, an Herbal Medicine for Gout and Hyperuricemia

Stage one gout starts with uric acid build up in the blood and crystal formation around the joints, while stage two is the acute gout causing a painful gout attack. Uric acid is a chemical produced when the body breaks down food high in purine such as poultry, red meat, alcohol, etc.

Dr. Cecilia Nelia Maramba-Lazarte, Institute of Herbal Medicine Director, presented the NIRPROMP developed solution for gout and hyperuricemia, the *Ulasimang bato* tablet, also called *pansit pansitan*, *Peperomia*
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UP CPH and British Embassy Manila host webinar on vaccine-preventable disease control in the New Normal

Responding to the need to prevent vaccine-preventable diseases amid the current pandemic, the UP College of Public Health (UP CPH) and the British Embassy Manila hosted a second webinar last October 22, 2020; as part of the series, *Public Health in the Time of COVID-19 and the New Normal*, aimed at frontliners and public health workers.

Spearheaded by the UP CPH Department of Medical Microbiology (DMM), the webinar titled, “Amplifying Vaccine-Preventable Disease (VPD) Control During the COVID-19 Pandemic” featured three renowned speakers and two reactors and attracted 450 attendees from the Philippines, the United Kingdom, and other countries in Asia, Oceania, and the Middle East.

The participants were welcomed by **Dr. Vicente Belizario, Jr**, UP CPH Dean and Centre Director of SEAMEO TROPED Philippines, who emphasized the need to sustain vaccine-preventable disease control in the New Normal. The webinar was also graced by the presence of the Ambassador of the United Kingdom in the Philippines, His Excellency Daniel Pruce, who expressed enthusiasm on the deepening relationship between the Philippines and the United Kingdom; strengthened further by the partnership with UP CPH. He also highlighted global vaccine-related efforts that are actively supported by the United Kingdom.

Talks were delivered by **Dr. Yoshihiro Takashima**, Coordinator of the Expanded Programme on Immunization Unit of the World Health Organization Western Pacific Region; **Dr. Lulu Bravo**, Professor Emeritus of the UP College of Medicine and Executive Director of the Philippine Foundation for Vaccination; and **Dr. Patrick Osewe**, Chief of the Health Sector Group of the Asian Development Bank.

Dr. Takashima discussed the imminent threat of another measles outbreak in the coming year and

The poster is for a webinar titled "Amplifying Vaccine-Preventable Disease Control During the COVID-19 Pandemic" held on 22 October 2020, Thursday, from 4:00 to 5:45 p.m. (Philippine Standard Time) and 9:00 to 10:45 a.m. (British Standard Time). It lists the following participants:

- OPENING REMARKS:** Dr. Vicente Belizario, Jr. (UP CPH Dean), His Excellency Daniel Pruce (Ambassador of the United Kingdom), and Dr. Yoshihiro Takashima (WHO Coordinator).
- SPEAKERS:** Dr. Lulu Bravo (UP CPH Professor Emeritus), Dr. Patrick Osewe (ADB Chief), and Dr. Sharon Yvette Angelina Villanueva (UP CPH Professor).
- REACTORS:** Dr. Clemencia Bondoc (UP CPH Associate Professor) and Dr. Maria Margarita Lota (UP CPH Chair).
- MODERATOR:** Dr. Sheriah Laine M. de Paz-Silava (UP CPH Assistant Professor).
- CLOSING REMARKS:** Dr. Sharon Yvette Angelina Villanueva (UP CPH Professor).

Registration link: tinyurl.com/BEUPWebinar2

how this may be averted by mass vaccination strategies especially at the community and barangay levels. He also explained the need to prepare for the impact of COVID-19 on measles control and to adopt a broader regional and global view of measles and rubella elimination.

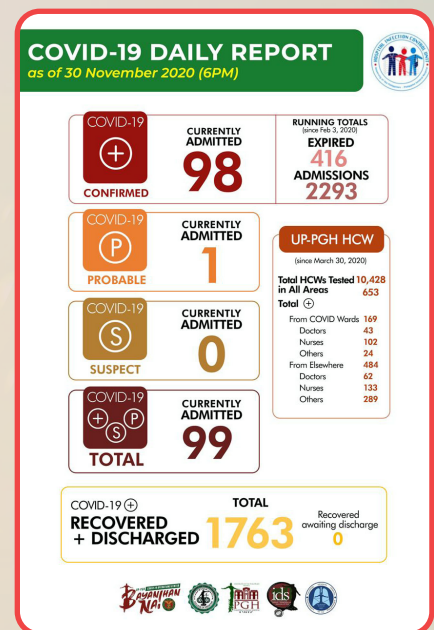
Dr. Bravo underlined how the COVID-19 pandemic disrupted essential health services in the country, especially immunization, which has posed greater health risks for VPDs. She issued a call to action and reiterated that the work is far from over. There is a need to overcome challenges in vaccine information, hesitancy, delivery, and availability in the Philippines.

Dr. Osewe demonstrated the essential role of policy and systems in implementing vaccination programs; which require better coordination in financing, regulation, manufacturing, planning, system strengthening, and vaccine delivery. He then suggested strengthening engagement in multilateral arrangements and bilateral negotiations with pharmaceutical companies. He recommended the scale-up of domestic manufacturing and the use of pooling mechanisms.

Reactions were given by **Dr. Clemencia Bondoc**, president of the Association of Municipal Health Officers

of the Philippines and **Dr. Maria Margarita Lota**, UP CPH DMM chair. Dr. Bondoc contextualized the speakers' inputs in the local health system setting and advocated for barangay- and community- level leadership in implementing vaccination campaigns. Meanwhile, Dr. Lota underscored the role of the academe in educating and advocating for vaccination programs.

After a fruitful open forum, the event ended with closing remarks from Dr. Sharon Yvette Angelina Villanueva, UP CPH College Secretary and professor at the DMM. The webinar was moderated by DMM faculty Dr. Sheriah Laine M. de Paz-Silava and the overall coordination was by CPH faculty and Special Assistant to the Dean Dr. Jaifred Lopez. **Dr. Sheriah Laine M. de Paz-Silava**



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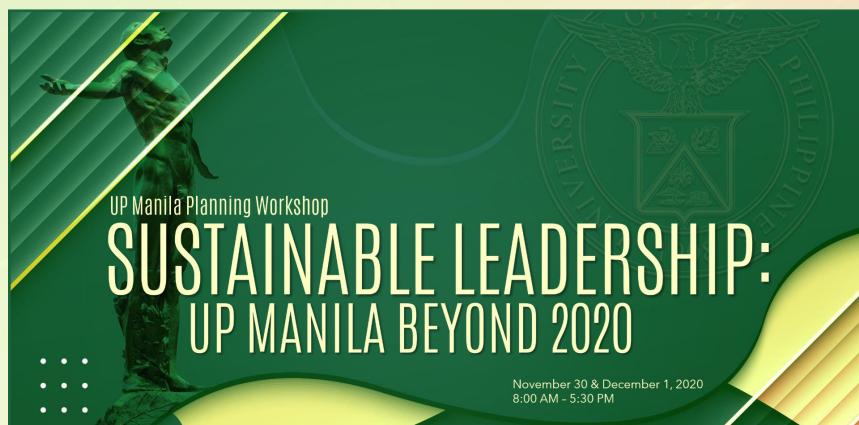
Dr. Olympia Q. Malanyaon
Director, IPPAO
Editor-in-Chief

Cynthia M. Villamor
Assistant Editor

Cynthia M. Villamor
Anne Marie D. Alto
Fedelynn M. Jemena
Charmaine A. Lingdas
January Kanindot
Staffwriters

January Kanindot
Anne Marie D. Alto
Design/Layout

Sigrid G. Cabiling
Circulation Officer
Joseph A. Bautista
Photographer



UP Manila officials train on sustainable leadership

Under Chancellor Carmencita Padilla's third term, UP Manila is envisioned to be a nurturing environment for accelerated change and innovation to advance academically and maintain its competitive advantage. To drive the university in this direction for the next three years, a two-day planning workshop via Zoom was held for the top management officials, deans, and directors from November 30 to December 1.

With the theme “**Sustainable Leadership: UP Manila Beyond 2020**”, the event brought together leaders across units to work as a community as they respond to the post-COVID-19 environment through enhanced 4Cs: Critical thinking, Creativity, Collaboration, and Communication skills. The workshop was facilitated by management expert **Prof. Federico “Poch” Macaranas**, Asian Institute of Management (AIM) professor and AIM Policy Center Executive Director, who shared concepts and insights that can be utilized in pursuing implementable programs in line with the university's vision. **Prof. Ester Ogena** and **Dr. Renato Bersoto** were also present to impart their thoughts and suggestions that complement the discussions.

Day one of the workshop focused on the behavioral aspects of seeing the “Big Picture,” the “Role of Middle Manager,” and “Game Theory” with exercises based on the movie *Parasite* and the article “Too Small to Fail: Prisoners’ Dilemma”. The second

day concentrated on an in-depth discussion on short-, medium-, and long-term SWOT analysis; at the same time applying the concepts of *People*, *Ideas*, and *Things* (capital investment for academic and outreach purposes) on specific problems.

The entire workshop covered four breakout sessions that the officials actively participated in. With help

from digital technologies such as Jamboard and Google Slides, 74 attendees who were grouped into 7 teams combined their knowledge and ideas and presented them in attractive and well-articulated outputs. A fun and interactive poll using Mentimeter was also utilized that sparked a connection among the participants while their answers and opinions are visualized in real-time.

At the end of the workshop, the participants were challenged to make use of the strategies learned and their implications on scaled up partnership efforts, communication for collaboration, and deepened UP Manila engagement with its stakeholders. Capping the two days filled with learning experiences was a fellowship night featuring global performer and UP Diliman BA Psychology graduate, **Kiara Dario**. She serenaded the attendees with dazzling Broadway songs and a few numbers from the musical *Ang Huling El Bimbo* where she performed as a cast member. **Anne Marie Alto**

HERBAL TECHNOLOGIES FROM PAGE 4...

pelucida. In the randomized double-blind clinical trials conducted, the *Ulasimang Bato* tablet was prescribed at a high dose during the first two weeks and was decreased to half the dose thereafter. Results showed that after two weeks of treatment, more than 85 percent had satisfactory pain relief and did not experience any rebound hyperuricemia or flare reaction which is sometimes seen in patients treated with allopurinol. *Ulasimang Bato* is cheaper compared to other anti-hyperuricemia agents and one need not take additional NSAIDs for pain and inflammation relief.

Mentha cordifolia in the Treatment of HIV Infection

The Philippines has an increasing incidence of HIV/AIDS in recent years. Fortunately, Antiretroviral therapy (ART) is currently given for free in DOH treatment hubs; however,

the availability is limited and recent reports show increasing drug resistance to current treatment regimens.

To help address these issues, **Dr. Sheria Laine M. De Paz- Silava**, physician scientist and UP College of Public Health Associate Professor, presented a product developed by her team which they called NP. NP is a medicinal plant that is widely distributed in Philippine communities and approved by the DOH for medicinal use. They conducted experiments in Japan to test the bioactivity of its crude and semi-purified forms against HIV and latently infected cells. The findings present a natural product that inhibits virus production in HIV latently infected cells and targets the later stages in gene expression where virus resistance strains are amplified. The patent application for the methods and preparations of NP in the treatment of HIV infection has been applied in February 2020.