

Mensahe mula sa Tsanselor

Balikan natin ang 1908 nuong itinatag ang Unibersidad ng Pilipinas bilang antas-dalubhasang tagapagturo sa halos lahat ng larangan ng pag-aaral tulad ng batas, medisina, inhinyeriya, at ibang mga agham panlipunan hanggang sa narsing. Lingid sa kaalaman ng karamihan, ang Kolehiyo ng Medisina ang pinakauna sa lahat ng kolehiyo ng UP. Nagsimula ito bilang *Philippine Medical School* noong 1905, upang tumugon sa hamon ng mga sakit na lagapan nuon tulad ng *'cholera'* at *'small pox'*. Ang Philippine General Hospital naman ay itinatag noong 1907 at nagbukas noong 1910.

Mahigit sandaang taon na ang nakalilipas ngunit hindi nagbabago ang kanilang layunin. Sa isyu ng ating *newsletter* ipapamalas ang tibay ng

dalawang yunit ng UP Manila at pakikisalamuha ng iba pang kolehiyo natin na harapin ang malaking suliranin na COVID-19.

Mahigit tatlong linggo na mula ng simulan ang UPPGH COVID-19 Bayanihan Na! Operations Center at pagtanggap ng mga pasyenteng may malubhang COVID-19. May takot sa puso ang karamihan ngunit naipakita natin na pag samasama at puspusan ang pagkilos, makabuluhan ang kahihinatnan.

Maraming sumagot na mag-aaral sa tawag ng Bayanihan Na! Operations Center at napuno ng mga donasyon ang Alvior Hall. May mga pasyenteng gumaling sa kanilang COVID-19; ngunit simula pa lamang ito upang maipamalas ang pagsisikap ng iba't-ibang sangay ng ating kampus.

Ang Kolehiyo ng Medisina at mga espesyalista nito ay abala sa pagsisiyasat ng iba't-ibang pamamaraang makakabuti laban sa COVID-19. Nariyan ang mga lokal na *ventilator* at ang *RxBox* na tatalakayin sa isyung ito. Katulong dito ang mga inhinyero ng UP Kolehiyo ng Inhinyerira at iba pang espesyalista. Sa linggong ito, ipinamahagi na rin sa mga ospital at laboratoryo ang lokal ng *testing kits* ng NIH.

Nakareport din ngayon ang sagot ng Kolehiyo ng *Allied Medical Professions* sa pamamagitan, di lamang ng mga donasyon at pagboluntir, kung hindi mga napakahalagang babasahin at *telemedicine* sa larangan ng kanilang kagalingan, *speech* at *physical therapy* sa panahon ng COVID-19.

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Distribution of NIH-developed COVID-19 test kit begins

THE UP Manila NIH was the first facility to use the GenAmplify™, Covid 19 testing kit rRT-PCR developed by Dr. Raul Destura and researchers from the NIH and Philippine Genome Center (PGC). The mass distribution of the kits started on April 20, 2020 according to the Department of Science and Technology which gave P53.2M for the development of this. Its use was approved by the Food and Drug Administration on April 3 after three weeks of field validation that covered 26,000 tests. Other institutions such as the PGC, Bataan General Hospital, Araneta Foundation, Office of the Vice President, and some local governments have availed of the kits, the DOST stated.

The Manila HealthTek, Inc, the first university spin off company, manufactures the test kits with 8,000 tests being run daily with 26,000 tests available on deck. Dr. Destura, the NIH

National Training Center for Biosafety and Biosecurity Director and PGC Deputy Director, revealed plans to double the tests being run per day starting on May 1, 2020.

"As we heal as one in fighting this global pandemic, we thank the DOST for its unwavering support in the production of these test kits. We hope that we can serve more Filipinos through this endeavor and help in saving more lives against the scourge of COVID-19," Dr. Destura said.

The GenAmplify™ COVID-19 test kit comes as a complete package with an RNA extraction device and viral transport medium that are not found in other testing kits. It can be used in any RT-PCR machine as the codes used to read the sample are open source. The complete package inclusive of VAT costs only Php 1,828.40, much cheaper compared to



other kits in the international market.

Dr. Destura also guarantees the provision of full technical support on how to use the said test kit. His team already conducted training at the Philippine General Hospital, The Medical City Ortigas, Makati Medical Center, and University of San Agustin, Iloilo City in collaboration with the Western Visayas Medical Center and PGC Iloilo. With reports from [PCHRD](#)

UPCM faculty addresses need for more ventilators



Photo: Breath of Life Foundation

Dr. Enrique M. Ostrea Jr together with engineers from the UP Diliman College of Engineering developed the first OstreaVent™ and the Breath of Life Foundation, founded by Dr. Ostrea, has donated more than 65 of these to several government hospitals nationwide.

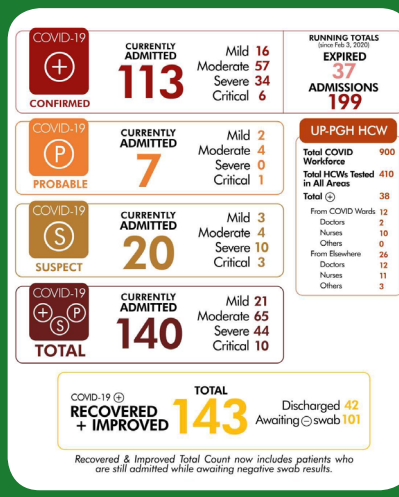
Due to the COVID pandemic, UP CM Dean Charlotte Chiong approached Dr. Ostrea

regarding the conversion of the OstreaVent™ into an adult ventilator. The development of the OstreaVent™ Upgrade prototype is headed by the Executive Director of the Metals Industry Research and Development Center under the DOST, Engr. Robert O. Dizon together with former College of Engineering Professor, Engr.

OstreaVent™ Upgrade for the Adult Population

The OstreaVent™ is a pressure-controlled, time-cycled mechanical ventilator which has been used for more than 5 years on neonates.

UP-PGH COVID-19 DAILY REPORT 24 APRIL 2020



Alexander P. Pangan. The Clinical Safety Trials will be headed by Dr. Ma. Esterlita V. Uy (Neonatologist and Co-investigator in the previous OstreaVent™ trials) with Adult Pulmonologists Drs. Manuel Jorge Jr. and Kris Tan and Pediatric Intensivists Drs. Herbert G. Uy and Vincent Faustino.

by Dr. Ma. Esterlita V. Uy

Mechanical Ambu Bag Insufflator



Manual ambu bagging is a very common procedure seen while a patient is waiting to be hooked to a respirator. In order to overcome the inconsistency and unreliability of manual ambu bagging, a **Mechanical Ambu Bag Insufflator (MABI)** is being developed by Dr. Rafael Bundoc in collaboration with other academic and private groups who engaged in the same endeavor. They all felt that with proper engineering, digitalization, and validation, the team can to come up with a homegrown technology that can operate an ambu bag reliably, consistently, and safely. **by Dr. Rafael Bundoc**

Ginhawa Ventilator



The PGH Department of Medicine Pulmonary Section has been developing ventilators since 1987. It started with a mechanical device (Pulmo1) attached to an ambulance bag mask that was developed in collaboration with the UP College of Engineering.

In 2011, the PGH Ventilator GinHawa project started with a grant from the DOST/PCHRD, initially in collaboration with the Mapua Institute of Technology and De La Salle University.

The latest GinHawa prototype which is a refined ICU servo ventilator, was designed in 2019 by the PGH Pulmonary group led by Dr. Abundio Balgos and Dr. Camilo Roa, Jr. with Biomedical Specialist Glenn Tuazon. It is a compact ICU ventilator capable of providing all standard ventilator modes plus PEEP, CPAP, Pressure Support, Pressure Control, FiO2, and inspiratory flow settings for children and adults.

by Dr. Abundio Balgos

The **RxBox**: Extending UP Innovations for COVID-19 Response

THE UP College of Medicine SIBOL (UPCM Surgical and Biotechnology Innovation Laboratory) was among the first to prepare UP Manila to respond to the growing COVID-19 epidemic. Among the initiatives was repurposing the RxBox telemedicine device for telemetry to monitor COVID-19 patients.

The RxBox Device: Finding benefit across the country for over a dozen years

The RxBox was developed by UP Manila National Institutes of Health National Telehealth Center (NTHC) and the Electrical and Electronics Engineering Institute (EEEI) of the UP College of Engineering in 2007 with the support of the DOST PCHRD.

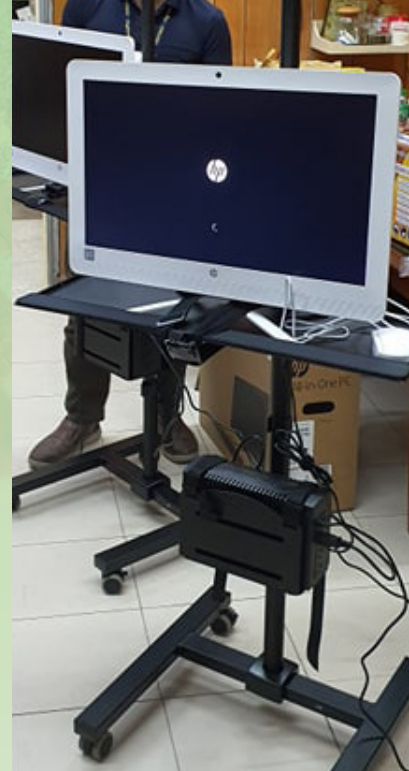
Originally intended for trauma care, RxBox and Telehealth proponent Dr Alvin Marcelo, showed that the patient's vital signs can be detected by the device and transmitted in real-time in a telemedicine system of an emergency room. Collaborating closely in this project was electronics engineer Dr. Luis Sison who was UP Diliman Vice Chancellor for Research at that time. The RxBox Telehealth project was among the initiatives under the UP System Emerging Disciplines program.

The RxBox-2 evolved to be a tool for rural health units (RHUs) in remote and disadvantaged communities in the country. As a community medicine faculty, Dr Portia Marcelo of the NTHC, working with Dr. Sison, spearheaded its deployment to strengthen maternal and child health as well as care for non-communicable/cardiovascular diseases. The RxBox sensor suite expanded to include a Doppler for fetal heart tone and a maternal tocometer, in addition to the original capabilities for ECG, pulse oxymeter, thermometer, and sphygmomanometer.

The research demonstrated the seamless exchange of a patient's clinical and physiologic data between the UPM-developed Community Health Information Tracking System (CHITS) electronic medical record system, the RxBox diagnostic device, and the National Telehealth System (NTS) platform; thus allowing teleconsultation with clinical specialists from the UPCM-PGH.

RxBox-Telemetry for COVID-19 Care

Dr. Nathaniel Orillaza and Dr. GeoHari Hamoy of the UPCM SIBOL are tapping the RxBox for COVID-19. Work is being initiated to extend RxBox as a telemetry device in PGH which



would be its third iteration. Data from RxBox sensors will be displayed in real-time on nurse station monitors, thus decreasing contact between patients and clinical team. Drs. Hamoy and Orillaza and other UPCM-PGH clinicians are now working closely with the electronics engineering team of Dr. Sison as well as a software engineering team led by Dr. Prospero Naval, professor of Artificial Intelligence at the UP Diliman. Deployment is expected within the next two weeks as the PGH COVID wards fill up with patients.

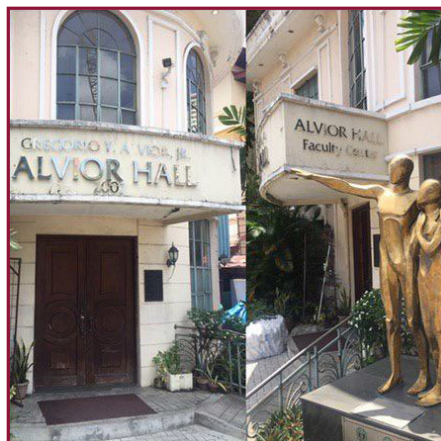
Multidisciplinary work has been a mantra of UP. This COVID-19 pandemic makes collaboration a natural recourse.

By Dr. Portia Fernandez-Marcelo

**FOR DELIVERIES
OF IN-KIND
DONATIONS TO
PGH, DROP-OFF AT:**

**ALVIOR
HALL**

Access to **UP-PGH BAYANIHAN NA! ALVIOR HALL DONATIONS CENTER** is through one of UP Manila's Pedro Gil gates. To coordinate **donations and deliveries**, please call **155-200**.



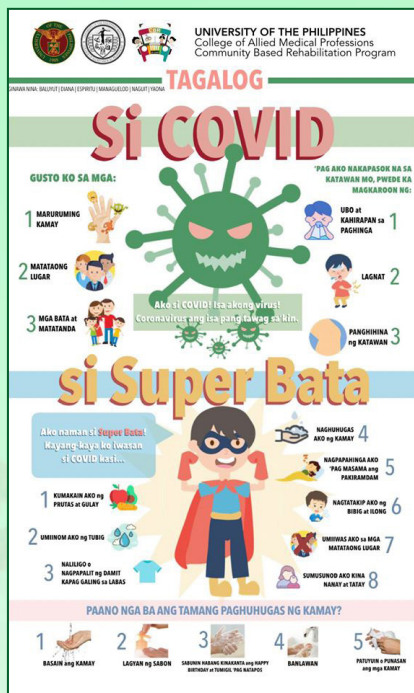
Project #CAMPana

A call for action, a call for help, a call for hope

PROJECT CAMPana was initiated on March 23, 2020 by the College of Allied Medical Professions Executive Committee as a call for action and help to alleviate the effects of COVID-19 on Filipinos. Like the ringing of the “kampana”, Project CAMPana is an affirmation that we are one community, and our coming together fuels hope that we can all pull through this crisis.

Faculty, alumni, students, administrative staff, and CAMP friends responded to the CAMPana call and the CAMP core values of service, solidarity, and resourcefulness were manifested through the creation of these responses and the mandate of the University to serve the country with *utak and puso* became very evident.

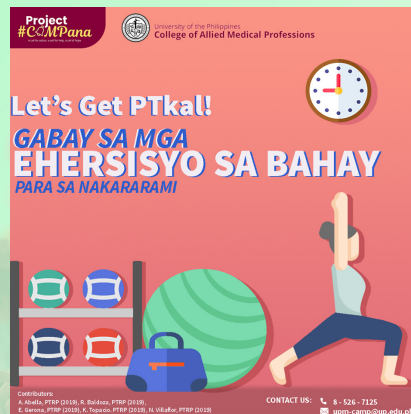
Health education materials for adults and children and available in English, Filipino and six other Philippine languages were developed by OT and SP interns of the CAMP Community-Based Rehabilitation Program on COVID-19. **USAP Tayo!** was launched to offer free online SP consultation for those with communication and swallowing difficulties. Volunteer SP alumni



“Si COVID at si Super Bata” is available in Tagalog, English, and 19 other Philippine languages.

and students develop home programs for clients and provide advice through email and video conferencing.

Project CAMPana has so far delivered ~1700 healthy meals for frontliners and other staff in Metro Manila and Laguna, mostly in partnership with Franco’s Friends



PH, a non-profit organization, and Ate Sol’s canteen, a local caterer. Project CAMPana also supports the efforts of the UP-CAMP Foundation through the assembly and delivery of 800 face shields to date for PGH and other hospitals. Nine CAMPers have also volunteered at the Operations Center, where they also provided exercises to promote active breaks of the volunteers.

We thank all those who have heeded the CAMPana call. Please contact camp@post.upm.edu.ph or peching@up.edu.ph if you wish to be part of Project CAMPana.

by Aila Nica Bandong, Mary-Grace De La Pena-Kang, Frances Rom Lunar, Esmerita Rotor, and Maria Eliza Aguila. With contribution from Peñafrancia Ching

Bayanihan spirit among CM faculty

AS the country’s premier medical school that started in 1905, the UP College of Medicine has always been a contributor to the fulfillment of its health goals. Today, several of UPCM’s academic, research, technology, and extension activities which are either in the development or implementation stages are geared towards fighting the battle against the Covid 19 pandemic and ensuring our people’s health and well-being.

The UP College of Medicine initiated measures to protect students and staff from Covid-19 since January and provided



alternative learning activities for the former. With the imposition of quarantine, reading assignments and non-graded self-assessments, video demonstration of clinical skills, and other forms of teaching became the norm. Blended learning modules with UP Manila’s Virtual Learning Environment Platform showed that all courses could be accessible 24/7. The

PANOPTO software obtained for the college in October proved to be a big help.

With the launching of the UP-PGH *Bayanihan Na!* Operations Center, 69 volunteer interns responded and are manning the hotline 155-200. Some consultants were put at higher risk among all medical professionals as PGH became a COVID-19 referral hospital. Sadly, a number of UPCM alumni and faculty passed away in the fight against COVID-19.

The early response of UP Manila NIH scientists led by Dr. Raul

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Heeding the call of service at the UP-PGH COVID-19 Operations Center



THE Alliance of Philippine and Medical Colleges pulled out all interns from PGH last March 14, 2020. However, seeing the gap it would leave in terms of manpower, I was compelled to return. I called on similarly-minded co-interns and after the call-to-arms, a total of 355 interns had expressed their willingness to continue serving.

Batch presidents, Michelle "Mitch" Eala and Romano "RA" Pangan and I had a meeting with the PGH Deputy Director for Hospital Operations, Dr. Juliet Sio-Aguilar to discuss how we could go about this legally. Providentially, Chancellor Carmencita Padilla joined us and the two-hour meeting marked the start of a beautiful and amazing journey. We would later recruit intern Ino Villacastin to help coordinate with other administrators.

When PGH was designated as a COVID referral center, the volunteer interns were, again for our safety, redirected to the call center. We were now, ironically, assigned to the frontline but without physically being there. We had some false starts, dry runs, and also software glitches. But being PGH-trained, what else was new? We would make do, find a way around it, adjust, invent a solution, and persevere because our people needed us to. Monday came. After the launch, RA, Mitch, Ino, and I grabbed a quick picture with Chancellor Padilla with our mask-covered smiles. The half of us was amazed at how far we had come, the other half was wondering what we got ourselves into and how our journey had brought us here. We are interns, not call center agents! But this is the call of our country, and we are ready for it.

It was breathtaking and mind-

"All we have to decide is what to do with the time that is given us."
- Gandalf, Lord of the Rings (J.R.R. Tolkien)

boggling for me as a supervisor for 14 hours that day. I was grateful to have RA, Mitch, and Ino with me in the first eight hours; and our volunteer coordinator, Dr. Lanie Nicodemus was heaven sent. Two weeks later, things have become routine but are still exciting and ever-changing. As Dr. Padilla said during her opening remarks, *"Kung hindi tayo maghahati-hati ng trabaho, hindi natin magagawa nang ganito kabilis."* Teamwork makes the dream work and I have been blessed and privileged to have been part of this team, playing my role in the greater scheme of things.

by Nicholas Robert Tan

DOH endorses UP Online Biosafety Training for Laboratorians Handling SARS CoV-2

THE Department of Health (DOH) officially recognizes the UP Manila National Institutes of Health's National Training Center for Biosafety and Biosecurity (NTCBB) as a training provider for biosafety and biosecurity during this Covid-19 pandemic in the Philippines through a Department Circular 2020-0173.

The training of laboratory personnel in biosafety and biosecurity is a requirement by the DOH in the accreditation of



COVID-19 testing laboratories. NTCBB launched the **"BEAT Covid-19 Program,"** an online Biosafety Education and Awareness Training (BEAT) for laboratory personnel handling SARS-CoV-2 (COVID-19). This initiative is one of NTCBB's

responses to the ongoing public health crisis, being the nation's source of relevant information and expertise related to the practice of biosafety and biosecurity in the Philippines.

Seven online modules composed of the core principles of biosafety and biosecurity have been designed that have live panel discussion for the question and answer sessions. The modules can be accessed anytime from April

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BAYANIHAN SPIRIT AMONG CM FACULTY...

Destura in developing an RTPCR test together with 20,000 A*STAR Fortitude kits donated by private company Monde Nissin will significantly help in our current efforts. Significantly, some of our faculty members are actively involved in the Inter-Agency Task Force that was convened to tackle this pandemic. Our epidemiology experts also provided crucial inputs. The College (thru Dr. Ana Melissa Hilvano-Cabungkal) participated in putting out the UP Manila NIH position paper on the "Whole-of-Society Approach".

A SIBOL (Surgical Innovation and Biotechnology) COVID-19 response team with project leader Dr. Edward Wang was born from a collaboration of engineers and clinicians under the UPCM SIBOL program set up in 2019. This was instrumental in mounting over ten projects (PPEs, telemetry, tracking, and decontamination) that will soon receive additional funding from DOST-PCHRD. There will be ten other projects with the UP College of Engineering (under Dean Ferdie Manegdeg), funded by the UP Engineering Research and Development Foundation headed by

its President Rico Trinidad (with about PHP 3.5 million from 87 donors).

As to raising funds, the UP Medical Foundation in partnership with the Ten Outstanding Women for the Nation's Service, Inc. raised more than PHP 37 million for 500,000 Personal Protective Equipment (PPEs) and other needs. The dire lack of PPEs at the start of the pandemic was met by engineers pooling together their 3D printers to make face shields and design ventilators from open source as well as modify neonatal ventilators (Ostreavent) into adult ventilators. The RxBox developed by the NIH's National Telehealth Center was repurposed and will be used in the PGH isolation rooms.

With UP President Concepcion's

AO dated March 3, 2020 creating a Collaborative Research Structure between UP Diliman and UP Manila, the university's COVID-19 research team led by Drs. Marissa Alejandria and Aileen Wang prepared many projects with multidisciplinary teams of virologists, data scientists, MD-PhD students, and other experts. They also pushed for the country's inclusion in the WHO Solidarity Trial, thus gaining access to some of the unavailable therapies for Covid19. One study is the use of convalescent plasma therapy for Covid patients.

My gratitude goes to the members of the Dean's Management Team, alumni, and friends who helped and continue to help the college in countless ways during this difficult time. **by UPCM Dean Charlotte Chiong**

MENSAHE MULA SA TSANSELOR from page 1...

Ang hamon sa UP ay hindi natatapos.

Hanggang sa mayroong problemang pangkasulugan, ang UP Manila ay handang mag-alay ng talino at lakas sa bayan.

Gamit ang lahat ng kanyang mga talento, kakayanan, at dedikasyon ng lahat ng kolehiyo dito, kasama ang PGH at NIH, handa tayong makipagtulungan sa matinding laban na ito. Kapag may patnubay ng Maykapal at iisa ang layunin sa ating mga puso, makakamtan natin ang tagumpay!

Tsanselor Carmencita D. Padilla

DOH ENDORSES UP ONLINE BIOSAFETY TRAINING...

14 to May 4, 2020, to allow participants to take the course at their own pace.

The course utilizes distance learning education by providing updated and relevant materials that are essential to the current

Covid-19 response. Subject matter experts moderate online discussion forum. The participants are evaluated based on their performance in the quizzes and final exam. A certificate of completion is given to the participants who passed the assessments and have complied with the requirements.

In its pilot implementation on

March 31-April 6, 2020, to date a total of 1,552 participants have been able to complete and pass the exam. Participants consisted of medical technologists, faculty members, researchers, physicians, microbiologists, chemists, and others who came from various regions of the country and some were from abroad.

Through the BEAT Covid-19 program, NTCBB will continue its commitment to biosafety advocacy, leadership, training, and development of applicable biosafety standards tailored to the capacity of the country. For more information about the training, please visit [NTCBB website](#) and [Facebook account](#).

by Dr. Rohani Cena and Dr. Eva Maria Cutiongco-De La Paz



US Embassy Ambassador for the Philippines, Hon. Sung Kim, turned over 150 military cots to UP-PGH Bayanihan Na! Operations Center