

**BalikPHD Recruitment Program**  
Ongoing and Completed in 2018  
(As of 31 August 2018)

#	Project Title	Name of Proponent	CU	Unit	Benefeciaries	Funding Source	Start	End	Status	Total Program Budget	Publications	Other Outputs
1	Catalytic valorization of lignin for the production of aromatic chemicals	Agulla, Mae Joanne Budol	UPLB	CAS	researchers, academe	Balik-PhD	2016	2018	Ongoing	2,500,000.00		<p>KKP-ST Annual Convention of the Kapisanang Kimika ng Pilipinas - Southern Tagalog, Inc. and a product demonstration about combined flash chromatography and preparative HPLC given by Dakila Trading Corporation.</p> <p>Attended the 32nd Philippine Chemistry Congress wherein different breakthroughs in science and scientific papers were presented</p> <p>Project Leader represented the Institute of Chemistry for the Youth Science Award Forum</p> <p>Successfully performed bis(amino)picric ligand synthesis from isophthalaldehyde and 2, 6-dimethylaniline via direct reductive amination.</p> <p>An undergraduate thesis student supported by the project, presented a poster and won 2nd place for his research entitled "Cleavage of C-O bond in aromatic ethers as lignin model compound via transfer hydrogenation reaction using iron-pyridylidimine complexes as catalysts" in the 10th Student Faculty Research Conference last November 20, 2017.</p>
2	Geophysical potential field investigation of the Macolod Corridor and adjacent regions: Crustal structure, heat flow, and deformation near the terminus of the Manila subduction zone	Armada, Leo Tajapal	UPD	NIGS	researchers, students, academe	Balik-PhD	2018	2020	Ongoing	2,499,704.00		
3	Ecological processes on reefs exposed to different environmental conditions: influence on coral community structure	Cabaitan, Patrick	UPD	MSI	researchers, students, academe	Balik-PhD	2018	2020	Ongoing	2,500,000.00		
4	Graphene and related two-dimensional materials for future nanoelectric device applications	Colambo, Ivy Razado	UPLB	Ins. Of Mathematical Sciences and Physics	researchers, students, academe	Balik-PhD	2018	2020	Ongoing	2,500,000.00		
5	Synthesis of Inhibitors of Mycobacterial Cell Wall Galactan Biosynthesis	Completo, Gladys Cherisse Jaucian	UPD	CS	researchers, students, academe	Balik-PhD	2016	2018	Ongoing	2,484,999.60		<p>Oral Presentations:</p> <p>1. Allas, M. J. DG.; Sumalde, J. M. C.; Angkico, RCB.; Espejo, JW;Zheng,R; Lowary,TL; Completo, G. C. "Synthesis and Biological Studies of Substrate-based Probes of Galactofuranosyltransferase 1 (GIFT1) Towards Understanding Mycobacterium tuberculosis" Oral presentation at the 17th Conference of the Science Council of Asia, Philippine International Convention Center (PICC), June 14-16, 2017.</p> <p>2. Ortiz, C.L.D.; Completo, G.C.J.; Nacario, R.C.; Nellas, R.B." Virtual Binding Analysis and Synthesis of Functionalized Sugar-Furanosides as Galactofuranosyltransferase 2 (GIFT2) Inhibitor" Oral presentation at the 32nd Philippine Chemistry Congress, Puerto Princesa, Palawan, May 31-June 2, 2017.</p> <p>Flores, M.S.C.; Completo, G.C.J.; Nacario, R.C.; Nellas, R.B. "Computational Design of Donor Inhibitors of Galactofuranosyltransferase 2 (GIFT2)" Poster presentation at the 45th KKP-ST Convention, and awarded as Best Poster, Los Baños, Laguna, October 27-28, 2016.</p> <p>GC Completo, RG Sangalang, BMI Pique, RC Nacario. 2016. Simple and efficient method for the synthesis of galactofuranosides. Kimika 27(2), 39-50.</p>
6	Prevalence of mental health problems among Filipino university students: Multi-site, mixed-method research	Del Castillo, Ronald Tolentino	UPMan	College of Public Health	researchers, students, academe	Balik-PhD	2017	2019	Ongoing	2,490,257.60		<p>The Project Leader was interviewed by CNN Life Philippines ("Are Philippine universities taking care of their students' mental health?", Anna Bueno. 11 April 2018). The article featured college mental health and made mention of the Diwa project, including a link to the Facebook page. Ms. Anna Bueno first made contact with Dr. Del Castillo through Messenger after seeing the project's Facebook page. This publicity was shared by the UP System Facebook on April 12th and shared by the UP Manila Facebook site on the same day.</p>
7	Host rock control on epithermal gold mineralization: clues from the Sanglo epithermal vein system and vicinity, Baguio Mineral District, Philippines	Gabo-Ratio, Jillian Aira Sibal	UPD	CS	researchers, students, academe	Balik-PhD	2017	2019	Ongoing	2,489,772.00		<p>Research collaboration with the Department of Earth Resources Engineering, Kyushu University in Fukuoka, Japan.</p> <p>The project assistant who is currently enrolled in the MS Geology Program was able to use the Electron Probe Microanalyzer for the first time in his study of the host rocks in Sanglo.</p> <p>JAS Gabo-Ratio, P Aguilera, MAK Yonezu, T Tindell, ES Andal. 2017. Geology and mineralization of the Sanglo epithermal gold deposit, Baguio Mineral District, Philippines. Presented at the 2017 Goldschmidt Conference, Paris, France.</p>

8	Molecular-based detection of tick-borne pathogens through PCR and survey of acaricide resistance in cattle ticks in Region IV-A (CALABARZON) Philippines	Galay, Remil Linggatong	UPLB	College of Vet	researchers, students, academe	Balik-PhD	2016	2018	Ongoing	2,500,000.00		<p>The project leader and project research associate/ research team have attended workshops and seminars related to the project such as the "Installation of T-optical RT-PCR Thermalcycler" last February 7, 2017 at the VMBL, CVM and "Animal Welfare Act and DA-AO 40" held last March 21, 2017 at the Veterinary Teaching Hospital, Maahas Station, UPLB.</p> <p>The first batch of undergraduate students, Bea Ambita-Salem, Larry Xerxes Capuno Jr., Dawn Maureen Chu, Sidney Lyndon Dolores, Carina Llaneta, Anna Angelica Manalo, and Maria Karla Faye Monreal, who worked on detection of tick-borne pathogens in large ruminants graduated last June 24, 2017.</p> <p>Two (2) of the students received an award for their undergraduate thesis namely, Larry Xerxes Capuno who got the "Best Undergraduate Thesis Award in Ruminants", and Dawn Maureen Chu who got the "Best Undergraduate Thesis Award in Public Health".</p> <p>Eight undergraduate DVM students are currently working on detection of tick-borne pathogens in cattle and water buffaloes from Quezon Province (five students), and goats and sheep from Batangas and Laguna provinces (three students) for their thesis, with the project leader as their adviser. Two undergraduate thesis students who were currently recruited and involved in the Phase 2 of the project has started their study working on acaricide resistance. Additional undergraduate students are being recruited to work on other subtopics.</p>
9	Ridge-to-reef Disaster Risk Assessment and Climate Impact Assessment of Floods and Droughts in the Agricultural Sector of Angat watershed, Philippines	Jaranilla-Sanchez, Patricia Ann	UPLB	SESAM	researchers, students, academe	Balik-PhD	2018	2020	Ongoing	2,500,000.00		
10	Organic Components of Submarine Groundwater Discharge in Lingayen Gulf	Jaraula, Caroline Marie B.	UPD	CS	researchers, students, academe, LGUs, community	Balik-PhD	2016	2018	Ongoing	2,499,108.00		<p>Organized SGD Workshop regarding the use of Durrige RAD7 for Radon-222 monitoring</p> <p>Hosted On-the-job-trainees from Adamson University</p> <p>Workshop on "Gadgets we can build: water level meter" with Dr. John Burtkenly Ong</p> <p>Hosted On-the-job-trainees from UP Integrated School</p>
11	Taklong Island Marine Biodiversity Assessments (TIMBA): Integrating biodiversity knowledge at the molecular, organismal, and	Malay, Maria Celia Defrance	UPV	CS	researchers, students, academe	Balik-PhD	2017	2019	Ongoing	2,500,000.00		<p>The project leader presented the research proposal of the TINMR Protected Area Management Board (PAMB) last February 2017, and also worked to coordinate with various agencies that need to give approval of the research plans.</p> <p>More specimens of the semi-terrestrial shrimp Merguia oligodon have been collected.</p>
12	Materials for Solar Fuels	Mercado, Candy	UPD	COE	researchers, students, academe	Balik-PhD	2016	2018	Ongoing	2,500,000.00		<p>A graduate researcher has been identified for this project and he will be directly working in the COMSOL simulations.</p> <p>A group of six high school students from Quezon City Science High School have been collaborating on the extraction and purification of anthocyanin dye from Komote leaves.</p>
13	Molecular Biology of Porcine Rotaviruses and Drivers of Infection: Empowering the Animal Health System in Local Backyard farm	Murao, Lyre Annie Espada	UPMin	CSM	researchers, students, academe	Balik-PhD	2016	2018	Ongoing	2,500,000.00		<p>Hands-on training on statistical analysis, 6 and 24 April 2017. Hands-on training on molecular phylogenetics, 25 and 27 April 2017 (This was attended by 19 undergrad students, five faculty, one RA and the Project Leader).</p> <p>Burgos M, Ibañez J, Ates-Camino F, Responte M and Murao LAE. "Non-invasive molecular profiling in bats using mitochondrial cytochrome oxidase I gene." (partially funded by BPhD)</p> <p>*Best Paper, Biodiversity and Environment Category, 2018 Regional Research Congress, University of Mindanao, Davao City, March 14, 2018.</p> <p>The Project Leader was invited to speak on her work with viruses in the TEDx Roxas St. at Marco Polo Hotel, Davao City on June 5, 2018. The findings of this research will be the highlights of the presentation entitled "If Poop Could Talk".</p> <p>Bacus M, Otero MCB, Alviola P IV, Murao LAE. "Molecular surveillance of Rotavirus A in Backyard Pig Farms in Davao City" (fully funded by BPhD)</p> <p>* Poster presentation, 2017 OVPAA Research Symposium, UP Diliman, Quezon City November 20-21, 2017.</p> <p>*2nd Place, Research Poster Competition, 22nd Mindanao Annual Meeting and Scientific Convention of the Philippine Society for Microbiology Mindanao Chapter, Davao City, November 17-18, 2017.</p> <p>*3rd Place, Research Poster Competition, PSBMB Mindanao Scientific Conference, General Santos City, October 26-27, 2017.</p> <p>The project has supported the thesis work of nine (9) undergraduates of Biology and one (1) from Applied Mathematics, nine (9) of which are graduated in the commencement exercises in June 2018.</p>
14	In-depth systematic study of fermented foods in the Philippines	Navarro, Richard Ragudo	UPLB	CA	food technologists/ researchers, academe, food manufacturing	Balik-PhD	2016	2018	Ongoing	2,500,000.00		<p>Successful collection of the following samples for the isolation of LAB and AAB from different provinces in Central and Northern Luzon.</p>

15	Detection of foodborne pathogens along the supply chain of fresh oysters and mussels and its culture environment	Nuñal, Sharon Nonato	UPV	College of Fisheries and Ocean Sciences	food technologists, seafood canning industry, researchers	Balik-PhD	2016	2018	Ongoing	2,500,000.00		The project currently has one full-time research assistant for Year 1. The three undergraduate students (AY 2016-2017) supported by the project have already finished their individual studies with hard-bound thesis
												The DA-Biotech scholars assigned to the Project Leader (SNUÑAL) has worked on experiments involving DNA extraction from bacterial isolates and tissue samples, PCR amplification, gel electrophoresis and processing of results (DNA sequences).
												The study was one of the three studies featured in the Media Brunch Reception for Science Journalists with the theme "Blue Economy for Sustainable Seas" organized by the Communicating Science and Technology Research and Development at UP (CoST UP) Program last December 6, 2017.
16	Investigation of the Redox Potentials of Fe-Humic Acid Complexes as a Potential Additive to Increase Bio availability of Iron in Biofloc Systems	Ortillo, Danilo Octaviano	UPV	CAS	researchers, students, academe	Balik-PhD	2017	2019	Ongoing	2,500,000.00		A journal article is currently in the works to be written and submitted before the end of the year to a peer-reviewed journal for publication.
17	Integrated Geomorphologic, Geochemical and Geophysical Studies on Hydrothermally rocks and their influence on Landslide susceptibility in Benguet Province, Philippines	Padrones, Jenielyn	UPLB	Ins. Of Renewable Natural Resources	researchers, students, academe	Balik-PhD	2018	2020	Ongoing	2,499,445.60		
18	A cross-country reserach on natural disaster and risk management	Pajaron, Marjorie C.	UPD	School of Economics	risk and disaster management, disaster mitigation programs, local household, policy-makers	Balik-PhD	2016	2018	Ongoing	2,492,000.00	Pajaron MC . 2016. The role of remittances as a risk coping mechanism: Evidence from agricultural households in rural Philippines. Asian and Pacific Migration Journal 26, 3-30. doi:10.1177/0117196816680625	Traveled and met with experts in the field of natural disaster, risk-coping, poverty, and applied economics (including previous colleagues and mentor at Stanford University). 1. Presentation in London 2. Presentation in Hongkong 3. Presentation in Peking University 4. Meeting and conference at Hitotsubashi University, Tokyo, Japan
19	Understanding cell physiology through characterization of the physical properties of cells: an atomic force microscopy perspective.	Prieto, Eloise Infante	UPD	CS	Pathologists, oncologists, medical researchers	Balik-PhD	2015	2017 2018	Ongoing	2,500,000.00	M Vasquez Jr., E Prieto, M Wada, Motoi. 2018. Radio-Frequency plasma induced biocompatibility of polyimide substrates. Plasma Medicine, 8(1):35-44	The Nanobiotechnology Laboratory has two research assistants capable of performing AFM imaging and analysis using the XE-Bio AFM. They were able to provide AFM service through the Multi-Dimensional Imaging Center of the Technology Incubation Core Facility of the College of Science.
												Project Collaboration: Visiting Researcher, Approval of Hitachi Global Research Fellowship, Kenichi Yoshikawa Lab through the Faculty of Life and Medical Sciences, Doshisha University, Kyoto, Japan.
												Project Collaboration: Visiting Professor, Talks have been initiated for a collaborative project, Dr. Mel Bacabac of the Physics Department of University of San Carlos, Talamban, Cebu City
												The Balik-PHD program was instrumental in the establishment and expansion of the Nanobilogy Laboratory (NBL) at the NIMBB. This has contriburted greatly to an in-house research project aiming to understand the nuclear compation of Archaea.
20	Coping Strategies to Natural Disasters: Micro-Meso-Macro interactions and consequences	Ravago, Majah-Leah Villar	UPD	School of Economics	local government units, disaster management agencies, general public	Balik-PhD	2015	2017 2018	Ongoing	2,499,894.00		Developed and programmed the survey software, based on Microsoft Access.
												As of July 31, fieldwork has been completed in 37 out of 43 provinces, corresponding to 165 interviews.

21	Discovery of small molecule therapeutics from cyanobacteria	Salvador-Reyes, Lilibeth Apo	UPD	CS	Biomedical researchers, students, academe	Balik-PhD	2014	2017 2018	Ongoing	2,500,000.00		<p>Prior Informed Consent (PIC) from Alaminos, Bani, and Bolinao - Pangasinan, and Tanza, Cavite were endorsed to Department of Agriculture – Bureau of Fisheries and Aquatic Resources (DA-BFAR). The Memorandum of Agreement (MOA) from DA-BFAR was obtained, submitted for legal review and is currently being signed by the UP Diliman Chancellor and Secretary of DA. Once the MOA is finalized, Gratuitous Permit (GP) will also be released by DA-BFAR.</p> <p>Presentation: J.D. Batucan was accepted for poster presentation on the 32nd Philippine Chemistry Congress.</p>
22	Microbial community shifts and enzymatic degradation rates in sediments influenced by plant-based fish feeds	Santander-de Leon, Sheila Salarda	UPV	College of Fisheries and Ocean Sciences	marine scientists, environmental scientists researchers	Balik-PhD	2016	2018	Completed	2,500,000.00		<p>Collaboration with the grantee's previous professor in Japan (Dr Hiroto Maeda) in terms of provision of materials, technical advice and future training and some sample analyses in Kagoshima University.</p> <p>The project leader currently mentors 3 undergraduate thesis students and 2 MSc thesis students who are supported by the project's newly acquired supplies and equipment. A number of biotech scholars (~5) have also been trained in the lab.</p>
23	Self-force and radiation-reaction in novel settings	Vega, Michael Francis Ian II G.	UPD	CS	researchers, students, academe	Balik-PhD	2017	2018	Ongoing	2,500,000.00	KS Revealar and I Vega. 2017. Overcharging higher-dimensional black holes with point particles. Physical Review D 96(6), 064010.	<p>Four Master's theses in Physics have been successfully defended by members of the group in the past 10 months. Apart from the Project Leader, the current group is now composed of 5 PhD students, 4 MS students, and 7 BS students. There are 9 BS students at the "apprenticeship" stage of their membership application.</p> <p>Four Master's theses in Physics have been successfully defended by members of the group since the beginning of the Project.</p> <p>5 PhD students, 4 MS students, and 7 BS students and 9 BS students are currently mentored.</p>
24	Phytosterols on cellular senescence and senescence-associated inflammation	Velarde, Michael C.	UPD	CS	materials researchers, students, academe	Balik-PhD	2016	2018	Completed	2,500,000.00	<p>CMD Marquez, JA Ibane, MC Velarde. 2017. The female reproduction and senescence nexus, American Journal of Reproductive Immunology 77(5), e12646.</p> <p>CMD Marquez and MC Velarde. 2017. Senescent Cells as Drivers of Age-Related Diseases, chapter 16, pp 305-335 of the book, "Aging: Exploring a Complex Phenomenon".</p>	<p>Murine Model of Aging: Mitochondrial oxidative damage in mice as a model of skin aging. 29th Annual Scientific Conference of the Philippine Association For Laboratory Animal Science (PALAS). May 18-19, 2017. Crowne Plaza Hotel, Quezon City, Manila. [Plenary Speaker]</p> <p>Murine Model of Aging: Mitochondrial oxidative damage in mice as a model of skin aging. 29th Annual Scientific Conference of the Philippine Association for Laboratory Animal Science (PALAS). May 18-19, 2017. Crowne Plaza Hotel, Quezon City, Manila. [Plenary Speaker]</p> <p>Cellular Aging and Its Contribution to Global Burden of Disease. 52nd Biology Teachers Association of the Philippines (BIOTA) Annual National Convention and Scientific Sessions. April 8, 2017. Philippine Normal University, Ermita, Manila [Plenary Speaker]</p> <p>Modulating the Senescence-associated Secretory Phenotype. The first bilateral symposium between Academia Sinica and University of the Philippines Diliman. December 13-15, 2016. Academia Sinica, Taipei, Taiwan.</p> <p>Impact of Environmental Stress on Cellular Aging. 36th Annual Convention of the Philippine Environmental Mutagen Society (PEMS). November 24-25, 2016. University of Northern Philippines, Vigan City, Philippines.</p> <p>Exploring Philippine Biodiversity for Anti-senescent Interventions. 2nd Annual Balik Scientist Program (BSP) Convention. "Strengthening Science, Technology and Innovation Capacity for Sustainable Countryside Development". November 18, 2016. Embassy Ballroom, Hotel Jen, Roxas Blvd., Pasay City, Philippines.</p> <p>Mitochondrial Dysfunction-Associated Senescence and the Secretory Phenotype. 1st International and 7th Annual Convention and Scientific Meeting of the Philippine Society for Cell Biology. October 20-21, 2016. De La Salle University, Manila, Philippines.</p> <p>CO2 incubator along with N2 and CO2 tanks have been installed in the lab.</p> <p>CMD Marquez and MC Velarde. 2017. Senescent Cells as Drivers of Age-Related Diseases, chapter 16, pp 305-335 of the book, "Aging: Exploring a Complex Phenomenon".</p>

25	Subsistence Strategies and Prey Spectra of First Humans in the Philippines	Volmer, Rebekka	UPD	ASP	archaeologists, paleontologists, researchers	Balik-PhD	2015	2017 2018	Completed	2,499,744.00	<p>R Volmer, C Hertler. 2016. The effect of competition on shared food resources in carnivore guilds. Quaternary International 413 B, 32 - 43.</p> <p>R Volmer, E Hölzchen, A Wurster, MR Ferreras, C Hertler. 2017. Did Panthera pardus (Linnaeus, 1758) become extinct in Sumatra because of competition for prey? Modeling interspecific competition within the Late Pleistocene carnivore guild of the Padang Highlands, Sumatra. Palaeogeography, Palaeoclimatology, Palaeoecology 487, 175-186.</p>	<p>The theoretical research on competition relations was done by the project leader, with consultancy of Dr. Christine Hertler from the Research Senckenberg Institute in Frankfurt Germany.</p> <p>The project leader was invited to present her research entitled "Subsistence Strategies and Prey Spectra of First Humans in the Philippines" and give a lecture during the symposium and international School of Quaternary History in Nanjing, China, held during 22-30th of April 2016.</p> <p>The symposium and course was developed from the European "Erasmus Mundus program Quaternary and Prehistory", and was the first time to be held outside of Europe.</p> <p>First research outputs were presented in 2nd international conference SEAMEO SPAFA, Regional Centre for Archaeology and Fine Arts, Bangkok, Thailand</p> <p>The project leader was the only participant from UP Diliman and presented outputs of the project in frame of the presentation "Did saber-tooth cats become extinct because of early Homo?"</p> <p>First research results are published in an ISI-journal with an impact factor of 2.942</p> <p>AS Mijares, F D�etroit, R Gr�un, R Volmer, R Rabett, R Dizon, T Clark, L Kinsley, E Robles, A Tiauzon, M Lara, K Manalo, D Satumbaga, PJ Piper. Homo luzonensis and the Archaeological Record of Callao Cave, Northeastern Luzon Philippines. Nature. (currently under review)</p>
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