

**BalikPhD Recruitment Program  
as of 31 December 2017**

#	Project Title	Name of Proponent	CU	Unit	Beneficiaries	Funding Sources	Durations (Years)	Start	End	Status	Total Program Budget	Publications	Other Outputs
1	Catalytic valorization of lignin for the production of aromatic chemicals	Aguilá, Mae Joanne Budol	UPLB	CAS	researchers, academe	Balik-PhD	2	2016	2018	Ongoing	2,500,000.00		<p>KXP-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>Able to prepare a set of bis(mino)-pincer ligands for the condensation of carbonyl compound with anilines.</p>
2	Utilization of sago flour to improve nutritional profile of selected food products	Alviola, Juma Novie Ayap	UPMin	CSM	Food technologists/researchers, academe, food manufacturing industry	Balik-PhD	2	2015	2017	Ongoing	2,500,000.00		<p>A Research Assistant BSFT student attended the learning session titled "START Writing a Great Paper and Getting It Published in a Research Journal" in Cagayan de Oro, which was organized by USAID-STRIVE and Elsevier.</p> <p>Research output was presented on two occasions during the: a. ICAEM 2016 Davao City; b. CSM Colloquium, UP Mindanao, Davao City.</p>
3	Identification and validation of non-coding RNAs induced by thyroid hormone and glucocorticoids in hippocampal neurons	Bagamasbad, Pia Dano	UPD	CS	Neural development researchers, endocrinologists, gene regulation studies	Balik-PhD	2	2015	2017	Ongoing	2,500,000.00		<p>Two (2) undergraduate thesis students have successfully defended their theses and graduated magna cum laude. Data generated from this project was submitted and accepted for two (2) poster presentations to the Endocrine Society Meeting 2017 in Orlando, Florida.</p> <p>A poster presentation entitled "Identification of a Hormone-responsive enhancer element in the cytochrome b561 gene in mouse hippocampal neurons" was presented by the project RA on April 2 under Gene Regulation and Development research category (Shortlisted as one of the five posters in the Presidential Poster Competition).</p> <p>The funding received from the Balik PhD grant has successfully allowed the purchase of equipment and next generation transcriptome analysis to generate a start-up lab. All of the equipment has been purchased following delivery and set-up of the biosafety cabinet.</p> <p>RNA-sequencing was finished.</p>
4	Transcriptome-based genetic resources for an armoured scale insect species, <i>Aspidiotus rigidus</i> and its susceptible and tolerant host coconut, <i>Cocos nucifera</i> .	Bautista, Anita Mascareñas	UPD	CS	Molecular biologists, insect pest management operators, coconut industry, coconut farmers	Balik-PhD	2	2015	2017	Ongoing	2,495,000.00		<p>Successful validation of sequences for an enzyme (Cytochrome P450) and molecular markers (SSRs) mined from the <i>Aspidiotus</i> transcriptome.</p> <p>Transcriptome sequencing of <i>Aspidiotus</i> destructor was presented and won as best poster in the Philippine Association of Entomologists Scientific Session of the 49th Pest Management Science Council of the Philippines Conference and Annual Scientific meeting held last May 10-12, 2017.</p>
5	Synthesis of inhibitors of Mycobacterial Cell Wall Galactan Biosynthesis	Completo, Gladys Cherisse Jaucian	UPD	CS	researchers, students, academe	Balik-PhD	2	2016	2018	Ongoing	2,484,999.60		<p>Oral Presentations:</p> <p>1. Alias, M. J. DG.; Sumalde, J. M. C.; Anglico, 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>Poster Presentation:</p> <p>1. Flores, M.S.C.; Completo, G.C.J.; Nacario, R.C.; Nellas, R.B. "Coupled Computational Design and Synthesis of Possible Donor Inhibitors of Galactosyltransferase 2 (GIFT2) in Mycobacterium tuberculosis"</p> <p>Poster presentation at the 32nd Philippine Chemistry Congress, Puerto Princesa, Palawan, May 31-June 2, 2017.</p>
6	Archeological human remains from Island Southeast Asia; a taphonomic approach	Crozier, Catherine Rebecca C.	UPD	ASP	Archaeologists, students, researchers	Balik-PhD	2	2014	2017 With Extension	Ongoing	2,500,000.00		<p>The project was able to travel to Barangay Kawit, Medellin in the North of Cebu. This is further supported by a MOA between ASP and USC.</p> <p>Dr. Eileen Murphy of Queen's University Belfast delivered lectures and a workshop on non-adult human remains. This was attended by ASP students and visiting students from Australia National University. Dr Murphy's involvement in our project is of further success because we are now in discussions between our two departments to develop a Memorandum of Understanding, which will lead to further collaborations and possible opportunities for our students beyond the scope of this initial project.</p> <p>One of the Project Research Assistants successfully defended her Master's Thesis proposal, entitled "A Study of the Taphonomy of Non-Adult Human Remains from Ille Cave and Rockshelter, Palawan, Philippines".</p> <p>Hosted an international conference from January 8-9, 2016. Over 60 delegates were in attendance coming from all over SE Asia and nearby regions. It was the first time a conference dedicated to human osteoarchaeology has been hosted in the Philippines.</p> <p>Two papers generated by this project were presented last January at the international conference held at ASP, "For the Love of Death: Human Osteoarchaeology in Southeast Asia and the Pacific."</p>
7	Prevalence of mental health problems among Filipino university students: Multi-site, mixed method research.	Del Castillo, Ronald Tolentino	UPMan		researchers, students, academe	Balik-PhD	2	2017	2019	Ongoing	2,490,257.60		
8	Host rock control on epithermal gold mineralization: clues from the Sanglio epithermal vein system and vicinity, Baguio Mineral District, Philippines	Gabo-Ratio, Jillian Aira Sibal	UPD	CS	researchers, students, academe	Balik-PhD	2	2017	2019	Ongoing	2,489,772.00		<p>Research collaboration with the Department of Earth Resources Engineering, Kyushu University in Fukuoka, Japan.</p> <p>JAS Gabo-Ration, P Aguilera, MAK Yonezu, T Tindell, ES Andal. 2017. Geology and mineralization of the Sanglio epithermal gold deposit, Baguio Mineral District, Philippines. Presented at the 2017 Goldschmidt Conference, Paris, France.</p>

9	Surveillance of tick-borne pathogens through PCR and acaricidal resistance in ticks in CALABARZON	Galay, Remil Lingatong	UPLB	College of Vet	researchers, students, academe	Balik-PhD	2	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 Thermocycler" 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-Saleem, Larry Xerxes Capuno Jr., Dawn Maureen Chu, Sidney Lyndon Dotores, Carina Llaneta, Anna Angelica Manalo, and Maria Karla Faye Monreal, who worked on detection of tick-borne pathogens in large ruminants and 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>
10	Establishment of a Structured Light Laboratory within the Photonics Research Laboratory of the National Institute of Physics	Hermosa, Nathaniel II Placido	UPD	CS	researchers, students, academe	Balik-PhD	2	2015	2017	Ongoing	2,500,000.00	<p>ND Barez Jr., N Hermosa. 2015. Propagation dynamics of vortices in helicon-conical optical beams. Optics Communications 356, 236. <a href="#">https://doi.org/10.1016/j.optcom.2015.08.017</a></p> <p>ND Barez Jr., N Hermosa. 2016. Subliminal group velocity and dispersion of Laguerre Gauss beams in free space. Scientific Reports 6, 26842. <a href="#">https://doi.org/10.1038/srep26842</a></p> <p>F Steinlechner, N Hermosa, V Pruner, JP Torres. 2016. Frequency conversion of structured light. Scientific Reports 6, 21390. <a href="#">https://doi.org/10.1038/srep21390</a></p>	<p>Attended the International Conference on Applied Optics and Photonics, Hanover, Germany, with two (2) contributions 2.1. Beam deflection sensitivity of quadrant detector using Bessel Beams (oral) 2.2. Limits of Brewster Imaging (poster)</p> <p>Two of research were also presented in the International Conference on Applied Optics and Photonics held in Hanover, Germany. These are titled, "Limits of Brewster Imaging" and "Beam deflection sensitivity of quadrant detector using Bessel beam." The first research is a poster presentation while the second is an oral presentation. Showed a generalized analytical equation for different thin film and substrate index of refraction in the first presentation. This is important for applications in thin film metrology.</p> <p>Second conference presentation is about using a Bessel beam, a structured light to increase the sensitivity of a quadrant detector. Quadrant detectors are used in a wide range of applications from Atomic Force microscopy to beam alignment in industry.</p>
11	Discovery of selective antimicrobial agents and probiotic interventions against gut-associated diseases	Ibana, Joyce Altamarino	UPD	CS	health/medical practitioners, researchers, academe	Balik-PhD	2	2015	2017	Completed	2,500,000.00	<p>ICVJ Imperial, JA Ibana. 2016. Addressing the antibiotic resistance problem with probiotics: Reducing the risk of its double-edged sword effect. Frontiers in Microbiology 7, 1983. <a href="#">https://doi.org/10.3389/fmicb.2016.01983</a></p> <p>J Ibana, M Romero, MN Nicdao. 2017. Therapeutic effects of 1-Methyl Tryptophan and Lactobacillus spp. on AOM/DSS-Induced Inflammation in a Mouse Model. Inflammatory Bowel Diseases 23, 1494-1502. <a href="#">https://doi.org/10.1093/ibd/ibw001</a></p>	<p>Two (2) Lecture/Seminar presentations for State Universities presented by one (1) PhD Biology Student entitled ""The antibiotic resistance of Lactobacillus spp. from Philippine food products is due to mutations in parC and gryA genes" and "Addressing Health Concerns in the Community through Microbiology Education, Pampanga Agricultural State University".</p> <p>Two (2) oral Presentations in National Conferences presented with one (1) PhD Biology Student entitled "The antibiotic resistance of Lactobacillus spp. from Philippine food products is due to mutations in parC and gryA genes" and "Finding solutions to the global antibiotic resistance problem by exploiting microbial interactions in different microenvironments".</p> <p>Oral presentation in an International Conference entitled "Harnessing beneficial microbes in poultry farming: An alternative approach to reduce the indiscriminate use of antibiotics in the agricultural industry".</p> <p>"Poster presentation in an International Conference presented by one (1) MS Biology Student entitled ""Therapeutic effects of 1-methyl tryptophan and Lactobacillus spp. on AOM/DSS induced Inflammation in a Mouse Model""</p> <p>Participation of Mr. Michael Angelo Nicdao to the 2015 Philippine Society for Biochemistry and Molecular Biology Convention (3rd Place winner of the best research poster competition)</p> <p>Successful completion of the undergraduate thesis of Mr. Michael Jonathan Palad, entitled: "Antimicrobial activity of Lactobacillus isolates against various enteropathogenic bacteria, and the assessment of the mode of inhibition against Shigella sp."</p> <p>Participation in the prestigious international conference: 2016 Advances in Inflammatory Bowel Disease (AIBD) conference held in Orlando, Florida last December 8-10, 2016 by Ms. Maevel Romero, MS Microbiology student of the Institute of Biology.</p> <p>Novel methodologies, exciting data and new research directions have emerged from the implementation of this Balik-PhD start-up grant.</p> <p>This Balik-PhD grant is also a major contributor in the establishment of a well-equipped laboratory at the Institute of Biology – The Immunopharmacology Research Laboratory (IRL), which houses top-of-the-line equipment for Cell Biology and Immunology (from USAID-STRIDE) and Microbiology from (OVPA – UP System).</p>
12	Organic Components of Submarine Groundwater Discharge in Lingayen Gulf	Jaraula, Caroline Marie B.	UPD	CS	researchers, students, academe, LGUs, community	Balik-PhD	2	2016	2018	Ongoing	2,499,108.00	<p>Organized SGD Workshop regarding the use of Durrige RAD7 for Radon-222 monitoring Hosted On-the-job-trainees from Adamson University</p> <p>Workshop on "Gadgets we can build: water level meter" with Dr. John Burkenly Ong</p>	
13	Marine biodiversity of Taklong Island: Integrating biodiversity knowledge at the molecular, organismal and bioinformatic levels	Malay, Maria Celia DeFrance	UPV	CS	researchers, students, academe	Balik-PhD	2	2017	2019	Ongoing	2,500,000.00	<p>The project leader presented the research proposal of the the TWMR 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>	
14	Materials for Solar Fuels	Mercado, Candy	UPD	COE	researchers, students, academe	Balik-PhD	2	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>	
15	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	2	2016	2018	Ongoing	2,500,000.00	<p>"Hands-on training on statistical analysis, 6 and 24 April 2017.</p> <p>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>	

16	In-depth systematic study of fermented foods in the Philippines	Navarro, Richard Ragudo	UPLB	CA	food technologists/ researchers, academe, food manufacturing industry	Balik-PhD	2	2016	2018	Ongoing	2,500,000.00		Successful collection of the following samples for the isolation of LAB and AAB from different provinces in Central and Northern Luzon.
17	Detection of foodborne pathogens along the supply chain of fresh oysters and mussels and its culture environment	Nuhal, Sharon Nonato	UPV	College of Fisheries and Ocean Sciences	food technologists, seafood canning industry, researchers	Balik-PhD	2	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"
18	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	2	2017	2019	Ongoing	2,500,000.00		
19	Atomic-scale understanding of the interaction of hydrogen (H) atom and carbon monoxide (CO) molecule on copper-palladium (CuPd) surface: An application to biomass-based renewable energy source	Padama, Allan Abraham B.	UPLB	Institute of Mathematical Sciences and Physics	alternative energy research, advanced materials research, students, academe	Balik-PhD	2	2015	2017	Completed	2,484,172.00	<p>AAB Padama, H Nakanishi, H Kasai. 2015. Quantum states of hydrogen atom on Pd(1 1 0) surface. Applied Surface Science 359, 687-691</p> <p>RL Arevalo, MCS Escaño, AAB Padama, H Kasai. 2016. Adsorbate-induced demagnetization: borohydride on magnetic substrates. International Journal of Philippine Science and Technology 9, 10-14.</p> <p>AAB Padama, RAB Villaos, JR Albia, WA Diño, H Kasai, H Nakanishi. 201. CO-induced Pd segregation and the effect of subsurface Pd on CO adsorption on CuPd surfaces. Journal of Physics: Condensed Matter, <i>Volume 29, Issue 2</i></p> <p>MA Albao, AAB Padama. 2017. CO absorption on W(100) during temperature-programmed desorption: A combined density functional theory and kinetic Monte Carlo study. Applied Surface Science 396, 1282-1288.</p> <p>AAB Padama, APS Cristobal, JD Ocon, WA Diño, H Kasai. 2017. Effects of Adsorbates (CO, COH, and HCO) on the Arrangement of Pd Atoms in PdCu(111). The Journal of Physical Chemistry, 121 (33), 17818-17826.</p>	<p>Research collaboration with other research groups was established.</p> <p>The results of the project are presented in national and international conferences.</p> <p>Three undergraduate students under the supervision of the principal investigator of this project successfully defended their undergraduate thesis. Their works and the results of this project are presented at the 35 th Samahang Pisika ng Pilipinas Physics Conference held in Bayfront Hotel Cebu, Cebu City, on 7-10 June 2017.</p> <p>*Peer Reviewed Proceeding Articles INTERACTION OF CO, CO<sub>2</sub>, COH, AND HCO ON METAL SURFACES 1. Cristobal, A.P.S. and Padama, A.A.B. (2017) Influence of Pd on the adsorption of CO, COH, and HCO on Cu(111) surface. Proceedings of the 35th Samahang Pisika ng Pilipinas Physics Conference, Samahang Pisika ng Pilipinas. 2. Villaos, R.A.B., Albia, J.R., and Padama, A.A.B. (2017) Adsorption of CO on CuPd surface: a DFT study using vdW-DF2 functional. Proceedings of the 35th Samahang Pisika ng Pilipinas Physics Conference, Samahang Pisika ng Pilipinas. 3. Estoloso, K.C. and Padama, A.A.B. (2017) The effect of O vacancy on the adsorption of CO<sub>2</sub> on Cu<sub>2</sub>O(111). Proceedings of the 35th Samahang Pisika ng Pilipinas Physics Conference, Samahang Pisika ng Pilipinas. 4. Fontanilla, J.F., Albia, J.R., and Padama, A.A.B. (2017) A density functional theory study on the adsorption of CO on W (110). Proceedings of the 35th Samahang Pisika ng Pilipinas Physics Conference, Samahang Pisika ng Pilipinas. PALLADIUM / NOBLE METAL INTERACTION 5. Buenaluz, T.N.A. and Padama, A.A.B. (2017) A density functional theory study on</p> <p>Cristobal, A.P.S., Padama, A.A.B. (2017). Adsorption of CO, COH and HCO on CuPd Surfaces: A DFT study. Presented at the 8th Jagna International Workshop: Structure, Function and Dynamics from nm to Gm.</p> <p>Padama, A.A.B., Albao, M.A., Villaos, R.A.B., Albia, J.R., Diño, W.A., Nakanishi, H., Kasai, H. (2016). Interaction of CO molecule with metal surfaces. Presented at the 8th Asian Computational Materials Design® Workshop in De La Salle University - Science and Technology Complex, Canlubang, Laguna.</p> <p>Villaos, R.A.B., Padama, A.A.B., Albia, J.R. (2016). Adsorption of CO on CuPd surfaces: A DFT - based study. Presented at the 2nd Workshop on Theories in Quantum Phenomena and Condensed Matter Physics in University of the Philippines Los Baños, Los Baños, Laguna.</p> <p>Padama, A.A.B., Villaos, R.A.B., Albia, J.R., Diño, W.A., Nakanishi, H., Kasai, H. (2016) Converting agricultural waste to fuel: An atomic scale perspective (The interaction of hydrogen atom and carbon monoxide molecule on copper-palladium surface). Presented at the UP Knowledge Festival: "Utak at Puso para sa Bayan" in <del>Barangay City</del>.</p> <p>Padama, A.A.B. (2016) Interaction of CO on CuPd Surfaces: A DFT-based Investigation. Presented at the International Workshop on Quantum Engineering Design: Materials Design and Realization in Osaka University, <del>Osaka, Japan</del>.</p> <p>Villaos, R.A.B., Padama, A.A.B., Albia, J.R. (2016) Atomic scale understanding of interaction of H atom and CO molecule on CuPd Surface: An Application to Biomass-based Renewable Energy. Presented at the International Workshop on Quantum Materials Science and Design for Innovative Nano- and Green Energy Devices and Life Sciences of the Osaka University, Osaka, Japan.</p> <p>Padama, A.A.B., Nakanishi, H., Kasai, H. (2015) Hydrogen atom quantum diffusion on Pd(110) surface. Presented at the 17 th Samahang Pisika ng Visayas at Mindanao National Physics Conference (17 th SPVPM) / 2015 International Meeting for Optical Manipulations in Complex Systems / 2015 International Conference on Applied Materials and Optical Systems of the Samahang Pisika ng Visayas at Mindanao, Cavite State University, Indang, Cavite, Philippines</p> <p>Cristobal, A.P.S., Padama, A.A.B. (2017). Adsorption of CO, COH and HCO on CuPd Surfaces: A DFT study. Presented at the 8th Jagna International Workshop: Structure, Function and Dynamics from nm to Gm of Central Visayan Institute Foundation, Inc., Jagna, Bohol, Philippines.</p>

20	A cross-country research 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	2	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	<p>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).</p> <ol style="list-style-type: none"> <li>Presentation in London</li> <li>Presentation in Hongkong</li> <li>Presentation in Peking University</li> <li>Meeting and conference at Hitotsubashi University, Tokyo, Japan</li> </ol>
21	Petrology and geochemistry of mantle xenoliths: Implications on the evolution of the mantle wedge beneath the Philippine island arc system	Payot, Betchaida D.	UPD	CS	Geologists, resource potential and geohazards studies, researchers	Balik-PhD	2	2015	2017	Ongoing	2,499,636.00	<p>GTV Valera, BD Payot, S Arai, M Takeuchi, S Ishimaru, A Tamura. Petrological records of subarc processes and buoyant plateau subduction in the xenoliths from Sabtang island of the Babuyan segment, Luzon arc (manuscript submitted and is currently under review to Lithos Journal)</p> <p>EG Gadot Jr., BD Payot, T Morishita, S Arai, T Mizukami. Origin of dunite xenoliths from Mount Pinatubo, Philippines: An insight into upper mantle processes beneath a volcanic front. (manuscript submitted)</p>	<p>Valera, G.T., Payot, B.D., Arai, S., Ishimaru, S., and Takeuchi, M. (2016) Delineating metasomatic processes beneath an active island arc: Insights from the Sabtang xenoliths. Presented at the Hunt for Ore Deposits 2016: Emerging Trends, Grand Regal Hotel, Davao City.</p> <p>Valera, G.T., Payot, B.D., Arai, S., Ishimaru, S., and Takeuchi, M. (2015) Xenoliths from Sabtang Island, Batanes (Philippines): Insights to the crust-mantle composition beneath an active arc. Presented at the 12th Annual Meeting of the Asia Oceania Geoscience Society, Suntec City, Singapore.</p>
22	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	2	2015	2018 With Extension	Ongoing	2,500,000.00		<p>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.</p> <p>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.</p> <p>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</p> <p>Developed and programmed the survey software, based on Microsoft Access.</p> <p>As of July 31, fieldwork has been completed in 37 out of 43 provinces, corresponding to 165 interviews.</p>
23	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	Balik-PhD	2	2015	2017	Ongoing	2,499,894.00		
24	Discovery of small molecule therapeutics from cyanobacteria	Salvador-Reyes, Lillbeth Apo	UPD	CS	Biomedical researchers, students, academe	Balik-PhD	2	2014	2017 With Extension	Ongoing	2,500,000.00	<p>LA Salvador-Reyes, J Sneed, VJ Paul, H Luesch. 2015. Amantelides A and B, polyhydroxylated macrolides with differential broad spectrum cytotoxicity from a Guamanian marine cyanobacterium, Journal of Natural Products 78, 1957-1962.</p>	<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>LA Salvador-Reyes, H Luesch. 2015. Biological targets and mechanisms of action of natural products from marine cyanobacteria. Natural Products Reports 22, 478-513</p>	<p>Presentation: J.D. Batucan was accepted for poster presentation on the 32nd Philippine Chemistry Congress.</p>
25	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	2	2016	2018	Ongoing	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>
26	Development of a Plasma Device and an Ion Source System for the Modification of Surfaces	Vasquez, Magdalena Jr. R.	UPD	COE	Materials researchers, students, academe	Balik-PhD	2	2014	2017 With Extension	Completed	2,500,000.00	<p>MR Vasquez Jr, M Wada. 2016. Extraction characteristics of a low energy ion beam system with a remote plasma chamber. Review of Scientific Instruments 87, 023304.</p>	<p>The grant was able to restore a diaphragated vacuum thermal evaporator.</p>
												<p>MR Vasquez Jr, CMD Cagomoc. 2016. Enhanced Chromium Adsorption Capacity via Plasma Modification of Natural Zeolites (submitted to Japanese Journal of Applied Physics and is currently under review)</p>	<p>The laboratory also hosts graduate and undergraduate courses on vacuum technology, thin films, and electronic materials. MSE 214 (Laboratory/Module in Vacuum Technologies and Thin Film Deposition) courses were held at PMIL for the past 2 years. In the laboratory, students can conduct their course-related activities such as running their experiments. To date, around 40 student under the MS MSE program used the facility. Also, undergraduate courses such as MatE 121.1 (Electronic Materials Laboratory) used the facility for instructional laboratory work. Last semester, 38 undergraduate students conducted their experiments in the laboratory.</p>
												<p>MR Vasquez Jr., KLM Taaca. 2017. Fabrication of Ag-exchanged zeolite/chitosan composites and effect of plasma treatment. Microporous and Mesoporous Materials 241, 383-391.</p>	<p>Collaboration with Plasma Science Laboratory of Doshisha University and with Plasma Physics Laboratory of the National Institute of Physics (NIP) is being undertaken. Joint research such as in plasma physics and plasma-material interactions has commenced.</p>
												<p>C Cagomoc and M Vasquez Jr., Enhanced Chromium Adsorption Capacity via Plasma Modification of Natural Zeolites (submitted to Japanese Journal of Applied Physics and is currently under review)</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>K. Taaca and M. Vasquez Jr., Fabrication of Ag-exchanged zeolite/chitosan composites and effect of plasma treatment (submitted to Microporous Mesoporous Materials and is currently under review)</p>	<p>Manuscripts under review: C. Cagomoc and M. Vasquez Jr., Enhanced Chromium Adsorption Capacity via Plasma Modification of Natural Zeolites (submitted to Japanese Journal of Applied Physics).</p> <p>K. Taaca and M. Vasquez Jr., Fabrication of Ag-exchanged zeolite/chitosan composites and effect of plasma treatment (submitted to Microporous Mesoporous Materials).</p> <p>J. Chan, J. Diaz, E. Enriquez, M. Wada, and M. Vasquez Jr., Doping of Spray-pyrolized Graphene Films using Ar/N2 Gas Discharge (submitted to IEEE Proceedings).<sup>14</sup></p>												

												J. Chan, J. Diaz, E. Enriquez, M. Wada, and M. Vasquez Jr., Doping of Spray-pyrolized Graphene Films using Ar/N2 Gas Discharge (submitted to IEEE Proceedings and is currently under review).	An experimental system with parts fabricated in Japan was brought and assembled. The laboratory also refurbished and restored a radio-frequency plasma etcher, a vacuum evaporator and several rotary pumps that can be used for different experiments.  "An approximately 100 m2 area was renovated to house different plasma equipment."
27	Self-force and radiation-reaction in novel settings	Vega, Michael Francis Ian II G.	UPD	CS	researchers, students, academe	Balik-PhD	2	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	The editor for the Taylor and Francis Group has finished reviewing the book chapter they have written. Have recently submitted the revised manuscript and are now waiting for its publication.
28	Phytosterols on cellular senescence and senescence-associated inflammation	Velarde, Michael C.	UPD	CS	materials researchers, students, academe	Balik-PhD	2	2016	2018	Ongoing	2,500,000.00	CMD Marquez, JA Ibane, MC Velarde. 2017. The female reproduction and senescence nexus, American Journal of Reproductive Immunology 77(5),e12646	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]  "Marquez CMD, Ibane JA, Velarde MC. Meta-analysis of senescence-associated secretory phenotype in various cell types and its potential role during gestation. 8th Philippine Society for Developmental Biology Annual National Convention. October 22, 2015. University Theater, Adamson University, Manila, Philippines"  Marquez, C. M. D., Ibane, J. A., & Velarde, M. C., 2017. The female reproduction and senescence nexus. American Journal of Reproductive Immunology, 77(5):e12646. DOI: 10.1111/ajri.12646.  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]  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]  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.  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.  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.  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.  CO2 incubator along with N2 and CO2 tanks have been installed in the lab.
29	Subsistence Strategies and Prey Spectra of First Humans in the Philippines	Volmer, Rebekka	UPD	ASP	archaeologists, paleontologists, researchers	Balik-PhD	2	2015	2017	Ongoing	2,499,744.00	R Volmer, C Hertler. 2016. The effect of competition on shared food resources in carnivore guilds. Quaternary International 413 B, 32-43.  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  AS Mijares, F Détroit, R Grün, 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. (Submitted and is currently under review)	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.  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.  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.  First research outputs were presented in 2nd international conference SEAMED SPAFA, Regional Centre for Archaeology and Fine Arts, Bangkok, Thailand  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?"  First research results are published in an ISI-journal with an impact factor of 2.942
30	Tapping into novel fungal endophytes for enzymes with biotechnology applications	Yu, Eizadora Torres	UPD	CS	Biotechnology and biotechnological applications, researchers, academe	Balik-PhD	2	2015	2017	Completed	2,500,000.00	CJO Bacal, ET Yu. 2017. Cellulolytic Activities of a Novel Fomitopsis sp. And Aspergillus tubigenis isolated from Philippine Mangroves, Philippine Journal of Science 146 (4), 403-410.	Key project personnel (i.e., RA and graduate student) attended a three day workshop (July 25-27, 2015) on DNA Barcoding held at the Institute of Biology, UPD.