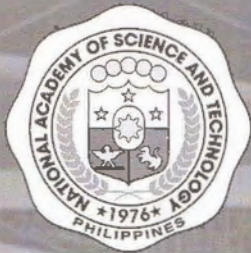


2010 Annual Report



2010 Annual Report



Copyright © National Academy of Science and Technology, Philippines

ISSN-0119-4267

National Academy of Science and Technology, Philippines Annual Report 2010

Published by the National Academy of Science and Technology, Philippines

3rd Level, Science Heritage Building

DOST Compound, Gen. Santos Avenue

Bicutan, Taguig 1631 Metro Manila, Philippines

E-mail: secretariat@nast.ph

Website: <http://www.nast.ph>

Telephone Numbers: (+632) 8372071 loc 2170-75; (+632) 387766/7739/7792

Fax Number: (+632) 833170

Editor: Academician Evelyn Mae Tecson-Mendoza

Staff-in-charge: Guada B. Ramos, Reihvella A. Perez

Design and Layout by: Dexter Lorma A. Bautista and LJB Printing Services

Printed by: LJB Printing Services

Printed in the Philippines

Contents

PRESIDENT' S MESSAGE	4		
EXECUTIVE SUMMARY	5		
RECOGNITION FUNCTION	6	SCIENTIFIC LINKAGES FUNCTION	35
National Scientist	7	Attendance to International Meetings	36
Academician	10	Co-sponsored Activities	37
Corresponding Member	12	NAST Publications Released	38
Honorary Member	12		
The Outstanding Young Scientist (OYS) Award	13	PHILIPPINE SCIENCE HERITAGE CENTER	39
TWAS Prize for Young Scientist in the Philippines	16	New Exhibits	40
NAST-Hugh Greenwood Environmental Science Award	16	Meet Your Scientist	40
NAST-LELEDFI Award for Outstanding Research in		Exposure to Different Science Centers and Museums	41
Tropical Medicine	17	Takbong Salinlahi	41
NAST Talent Search for Young Scientists	17		
Outstanding Publication Awards	18	THE ACADEMY MEMBERS	
Outstanding Scientific Paper	18	Research and Development	42
Outstanding Book/Monograph	18	R&D Management	42
Other Awards	19	Education and Mentoring	43
The Outstanding Technology Commercialization		Policy Making and Regulation	44
Award	19	Extension, Advocacy and Community Service	45
The Outstanding Research and Development		Entrepreneurship and Industry	46
Award for Basic Research	19	Accomplishments of Academy Members	46
The Outstanding Research and Development		Significant S&T Positions Held	46
Award for Applied Research	19	Publications	53
The Outstanding Science Administrator Award	19	Researches	56
Benefits of National Scientists and Academicians	20	Completed	56
Research Fellowships	20	On-Going	57
Publication Assistance	20	S&T Policy and Program Implementation	
Awards Received by NAST Members	21	(including Conferences, Seminars, etc)	59
In Memoriam	22	Honors and Recognitions Received	67
Science and Technology Fair	22		
		FINANCIAL REPORT	70
ADVISORY FUNCTION	23		
32nd Annual Scientific Meeting	24	NAST EXECUTIVE COUNCIL	71
Pre-ASM Discussions and Consultations	27		
Other Advisory Activities	30	NAST SECRETARIAT	72

President's Message



In pursuance of its vision of "A progressive Philippines anchored on science," the National Academy of Science and Technology, Philippines (NAST PHL) humbly presents this Annual Report for CY 2010.

The Academy held a series of roundtable discussions, scientific fora on issues like aerial spraying, research performance evaluation, rural credit, biotechnology, statistics, bioremediation, energy sustainability, water reforms, climate change, water resource management, climate change, animal health code, swine-poultry-yellow corn industry, mentoring, Gender and Development, and other timely issues that impact the lives of our fellow countrymen. The 32nd Annual Scientific Meeting, steered by the Social Sciences Division, focused on the Millennium Development Goals (MDGs) vis-a-vis the role of the Academy and the concerned agencies in monitoring the Philippines' progress in meeting the goals by 2015.

Three eminent members of the Academy were conferred with the Order of National Scientist by Her Excellency Gloria Macapagal-Arroyo this year. They were Dr. Mercedes B. Concepcion (Demography), Dr. Ernesto O. Domingo (Internal Medicine/Gastroenterology) and Dr. Perla D. Santos Ocampo (Pediatrics). Three new academicians and one corresponding member were invested to the Academy on 15 July 2010. Further, the Academy continues to give recognition to young scientists, outstanding scientific papers, and outstanding book/monograph.

The ensuing pages of this annual report give the details of the activities and accomplishments of the Academy. As we welcome the New Year, the Academy is committing to strengthen its various functions in order to reach and bring science and technology closer to our stakeholders.

Emil Q. Javier
ACADEMICIAN EMIL Q. JAVIER, Ph.D.
President

Executive Summary

The National Academy of Science and Technology (NAST), Philippines, considers it an honor and great responsibility to report on the accomplishments and achievements of the Academy for 2010.

The Academy strengthened its advisory function through the conduct of roundtable discussions, lectures, and scientific fora on relevant topics like aerial spraying, research performance evaluation, rural credit, biotechnology, statistics, bioremediation, energy sustainability, water reforms, climate change, among others. Recommendations and resolutions from these initiatives were forwarded to the concerned agencies for appropriate actions.

The 31st Annual Scientific Meeting with the theme "MDGs and Beyond: Are We Making Progress" emphasized the Academy's commitment to provide an independent but collaborative role in monitoring the progress in achieving the Millennium Development Goals (MDGs) set by the United Nations. More than 700 guests and participants attended the two-day affair.

Under the NAST Recognition Function, three (3) eminent Academicians - Mercedes B. Concepcion, Ph.D., Ernesto O. Domingo, M.D. and Perla D. Santos Ocampo - were conferred with the Order of National Scientist by President Gloria M. Arroyo. Further, Marco Nemesio E. Montaña, Ph.D. (Biological Chemistry), Fernando P. Siringan, Ph.D. (Geology), Guillermo Q. Tabios III, Ph.D. (Civil Engineering) and Antonio Miguel I. Dans, M.D. (Clinical Epidemiology) were invested as Academicians on 15 July 2010 at the Manila Hotel. On the same event, Kevin S. Rodolfo, Ph.D. (Marine Geology) was also invested as Corresponding Members. On the other hand, the scientific community was saddened by the demise of Academician Prescillano M. Zamora.

Young scientists were given recognition for their significant contributions to Philippine science and technology through the Outstanding Young Scientist Awards, TWAS Award for Young Scientists in the Philippines, NAST Talent Search for Young Scientist. In addition to the NAST Awards, the Academy was tasked to handle the annual NSTW Award of the Department of Science and Technology (DOST). Four awards were given this year, the Outstanding Technology Commercialization Award (Gregorio Y. Zara Medal), Outstanding R&D Award for Basic Research (Eduardo A. Quisumbing Medal), Outstanding R&D Award for Applied Research (Julian A. Banzon Medal) and the Outstanding Science Administrator Award (Dioscoro L. Umali Medal).

To strengthen the linkages, Academicians attended and participated in international and local fora. Academicians also actively participated as board members of several international organizations.

The exhibits and facilities of the Philippine Science Heritage Center are undergoing rehabilitation under the DOST- GIA-funded project "Improvement of Exhibits and Facilities of the PSHC and Its Services." Three new staff were hired under the project.

The achievements and accomplishments of the Academy and its individual Academicians would not be possible without the unstinting support and enduring trust of the scientific community. We are pleased to present these accomplishments as part of our commitment in achieving our vision of "A progressive Philippines anchored on science."

RECOGNITION FUNCTION

The Academy recognizes and provides incentives to Filipino scientists for outstanding achievements in scientific research and development. NAST, through its Recognition Function, has contributed significantly in promoting and fostering excellence in science and technology research in the country.



National Scientist

The conferment of the order of National Scientist by the President of the Republic of the Philippines is the highest honor given to a Filipino man or woman of science. Nominees should receive 60% of the votes of the full membership of the Academy before being recommended to the President of the country for the honor. Since 1978, thirty-four (34) Academicians have been conferred the rank and title of National Scientist. Of these, fourteen are living.

For 2010, three eminent Academicians were conferred the Order of National Scientist by Her Excellency President Gloria Macapagal-Arroyo at the Malacañan Palace.

Mercedes B. Concepcion, Ph.D.

A World-Recognized Expert in Demography

THROUGH Proclamation No. 1980 issued by Malacañang on 14 January 2010, Academician Mercedes B. Concepcion was declared National Scientist for her outstanding contributions in the field of demography. Her exemplary accomplishments covered the study of population composition and trends and their implications to social and economic development, the growth of urbanization, the situation of the elderly and of employment that resulted in the formulation of population policies here and abroad.

Dr. Concepcion, who was honored as the first Filipino demographer by the Philippine American Foundation in 2002, has racked up other "firsts" in her distinguished career. She was the first Filipino staff member of the United Nations Statistical Training Centre set up at the University of the Philippines (UP) in 1955, the first Director of the UP Population Institute (UPPI) in 1965, the first and sole Philippine Representative to the United Nations Population Commission (PopCom) in 1967, the first Woman to chair the UN PopCom from 1969 to 1977, and the first Asian woman to be elected President of the International Union for the Scientific Study of Population from 1981 to 1985.

The Vatican recognized her expertise and invited her to be one of two Asian members of the special committee for studies on problems of population and birth control (popularly known as the Birth Control Commission) in November 1964 that led to the promulgation of the famous encyclical *Humanae Vitae* in 1968. She was also selected by the United Nations Economic Commission for Asia and the Far East (now the Economic and Social Commission for Asia and the Pacific) to be a member and later chairperson of the Preparatory Committees for the Asian Population Conferences of 1963, 1972, 1984 and 1994.

Dr. Concepcion, together with the late Acting UP President Enrique T. Virata and Professor Philip M. Hauser of the University of Chicago, worked for the establishment of the UPPI with funding assistance from the Ford Foundation. The Institute served as the secretariat of the ad hoc Population Commission that was instrumental in the enactment of the Population Act of 1971, which provided for a national population policy and a family planning program. Through the years, the UPPI has earned its reputation as the prime research and training center on population-related fields.

In 1986, she chaired the Committee to Review the Philippine Statistical System which led to the reorganization of the country's statistical offices and to the establishment of the National Statistical Coordination Board (NSCB).

Her research efforts have gained recognition not only locally but also internationally. Under her leadership, the UPPI collaborated with its counterpart institutions in Southeast Asia to undertake joint research projects on population and family planning. She headed the Organization of Demographic Associates (ODA) composed of leading population institutes in Asia. The ODA planned and implemented research studies on migration, urbanization, the elderly and population and development issues in the late 1970s and early 1980s. The research results were used by the region's policy makers and programme managers as guides to effective population and programme management. She was also tapped by the World Health Organization (WHO) in the eighties to chair the Steering Committee on the Social and Psychological Determinants of Fertility Regulation, a committee that reviewed research and action programme proposals for funding.

At present, National Scientist Concepcion continues to be busy with the Commission on Population where she sits as one of its Board Members, chairs the NSCB Technical Committee on Population and Housing Statistics, is the Vice-President of the Executive Council of NAST, and serves as Vice-President of the Pangarap Foundation for Street Children.



Ernesto O. Domingo, M.D.

A Liver Specialist and Medical Educator



BY virtue of Malacañang Proclamation 1979 issued on 14 January 2010, Academician Ernesto O. Domingo was conferred the title and rank of National Scientist. Among his outstanding scientific contributions are: elucidation of the nature of schistosome granuloma and its role in hepatosplenic disease, the pathophysiology of hepatosplenic Schistosomiasis japonica in humans, the epidemiology and control of Hepatitis B and the pathophysiology, clinical behavior and treatment of hepatocellular carcinoma in Filipinos. Results of his hepatitis research have been utilized in the formulation and implementation of policies and programs of the Department of Health (DOH) and private sector on Hepatitis B immunization and routine hepatitis B and C screening of blood for transfusion.

An M.D. graduate of the University of the Philippines Manila in 1961 (eighth in a class of 100, third in the physicians' licensure examination with a record 98% in internal medicine), Dr. Domingo specialized in internal medicine at the Philippine General Hospital (PGH) and in Gastroenterology Hepatology at the Case Western Reserve University in Cleveland, Ohio, USA.

In 1967, he joined the faculty of the Department of Medicine in the UP College of Medicine. He organized and led the Liver Study Group (LSG) that has conducted major studies on viral hepatitis including hepatitis A, B, C, D, E and G. He and his LSG co-workers with the Research Institute for Tropical Medicine (RITM) of DOH have developed technologies associated with viral hepatitis. These include the rapid epidemiologic assessment for HbeAG positive individuals, production of diagnostic reagents for the testing of Hepatitis B virus carrier individuals and microparticle agglutination test for Hepatitis C. Findings from these studies were utilized by DOH in developing the policy on hepatitis B immunization.

He developed and helped implement the clinical fellowship program in the clinical departments of the PGH. He established the Clinical Epidemiology Unit (CEU), now a Department, which served both government and private institutions. As Chancellor of UP Manila, he led the reorganization of UP Manila in 1988 that resulted in the establishment of the Institutes of Socio-Biomedical Research, which later became the National Institutes of Health. As Director of the UP Postgraduate School of Medicine, he implemented a nationwide continuing medical education program for medical practitioners.

His contributions to society have earned him numerous awards and recognitions. The Philippine College of Physicians awarded him the Distinguished Teacher Award in 1983 and the Most Distinguished Physicians Award (highest award) in 1994. He also received the Dangal ng Bayan Award from the Civil Service Commission, Saint Brother Miguel Febres Cordera Award by the De La Salle University, Outstanding Professional in Medicine by the University of the Philippines Alumni Association and Most Distinguished Alumnus by the UP College of Medicine among others. In 2008, he was designated Centennial Fellow of UP and in 2009, he became a Fellow of the American Gastroenterological Association.

His scientific and technological publications totaling to 122 original research papers published locally and internationally. Dr. Domingo continues his research and service to the nation by acting as adviser and consultant to major research projects. He is a founding member of the Universal Clinical Health Care Advocacy Group, which is conducting studies on the reforms needed to achieve universal health care for Filipinas.

Perla D. Santos Ocampo, M.D.

The latest to join the august roster of National Scientists of the country is Dr. Perla D. Santos Ocampo through Proclamation No. 2099 issued by Malacañang on 23 June 2010.

She is recognized for her excellent contributions as scientist in the field of pediatrics, as medical educator-leader and mentor, institution builder and advocate for the better health of the Filipino people, particularly, the children.

Her research achievements in diarrheal diseases resulted in the development of a super oral rehydration solution and provided the basis for diarrhea-related policies of the Department of Health. Her researches on malnutrition's effects on the growth and development of children led to the rational management of nutritional problems among Filipino children. These researches were published in over 100 articles in peer-reviewed local and international journals.

Dr. Santos Ocampo is known for her dedicated and sterling service as medical educator, mentor, adviser, administrator and institution builder at the University of the Philippines (UP) Manila and throughout the nation. She developed academic programs to enhance the quality and number of experts, among which are the first pediatric fellowship program in UP Manila which trained trainors in various subspecialties in pediatric centers abroad and who formed the core of trainors training the bulk of child care specialists in the country and the institution of distance study courses especially for health professionals in remote areas.

During her term as Chancellor of UP Manila, she led the establishment of the National Institutes of Health (NIH) in 1998 through the enactment of Republic Act 8503, the National Graduate School for the Health Sciences and the National Telehealth Center. The NIH is now recognized as one of the four core agencies of the Philippine National Health Research System and recognized as a training center for research ethics and good clinical practice in the Asia Pacific region.

She served as President of the Philippine Pediatric Society, the International Pediatric Association, and Chair of the Medical Association of the Southeast Asian Nations and continues as Emeritus President of these organizations. Her outstanding, dynamic and charismatic leadership qualities put forward the best in the Filipino and have been highly esteemed by local and international health and medical organizations.

Dr. Santos Ocampo is the recipient of numerous local and international awards and recognition including five honorary fellowship or membership awards from five national pediatrics societies. In 1994, she was elected as Academician of NAST. In May 2010, the NAST general assembly of National Scientists and Academicians elected her National Scientist and endorsed to President Gloria Macapagal-Arroyo the conferment of the award.



Academician

This year's newest members are: Marco Nemesio E. Montaño, Ph.D. (Biological Chemistry); Fernando P. Siringan, Ph.D. (Geology); Guillermo Q. Tabios III, Ph.D. (Civil Engineering); and Antonio Miguel L. Dans, M.D. (Clinical Epidemiology).



MARCO NEMESIO E. MONTAÑO, Ph.D.
(Biological Chemistry)

In recognition of his outstanding scientific achievements in the field of biological chemistry, specifically, in the structural, chemical and physical studies of carageenan, agar and other polysaccharides from Philippine seaweeds. His research outputs on the quality of Philippine natural grade carageenan, agars from different seaweeds, alginates and by-products such as seaweed fertilizers and ink for the textile industry have significantly contributed to the strengthening and expansion of the Philippine seaweed industry. His research work encompasses the effects of pollution, seagrass utilization and diseases on seagrasses and their phycocolloids, as well as their impact on the marine environment. He has published more than 40 peer-reviewed scientific articles in local and international journals and holds a utility patent on seaweed-based carageenan gels.



FERNANDO P. SIRINGAN, Ph.D.
(Geology)

In recognition of his significant and outstanding accomplishments in the area of environmental changes and processes from geological to historical time scales that have helped local and national leaders and environmental managers reached informed decisions. His works with students and collaborators include reconstruction of precipitation and sea level patterns, examination of the fossil record to assess the resilience of present day coral reefs to warming seas, mapping areas that are highly vulnerable to marine inundation and coastal erosion, determining the roles of warming seas and eutrophication in the occurrence of harmful algal blooms, and elucidating the impact of large volcanic eruptions to marine primary production. They continue to explore coastal-plain subsidence and its link to worsening floods and a new field, the submarine groundwater discharge. His research results are documented in more than 30 scientific articles in peer-reviewed journals and have been presented in various conferences, both of the national and international levels.

Election to the Academy is by peer recognition and carries with it the title of Academician. Resident Filipino scientists elected as Academicians shall have demonstrated and earned distinction in independent research and significant innovative achievements in basic and/or applied sciences as manifested by their published works in recognized scientific and technical journal.

**GUILLERMO Q. TABIOS III, Ph.D.
(Civil Engineering)**

In recognition of his significant and outstanding contributions in the field of civil engineering, specifically on two-dimensional hydraulic modelling using finite volume method (FVM) with sediment transport which has been applied to the various reservoirs, dams, rivers and lakes in the country for emergency preparedness plan. He has developed the pipe network model with optimization for the West Concession of Metro Manila water distribution system that facilitated the detection, surveillance and quantification of non-revenue water due to pipe leakages of pilferage, for planning and expansion studies of pipe network distribution system by optimal layout of pipes and sizing of pipe, and for normal pipe operations such as optimizing booster pump operations or valve throttling scheduling to satisfy flow and pressure requirements. An optimization-simulation model for monthly reservoir operations of Angat Reservoir developed by Dr. Tabios led to the application of a dynamic, anticipatory operation policy over a 6-month planning horizon in satisfying water demand.



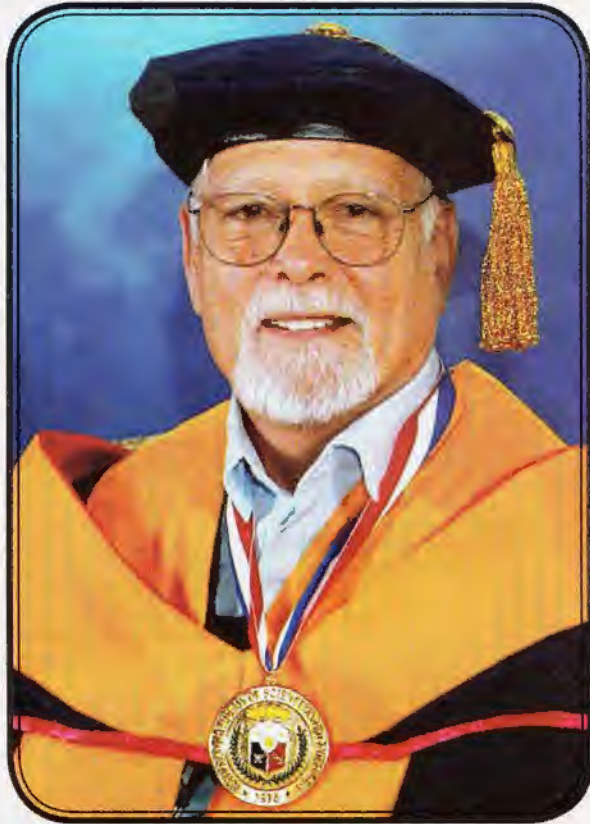
**ANTONIO MIGUEL L. DANS, M.D.
(Clinical Epidemiology)**

In recognition of his significant contribution to the field of clinical epidemiology, by bridging the schism between public health and clinical medicine, by promoting scientific design, measurement and evaluation in research, by generating and applying evidence-based knowledge in the clinical care of the patient; by studying the relative value of risk factors in cardiovascular diseases and utilizing these information to develop rational algorithms for the care of said diseases. For correcting the imbalance in the production of general-internist vis-a-vis subspecialist-internist by establishing the first section of General Internal Medicine in the Department of Medicine, UP-PGH Medical Center. For organizing the Cardiovascular Research Group to promote a coordinated multi-institutional effort in research. All the above advanced the field of Internal Medicine and Clinical Epidemiology in the Philippines.



Corresponding Member

Corresponding membership is conferred on non-resident Filipino scientists who have made exemplary contributions to the advancement of science and technology. Aside from possessing the same qualification as the Academicians, Corresponding Members have continuing connections and contributions to Philippine science. They should regularly come to the Philippines to practice their field of expertise. Filipino citizenship and residency requirements are waived as long as the first three qualifications are met. Dr. Kelvin S. Rodolfo (Marine Geology) was elected and was conferred the title of Corresponding Member during the investiture ceremony held on 15 July 2010 at the Manila Hotel.



KELVIN S. RODOLFO, Ph.D. (Marine Geology)

In recognition of his significant contributions to the field of geology and volcanology. His PhD dissertation established the origin by seafloor spreading of the Andaman Basin between Burma, the Malay Peninsula, Sumatra and the Andaman-Nicobar island chain. This anticipated the plate tectonic model and was praised for its foresight. His deep-sea drilling research in the Philippine Sea in 1978 showed that cycles of arc sundering in the Marianas Island region precede and follow the episodes of arc volcanism, instead of being penecantemporaneous with them, contrary to the prevailing model; this was confirmed eight years later. His studies with Filipino scientists on the Mayon and Pinatuba lahars — their triggering mechanisms, flow behaviour, and previous occurrences, have educated the Filipinos and the national leadership on lahars, which is crucial for disaster planning and management. His pioneering work on land subsidence and the resulting flooding and tidal incursions in the country is particularly timely. His research is documented in more than 90 scientific articles in national and international refereed journals, books and proceedings and presented at many conferences all over the world. A five-time recipient of the University of Illinois at Chicago

Excellence in Teaching Award, he has mentored about 190 undergraduate and 12 graduate geology and environmental science students, including several Filipinos, a good number of whom are now experts and leaders in the field.

Honorary Member

To recognize exceptional outstanding contributions to science and technology, the Academy established the Honorary Membership which may be conferred on recipients of internationally recognized prestigious scientific awards such as the Nobel Prize, the Food Prize and the like, who come to the Philippines to deliver a lecture for the Academy. The late Dr. Norman Borlaug, the Father of the Green Revolution and Nobel Peace Prize Awardee, was conferred Honorary Member in the Academy in 2000.

The Outstanding Young Scientist (OYS) Award

The Outstanding Young Scientist Awards are given to young Filipino scientists who have made significant contributions to science and technology. The awardee must not be more than 40 years old on the day of the awarding.



VON MARK V. CRUZ, Ph.D. (Plant Breeding)
International Service for the Acquisition of Agri-Biotech Applications (ISAAA)

In recognition of his significant contribution in plant genetic resources conservation and management in the Philippines that has resolved some operational and biological issues for crop germplasm curators and genebank managers. His assessment of crop biodiversity using molecular markers has immensely contributed in technology transfer and has facilitated the increase of the institutional capacities and public awareness on biotechnology in the country and in the region. The results of his studies have enabled the testing of various hypotheses on crop domestication, species diffusion, integrity of accessions during germplasm regeneration, and market-trait association. His method of verifying the putative duplicates and bulked accessions has reduced the associated cost with germplasm regeneration and maintenance.



ROEL R. SURALTA, Ph.D. (Agricultural Sciences)
Philippine Rice Research Institute (PhilRice)

In recognition of his outstanding scientific research in the field of agricultural sciences, specifically on the study of the rice crop's plastic root responses to fluctuating soil moisture stresses that resulted in identifying key root traits and has precisely quantified their contribution in maintaining growth and yield of rice under such conditions. His research has contributed to the better understanding of the morphological, anatomical and physiological responses of rice roots to fluctuating stresses as the alternate occurrences of drought and waterlogging brought about by fluctuating soil moistures that normally occur under natural field conditions. Through his research, efficient screening procedures of such key root traits and precise phenotyping for mapping the associated quantitative trait loci (QTL) have been developed. The identified QTLs that control such key root traits are essential for efficient breeding in improving the adaptability of high-yielding cultivars to fluctuating soil moisture conditions such as in rainfed ecosystems, and of rice grown using water-saving technologies like alternate wetting and drying systems, and aerobic rice.



GAYVELLINE C. CALACAL, M.S. (Molecular Biology)
DNA Analysis Laboratory, Natural Sciences Research Institute
University of the Philippines Diliman

In recognition of her significant contribution to forensic DNA typing technology in the Philippines. She has been involved in research studies that validated analytical procedures for handling different types of biological materials for forensic application; developed a system for the collection, handling and analysis of evidence, particularly in sexual assault cases; and generated and expanded the reference genetic databases of the Philippines population. All these have proved very useful in the statistical analysis of matching DNA sample cases. Her active involvement in the promotion and dissemination of DNA typing technology in the country through lectures and training programs attests to her deep commitment to this field, generating public's trust in forensic



RACHEL JUNE RAVAGO-GOTANCO, M.S. (Molecular Biology and Biotechnology)
Marine Science Institute, College of Science, University of the Philippines Diliman

In recognition of her pioneering and outstanding research in the field of molecular biology specifically on DNA marker development and their application in the understanding of the ecology and evolution of marine organisms and their management. Her publications have contributed immensely to current knowledge on patterns of diversity and population connectivity for various reef-associated species (*Linckia*, *Tridacna*) stock delineation of milkfish; and species boundaries and phylogeny of spiny lobsters.



ERIC A. GALAPON, Ph.D. (Physics)
National Institute of Physics, College of Science, University of the Philippines Diliman

In recognition of his significant original contributions in the field of theoretical physics specifically on the fundamental issue of time in quantum physics, by independently and successfully formulating and carrying out interesting research despite the unfavourable socio-economic conditions in the Philippines that have made the pursuit of scientific excellence much more difficult. He has been an effective teacher and a dedicated and competent mentor of promising graduate and advanced undergraduate physics students who could be the next generation of outstanding scientists and researchers of the country. His research findings have been published in the leading physics journals of the world, e.g. *Physical Review Letters*, *Physical Review* and *Proceedings of the Royal Society of London*.



FREDEGUSTO GUIDO P. DAVID, Ph.D. (Biomedical Engineering)
Institute of Mathematics, College of Science, University of the Philippines Diliman

In recognition of his outstanding research in computational biomechanics, an inter-disciplinary area that utilizes mathematical modeling and computational methods to solve significant and relevant medical and biological problems. His collaborative studies in the biomechanics of the lens capsule included assumptions of nonlinear stress-strain relationship and non-uniform properties that showed for the first time that the lens capsule exhibits regionally varying material characteristics. The findings were then used to build a more comprehensive model of the lens capsule. His methodical understanding of the complex geometry of biomembranes and expertise in sophisticated mathematical modeling and computational techniques enabled the development of simulations that help to better understand to process of eye accommodation and the accompanying procedures in cataract surgery.



ALVIN R. CAPARANGA, Ph.D. (Environmental Engineering)
School of Chemical Engineering and Chemistry, Mapua Institute of Technology

In recognition of his outstanding scientific research in environmental engineering, particularly on the physical and thermodynamic properties of new or alternative solvent systems (i.e., solvent systems for CO₂ and/ or H₂S capture), which have been reported in international peer-reviewed journals and which have contributed to the data bank of properties. Knowledge of these properties is indispensable in the design of processes and equipment systems, including such applications as CO₂ absorption during its capture and sequestration. Moreover, such solvent systems have been demonstrated to improve absorption rate and efficiency and to lower energy requirement during solvent regeneration.

ALLAN A. SIOSON, Ph.D. (Computer Science and Applications)
College of Computer Studies, Ateneo de Naga University

In recognition of his significant research in the field of computer science focusing on bioinformatics that has paved the way to a fuller understanding of natural phenomena, such as, evolutionary history through associations of species using DNA arrays. His knowledge and skills in combining computer modeling with scientific information in the natural sciences such as DNA arrays to trace species through their similarities and/or differences has been shared actively with students and scientists through seminars and conferences and collaborative work in research and publications.

EDSEL MAURICE T. SALVAÑA, M.D., DTM&H (Tropical Medicine and Infectious Diseases)
Department of Medicine, College of Medicine, University of the Philippines Manila

In recognition of his outstanding scientific contributions in the field of tropical medicine particularly his pioneering work on lymphatic filariasis implicating antibodies against endosymbiont *Wolbachia* in the pathogenesis of acute filarial disease which has been given recognition by the Infectious Disease Society of America, the American Society of Microbiology, and the American Society for Tropical Medicine and Hygiene. Some of his notable research work includes researches on *Lactobacillus* endocarditis and *Shigella* blood culture contamination. His work on atypical mycobacterial disease in patients treated with immune modulators exemplified by the article entitled "Infectious Complications Associated with Monoclonal Antibodies and Related Small Molecules" has been published in *Clinical Microbiology Reviews*, the highest ranked infectious diseases journal in the world.

MARIA PURA R. SOLON, M.D., M.S. (Tropical Medicine and International Health)
Nutrition Center of the Philippines

In recognition of her outstanding work in tropical medicine and international health particularly on infant and young child nutrition and maternal and neonatal health, which are priority concerns in the Philippines and in other developing countries. She has contributed novel concepts in the field of perinatal growth and nutrition. Her collaboration with government and non-government organizations has resulted in the development of evidence-based documentation and evaluation of relevant priorities in maternal and child health. The extensive literature review on iron, vitamin A, folic acid, zinc, iodine and multiple micronutrients across the life cycle by her group has been instrumental in reformulating the guidelines for micronutrient supplementation of infants, children, women or reproductive age, pregnant and lactating mothers and the elderly.

MARY JANET M. ARNADO, Ph.D. (Sociology)
Research Institute for Gender and Women, Inc., Malaybalay City

In recognition of her significant scientific research work on women and migration, which ranged from internal to international migration of Filipinas to Germany and Singapore for work or for marriage to the internal displacement of men and women in Mindanao due to violent conflict. She has employed both quantitative and qualitative methods to examine the experiences of the oppression of largely women and of men migrants in various types of geographical movements due to labor, marriage, and war. The Research Institute for Gender and Women which Dr. Arnado established in Bukidnon has sparked increase in academic and research interest in sociology and gender issues in Mindanao.



TWAS Prize for Young Scientist in the Philippines

The TWAS Prize is given to an outstanding Filipino scientist jointly by the Academy and the Third World Academy of Sciences (TWAS). Every year, one award is given in the selected discipline for the year — biology, chemistry, mathematics or physics.



JOHN DONNIE A. RAMOS, Ph.D. (Molecular Biology/Immunology)
Department of Biological Sciences, College of Science
University of Santo Tomas Manila

For his significant contribution in the field of molecular biology, particularly the molecular cloning, expression and characterization of house dust mite allergens, one of the most common causes of allergic diseases worldwide. He determined the full-length cDNA sequence of a paramyosin-homolog Blo t 11 allergen from the house dust mite *Blomia tropicalis*. His research work has generated monoclonal antibodies against house dust mite allergens for allergen detection, diagnosis and isolation and purification of native allergens, that led to better understanding and easy identification of the proper treatment for dust mites allergies.

NAST - Hugh Greenwood Environmental Science Award

The NAST - Hugh Greenwood Environmental Science Award is intended to recognize outstanding scientific and technological research works that contribute to environmental protection and conservation. The grand prize winner receives US\$1, 000 from Dr. Greenwood and a plaque of recognition from the Academy. Winners of special citations will receive plaques of recognition.

MACRINA T. ZAFARALLA, Ph.D. (Environmental Science)
Institute of Biological Sciences, College of Arts and Sciences
University of the Philippines Los Baños

In recognition of her significant contributions to science and resource management through her ecological studies of Taal Lake and other water bodies, which have shown that the base of the food chain can be affected by such natural events as volcanic eruption and river inflow and by man-induced factors such as aquaculture and effluents from human settlements; for showing a perspective on changes in ecological relationships in freshwater environments exploited in varied ways by local stakeholders thus uncovering some yet unknown aspects of the ecological history of Taal Lake; for clearly identifying some indicators of water quality, including that of phytoplankton communities, that reflect the ecological changes brought about by the proliferation of fish cages beyond the lake's carrying capacity, which also prompted the intervention of Governor Vilma Santos to sign an Order demolishing the floating cages on June 12, 2008; and for sharing the results of her scientific investigations with the local people with varied interests on the use of lake resources, demonstrating that there are no limits to how much a scientist can do to help save the natural resources on which people are dependent for their livelihoods.



NAST-LELEDFI Award for Outstanding Research in Tropical Medicine

The award recognizes outstanding research that contributes to the advancement of knowledge and practice in Tropical Medicine. The award is jointly sponsored by the Academy and by the Lino Ed. Lim Educational Development Foundation, Inc (LELEDFI).

For 2010, the award was given to the research entitled "Current Advances in the Study of *Trichomonas vaginalis* Infections in the Philippines" of Windell L. Rivera and Vanessa A. Ong. The award came with a plaque of recognition and cash prize of fifty thousand pesos.



NAST Talent Search for Young Scientists

The NAST Talent Search for Young Scientists is a project of NAST to encourage young people to pursue a career in science. Trophies and cash prizes are awarded to the best three scientific paper presenters. The paper may present basic or applied research.

KATHLEEN B. AVISO, Ph.D.

Environmental Engineering and Management, De La Salle University Manila

For her outstanding scientific and technological contribution entitled: "Designing Eco-Industrial Water Exchange Networks Using Fuzzy Mathematical Programming." Dr. Aviso is a Graduate Fellow of the Center for Engineering and Sustainable Development Research at De La Salle University, Manila. In her PhD work, she has developed novel modeling approaches for designing efficient water use schemes in Eco-industrial parks (EIPs). Her techniques make use of elements drawn from the fields of operations research, artificial intelligence and game theory to provide an improved modeling approach for industrial symbiosis. This research represents a significant advance in the systematic design of Eco-industrial complexes, which will allow for more efficient use of water resources in the country and the rest of the world. The awarding ceremony was held on 09 December 2010 at The Manila Hotel. Dr. Aviso received a cash prize of PHP40,000 and a plaque of recognition from NAST.

Outstanding Publication Awards

The award recognizes outstanding scientific papers published in Philippine journals and books or monographs published in the Philippines. With the award, NAST aims to promote the enhancement of the quality of Philippine journals and publications of substantial, relevant and high quality science-related books in the country.

Outstanding Scientific Paper Awards

Papers are judged for quality and content, contribution to science and technology, clarity of presentation and thoroughness of documentation. These awards are given annually for papers published in the Philippine scientific or technical journals within five years preceding the awards.

- Boongaling, Edison G., Menandro N. Acda, Hidelisa P. Hernandez, and Ernesto J. del Rosario. "Fractionalization, Derivatization and Termiticidal Activity of Cashew (*Anacardium occidentale* L.) ISSN 0031-7454 The Philippine Agricultural Scientist 91(4):408-415 (2008)
- Villegas, Lucille C., and Erlinda S. Paterno. Growth Enhancement and Root Colonization of Sugarcane by Plant Growth-Promoting Bacteria, by ISSN 0115-463x The Philippine Journal of Crop Science 33(2): 3-24 (2008).
- Palomar, Mike Joshua, Helen T. Yap and Edgardo D. Gomez. Coral Transplant Survival over 3 years under Different Environmental Conditions at the Hundred Islands, Philippines, ISSN 0031-7454 The Philippine Agricultural Scientist 92 (2): 143-152 (2009).
- Lachica-Aliño, Lualhati, Laura T. David, Matthias Wolff, Porfirio M. Aliño and Catalina Rañola Distribution Pattern, Habitat Overlap and Trophic Interaction of Trawl Catches within the Fisheries Ecosystem of Ragay Gulf, Philippines, ISSN 0031-7454 The Philippine Agricultural Scientist 92 (1):46-65 (2009)
- Celeste, Richell O., On the Denominator of Barnes Double Bernoullian Numbers with Even Indices, ISSN 0115-6926 Matimyas Matematika 31 (1-3): 1-9 (2008).
- Mapa, Dennis S. and Lisa Grace S. Bersales. Population Dynamics and Household Saving Evidence from the Philippines, by ISSN 209403-43 The Philippine Statistician 57 (1-4): 1-27 (2008)

Outstanding Book and/or Monograph Award

- Animal Breeding Principles and Practices in the Philippine Context by Orville L. Bondoc. ISBN 971-542-589-6, Published by the University of the Philippines Press, 2008.
- Protected Vegetable Cultivation: Management Options and Economic Potential by Clarita P. Aganon and Teotimo M. Aganon. ISBN 978- 971-7050145-1, published by the Central Luzon State University, 2009
- Philippine Fermented Foods: Principles and Technology by Priscilla C. Sanchez. ISBN 978-971-542-554-4, published by the University of the Philippines Press, 2008
- Atlas of Pediatric and Adolescent Gynecology by Corazon Y. Almirante, Franklin P. Atecio, and Blanca C. de Guia, 2009 First Edition.

SPECIAL CITATION:

- Modern Biotechnology and Agriculture: A History of the Commercialization of Biotech Maize in the Philippines by Leonardo A. Gonzales, Emil Q. Javier, Dolores A. Ramirez, Flerida A. Cariño and Arthur R. Baria, ISBN 978-971-91904-8-6, published by STRIVE Society Towards Reinforcing Inherent Viability for Enrichment/SIKAP) Foundation, 2009.

Other Awards

As the highest recognition body on science and technology, the Academy has been requested by the Department of Science and Technology (DOST) to handle the annual National Science and Technology Week (NSTW) Awards. Every year, four awards are given during the NSTW celebrations in July.

The Outstanding Technology Commercialization Award
(Gregorio Y. Zara Medal)

The award was given to Lilian F. Pateña, Project Leader and Head of the Plant Cell and Tissue Culture Laboratory, Institute of Plant Breeding, Crop Science Cluster, College of Agriculture of the University of the Philippines Los Baños for the successful commercialization of the "IPB's Tissue Culture System for Banana," and to Eulito U. Bautista for the "Drum Seeder: Its Development and Commercialization". The winners each received a cash prize of PhP 75,000, a medal and a plaque of appreciation.

The Outstanding Research and Development Award for Basic Research
(Eduardo A. Quisumbing Medal)

The team from Philippine Rice Research Institute and International Rice Research Institute led by Victoria C. Lapitan, Edilberto C. Redoña, Toshinori Abe and Darshan S. Brar won the 2010 Outstanding Research and Development Award for Basic Research for their research on "Mapping of Quantitative Trait Loci (QTL) Using a Doubled-Haploid Population from the Cross of Indica and Japonica Cultivars of Rice. The team received a cash prize of PhP 150,000, a medal and a plaque of recognition.

The Outstanding Research and Development Award for Applied Research
(Julian A. Banzon Medal)

The award was given to Guillermo Q. Tabios III from the College of Engineering, University of the Philippines Diliman for his research on "Development and Application of Two-Dimensional Finite Volume Flow and Sediment Transport Model for Rivers and Reservoirs." He received a cash prize of PhP 150,000, a medal and a plaque of recognition.

The Outstanding Science Administrator Award
(Dioscoro L. Umali Medal)

Dr. Caesar A. Saloma from the University of the Philippines Diliman was this year's recipient of the award. He was recognized for his "commitment, leadership, dedication and outstanding service as scientist, teacher and administrator specifically for serving as Director of the National Institute of Physics." Dr. Saloma received a cash prize of PhP 150,000, a medal and a plaque of recognition.

Benefits of National Scientists and Academicians

Research Fellowships

Table 1. Academy Members with Research Fellowship Grants in 2010.

RESEARCH FELLOW	DURATION	TITLE
Acad. Ramon F. Abarquez Jr.	Jan 1 - Jul 31	Heart Failure Guidelines' Recommendations: Is the problem limited to implementation or also to presentation?
Acad. Rhodora V. Azanza	Jan 1 - Jul 31	MDGs and the Philippine Coastal and Marine Environment
Acad. Christopher C. Bernido	Jan 1 - Nov 30	Analytical Models for Biomolecular Systems
NS Ernesto O. Domingo	Jan 1 - Dec 31	Towards Universal Health Care: What Needs To Be Done
Acad. Salcedo L. Eduardo	Jan 1 - Feb 28	Guide to the Parasites of Ruminants in the Philippines
Acad. Raul V. Fabela	Jan 1 - Jul 31	MDGs and the Economy
Acad. Leonardo Q. Liongson	Jan 1 - Sep 30	A Review of Hydrologic and Hydraulic Aspects of Flooding in Metro Manila
Acad. Evelyn Mae T. Mendoza	Jan 1 - Oct 31	Defining the Contributions of NAST Members to Science and Technology
NS Dolores A. Ramirez	Jan 1 - 31	Vascular Flora of Mount Makiling and Vicinity (Luzon: Philippines) Part IV
Acad. Eufemio T. Rasco Jr.	Jan 1 - Dec 31	Monograph on <i>Nypa fruticans</i>
Acad. Asuncion K. Raymundo	Jan 1 - Nov 30	Assessment of the Status of Bioremediation as an Approach to the Rehabilitation of the Damaged Environment and Management of Recalcitrant Wastes in the Philippines
Acad. Reynaldo B. Veo	Jan 1 - Sep 30	A Review of Flood Control Measures in Metro Manila
Acad. Ruben L. Villareal	Feb 1 - Dec 31	Building a Science Culture in Laguna with Los Baños as Pilot Through Improved Math and Science Education (Phase 2)
Acad. Fernando P. Siringan	Sep 1 - Dec 31	Sampling and Characterization of Mercury Pollution at Selected Mining Sites in the Philippines
Acad. Guillermo Q. Tabios III	Sep 1 - Dec 31	Assessment of Mining Activities, Practices and Governance Issues in Relation to Mercury Pollution at Selected Sites in the Philippines

Publication Assistance

Members of the Academy may request publication assistance as part of their benefits. NAST gives support assistance to the authors to have the document camera-ready or to put it in its final form and partial printing support assistance to the author for discipline with high scholarly and scientific value but has little chance to be published by commercial publishers because of economic reasons.

Awards received by NAST members

NS LOURDES J. CRUZ, 2010 L’Oreal-UNESCO Awardee in Life Sciences



Out of more than a thousand nominees worldwide, the Philippine candidate, National Scientist Lourdes J. Cruz was one of the five women scientists chosen to receive the award. NS Cruz is being honored for the discovery and elucidation of the biochemical and molecular nature of marine snail toxins that have been found to assist in the study of brain function. For her remarkable achievements that are beneficial to the country and the world, and to the cause of women, NS Cruz truly deserves to be the First Filipina to receive the L’Oréal – UNESCO Award for Women in Science. The awards ceremony took place on 04 March 2010 at the UNESCO headquarters in Paris, with each of the five laureates receiving a \$100,000 prize for their contributions to scientific advancement in the field of life sciences.

ACD. CEFERINO L. FOLLOSCO, Man of the Year for 2010



ACD. Ceferino FolloSCO was recognized as “Man of the Year for 2010” by the Metals Industry Research and Development Center (MIRDC) of the DOST.

ACD. FolloSCO was secretary of the DOST from 1989 to 1992. He was behind the adoption of leading edge technologies, a modernization strategy for industrial and agricultural systems in the country. Part of the strategy was the selection of sectors based on their capabilities in terms of increased production, increased value added, and potential to expand. As DOST secretary, he reorganized the MIRDC and assisted in creating the Design Engineering Center Foundation, Inc. He is presently the head of the C.L. FolloSCO Group of Companies.

ACD. CHRISTOPHER C. BERNIDO and DR. MA. VICTORIA CARPIO-BERNIDO 2010 RAMON MAGSAYSAY AWARDEE



Academician Christopher C. Bernido and his wife Ma. Victoria Carpio-Bernido received the 2010 Ramon Magsaysay Award in recognition of their purposeful commitment to both science and nation, ensuring innovative, low cost, and effective basic education even under Philippine conditions of great scarcity and daunting poverty. Both with doctorates in Physics, they transformed a family-owned high school in Bohol, developed a cost-effective teaching strategy and set up a project to address a nationwide shortage of physics teachers.

IN MEMORIAM

Academician Prestillana Martinez Zamora, the nation's top-notch scientist on plant anatomy-morphology studies succumbed to heart attack on Tuesday, 03 August 2010.

His work on the xylem elements of vascular plants is the basis for the formulation of the two-phase wall deposition concept now accepted worldwide. His extensive researches on the taxonomy of the Philippine fern led to the detection of additional species of the group. He was a consistent supporter of the conservation of the Philippine environment and a supporter of natural resource policy research.



SCIENCE AND TECHNOLOGY FAIR

The NAST Exhibits presented during the DOST S&T Fairs held nationally and regionally, consisted of four (4) panels containing the main functions of the Academy, i.e. Recognition, Advisory, Scientific Linkages, and the Philippine Science Heritage Center.

TAPI provided PhP 50,000 as financial support for the fabrication of the NAST exhibits which were presented during the following activities in 2010:

- **National S&T Fair held on 19-20 July at the Manila Hotel**
- **Northern Luzon Cluster S&T Fair held on 26-30 August at Isabela**
- **Southern Luzon Cluster S&T Fair held on 14 -18 September at Puerto Princesa, Palawan**
- **Visayas Cluster S&T Fair held on 28-30 September at Dumaguete City**
- **Mindanao Cluster S&T is held on 8-10 October at Cagayan De Oro**

ADVISORY FUNCTION

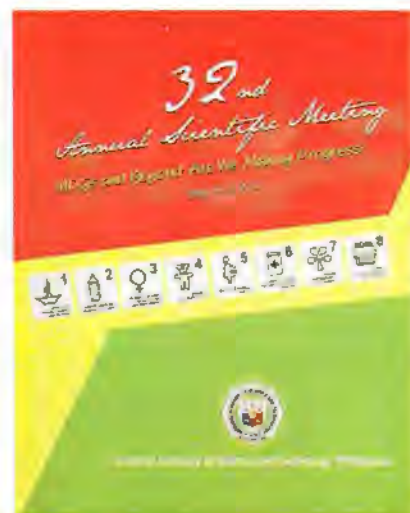
The Academy continues to fulfill its advisory function through relevant activities. As the highest advisory body on science and technology, NAST is proactive on legislative matters and in giving advice to the government on issues related to S&T.



NAST has been able to bring science and technology closer to the lives of the Filipino through its various advisory activities. Its information fora and roundtable discussions have encouraged public participation in discussing important and pressing issues in science such as MDGs, agricultural productivity, population, climate change, among others. These activities help in the formulation of specific policy recommendations such that people would benefit more from S&T. National Scientists, Academicians, and other local and foreign experts have collaborated to put their expertise and knowledge in giving advice to legislators and other policy-making bodies in the country. The NAST Annual Scientific Meeting (ASM) is a much anticipated event where scientists and researchers from the government, academe, industries, non-government organizations, among others, convene to discuss S&T issues of national importance and enrich their knowledge of the new research findings and scientific advances in the Philippines and elsewhere, and witness the awarding of various NAST awards.

32nd Annual Scientific Meeting

The NAST held its 32nd Annual Scientific Meeting (ASM) on 14-15 July 2010 at the Manila Hotel. Taking on the theme "MDGs and Beyond, Are We Making Progress?," it presented the assessments made by NAST of the country's progress with respect to the Millennium Development Goals (MDGs) set by the United Nations in the year 2000. The Philippine's commitment to the MDGs provided an opportunity for NAST, in partnership with individuals and units in implementing government agencies, to play an independent but collaborative role in monitoring progress toward achieving the MDGs.



The renowned medical doctor and former Secretary of Health, Dr. Jaime Galvez Tan, keynoted the event. Experts on the abovementioned fields shared their insights and experiences in the six plenary sessions. Dr. Nimfa B. Ogena and Acd. Raul V. Fabella were speakers for Plenary Session 1 entitled "Population and Economic Growth and the MDGs." Acd. Arsenio M. Balisacan and Dr. Cynthia Rose Bautista, on the other hand, discussed MDG #1 - Eradicating Extreme Poverty and Hunger in the Philippines and MDG #2 - Achieving Universal Primary Education in the Philippines, respectively for Plenary Session 2. This was followed by Plenary Session 3, which deals with MDGs #4 and #5 - Reducing Child Mortality and Improve Maternal Health delivered by Dr. Alberto G. Romualdez. During Plenary Session 4, Acd. Jaime C. Montoya discussed MDG #6 - Combat HIV-AIDS, Malaria, and other diseases while in Plenary Session 5, Acd. Angel C. Alcala talked about MDG #7 - Environmental Sustainability. In Plenary Session 6, MDG #3 - Promote Gender Equality and Empower Women: An Assessment of Gains and Remaining Challenges was delivered by Dr. Carolyn Israel-Sobritchea.

The 32nd ASM was organized by the Academy with assistance from donors and sponsors.

The 32nd ASM Steering Committee was composed of National Scientist Mercedes B. Concepcion, Acd. Arsenio M. Balisacan, Acd. Allan Benedict I. Bernardo, National Scientist Gelia T. Castillo, Acd. Raul V. Fabella, National Scientist Onofre D. Corpuz, Acd. Rhodora V. Azanza, Acd. Ceferino L. Folloasco, Acd. Jaime C. Montoya, Acd. Carmencita D. Padilla, National Scientist Dolores A. Ramirez, Acd. Evelyn Mae Tecson-Mendoza, and Acd. Thelma E. Tupasi.

Scientific Posters. There were one hundred fifty eight (158) accepted abstracts for the scientific poster session broken as follows: Agricultural Sciences – 36, Biological Sciences – 45, Chemical, Mathematical, Physical Sciences – 32, ESTD – 18, Health Sciences – 14, and Social Sciences – 7. A special prize was also awarded to the poster related to the theme "Is Income Growth Enough to Reduce Fertility Rate? Empirical Evidence from Regional Panel Data" by Dennis S. Mapa, Michael Daniel C. Lucagbo and Czarina Lei S. Ignacio.



Table 2. 2010 Scientific Poster Awardees

DIVISION	NAME(S)	TITLE
Agricultural Sciences	Shierel F. Vallesteros Wilfredo M. Carandang Armando M. Palijon Rex Victor O. Cruz	Yield and Oil Content Ideotypes Specifications in <i>Jatropha curcas</i> L.
Biological Sciences	Karen G. Rosal Shusuke Taniuchi Ai Kukushima Sumio Takahashi Sakae Takeuchi	Identification of Two Novel Growth Hormones mRNAs Expressed Mainly in Mouse Immune Tissues
Chemical, Mathematical and Physical Sciences	Kristian Mark P. Caldo Roberta N. Garcia Andrea G. Vargas Evelyn Mae Tecson-Mendoza	Coconut (<i>Coconut nucifera</i> L.) 11S Globulin Exhibits Gene Sequence and Structural Homologies with Known Legumins
Engineering Sciences and Technology	Evelyn B. Gergon John Eric Abon	Effects of Hermitic Storage in the Saclob and Super Bag on Quality of Rice Seeds and Milled Rice of Different Rice Varieties in the Philippines
Health Sciences	Wendell Lou B. Ladion Maetrese Arianne J. Beley Lucilyn D. Lahoylahoy	Calliphorid Larval Secretions as Naturopathic Antiseptic

NAST Resolution on MDG.

At the dawn of the new administration, the results of this year's Annual Scientific Meeting were summarized into the Resolutions on the Imperatives to Heighten the Progress of the Philippines in Meeting the Millennium Development Goals. These were presented by NAST President Acd. Emil Q. Javier to the newly appointed DOST Secretary Engr. Mario G. Montejo.

The whole Academy trusts that the results of this year's ASM would be considered by the new administration as the building block and guide post that would assist concerned departments and agencies in laying out their plans and programs to attain the MDGs for all concerned sectors of our country.

RESOLUTIONS ON THE IMPERATIVES TO HEIGHTEN THE PROGRESS OF THE PHILIPPINES IN MEETING THE MILLENNIUM DEVELOPMENT GOALS

WHEREAS, the Philippines is a signatory of the 2000 UN Millennium Development Declaration setting down the UN Millennium Development Goals for each country to achieve;

WHEREAS, the NAST selected as the theme of its 32nd Annual Scientific Meeting: "MDGs and Beyond: Are we making Progress?" to review the progress of the Philippines in meeting its targets and suggest research- and evidence-based remedies for shortfalls;

WHEREAS, the newly installed administration of President Benigno Aquino III pledged itself to the goal of "walang maiiwan" which is totally congruent with the pro-poor and inclusive philosophy underlying the MDGs;

WHEREAS, the likelihood as of 2010 of some MDG targets being achieved by 2015 is low and time is fast running out;

WHEREAS, the recent crises in food, energy and global economy have heavily eroded and in some cases reversed the tenuous progress made towards the targets;

WHEREAS, the various fact-finding roundtable discussions (RTD) organized by NAST revealed that relevant data were inadequate, non-harmonized or not accessible to researchers and policy makers in a timely manner;

WHEREAS the engagement of local stakeholders, such as LGUs, private sector, local communities, and academe, will be crucial in assuring the attainment of the MDGs;

WHEREAS, the attainment of the MDGs will be a significant achievement for President Aquino and his pro-poor program;

NOW, THEREFORE, THE NATIONAL ACADEMY OF SCIENCE AND TECHNOLOGY RESOLVES, as it is hereby resolved, that to hasten the achievement of the MDGs, the Philippines urgently undertake the following:

A. ON OVERARCHING ISSUES

A.1. On a Presidential Commission

That the President form a Presidential Commission on the MDGs to formulate new modalities and approaches to realize the MDGs and continually remind and counsel the various agencies to mainstream the MDGs.

A.2 Budget for R & D

That the budget to finance the R & D sector be raised from current 0.1 percent to 0.5 percent of GDP by 2015 with an eventual target of 1.0 percent.

A.3. On Inclusive Growth

1. That the Philippine government pursue an economic growth path that is rapid, job creating and inclusive;
2. That the Philippine polity address with severity and resolve corruption, that hinders the attainment of the MDGs;

A.4. On Social Protection

3. That greater social protection be pursued via a larger budget allocation for social spending and the provision of safety nets rather than through distortions of the market;

A.5. On the Management of Population Growth

4. That the President, in recognition of the crucial importance of population management on the MDG outcomes and pending the re-filing and passage of a new RH bill, issue an EO that mandates the different agencies to include responsible parenthood in their programs and increase their budget allocation;

A.6. On Data Access and Harmonization

5. That census and national survey data collection activities of government agencies be adequately supported as a matter of national priority. Provided further that these agencies be brought under the close technical supervision, control, and harmonization of the NSO.

6. That the President certify the Freedom of Information (FOI) Bill as urgent and in the meantime a Presidential directive be issued mandating all the data collected by the government to be placed in the public domain within 12 months;

7. That the data be collected and processed in harmony with internationally accepted definitions and standards;

8. That data collection be granted higher and adequate budget allocation to strengthen the availability and integrity

of data for evidence-based policy formulation;

B. ON SPECIFIC RECOMMENDATIONS

9. That the out-of-pocket financing of medical services for PhilHealth members be dramatically brought down to allow the very poor to avail themselves of the PhilHealth Fund;

10. That, in recognition of the need to reduce the likelihood of environmental disasters including climate and eco-systems change, environmental sustainability and disaster prevention be mainstreamed in the policies and programs of government to protect habitats and increase biodiversity;

11. That our watersheds so long neglected be resolutely rehabilitated and maintained, through government jobs program and community initiatives, to ensure the availability of clean water in the coming years;

12. That small scale, low-cost water supply and sanitation facilities in remote areas and small islands be provided and adapted to the existing natural and socio-economic conditions;

13. That the DepEd, in recognizing that the education crisis extends beyond the lack of classrooms and textbooks, encourage and adopt new and flexible modalities of teaching and pedagogy which compensate for the inadequacies of our school system;

14. That the share in GDP of the education budget be benchmarked relative to the Asian countries;

15. That the Conditional Cash Transfer Scheme be scaled up to partly address the problem of high dropout rate among elementary school children; and

16. That the linking of the unserved and underserved areas to the national networks, through accessible and affordable ICT, be accelerated.

Pre-ASM Discussions and Consultations

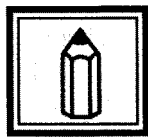
In preparation for the 32nd Annual Scientific Meeting (ASM), roundtable discussions (RTDs) and consultation meetings with different government agencies concerned on the different Millennium Development Goals (MDGs) were conducted as early as November 2009. Results and recommendations from these activities were incorporated in the commissioned papers presented during the ASM.

MDG 1: Eradicate Extreme Poverty and Hunger



The RTD was held on 02 February 2010 at the Traders Hotel, Pasay City. The activity was coordinated by Acd. Arsenio M. Balisacan. Dr. Romulo Virola, Secretary-General of the National Statistical Coordination Board (NSCB), Dr. Jocelyn Juguan, Senior Science Research Specialist of the Food and Nutrition Research Institute (FNRI-DOST), Dr. Dennis Mapa, Associate Professor 5 and Director for Research, School of Statistics, UP Diliman, and Dr. Mahar Mangahas, President of the Social Weather Stations, Inc., participated in this RTD organized by the NAST Social Sciences Division. This RTD determined the factors affecting the dynamics and prevalence of hunger incidence, identified recommendations on lowering the prevalence of hunger incidence and presented statistics related to poverty and hunger.

MDG 2: Achieve Universal Primary Education



The RTD was organized on 26 January 2010 at the Traders Hotel, Pasay City. The discussion tried to address the question: *How can we avert the decline in the performance of EFA indicators of education outcomes and sustain improvements in those that registered recovery?* The paper presentations aimed to identify the key determinants of selected major education outcomes; examine concomitant or related education policies and strategies, and determine the project intervention for purposes of recommending reforms or possible reorientation. Speakers of the said event include Dr. Michael Alba of the De La Salle University and Dr. Dalisay Maligalig of the Asian Development Bank. The focal person of this activity was Acd. Allan Benedict I. Bernardo.

MDG 3: Gender Equality and Empower Women



The RTD on Sharing Experiences and Data on Gender Equality and Empowering Women was held on 20 January 2010 at the Manila Hotel. Led by the NAST Vice President, NS Mercedes B. Concepcion, this RTD discussed the country's progress on MDG monitoring, came up with additional indicators for MDG 3, and provided recommendations to meet the goals of MDG 3. The International Rice Research Institute (IRRI) shared its research results on agricultural households, coming up with additional indicators and recommendations to meet its goals. Speakers for this RTD include Ms. Joyce Luis, Associate Scientist of IRRI, Ms. Jemelle Milanes, Planning Officer of the Philippine Commission on Women (PCW), and Ms. Maritess Lagarto, Social Development Staff Division Chief of the National Economic and Development Authority (NEDA).



MDG 4: Reduce Child Mortality and MDG 5: Improve Maternal Health



The consultative meeting on MDG 4 Reduce Child Mortality and MDG 5 Improve Maternal Health was held on 25 March 2010 at the Traders Hotel, Pasay City. During the meeting, the problematic progress on maternal health and the disaggregated indicators of child mortality were discussed. Dr. Liezel P. Lagrada, OIC Health Planning Division, Health Policy Development and Planning Bureau, Department of Health, presented the DOH Transition Plans on MDG 4 and 5. Dr. Raman P. Paterna, Research Associate Professor, National Institutes of Health, University of the Philippines, focused his presentation on the Universal Health Care System in relation to MDGs 4 and 5. Dr. Lilibeth C. David, Director IV, Local Health Development, Department of Health, talked about Forecasting for 2015. Three reactors contributed their ideas to the consultative meeting. They were: Dr. Shirley B. Domingo, Vice President, Philippine Health Insurance Corporation; Dr. Zelda C. Zablan, Professor and Researcher, UP Population Institute; and Dr. Albert Romualdez, Dean of the Graduate School, Pamantasan ng Lungsod ng Maynilo. Dr. Marilyn Lorenzo, in her synthesis, reported that towards the attainment of MDGs, MDG 4 has disaggregated indicators that show some progress while MDG 5 is still problematic with a little progress.



MDG 6: Combat HIV-AIDS, Malaria, and Tuberculosis



The RTD on Achieving MDG 6 (Combat HIV-AIDS, Malaria, and Tuberculosis): Status of Malaria and Its Control in the Philippines was held on 21 May 2010 at the Pan Pacific Hotel, Manila. Acd. Jaime C. Montaya, NAST Focal Person on MDG 6, and Dr. Vicente Y. Belizaria, Jr. coordinated the event that aimed to (1) describe the current status of malaria in the Philippines and the Western Pacific Region, (2) describe good practices and challenges in malaria control in the country, and (3) formulate strategies to sustain progress of malaria control. Resource speakers were Dr. Jeffrey Hii, Malaria Scientist of the World Health Organization (WHO), Dr. Christino Galang of the National Center for Disease Prevention and Control (NCDPC) of the Department of Health (DOH), and Ms. Marvi R. Trudeau, Program Manager of Pilipinas Shell Foundation Inc. Panel discussants include Dr. Thelma Dangao from Apayao, Dr. Antonio Yasaña from Sarangani, Dr. Fahra T. Omar from Sulu and Dr. Madonna Sumanga from Zambales. Dr. Cecilia S. Acuin of the Research Dissemination and Utilization Committee, National Institutes of Health (NIH) and Dr. Fe Esperanza J. Espino of the Research Institute for Medical Health of DOH serves as reactors to the presentations.



MDG 7: Ensure Environmental Sustainability



On 16 March 2010, the RTD tried to assess the indicators of MDG 7 in terms of upland, forest and agricultural ecosystems was held at the Traders Hotel, Pasay City. Dr. Florentino O. Tesoro, former DOST Undersecretary and Professor of Forestry, presented his paper on "The Forestry Outlook" and reacted upon by Isabellita Austria of the Department of Environment and Natural Resources (DENR) and Dr. Bessie Burgos of SEARCA. Dr. Domingo E. Angeles, Dean of the College of Agriculture, UP Las Baños, discussed the status of Philippine agriculture and its impact on the MDGs and the reaction was given by Assistant Secretary Percy Manzo of the Department of Agriculture.

On 20 April 2010, an RTD focusing on Aquatic Environmental Sustainability was coordinated by Acd. Azanza and Dr. Marie Antonette Juinio-Meñez, professor at the UP Marine Science Institute (MSI). Acd. Azanza gave an overview of the MDG 7 focusing on aquatic environments. Dr. Juinio-Meñez presented her paper on the Preliminary Assessment on Status of Coastal and Marine Environment Sustainability in Relation to MDG 7. Acd. Rafael D. Guerrero III, discussed his paper on "Lakes and Other Inland Freshwater Bodies in the Philippines: Status, Gaps and Recommendations." Carla Custadio, head of the CMMO, PAWB-DENR discussed the "Conservation of Philippine Aquatic Resources/ Ecosystems: Status, Issues and Gaps." Reactors were Nelson Lopez of BFAR, Dr. Perry Aliña of UP-MSI and Anabelle Trinidad of Conservation International-Philippines. Acd. Angel C. Alcalá synthesized the important points covered in the RTD. NS Mercedes B. Concepcion gave the closing remarks and Acd. Angel L. Lazara III acted as emcee/moderator.

On 04 May 2010, another RTD on MDG 7 was held focusing on Lowland, Urban and Industrial Environment at the Traders Hotel, Pasay City. During the forum, the issue on the accuracy of national figures (rural and urban difference) and the number of informal settlers were tackled. Industrial environment was also considered especially the toxic and hazardous elements and wastes. NEDA suggested that all recommendations from the NAST RTDs on MDGs be submitted to their office for reference. Dr. Aura C. Matias, Associate Professor of the Department of Industrial Engineering and Operations Research, UP Diliman presented her paper on "Environmental Sustainability: Urban and Industrial Sector". Engr. Lerma Rosario, Engineering Division Manager, Metro Waterworks and Sewerage System (MWSS) and Mr. Arnulfo Garcia of the Department of Interior and Local Government (DILG) gave their reaction to the paper presented. Acd. Leonardo Q. Liangson, RTD Convenor, served as synthesizer. Acd. Azanza gave the closing remarks and acted as emcee/moderator.



RTD on Towards Achieving the MDGs: Technologies for the Unserved and Underserved Communities



The NAST initiated a roundtable discussion on Towards Achieving the MDGs: Technologies for the Unserved and Underserved Communities on 09 June 2010 at the Traders Hotel, Pasay City, in line with its role on assisting in monitoring progress toward the achievement of the Millennium Development Goals (MDGs). Although the NAST Social Sciences Division is spearheading the assessment of the MDGs, the ASM Steering Committee requested the NAST Engineering Sciences and Technology Division to look at how the division's concerns cut across all the MDGs. The topics discussed were energy, infrastructure, ICT, water and

RTD on State of Presidency and the Role of Media in Achieving the MDGs

The NAST Social Sciences Division conducted the discussion on the State of Presidency and the Role of Media in Achieving the MDGs on 07 April 2010 at the Manila Hotel. Dr. Emmanuel de Dias, Dean of the School of Economics, UP Diliman, talked about the state of Philippine economy, which the elected President will inherit. Recommendations on possible programs and projects for the next administration were discussed. Mr. John Nery, Senior Desk Editor of the Philippine Daily Inquirer, talked on the possible roles of media and the individual media practitioners in achieving the MDGs.



Other Advisory Activities

Research Performance Evaluation (RPE) Workshop

Focal Person: NS Lourdes J. Cruz

A three-day workshop was conducted on 25-27 January 2010 at the Traders Hotel, Pasay City. This is in line with the initiative of DOST to institute measures to improve the monitoring and evaluation of R&D results and the respective institutions. More than 250 participants from all over the country attended the workshop. A follow-up training for all researchers and editors of scientific journals is being planned.

RTD on Aerial Spraying of Pesticides on Plantation Crops

Focal Person: NS Dolores A. Ramirez

The RTD was held on 04 March 2010 at the NAST Conference Room, Bicutan, Taguig City to help resolve the controversy on aerial spraying. The following courses of action were suggested: (1) re-study the risks associated with aerial spraying and explore alternatives to chemical control of Sigatoka; (2) closer monitoring of aerial spraying and more rigid implementation of guidelines for aerial spraying by FPA which will assure the public that regulation of aerial spraying is effectively in place; (3) increase participation of the scientific community in risk communication to help the public understand the scientific issues behind aerial spraying; and (4) recommend to Press Secretary Jesus Dureza, Chair of the National Task Force on Aerial Spraying, to tap relevant scientists in the studies they will undertake.

17th Dioscoro L. Umali Memorial Lecture Series

The NAST, in partnership with the Southeast Asian Regional Center for Graduate Study and Research in Agriculture (SEARCA), conducted the 17th Dioscoro L. Umali Memorial Lecture Series with the theme "Rural Credit: The Unresolved Dilemma" at SEARCA Los Baños, Laguna on 22 July 2010.

This year's lecture transcends the critical issue on the access to credit by the farmers. With its essential connection to the production process, there is a need to shed light and solution to this rural credit dilemma as guide to the government in creating policy and necessary actions. Jovita M. Corpuz, Executive Director of Agricultural Credit Policy Council (ACPC) and President of the APRACA CENTRAB, outlined the history, current status and future directions of rural and agricultural financing in the Philippines. Dr. Jaime Aristotle B. Alip, General Manager of Center for Agriculture and Rural Development Mutually Reinforcing Institutions (CARD MRI), introduced his institution to the participants. Antonio L. Tiu, Chief Executive Officer of AgriNurture, Inc. talked about the role of rural financing in addressing the country's agricultural problem. Dr. Eulogio T. Castillo, Professor, of Agricultural Credit and Cooperative Institutes (ACCI), College of Public Affairs (CPAf), UP Los Baños, gave a general assessment of the Philippine farming sector.

This activity resulted in the following recommendations: (1) the government should continue to provide the support services, information, and development for farmers; (2) the government should assist and support the development of cooperatives and provide incentives for them; (3) there is a need to increase the outreach of micro-finance for alternative livelihood projects and financing of climate change-resilient crops; (4) investment in the construction and upgrading of agricultural infrastructure is necessary; and (5) funding for capacity building to enhance delivery of credit to small farmers and fisherfolk should be increased.

Seminar on Crop Biotechnology and Biosafety Experiences

The NAST and SEAMEO-SEARCA Biotechnology Information Center (BIC) held a Seminar on Crop Biotechnology and Biosafety Experiences on 27 September 2010 at the Linden Suites, Ortigas Center, Pasig City. The activity aimed to provide avenue where key stakeholders are updated on the current efforts on crop biotechnology research and development and foster the exchange and sharing of experiences and lessons on crop biotech applications, adoption and collaboration. It also aimed to further inform policy and program development on agricultural biotechnology and continue to uphold the national policy on safe and responsible use of modern biotechnology.

During the seminar, Dr. Kailash C. Bansal, Professor from the National Research Centre on Plant Biotechnology (NRCPB), Indian Agricultural Research Institute (IARI), shared with the Philippine stakeholders the progress of crop biotechnology initiatives, safety assessment and adoption in India. A media forum followed immediately after lunch.

11th National Convention on Statistics
Panel Discussion on the Philippine Population Projections
Focal Person: NS Mercedes B. Concepcion

The National Statistical Coordination Board (NSCB) and NAST organized the Panel Discussion on the Philippine Population Projections, in conjunction with the 11th National Convention on Statistics on 05 October 2010 at the EDSA Shangri-La Hotel.

This was organized in response to an article written by Dr. Bernardo Villegas, entitled "Population Statistics are Being Doctored" published in the Manila Bulletin on 20 September 2010. The RTD aimed to (1) present the official population projection methodology in a public forum for better appreciation among various data users, the media, and the general public; (2) provide a venue for sharing various viewpoints, facts, and opinions from different fields of expertise on the issues raised concerning population counts and population projections; and (3) serve as a forum for exchange of ideas and to respond to and shed light on questions from the participants on population statistics.

1st National Bioremediation Conference
Focal Person: Acd. Asuncion K. Raymundo

The First National Bioremediation Conference was a successful gathering of almost 200 participants from diverse groups who shared their experiences and challenges in the field of bioremediation. With the presentation of 11 plenary sessions, 13 oral and 24 poster papers covering various aspects of bioremediation, the Conference provided an opportunity for the people from the academe, industry, government and other sectors to learn more about the viability of bioremediation in the country.

The discussions revolved around the different cases of how hazardous wastes can be addressed through bioremediation technologies. The different practical bioremediation technologies developed abroad which could be adapted in the Philippine conditions were also presented while information on how government manages hazardous wastes and how bioremediation could be tapped as one of the most viable solution to the problem of hazardous wastes were also discussed. The convention also looked into the practicality of applying bioremediation technologies in the country as well as interesting tools in obtaining organisms from both plants and microorganism using new or improved bioremediation capabilities. The addition of sociological and health/toxicological dimensions in the presentations reminded the participants about the stakeholders' position in using bioremediation approach to solve environmental problems. From the best practices presented during the plenary sessions, the following technologies can be adopted and slightly modified to adopt with the situation and needs:

1. The Australian experience on phytoremediation presented by Dr. Doronila can be consolidated and adopted to Philippine conditions;
2. Mine waste management practices of Philiex Mining can be shared with other companies that are using underground mining;
3. Bioremediation of abandoned mines of the NAST-UPLB Bioremediation Team is ready to take off and must be expanded. The strategy of community participation and involvement in the bioremediation efforts has to be implemented. This strategy is not only to create environmental awareness but also as a way of empowering the community. A program proposal integrating this portion has long been submitted and it was strongly recommended that this be given priority to show that it is workable;
4. Bioremediation of tannery waste practised by Chelsi Leather Systems, Inc. has proven successful and should be adopted by the other tannery companies;
5. Bioremediation to clear up aquatic systems – experiences of Dr. Sandeep Sudhakar Joshi of India and Professor Marlo Mendoza of UPLB/DENR should be considered; and
6. For small water systems like creeks, the technology practiced by Dr. Macrina T. Zafaralla can be adopted.

RTD on the Progress of Philippine Energy Programs
Focal Person: Acd. Alvin B. Culaba

With the ever-increasing concerns on energy sustainability in the country and the whole world, NAST held a roundtable discussion to determine the current status of Philippine energy programs and future directions of biodiesel and bioethanol programs, and identify potential alternative energy sources. The RTD was held on 19 November 2010 at the Traders Hotel, Pasay City.

Dr. Jacelyn Eusebio presented the research and development programs of the Philippine Council for Agriculture, Forestry and Natural Resources Research and Development (PCARRD) related to biofuel production, particularly with the use of *Jatropha curcas* and sweet sorghum. Annabelle V. Briones, Chief Science Research Specialist of Industrial Technology Development Institute (ITDI), presented the processing and pilot testing of *Jatropha*. Nonilo A. Peña, Supervising Science Research Specialist of the Philippine Council for Industry, Energy and Emerging Technology Research and Development (PCIEERD), tackled the initiatives and programs of DOST in biofuels and renewable energy, especially in including alternative feedstock development; S&T support services through testing facilities and resource assessment, and technology development. Ruby B. de Guzman, Supervising Science Research Specialist of the Alternative Fuels and Energy Division of the Department of Energy (DOE) updated the participants on the undertakings of the National Biofuels Board. Engr. Fortunato Sibayan of DOE presented the solar and wind energy programs, including the BIGSHOW (which stands for biomass, geothermal, solar, hydro, ocean, wind) plan, which hopes to cultivate renewable energy sources for the country.

Recommendations include, adopting the best practices of other countries on alternative energy sourcing and project implementation; engaging the private sector to invest in these efforts and implement it successfully; collective effort between the government, academe, research agencies and the private sector on the initiatives and endeavours in finding alternative energy sources; and technology entrepreneurship should be strengthened to attract business groups to participate since they have financial resources.



RTD on Priority Legislation for the Philippine Water and Sanitation Sector
Focal Person: Acd. Leonardo Q. Liongson

The NAST, in partnership with the Philippine Water Partnership (PWP), conducted an RTD on the Priority Legislation for the Philippine Water and Sanitation Sector on 22 November 2010 at the Discovery Suites, Ortigas, Pasig City. The RTD aimed to develop an updated list of development issues and set of recommendations for the water sector reforms and identify the Water and Sanitation Indicators Measurement Guide (WATSAN) Champions.

The RTD inputs came from Acd. Leonardo Q. Liongson, NAST member and PWP Chairman; Acd. Angel C. Lazara III; Vicente S. Paragas, Executive Director of the National Water Resources Board (NWRB); Rosario Aurora L. Villaluna, Executive Secretary of the Streams of Knowledge, PWP Managing Trustee and PWP representative to the National Economic and Development Authority (NEDA) Board Committee on Infrastructure Sub-Committee on Water Resources (INFRACOM-SCWR); Dan Lapid, President and Executive Director of the Center for Advanced Philippine Studies (CAPS) and Team Leader for Strengthening Strategic Alliances, Philippine Sustainable Sanitation Roadmap; and Ramon B. Alikpala, Chairman of the Board of Metropolitan Waterworks and Sewerage System (MWSS).

The group agreed to (1) build alliance and communicate with legislators to push for water supply and sanitation roadmap legislative recommendations to create economic regulation, strengthen resource regulation thru update of water code, and strengthen NWRB implement rationalization plan; (2) support the process to develop the water security roadmap, which includes joint PWP-NWRB-NAST proposal for the updated water availability study for DOST; (3) decentralize resource regulation by utilizing regional offices of DENR to assist in resource regulation; (4) working closely with the Congressional Commission on Science and Technology Engineering (COMSTE); (5) review of all pending bills and look for sponsors for the proposed Water Resource Center (WRC) bill; (6) discuss with the Speaker of the House of Representatives to co-sponsor the WRC bill; and (7) for NWRB/NEDA to get endorsements from other stakeholders.

RTD on Ovicidal Trap System
Focal Person: Acd. Jaime C. Montoya

The RTD was held on 07 December 2010 at the Traders Hotel, Pasay City. The ovicidal and larvicidal (OL) trap system was presented by Anabelle V. Briones, Chief of the Chemicals and Energy Division, Industrial Technology Development Institute (ITDI) of DOST. Dr. Nelia Salazar, consultant of the Research Institute for Tropical Medicine (RITM-DOH), Dr. Lilian delas Llagas, professor of the National Institutes of Health, Dr. Jesus Sarol, Jr., consultant of the College of Public Health, UP Manila, and Dr. Nuna E. Almanzor, director of ITDI, provided expert reactions on the proposed project.

This is one of the priority high impact projects of DOST Secretary Mario G. Montejo that addresses the problem of dengue using an OL Trap, a device that can potentially reduce the Aedes mosquito population. It can monitor as well as control the Aedes mosquito population. To help further improve the development of the OL Trap system, the following courses of action were suggested: (1) Better understanding of dengue transmission in relation to environmental changes, meteorological and climate patterns, community practices, political and health sector reforms, vector biology, viral persistence and reservoirs; (2) Determine the critical threshold for vector and human infection and apply appropriate control measures to minimize transmission; (3) Reduce or eliminate mosquito-breeding habitats to interrupt the cycle of dengue virus transmission; (4) Strengthen local government capacity in program management for an evidence-based, demand-driven control program that will result in long term source reduction, consequently, effective control and prevention of outbreaks; (5) Integrate community control programs on dengue prevention and control using appropriate methodology e.g. Communication for Behavioral Impact (COMBI); (6) Launch awareness campaigns through tri-media and multi-sectoral involvement of all stakeholders (education, business, tourism, religious, NGOs civic organizations, etc.) including travel advisory, personal protection; (7) Eliminate all larval habitats through environmental sanitation and/or treatment of water holding containers with appropriate pesticides; and (8) Apply auxiliary and innovative control methods such as genetic manipulation, use of insecticide-treated bed nets, curtains, clothing, ovitraps/larvitrap and herbal pesticides. It should be viewed, however, that the approach to dengue control should be multi-pronged, to include vector and environmental control, appropriate diagnosis and management of cases.

Annual Rice Forum 2010: Adoption to Climate Variability in Rice Production
Focal Person: NS Benito S. Vergara

The Asia Rice Foundation (ARF) organized the Annual Rice Forum 2010 on November 23, 2010 at the SEARCA Drillon Hall. This was in partnership with SEARCA, IRRI, Department of Agriculture – Food and Agriculture Organization Philippines – Strengthening the Philippine Institutional Capacity to Climate Change (DA-FAOPH-SPICACC), PhilRice, UPLB, PCARRD-DOST, International Service for Acquisition of Agribiotech Applications (ISAAA), Provincial Government of Albay, NAST Philippines, and AGHAM Partylist.

The forum aimed to (1) present recent and current knowledge on effects and impacts of climate variability and climate change in the Philippines, including the projected plausible climate scenarios that impinge on rice production; (2) discuss recent advances in science and technology which can be utilized to design and develop knowledge based-based climate adaptation strategies to reduce adverse impacts in rice crop production; and (3) initiate and stimulate collaboration and partnership in research and development activities for further fine-tuning and application strategies and measures to enhance climate resilience of rice production communities.

The paper presentations were made by Ms. Helen Grace S. Centeno from IRRI who talked about climate change and climate variability effects and impacts on rice production, Dr. Felino P. Lansigan from UPLB on climate change adaptations in rice production in the Philippines while Maria Pilar S. Castro-Pablo of Sibol ng Agham at Teknolohiya and Dr. Charito P. Medina of Magsasaka at Siyentipiko para sa Pagunlad ng Agrikultura (MASIPAG) tackled community-based strategies and initiatives on increasing adaptive capacity of smallholders for more climate resilient rice production systems. The event was attended by 74 participants from 26 organizations.

Science Information Forum on Staying Alive, Healthier and Longer
Focal Person: Acd. Jaime C. Montoya

Dr. Enrique Tayag, director of the National Epidemiology Center of the Department of Health, served as the resource person of the forum held on 09 December 2010 at the Manila Hotel. Miscceptions and truths on some health-related issues were the focus of Dr. Tayag's presentation. The event was attended by NAST Members, partners from government agencies and institutions as well as members of the media. Academician Ruben L. Villareal, member of NAST Agricultural Sciences Division, served as the moderator.



SPEAKERS BUREAU: Vermiculture and Mango Pulp Weevil
Venue: Western Philippines University, Puerto Princesa, Palawan
Date: 14 December 2010

The Speakers Bureau is a program under the advocacy function of the NAST that aims to bring Filipino scientists to different parts of the country to serve as speakers and resource persons on vital issues related to science and technology.

The program was brought to Palawan in coordination with DOST Region IV-B MIMAROPA, Provincial Science and Technology Center of Palawan, Western Philippines University and the local government of Palawan. Speakers were Academician Rafael D. Guerrero III, who talked about vermiculture, Dr. Lovella Lorenzana of the Department of Agriculture Region IV who discussed mango pulp weevil and Ma Theresa Vasquez of the Special Project Unit of DOST, who talked on DOST-GIA Projects and ways on how to access funding support from DOST. Participants included students, farmers, concerned LGU officials and other stakeholders.



SCIENTIFIC LINKAGES FUNCTION

Among the mandates of the Academy is forging linkages with international academies of science, technology, engineering as well as with international and regional networks and local science organizations to promote closer scientific cooperation.

As of 2010, the Academy has maintained linkages with 29 science academies and institutions all over the world. These linkages have enabled the promotion of collaborative effort among Filipino and foreign scientists through the exchange scientists program. Access to research findings has been facilitated through the exchange of books and other scientific materials.

International Scientific Linkages

- Academy of Sciences Malaysia (ASM)
- Australian Academy of Sciences (AAS)
- Chinese Academy of Sciences (CAS)
- French Academy of Sciences (FAS)
- Indian National Science Academy (INSA)
- Korean Research Foundation (KRF)
- Malaysian Scientific Association (MSA)
- Pakistan Academy of Sciences (PAS)
- Royal Society of London (RSL)
- The Royal Swedish Academy of Sciences
- Turkish Academy of Sciences (TUBA)
- US National Academy of Sciences (US NAS)
- Korean Academy of Science and Technology (KAST)
- German Research Society (Deutsche Forschungsgemeinschaft or DFG)
- Philippine-American Academy of Science and Engineering (PAASE)

Affiliations to International Scientific Networks

- American Association for the Advancement of Sciences (AAAS)
- Association of Academies of Science and Engineering (AASA)
- ASEAN Council for Academies of Science and Engineering (ASEAN-CASE)
- Federation of Asian Scientific Academies and Societies (FASAS)
- Inter Academy Panel (IAP)
- Inter Academy Council (IAC)
- Inter Academy Medical Panel (IAMP)
- Third World Academy of Sciences (TWAS)
- Third World Network of Scientific Organizations (TWNISO)

Local Scientific Linkages

- Center for Biomolecular Science Foundation, Inc. (CBMFS)
- Center for Fluid Dynamics (CFD)
- Confederation of Scientific and Professional Organizations Region 8, Inc. (COSPO) and Department of Science and Technology Regional Office No. 7 (DOST 7)
- Outstanding Young Scientists, Inc. (OYSI)
- Philippine Association for the Advancement of Science (PhilaAAS)

Attendance in International Meetings

AASA/FASAS meeting in Seoul, Korea

Academician Evelyn Mae Tecson-Mendoza and Acad. Ceferino L. Folloso represented the Academy in the international conferences and general assembly and council meetings of the Association of Academies of Sciences in Asia (AASA) and Federation of Asian Scientific Academies and Societies (FASAS) on 18-23 October 2010, Seoul, Korea.



Acads. Tecson-Mendoza and Folloso attended the 10th anniversary celebration of the foundation of the AASA during which the reports of AASA on its project "Sustainable Development in Asia" were released. The reports consist of the following: (a) Towards a Sustainable Asia: Energy' (b) Towards a Sustainable Asia: Natural Resources; (c) Towards a Sustainable Asia: Environment and Climate Change; (d) Towards a Sustainable Asia: The Cultural Perspectives; and a synthesis report, (e) Towards a Sustainable Asia: Green Transition and Innovation.

The 2010 AASA International Symposium on 'One Green Asia' focused on initiatives in Asia, especially in South Korea and China, to protect the environment while still promoting industrial progress. These include development and use of clean energy (nuclear power, solar, wind, others), concerns on climate change and global warming, clean up of rivers and pollution, protection of biodiversity, and others.

The 4th AASA-FASAS Joint International Conference on 'Science Education in Asia and the Pacific' addressed the question of what scientific academies are doing to help improve science education in Asia. Acad. Tecson Mendoza presented a paper on "NAST Initiatives in Science Education Improvement in the Philippines" on October 20, 2010. Other delegates from various member countries shared their strategies and experiences in improving science education.

Both Academicians participated in the general assembly meeting of AASA and the council meeting of FASAS. The newly elected president of AASA is Prof. Won-Hoon Park of KAST. The possible merger of FASAS with AASA was discussed during the FASAS meeting. They also joined the industrial tour in Samsung Electronics in Suwon and National Research Institutes (KAIST, KRIBB, ETR) in the Daedeok Innopolis in Daejeon.

It was observed that the successful industrialization of South Korea was attributed by several guest speakers (former and present high ranking officials) to science and technology.

IAMP Scientific Meeting and 3rd General Assembly

Academician Carmencita D. Padilla, NAST official representative to IAMP, represented the Academy during the IAMP Scientific Meeting and 3rd General Assembly on 9-11 June 2010, Malaysia.

The highlight of the meeting was the election of new members and IAMP Executive Committee. Five new members of IAMP were elected bringing a total membership of 69. The new co-chair for high income countries is Jo Ivey Bouffard. New members of the executive committee are from the following:

For low and middle income countries:

- Brazilian Academy of Sciences
- Academia Nacional de Medicina de Colombia
- Nigerian Academy of Sciences
- Turkish Academy of Sciences
- African Academy of Sciences

For high income countries

- Academie Nationale de Medecine
- Deutsche Akademie der Naturforscher
- Academia dei Lincei
- Royal Swedish Academy of Sciences



Co-sponsored Activities

DYSI 5th Annual Meeting and Convention

The 5th Annual Meeting and Convention of the Outstanding Young Scientists, Inc. was held on 13 July 2010 at the Manila Hotel with the theme "Meeting the Challenges of Natural Resource Management".

The convention was highlighted with a keynote address from National Scientist Lourdes J. Cruz who is also a member of the Society. NS Cruz focused on the community empowerment in the management of natural resources. Two (2) members were given recognition for being elected as members of the NAST in 2009. They were Academicians Eufemio T. Rasca Jr. and Rodel D. Lasco.

The outgoing president, Dr. Rhodora R. Aldemita, presented the accomplishments for 2009. Members of the governing board were elected during the meeting through ballot casting. The newly elected governing board include Drs. Cynthia P. Saloma, Felino P. Lansigan, Maribel L. Dianisio-Sese, Arnel N. Del Barrio, Gabriel O. Romero, Merlyn S. Mendiolo, Windell L. Rivera, Raymond R. Tan, Maria Corazon A. De Ungria, Victor B. Amoroso and Laura T. David. Dr. Aldemita is the Ex-officio Member.

Experts on environment and biodiversity were invited to speak during the plenary sessions. Dr. Rex Victor Cruz, Dean of the College of Forestry and Natural Resources, UPLB, discussed climate change, biodiversity and ecosystem functions, key impacts, vulnerabilities and adaptation; Dr. Laura David, Professor from UP Marine Science Institute, talked about marine resource management-biodiversity as key to building resilience; Dr. Gabriel O. Romero, Deputy Director for Research at PhilRice, talked about biotechnology for natural resource management; and Acad. Caesar A. Saloma, Dean of College of Science, UP Diliman, discussed the measures of scientific productivity and current Philippine performance.

The first governing board meeting of the new set of officers for 2010-2011 was held after the plenary sessions to elect the new set of officers and to set preliminary activities. The elected officers include Drs. Cynthia P. Saloma, President (previous Vice President), Felino P. Lansigan, Vice President, Maribel L. Dianisio-Sese, Treasurer, Maria Corazon A. De Ungria, Secretary, Arnel N. Del Barrio, Auditor, and Gabriel O. Romero, PRO.

Gender and Development

As part of the Gender and Development (GAD) Program of the NAST, a Science Information Forum on Staying Alive, Healthier and Longer in Government Service was organized on 10 December 2010, at the Traders Hotel, Pasay City.

NS Mercedes B. Concepcion, NAST Vice President and GAD Focal Person, led the different DOST agencies' focal persons, members of the GAD DOST Core Group of Trainers, other DOST Employees, and the NAST Secretariat in attending the said event. Resource speaker was Dr. Enrique Toyag, Director of the National Epidemiology Centre of DOH.

Dr. Toyag informed the group that large percentage of deaths worldwide is usually caused by chronic diseases. He reported that cardiovascular diseases (mainly heart disease and stroke) are responsible for 30% of all deaths. Cancer, chronic respiratory diseases, and diabetes are also major causes of mortality. To practice healthy lifestyle, the following were recommended: don't smoke; avoid too much alcohol; no to illicit drugs; low salt, high fiber diet; prevent hypertension; engage in regular exercise; and manage stress.

NAST Publications Launched

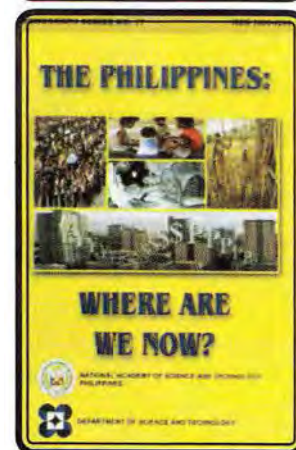
Two monographs were launched on 14 July 2010 at the Manila Hotel.

BUILDING A CAREER IN SCIENCE IN THE PHILIPPINES (Evelyn Tecson-Mendoza, Editor)

This monograph is a compilation of papers presented during the four roundtable discussions organized by the NAST Chemical, Mathematical, and Physical Sciences Division in preparation for the 29th Annual Scientific Meeting (ASM) on July 11-12, 2007. This volume reports on the discussion and analysis of many collaborative initiatives, programs, and projects of the academe, private sector, government, NGOs, and foreign governments that address issues on the improvement of science and mathematics education and development of scientific capability in the country.

THE PHILIPPINES: WHERE ARE WE NOW?

This monograph is a compilation of papers presented by experts on population and development, global economic crisis, country's efforts to attain millennium development goal on poverty, and rural based asset reform programs foremost of which is the Comprehensive Agrarian Reform Program (CARP) in the country.



PHILIPPINE SCIENCE HERITAGE CENTER

The Philippine Science Heritage Center was created under Republic Act 9107 to be the country's main repository of the contributions, achievements, and accomplishments of Filipino scientists in the field of science and technology. Jumping off from this premise, it is clear that the contents of the Center should be the scientific and technological breakthroughs and advancements initiated by Filipino scientists.



The Salinlahi Symposium Series, Meet Your Scientist and other similar programs are conducted to promote science culture, popularize and bring scientists to the realm of the general public, encourage young people to take science-based careers and circulate the richness of Philippine scientific heritage. The PSHC was reopened to the public following the Launching of Exhibits done in June 2010.

NEW EXHIBITS

Salinlahi, as Philippine Science Heritage Center, is fondly called, renewed its mission of promoting science culture to the Filipinos through the launching of new exhibits on 17 June 2010. Representative Angelo B. Palmones of the Alyansa ng Agham at Teknolohiya para sa Mamamayan (AGHAM) Partylist graced the event providing insights and inspiration for the scientific community to support endeavors like science museums. Guests included members of the NAST PHL, DOST officials and staff, students, teachers, tour agencies and operators.

New exhibits form an integral part of the Salinlahi, along with renovated older exhibits. Thirty-two (32) backlit panels on the National Scientists compose the Order of the National Scientist section. A centerpiece exhibit focuses on two distinguished National Scientists: Geminiano de Ocampo and Julian Banzon. On the other hand, unique Philippine flora, fauna and microorganisms like the Philippine eagle, jade vine and tarsier, are featured in the exhibit on biodiversity, coinciding with the United Nation's declaration of 2010 as the International Year of Biodiversity.

Globally-acclaimed coconut and tilapia sex reversal technology are highlighted in the exhibit on Agriculture and Environment. Filipino achievements in medicine and other health-related fields like the Meconium kit are featured in the Health and Wellness section. Quink, Filipino ancient writing called alibata and yoyo are some of the interesting exhibits in the Society and Industry section. Awardees of various DOST councils and Outstanding Young Scientist honorees comprise the Gallery of Awardees. The Bioteknolohiya! Exhibit presents the principles and products of biotechnology with an imposing 20-ft model of the double helical structure of the DNA as its masterpiece.



PSHC started as a program in 1998 as the contribution of the scientific community to the centennial celebration of Philippine Independence. It was formally launched into a full-blown science museum in 2001 with the enactment of RA 9107. This was a product of the creative mind of National Scientist Benito Vergara, who also championed the creation of Rice World at the International Rice Research Institute (IRRI), Los Baños, Laguna. At present, exhibitions and programs of the Center are approved by NAST – PSHC Working Committee composed of NS Vergara, NS Dolores Ramirez, Acd. Evelyn Moe Tecsan-Mendoza, Acd. Gavino Trono, Acd. Alvin Culaba, Acd. Arsenio Balisacan and headed by Acd. Jaime Montoya.

Meet Your Scientist

With the aim of promoting the achievements and contributions of Filipino scientists, increase awareness and appreciation of students on science-related matters and inspire them to pursue careers in science, *Meet Your Scientist* was conducted in the following venues:

1. Tagbilaran, Bohol (17 June 2010)

Speakers: Acd. Christopher C. Bernido and Dr. Rommel G. Bacabac

Attendees: Students and teachers from Tagbilaran City Science High School, Bohol Island State University, Holy Name University, International Academe for EnSciMa, Bohol Wisdom School and Victoriano Advanced Learning Center.

2. Bicutan, Taguig City (19 November 2010)

Speakers: Dr. Esperanza O. Cayanan (DOST-PAGASA), Dr. Ernesto S. Luis (Retired Deputy Director, DOST-ITDI)

Attendees: Students from St. Jude Catholic School Manila

3. Bicutan, Taguig City (07 December 2010)

Speakers: Dr. Maricor N. Soriano, Dr. Julius M. Basilla, and Dr. Arnel A. Salvador

Attendees: Students from God the Almighty Academy, Inc.

Exposure To Different Science Centers and Museums

1. Daejeon and Seoul, South Korea (25-28 June 2010)

Attended by Reihvelle Perez and Dexter Bautista

Visited museums include Gwacheon National Science Museum, National Museum of Korea, Daejeon Science City, National Science Museum (Daejeon, South Korea), National Palace Museum of Korea, and Korean Folk Museum. During the visit the following were observed: (1) Most of the museums are open during weekends and holidays boosting up visitorship and encouraging families to visit the museums on their free time. Entrance fees were also minimal since most of the museums were government-funded; (2) Museum staff have their rest days on Monday to accommodate the visitors on weekends; (3) Exhibits are child friendly and interactive and the exhibits are updated regularly; and (4) Use of innovative advertising medium (i.e. use of manholes to advertise the National Museum of Korea, use of mascots for the museum). Based on these observations, recommendations were submitted to the PSHC Committee and NAST Executive Council for their consideration.



2. International Museum Day (May 2010)

Pasig City Museum

Attended by Dexter Bautista

Takbang Salinlahi

Takbang Salinlahi, held on 14 December 2010, 5:00 am at the DOST Compound, was participated by representative from different DOST Agencies and Philippine National Police (PNP) including National Capital Region Police Office (NCRPO) PDir. Nicanor A. Bartolome. This event, aimed to promote awareness of the Science Center and the commemoration of its 12th year anniversary, was co-sponsored by UNIDEA and DOST's *Ignite the Mind* advocacy program. Acd. Jaime C. Montoya, PSHC Focal Person and STII Director Raymund Liboro actively participated in this fun run.

THE ACADEMY MEMBERS

In addition to their activities in the Academy, members pursue their profession and interests with vigor and excellence. Their works take them to many parts of the country and beyond its shores to promote and contribute to science and technology and their applications to uplift the socio-economic conditions of their countrymen. The Academy's members are actively involved in the following areas: Research and Development (R&D), R&D Management, Education, Policy-making and Regulation, Entrepreneurship and Industry, and Extension, Advocacy and Community Service.

RESEARCH and DEVELOPMENT

Many of the Academy members lead in the implementation of various projects in their respective fields:

National Scientist Clare R. Baltazar diligently works on the inventory of Philippine Hymenoptera, Diptera, Lepidoptera, Trichoptera, Siphonaptera, Neuroptera, and Strepsiptera.

Academician Veronica F. Chan continues her research on WHO-Global Influenza Surveillance.

Academician Gisela P. Concepcion is actively involved in *Moringa* research.

Academician Gavino C. Trono is actively involved in seaweed research.

National Scientist Lourdes J. Cruz continues her research on *Conus* toxins and other marine toxins.

Academician Salcedo L. Eduardo is actively involved in research and publications on various old and new species of nematodes.

Corresponding Member Liwayway M. Engle is a geneticist and head of the Genetic Resources Unit of the AVRDC-The World Vegetable Center in Taiwan.

Academician Edgardo D. Gomez leads researches on marine biodiversity, conservation and utilization with local and international funding. He serves as a member of the Executive Council of the International Union of Biological Sciences (IUBS).

National Scientist Bienvenido O. Juliano continues to be active in rice grain quality research at PhilRice Los Baños.

Academician Apolinario D. Nazarea continues his research on vaccine design and the use of bioinformatics.

Academician Asuncion K. Raymundo is conducting a research on the rehabilitation of abandoned mines in Marinduque through the use of microorganisms.

Academician Evelyn Mae Tecson-Mendoza continues her researches with colleagues and students on the field testing of transgenic papaya with delayed ripening trait and the biochemical and molecular studies on the oil and proteins of coconut and the storage proteins of mungbean.

R&D MANAGEMENT

As high officials of various R&D institutions at the national, regional and international levels, several of our Academy members are involved in setting directions and policies in R&D, in overseeing the implementation of R&D programs, in the transferring of technologies to their target clientele and training manpower, among others. Many serve as advisers, consultants and chairs/members of technical committees of such institutions.

Academician Veronica F. Chan is the Director of the WHO National Influenza Center in the Philippines.

Academician Libertado C. Cruz is the Executive Director of the Philippine Carabao Center.

Academician Ernesto O. Domingo as Vice President and Trustee of the Philippine Cancer Society has been deeply involved in cancer control, specifically cancer epidemiology, education and pain control.

Academician Jaime C. Montoya is the Executive Director of the Philippine Council for Health Research and Development.

Corresponding Member Amador C. Muriel is the Director of the Molecular Theory of Turbulence Project at the World Laboratory, CERN, Geneva, Switzerland.

Academician Carmencita D. Padilla is the head of the Institute of Human Genome of the National Institutes of Health in UP Manila.

Academician William G. Padolina is the current Deputy Director for Operations and Support Services of the International Rice Research Institute (IRRI) and serves as a liaison between the Philippine government and IRRI and acts as the Secretary of the Board of Trustees.

Academician Thelma E. Tupasi is the President of the Tropical Disease Foundation and is the official NAST representative to the Women's Health and Education Program of the InterAcademy Medical Panel (IAMP).

Academician Filemon A. Uriarte Jr. is the present Executive Director of ASEAN Foundation based in Jakarta, Indonesia.

EDUCATION AND MENTORING

Several Academicians are at the forefront of Philippine education – establishing policies and strategies, developing curricular programs, teaching and training students, preparing teaching materials, and mentoring of future scientists and leaders.

Academician Eliezer A. Albacea is a Professor and Director of the Institute of Computer Science in UP Los Baños.

Academician Angel C. Alcala is the Director of the Siliman University Angelo King Center for Research and Environmental Management.

Academician Jose Maria P. Balmaceda is a Professor and Director of the Institute of Mathematics in UP Diliman.

Academician Allan Benedict I. Bernardo is a University Fellow and Chair of the Counseling and Educational Psychology Department of De La Salle University Manila. He is actively maintaining research and publication program in psychology and education.

Academician Christopher C. Bernido is the President of the Central Visayan Institute Foundation and the founding Director of the Research Center for Theoretical Physics in Jagna, Bohol.

Academician Solita F. Camara-Besa maintains her academic ties by being an active member of the Ethics Review Board of the Committee on Research Implementation and Development of the College of Medicine, UP Manila.

National Scientist Gelia T. Castillo continuously conducts informal "mentoring" of young researchers engaged in participatory R&D through commentaries on their research and research reports.

Academician Veronica F. Chan is a Professor Emeritus of the College of Public Health, UP Manila and a professorial lecturer at the University of Santo Tomas. She is a much sought-after lecturer on influenza.

Corresponding Member Jose B. Cruz Jr. is a Distinguished Professor of Engineering and Professor of Electrical and Computer Engineering at the Ohio State University.

National Scientist Lourdes J. Cruz is a Professor of Biochemistry at the Marine Science Institute, UP Diliman. She also initiated a number of projects on mentoring at NAST.

Academician Romulo G. Davide is a member of the UP Board of Regents.

National Scientist Clara Y. Lim-Sylianco is a Professor Emeritus of UP and continues to receive accolade for the achievements of her many students who have made a name for themselves in the various fields of chemistry.

Academician Leonardo Q. Liongson is a Professor of Civil Engineering and the Director of the Hydraulics Research Center, under the College of Engineering, UP Diliman. He is also the editor-in-chief of the Philippine Engineering Journal.

Academician Bienvenido F. Nebres, SJ, as President of the Ateneo de Manila University, continues to work for the upgrading of science education not only in the tertiary level but also at the elementary and high school levels.

Corresponding Member Baldomero M. Olivera is a Distinguished Professor at the Department of Biology, University of Utah.

Academician Asuncion K. Raymundo is a Professor and Dean of the College of Arts and Sciences (CAS) in UP Los Baños.

Academician Caesar A. Saloma is the Dean of the College of Sciences in UP Diliman. He has supervised and graduated PhD and MS Students at the National Institute of Physics.

Academician Reynaldo B. Veja, President of Mapua Institute of Technology, in addition to his administrative duties and efforts to improve engineering and technology curricula in the country, vigorously pursues the accreditation of engineering education.

Corresponding Member Reynaldo L. Villareal serves as coordinator for Asia Transnational Learning Program of Cornell University, which established the Cornell University distance learning modules for Biotechnology in the UP Open University and the Leyte State University.

POLICY MAKING AND REGULATION

A number of Academicians are chairs or members of important national and international technical committees, which conduct science-based studies and make policy recommendations in the fields of economics, governance, agriculture, environment, population, education, science and technology, among others.

Academician Arsenio M. Balisacan is a member of the Technical Advisory Council of the Congressional Commission on Science and Technology and Engineering (COMSTE).

Academician Alvin B. Culaba is a member of the Technical Panel on Energy and Environment of COMSTE.

National Scientist Ernesto O. Domingo is a senior adviser to the Health Policy Development Program of the UP School of Economics and USAID. He is involved in a wide-ranging review of programs of the Department of Health. He assists Senator Pia Cayetano in various health-related purposed legislation as technical adviser.

Academician Ceferino L. Folloso is a member of the Technical Advisory Committee of COMSTE.

Academician Angel L. Lazaro III is the present Chairman of the Board of Civil Engineering of the Professional Regulatory Commission (PRC).

National Scientist Ricardo M. Lantican is an active member of the Scientific Technical Review Panel of the National Committee on Biosafety of the Philippines (NCBP) and a reviewer of the Bureau of Agricultural Research, Department of Agriculture (DA).

Academician Emil Q. Javier is a senior adviser to the Biotechnology Coalition of the Philippines, a key scientific/technology adviser to the DA and Chair of the Asia Rice Foundation.

Academician Bienvenido F. Nebres, SJ is the Co-Chair of the Technical Advisory Council of COMSTE.

National Scientist Dolores A. Ramirez serves as the Vice-Chair of the NCBP.

National Scientist Teodulo M. Topacio Jr serves as Chair of the Board of Veterinary Medicine of the PRC and actively promotes the implementation of the Anti-Rabies Act of 2007.

Academician William T. Torres is an active participant in the formulation of government policies affecting the telecommunications industry, especially value-added services such as Voice-Over Internet Protocol and audio/video conferencing and streaming.

EXTENSION, ADVOCACY AND COMMUNITY SERVICE

Members of the Academy have also been active in extension activities that include participation in fora, seminars, workshops, dialogues, as resource persons, speakers, panelists, moderators and reactors.

Academician Ramon F. Abarquez Jr. as one of the leading cardiologists in the country, delivers technical papers in many fora on atherosclerosis, hypertension management and related topics here and abroad.

Academician Ramon C. Barba continues to advise projects on tissue culture of coconuts, citrus, and mango and serves as a consultant in an agricultural and environmental consultancy firm.

Academician Filomena F. Campos continues to be active in her advocacy on gender issues and an active member of TWNSO.

National Scientist Gelia T. Castillo serves in boards and committees in various S&T or R&D bodies enabling her to contribute through analysis, synthesis, and writings on the subject at hand. Interdisciplinary perspectives in S&T are her quiet advocacies.

Academician Leopoldo S. Castillo reaches out to students, researchers and industry practitioners in the livestock industry through his written works.

National Scientist Mercedes B. Concepcion has tirelessly worked on population demographics and management. She is also the chairperson, member or consultant of different international and local programs on population.

National Scientist Onofre D. Corpuz is a prodigious author of Philippine history and political economy.

National Scientist Lourdes J. Cruz is the President of the Bataan Center for Innovative Science and Technology and Center for BioMolecular Science Foundation. She leads an NGO promoting social development and economic upliftment of cultural minorities in Bataan.

Academician Romulo G. Davide continues his advocacy for participatory rural extension with his pioneering farmer-scientist training program.

Academician Raul V. Fabella continues to study and lead discussion on issues related to the socio-economic status and

the development of the country.

Academician Ceferino L. Follosco continues to lecture and hold dialogues on productivity, technology, and industrial clustering all over the Philippines.

National Scientist Perla D. Santos Ocampo serves in local and international medical organizations in various capacities.

National Scientist Benito S. Vergara is a member of the PCARRD Team on Ornamental and Horticulture and a Trustee of the Asia Rice Foundation.

Academician Ruben L. Villareal continues the NAST advocacy on the improvement of science and math education by giving lectures all over the country.

ENTREPRENEURSHIP AND INDUSTRY

Members of the Academy have also been active in entrepreneurship activities. They are also key players in the various industries like medical, construction and consultancy.

Academician Ceferino L. Follosco is the Chairman of the Follosco Group of Companies and continues to tirelessly work towards greater productivity in the industry sector.

Academician Jose O. Juliano is the President of the Calamba Medical Center, and member of several Boards. He also established the South Luzon Hospital and Medical Center, Inc. and built a PhP 400 million-, 150-bed tertiary hospital at Greenfield City, Santa Rosa, Laguna.

Academician Angel L. Lazaro III is the Managing Partner and CEO of Angel Lazaro and Associates Consulting Architects and Engineers. He handles various designs and supervision of projects, from highways and bridges to airports and harbors, from waterworks and sewerage system to mechanical and electrical systems and from site development planning to computer software development.

ACCOMPLISHMENTS OF ACADEMY MEMBERS

SIGNIFICANT S&T POSITIONS HELD

ANGEL C. ALCALA

- Co-Chairman, NAST Committee on Climate Change
- Member, National Climate Change Commission
- Chairman, Board of Judges, NAST-Hugh Greenwood Environmental Science Award
- Member, Board of Judges, NAST Outstanding Research and Development Award
- Chairman, CHED National Biodiversity and Database Program
- Biodiversity Research Specialist, DENR-ICRMP Project
- Member, National Agriculture and Fisheries Education (NAFE) Board, CHED

RHODORA V. AZANZA

- Scientific Adviser, International Foundation for Science (Sweden) – 1997 to present
- Chairperson, Training Through Research, UNESCO/IOC – WESTPAC HAB Programme, 2004 to present
- Member, International Seaweed Association Council (ISAC), 2004 to present
- Coordinator, ASEAN-Canada Red Tide Network/SEAHAB, 1993 to present
- International Editorial Board Member, Harmful Algae, ISI Scientific Journal, Elsevier Science B.V.

- International Editorial Board Member, Journal of Applied Psychology, ISI Scientific Journal, Springer-Verlag
- Reviewer, Journal of Applied Psychology, Springer-Verlag
- Reviewer, Philippine Journal of Science, Science and Technology Information Institute, DOST
- Reviewer, Coastal and Ocean Management, Elsevier Science B.V.
- Reviewer/Participant, Open University of Hongkong National Research Program
- Reviewer/Participant, Open University of Hongkong International Research Program
- Reviewer/Participant, IOC-WESTPAC HAB Program

JOSE MARIA P. BALMACEDA

- Chair, Division of Mathematical Sciences, NRCP
- Chair, Technical Committee for Mathematics, CHED
- Member, Technical Panel for Mathematics and Statistics, CHED
- Member, Special Technical Committee for Natural Sciences, Scientific Career System
- Director, Institute of Mathematics, College of Science, UP Diliman
- UP Coordinator, Erasmus Mundus Mobility with Asia (EMMA) Program
- Editor-in-chief, Matimyas Matematika: Official Journal of the Mathematical Society of the Philippines
- Editor, Southeast Asian Bulletin of Mathematics
- Member, Editorial Board, Philippine Science Letters

ALLAN BENEDICT I. BERNARDO

- Chairman, Philippine Social Science Council
- Secretary-General, Asian Association of Social Psychology
- Ex Officio and Past President, Psychological Association of the Philippines
- Advisory Board Member and Immediate Past President, ASEAN Regional Union of Psychological Societies
- Editor, The Asia-Pacific Educational Researcher (ISI/SSCI)
- Editor, Philippine Journal of Psychology
- Associate Editor, Asian Journal of Social Psychology (ISI/SSCI)
- Member, Working Committee on the Education of Psychologists, International Union of Psychological Science
- Co-Chair, Task Force on Quality Assurance Systems for Higher Education, CHED
- Member, Technical Panel on Social Science, CHED
- Member, Technical Working Group on Journal Accreditation System, CHED
- Resource Person, Task Force on Typology of Higher Education Institutions, CHED

CHRISTOPHER C. BERNIDO

- Editorial Board Member, Communications on Stochastic Analysis (<http://www.math.lsu.edu/cosa>; published by Serials Publication)
- Editorial Board Member, Philippine Science Letters (<http://philsciletters.org>).
- Reviewer, Mathematical Reviews (American Mathematical Society)
- Advisory Board Member, The Philippine Scientist (University of San Carlos Press) ISSN 0079-146 (www.philjol.info/index.php/PSCI)
- Advisory Board Member, Philippine Education Research Journal (www.perj.org)
- M.S. and Ph.D. Thesis Advising / Committee Membership {Ph.D. (Physics) Thesis External Advisor: Henry P. Aringa (MSU-Iligan Institute of Technology), M.S. (Physics) Thesis Committee Member: Heev Ayade (University of San Carlos, Cebu), M. S. (Science Education) Thesis External Advisor: Renier Cagurol (University of San Carlos, Cebu)}

GELIA T. CASTILLO

- Consultant, International Rice Research Institute
- Scientific Adviser (Social Science) International Foundation for Science, Stockholm
- Senior Adviser, UPWARD (Users' Perspective with Agricultural Research and Development, A network of Asian

Researchers Doing Participatory Research and Development) A program associated with the International Potato Center

- Chair, Scientific Poster Committee, Annual Scientific Meeting, NAST
- Member, Executive Committee, Human Development Network
- Member, Board of Trustees, Philippine Rice Research Institute
- Member, Board of Trustees, Center of Agriculture and Rural Development (CARD) –Mutually Reinforcing Institutions (MRI) Inc.
- Member, Board of Trustees, CARD Micro-Finance Development Institute (CMDI)
- Member, Board of Judges, Gawad Saka Awards, DA
- Member, Board of Judges, Outstanding Rural Women, Philippine Commission on Women
- Member, Steering Committee, Annual Scientific Meeting of NAST for 2010
- Member, Seminar Committee, IRRI
- Member, Board of Judges for the Outstanding IRRI Alumni
- Member, Advisory Committee on Ageing

VERONICA F. CHAN

- Professor Emeritus, College of Public Health, UP Manila
- Professor Emeritus, School of Medicine, Emilio Aguinaldo College
- Professor of Medicinal Virology, UST Graduate School
- Associate Dean for Basic Sciences, School of Medicine, Emilio Aguinaldo College
- College Secretary, School of Medicine, Emilio Aguinaldo College
- Chairman, Department of Microbiology and Parasitology, School of Medicine, Emilio Aguinaldo College

GISELA P. CONCEPCION

- Chair, NAST Website Committee
- Co-founder and co-editor, Philippine Science Letters, ISI-listed online, peer-reviewed scientific journal
- Editor, Star Science, weekly science column in The Philippine Star

MERCEDES B. CONCEPCION

- Chair, NSCB Technical Committee on Population and Housing Statistics
- Chair, Program Committee Philippine Center for Population and Development
- Commissioner, POPCOM until 30 June 2010
- Eminent Person, Forum for Family Planning and Development
- Vice-President, Executive Council, NAST
- Chair, Social Sciences Division, NAST
- Focal Person on Gender, NAST
- Chair, Organizing Committee, 32nd ASM
- Lead Person, MDG#3 for the 32nd ASM
- Member, NAST-Hugh Greenwood Environmental Science Award Committee
- Chair, Board of Judges, National Statistics Quiz, BSP, 08 December 2010

LIBERTADO C. CRUZ

- Member, Technical Working Group, Philippines –India Technical Collaboration in Agriculture and Fisheries
- Member, Technical Working Group, Philippines-Brazil Technical Collaboration in Agriculture and Development
- Member, Technical Working Group, Philippines-Taiwan (MECO-TECO) Technical Collaboration in Agriculture and Fisheries with focus on Biotechnology
- Member, DA Biotech Program Technical Committee

ALVIN B. CULABA

- Focal Person on Energy, NAST
- Member, Presidential Coordinating Council for Research and Development (PCCRD)
- Member, Energy and Environment Expert Panel, COMSTE
- Vice President and Division VII (Engineering and Industrial Research), National Research Council of the Philippines (NRCP)
- Director, Center for Engineering and Sustainable Development Research (CESDR), De La Salle University Manila
- Associate Editor, Philippine Science Compendium in Engineering and Industry Research
- Associate Editor, The International Journal for Manufacturing Science and Technology
- Co-editor, Journal of Sustainable Energy & Environment
- Member, Editorial Board, The Philippine Science Letters

SALCEDO L. EDUARDO

- Curator (Parasitic Helminths), UPLB Museum of Natural History
- Faculty In-Charge, Parasite Collection Center, College of Veterinary Medicine, UPLB
- Biological Safety Officer, UPLB-DOST
- Member, 2008 UPLB Pool of Research & Extension Evaluators
- Member, Mathematics, Science and Society Domain of the UPLB- RGEP
- Member, Editorial Board: Journal of Veterinary Science
- Member, Editorial Board: Philippine Journal of Veterinary and Animal Sciences

CEFERINO L. FOLLOSCO

- Chair, CL FolloSCO Group
- Member, Executive Council, NAST (reappointed by the President of the Philippines, 26 May 2009)
- Chair, Engineering Sciences and Technology Division, NAST
- Commissioner, UNESCO Philippines
- Volunteer Consultant, Export Development Council (headed by the President of the Philippines)
- Chair Emeritus, Philippines Foundation for Science and Technology
- Member, COMSTE; Technical Advisory Board; Advisor for Engineering Education and Energy
- Chair, Philippine Society of Agricultural Engineer Foundation
- Chair, Philippine Society of Mechanical Engineers Foundation
- Founding Chair and Director, Philippine Technology Development Ventures, Inc.
- Founding Chair and Director, Entrepinoy Volunteer Foundation, Inc.
- Founding Chair and Director, Philippine Quality and Productivity Movement
- Director, IMI Philippines (an Ayala Corporation)
- Chair, IMI Philippines Audit Committee
- Director, Wartsila Philippines and Wartsila Subic Corp. (Finnish Companies)
- Director, DLSU-AKI Institute of Economic Studies
- Member, DLSU Board of Engineering Advisors

EDGARDO D. GOMEZ

- University Professor Emeritus, University of the Philippines
- Coordinator, Southeast Asia Center of Excellence, GEF, World Bank Coral Reef Targeted Research and Capacity Building for Management Program

RAFAEL D. GUERRERO III

- Chair, Board of Judges, Outstanding Aquatic Environment Projects, PAWB, Department of Environment and Natural Resources

- Member, Board of Judges, Gawad Saka Awards for Fisheries, Department of Agriculture
- Member, Editorial Board, Asian Life Sciences Journal of Biology
- Reviewer, Papers submitted to Journal of Applied Soil Biology

EMIL Q. JAVIER

- President, NAST
- Member, Science Career Council (Civil Service/DOST)
- Member, DA Secretary's Technical Advisory Group (STAG-DA)
- Member, Board of Directors, Centro Escolar University (CEU)
- Member, Board of Directors, Del Monte Pacific Limited
- Board Member, International Service for the Acquisition of Agri-Biotechnology Applications (ISAAA), South East Asia Center-Philippines
- Head Adviser, Biotech Coalition of the Philippines
- Member, Board of Directors, Nutrition Center of the Philippines
- Member, Board of Directors, Philippine Foundation for Science and Technology
- Board Member, UP Los Baños Alumni Association, Inc.
- Member, Board of Trustees, Philippine Society of Youth Science Clubs (PSYSC)
- Chair, SATRE, Foundation, Inc.
- Vice President, D.L. Umali Foundation, Inc.
- Member, Board of Trustees, Asia Rice Foundation, Inc. (ARF)
- President, AGHAM Party list
- Member, D.L. Umali Award Search Committee

BIENVENIDO O. JULIANO

- Senior Expert, Philippine Rice Research Institute
- Chair, Election Committee, NAST
- Member, Editorial Board and Reviewer, Journal of Cereal Science 1987- and Food Reviews International 1985- .

QUINTIN L. KINTANAR

- Chair, Health Sciences Division, NAST
- Member, NAST Executive Council
- Vice-Chairman, Board of Trustees, Philippine Health Research and Development Foundation
- Chair, Special Technical Committee – Medical Sciences, Scientific Career Council, DOST-CSC Scientific Career System
- Member, Executive Board, DOH Pharmacopeia Organizations
- Member, Pesticide Policy and Technical Advisory Committee, Fertilizer and Pesticide Authority, Department of Agriculture
- Member, Board of Trustees, UP Medical Alumni Society

RICARDO M. LANTICAN

- Professor Emeritus, UPLB
- Member, National Scientist Award Committee
- Member, NAST-TWAS (Third World Academy of Sciences) Prize for Young Scientists in the Philippines Award Committee
- Co-Chairman, NAST Scientific Publications Committee
- Member, Board of Judges, Outstanding Science Administrator Award (D. L. Umali Medal)
- Member, STRP (Science and Technology Review Panel) for the NCBP and BPI
- Member, Plant Variety Protection Board of the Philippines

RODEL D. LASCO

- Philippines Coordinator, World Agroforestry Centre (ICRAF)

LEONARDO Q. LIONGSON

- Professor, Institute of Civil Engineering (ICE), University of the Philippines Diliman
- Chairman, Philippine National Committee, UNESCO International Hydrological Programme, (UNESCO-HP)
- Chairman & Trustee, Philippine Water Partnership (PWP), affiliated with the Global Water Partnership (GWP)
- National Representative, International Association of Hydrological Sciences (IAHS).

EVELYN MAE TECSON-MENDOZA

- Member, Executive Council, NAST; Secretary from 2005-to date
- NAST Focal Person, Biotechnology
- Research Professor 12, Institute of Plant Breeding, College of Agriculture, UPLB
- Chair, Committee for Institutional Capacity Enhancement for Regulation and Research, DA-Biotech Program (DA Special Order No. 388 s.2001, August 14, 2001)
- Chair, UPLB Molecular Biology and Biotechnology Program Management Committee
- Chair, CA UPLB Ad Hoc Committee BS AgBiotech Curriculum Development
- Editor-in-chief, Philippine Agricultural Scientist, Published by the College of Agriculture, UPLB (January 01, 2004-2009)
- Editor, Transactions of the National Academy of Science and Technology Philippines, 2003, 2004, 2005, 2006, 2007
- Overseas Editor, Bioscience, Biotechnology and Biochemistry, Published by the Japan Society for Bioscience, Biotechnology and Agrochemistry, 2007 to date
- President, Kapisanang Kimika ng Pilipinas-Southern Tagalog Chapter, 2010

JAIME C. MONTOYA

- President, Science Council of Asia, 2010
- Member, ICSU Regional Committee for Asia and the Pacific, 2009 - present
- National Focal Person, ASEAN Subcommittee on Biotechnology
- Philippine Representative, Asian Heads of Research Councils (ASIAHORCs)
- President, National Research Council of the Philippines
- President, UP Medical Alumni Society
- Vice-President, Philippine College of Physicians
- Immediate Past President, Outstanding Young Scientist, Inc.
- Vice-Chair, National Vaccine Research Development Plan Committee
- Member, Advisory Board, National Institutes of Health
- Focal Person for the PSHC, NAST
- Coordinator for MDG on AIDS, TB and Malaria
- Member, Board of Judges for the Outstanding S and T Awards

EDUARDO A. PADLAN

- Co-Instructor, Special Topics Course on Writing a Scientific Paper, UP MSI
- Co-Instructor, Special Topics Course on Targeted Marine Natural Products for Improved Therapeutic Efficacy, UP MSI
- Consultant, BioMedics Inc
- Co-Editor, Philippine Science Letters

WILLIAM G. PADOLINA

- Chair, Agriculture and Food Panel, Commission on Science, Mathematics, and Engineering Education (COMSTE)
- Member, Board of Trustees, Philippine Institute for Development Studies (PIDS)
- Member, Board of Trustees, PhilRice
- Editor-in-Chief, Philippine Journal of Science (PJS)

EUFEMIO T. RASCO JR.

- Editor-in-Chief of *Banwa* (Journal of UP Mindanao)

ASUNCION K. RAYMUNDO

- Professor 12, Institute of Biological Sciences, UPLB
- Dean, College of Arts and Sciences, UPLB
- American Society of Microbiology Country Liaison in the Philippines, until June 20, 2010
- Chair, NAST Task Force on Hazardous Waste
- Chair, Bioremediation Research Team
- Chair, Commission on Higher Education Technical Committee on Biology
- Member, IRRI Institutional Biosafety Committee
- Member, Evaluation Panel for Basic Research, UPLB
- Member, NSTW Outstanding Commercialization Awards Committee
- Chair, UPLB Basic Science Component Committee

PERLA D. SANTOS OCAMPO

- Chair, Advisory Committee, National Institutes of Health Building Project
- Member, Advisory Board, National Institutes of Health
- Chief Editor, Competency-based Philippine Textbook of Pediatrics
- Honorary President, Philippine Society for Pediatric Gastroenterology, Hepatology and Nutrition
- Honorary President, Philippine Society for Developmental and Behavioral Pediatrics
- Honorary President and Chairman Emeritus, Philippine Association for the Gifted
- Honorary President, International Society of Tropical Pediatrics

FILEMON A. URIARTE JR.

- Executive Director, ASEAN Foundation

REYNALDO B. VEA

- President, Mapua Institute of Technology
- President, Malayan Colleges Laguna
- President, Malayan High School of Science
- President, Mapua I.T. Center
- President, Mapua Techserv
- Focal Person on Washington Accord Initiative, NAST
- Director, Philippine American Educational Foundation
- Chairman, Technical Panel on Science, Technology and Engineering Education, COMSTE
- Trustee-at-Large, NRCP
- Director, Philippine Association of Colleges and Universities (PACU)

RUBEN L. VILLAREAL

- Member, Board of Judges, Outstanding R&D Award (Eduardo Quisumbing Medal – Basic Research and Julian Banzon Medal – Applied Research)
- Convenor and Moderator, Roundtable Discussion on Aerial Spraying
- Focal Person on Building a Science Culture in Laguna with emphasis on Mathematics, NAST
- Member, Board of Judges, 3rd Dioscoro L. Umali Achievement Award in Agricultural Development
- Chair, Board of Judges, 2010 DA Gawad Saka for Outstanding Filipino Farmers (Crops Category).
- Member, Asia Rice Foundation

- Member, UPSILON Foundation, Inc.
- Member, UPLB Committee on Naming Streets and Buildings
- Member, PARRFI Board of Trustees
- Member, Board of Judges, 2009 CHED Research and Publication (REPUBLICA) Award (completed on 2010)
- Member, Selection Committee of the UPLB College of Agriculture 2010 Distinguished Alumni Awards
- Member, UPLB-College of Agriculture Alumni Association Board
- Chair, GK Los Baños Ville Resource Generation Committee

PUBLICATIONS

RAMON F. ABARQUEZ JR.

- Abarquez RF Jr. Individualized Clinical Practice Beyond Group Outcome Measures, *Obesity Alert*, 2010, 13:6
- Abarquez, RF Jr. Obesity Purguing the Bulge, *Health and Lifestyle* 2010; 8:34-36
- Abarquez RF Jr. Individualized Clinical Practice Beyond Group Outcome Measures, *Phil Journal of Internal Medicine*, 2010, 48:1-3

ANGEL C. ALCALA

- Weeks, R., Russ, G.R., Bucol, A.A. and Alcala, A.C. Shortcuts for marine conservation planning: The effectiveness of socioeconomic data surrogates. (In Press, *Biological Conservation*).
- Weeks, R., Russ, G.R., Bucol, A.A. and Alcala, A.C. 2010. Incorporating local tenure in the systematic design of protected area networks. *Conservation Letters* 00 (2010) 1-9.
- Russ, G.R., and Alcala, A.C. Decadal-Scale Rebuilding of Predator Biomass in Philippine Marine Reserves. (In Press, *Oecologia*).
- Russ, G.R. and Alcala, A.C. 2010. Enhanced biodiversity beyond marine reserve boundaries: the cup spillith-over. (In Press, *Ecological Applications*).

ALLAN BENEDICT I. BERNARDO

- Bernardo, A. B. I. (2010). Exploring Filipino adolescents' perceptions of the legitimacy of parental authority over academic behaviors. *Journal of Applied Developmental Psychology*, 31, 271-280.
- Bernardo, A. B. I. (2010). Extending hope theory: Internal and external locus of trait hope. *Personality and Individual Differences*, 49, 944-949.
- Bernardo, A. B. I. & Ismail, R. (2010). Social perceptions of achieving students and achievement goals of students in Malaysia and the Philippines. *Social Psychology of Education*, 13, 385-407. (IF: not available)
- Liem, G. A. D., & Bernardo, A. B. I. (2010). Epistemological beliefs and theory of planned behavior: Examining beliefs about knowledge and knowing as distal predictors of Indonesian tertiary students' intention to study. *The Asia-Pacific Education Researcher*, 19, 127-142.
- Liem, A. D., Martin, A. J., Nair, E., Bernardo, A. B. I., & Prasetya, P. H. (2010). Are basic values fully crystallized in middle adolescence? Evidence from Singapore, the Philippines, Indonesia, and Australia. *Journal of Cross-Cultural Psychology*, 42, 146-154.
- Bernardo, A. B. I. (in press). Language, learning, and medium of instruction in multilingual contexts: An information-processing components perspective. In U. Kim & Y.-S. Park (Eds.), *Asia's educational miracle: Psychological, social, and cultural perspectives*. New York: Springer Science.
- Bernardo, A. B. I., & Gaerlan, M. J. M. (in press). English medium of instruction in Philippine higher education institutions: MOI policy development in an oligarchy. In C. Davison & N. Bruce (Eds.), *Language issues in English-medium universities across Asia*. Hong Kong: Hong Kong University Press.
- Ganotice, F., & Bernardo, A. B. I. (2010). Validating the factor structures of the English and Filipino versions Sense of Self Scales. *Philippine Journal of Psychology*, 43, 81-99.
- Bernardo, A. B. I., & Kintanar, N. S. M. (2010). Exploring Filipino school counselors' beliefs about learning. *Philippine Journal of Counseling Psychology*, 12, 1-12.

CHRISTOPHER C. BERNIDO

- M. V. Carpio-Bernido, C. C. Bernido and C. C. Porio, "Assessment of Student Performance in the Learning Physics as One Nation Project," Philippine Education Research Journal (Sept. 2010) www.perj.org.

GELIA T. CASTILLO

- Gelia T. Castillo, (2010) When Reforms Do Not Transform, Manila Bulletin in Educators Speak, April 18, 2010, p.11
- Gelia T. Castillo, (2010) Human Development Must Wear a Human Faces: Reflections on a 15 Years of Knowledge Building for Human Development in the Philippines, Published by the Human Development Network in Cooperation with UNDP, 2010, pp.188-200.
- Gelia T. Castillo, A college in Transition: An Unsolicited Perspective, discussion paper prepared for the 12th Anniversary of the College of Public Affairs, UPLB, February 16, 2010
- Gelia T. Castillo, Creating Options for a Culture of Choice, Message on the occasion of the Seminar dedicated to the late Nobel Peace Laureate Norman Borlaug sponsored by NAST, ISAAA, and SEARCA Biotechnology Information Center, Makati, Philippines, March 1, 2010
- Gelia T. Castillo, Thinking Globally and Acting Globally: The Global Rice Science Partnership, IRRI, March 2010
- Gelia T. Castillo, Between Time, Space and Water are People Who Manage Rice Landscapes for Livelihoods in Upper Catchments and Mekong and Red River Basins. A Commentary on the Project: Rice Landscape Management for raising Water Productivity, Conserving Resources and Improving Livelihoods in Upper Catchments of the Mekong River and Red River Basins, Project Completion Workshops held in Chiangmai, Thailand, March 29-30, 2010
- Gelia T. Castillo, Counting Dividends from CURE Investments, Remarks made at the Ninth Review and Steering Committee Meeting, Siem Reap, Cambodia, May 3-5, 2010
- Gelia T. Castillo, Reflections: The "World" Came Together on the Commission on Health Research for Development, Brochure Celebrating 20 Years of the Commission on Health Research for Development: Enriching the Legacy, Hosted by the Harvard School of Public Health; co-sponsored by the Rockefeller Foundation; WHO, China Medical Board. Health at the Joseph B. Martin Conference Center, Harvard Medical School, Boston, Ma. USA, May 13, 2010
- Gelia T. Castillo, CURE Approach Amidst Rice Crisis and Changing Climate. Policy Brief Series 2009-7 SEARCA
- Hettel, Gene, Pioneer Interviews Gelia T. Castillo on Her Interest in Rice, Rice Today, Oct-Dec 2010, Vol. 9, No.4. p.40.
- Gelia T. Castillo, Piedad Moya, and William Padolina, Philippine Rice Production, Productivity, Population, Per Capita Rice Availability and Poverty Incidence: A Provincial-Level Analysis (2000-2009)
- Gelia T. Castillo, Agronomy in Search of Its Own Resolution, Comments prepared for the Science Forum: "Will there be an Agronomic Resolution in the Intensive Lowlands?", IRRI Alumni Week, 20-23 April 2010, IRRI
- Imelda R. Molina, Gelia T. Castillo, Pamela Castanar and Randolph Barker, IRRI's experience in training rice scientists and extension workers: Documenting the past and identifying future training needs, Paper prepared for the 3rd International Rice Congress, 8-12 November 2010, Hanoi, Vietnam

VERONICA F. CHAN

- Michael O. Baslig, Veronica F. Chan, John Donnie A. Ramos, Juliet Gopez-Cervantes and Filipinas F. Natividad. Concordance of Hepatitis C Virus Subtyping by Non-structural 5A and non-structural 5B sequencing, Acta Medica Philippina 44:1, 16-19, Jan-Mar 2010.
- Michael O. Baslig, Veronica F. Chan, John Donnie A. Ramos, Juliet Gopez-Cervantes and Filipinas F. Natividad. Correlation of the 5' untranslated regions (5'UTRs) and non-structural 5B (NS5B) nucleotide sequences in hepatitis C virus typing. International Journal of Molecular Epidemiology and Genetics 1(3):236-244; 2010.

EDGARDO D. GOMEZ

- Baria, M.V.B., J.R. Guest, A.J. Edwards, P.M. Aliño, A.J. Heyward and E.D. Gomez. Caging enhances post-settlement of juveniles of the scleractinian coral *Acropora tenuis*. J. Exp. Mar. Biol. Ecol. 394: 149-153.
- Gomez, E., R. Dizon and A. Edwards. Methods of coral transplantation. (Ch. 6). Pp. 99-112. In Edwards, A. (ed.). Reef rehabilitation Manual. Coral Reef Targeted Research and Capacity Building for Management Program: St. Lucia,

Australia. ii + 166pp

- Edwards, A. and E. Gomez. Objectives and scope of this manual. (Ch. 1). Pp. 1-6. loc. cit.

EMIL Q. JAVIER

- Philippine Agriculture 2020: A Strategic Plan For Poverty Reduction, Food Security, Competitiveness, Sustainability, and Justice and Peace (write up ongoing)
- Modern Biotechnology and Agriculture: A History of the Commercialization of Biotech Maize in the Philippines
Chapter 3: Corn Farming Systems within the Context of the Philippine Agricultural Landscape
Chapter 6: Technological Challenges to Philippine Crop Agriculture

QUINTIN L. KINTANAR

- The New Law and Implementing Rules and Regulations for Processed Foods, Drugs, Cosmetics, Household/Urban Hazardous Substances and Medical radiation and Other Health Related Devices (submitted for publication)

RICARDO M. LANTICAN

- Lantican, Ricardo M. 2010. Nanotechnology – A rapidly evolving frontier. *The Philippine Star* (January 21 issue)
- Lantican, Ricardo M. 2010. The moon and the four seasons. *The Manila Bulletin* (March 14 and March 21 issues)

EVELYN MAE TECSON-MENDOZA

- Wittayawannakul, W., Garcia, R.N., Yllano O.B., Borromeo, T.H., Namuco, L.O. and Tecson-Mendoza, E.M. (2010). Assessment of genetic diversity in *Garcinia* species using peroxidase, RAPD and gene sequence specific amplification polymorphism (GSSAP). *Philipp Agric Scientist* 93, pp. 31-41.
- Angelia, M.R.N., Garcia, R.N., Caldo, K.M.P., Prak, K., Utsumi, S. and Tecson Mendoza, E.M. (2010). Physicochemical and functional characterization of cocosin, the coconut 11S globulin. *Food Sci. Technol. Res.* 16 (3), pp. 225-232.
- Singh, N., Dang, T.T.T.M., Vergara, G.V., Pandey, D.M., Sanchez, D., Neeraja, Septiningsih, E.N., Mendioro, M., Tecson-Mendoza, E.M., Ismail, A.M., Mackill, D.J. and Heuer, S. (2010). Molecular marker survey and expression analyses of the rice submergence-tolerance gene SUB1A. *Theor Applied Genet* 121 (8) pp. 1441-1453.
- Cueno, M.E., Laude, R.P., Mendoza, E.M.T., Laurena, A.C. 2010. An insight into the ontogenetic pattern observed among NQHVVN-containing transcripts found in varying ages of the coconut endosperm. *Philipp J Science* 139, pp 219-225.

ASUNCION K. RAYMUNDO

- Lantican, NB., MGQ. Diaz, JL. Cantera, FL. De Los Reyes, and AK. Raymundo. 2010. Microbial Community of a volcanic mudspring in the Philippines as revealed by 16S rDNA sequence analysis and fluorescence in situ hybridization. *World Journal of Microbiology and Biotechnology*. DOI 10.1007/s11274-010-0528-y
- Ilagan, MFC., MTM. Perez and AK. Raymundo. 2010. Direct detection of *Ralstonia solanacearum* (Smith) Yabuuchi in banana stalk. *Philipp Agric Scientist* 93: 307-316

FILEMON A. URIARTE JR.

- Uriarte, FA. 2010. *Biofuels From Plant Oils*. Printed by ASEAN Foundation.

RESEARCHES

A. COMPLETED

ANGEL C. ALCALA

- Bucol, A.A., Alcala, A.C., Diesmos, A., Brown, R. in manuscript, "Vulnerability of Philippine Amphibians to Climate

Change.”

ALLAN BENEDICT I. BERNARDO

- Barrios, A. L., & Bernardo, A. B. I. (2010). Acquisition of case marking by Chabacano and Cebuano learners of Filipino: Influence of actancy structure on transfer.
- Bernardo, A. B. I. (2010). Exploring the love of learning among Filipino learners: Philippine studies on the mastery orientation
- Bernardo, A. B. I. (2010). International publications of Filipino social scientists in universities: Responding to global changes in knowledge production.
- Bernardo, A. B. I. (2010). Opportunities and challenges for the development of psychological sciences in the Philippines.
- Bernardo, A. B. I. (2010). Perceived legitimacy of parental control over academic behaviors and student wellbeing: A study of Filipino adolescents.
- Bernardo, A. B. I. (2010). The Lasallian Core Curriculum: Development and early experiences of the revised general education curriculum of De La Salle University, Philippines.
- Bernardo, A. B. I., & Gaerlan, M. J. M. (2010). Non-native English students learning in English: Reviewing and reflecting on the research.
- Del Rosario, R. M., & Bernardo, A. B. I. (2010). Epistemological beliefs and intrinsic motivation of Filipino high school students.
- Ganofice, F. A., Bernardo, A. B. I., & King, R. B. (2010). Validating two language versions of the Inventory of School Motivation among Filipinos.

EDGARDO D. GOMEZ

- Gomez, E.D. et al. Enhancing Recovery by Culture and Transplantation of Corals. Global Environment Facility / World Bank— Coral Reef Targeted Research and Capacity Building Management (GEF – CRTR) Project. 2010.

BIENVENIDO O. JULIANO

- Grain Quality of Philippine Rice. Philip Rice Res Inst, Muñoz, Nueva Ecija, Philipp. Bulletin (in press)
- “Improving the Eating Quality of Rice: utilizing physicochemical properties as indexes of quality” for Milestone of Pinoy Science (Philippine S&T)

QUINTIN L. KINTANAR

- My Odyssey in Science (manuscript submitted as part of KINTANAR Family book)
- Guide to Easy Piano Playing and Common Chords by Numbers

LEONARDO Q. LIONGSON

- Project Leader: Groundwater Models of Stream-Aquifer Interactions, 1 June 2009 – 31 May 2010, funded by UP Institute of Civil Engineering
- Project Leader: Surface-Water Modeling of the UP Diliman Basin, 1 June 2009 – 31 May 2010, funded by UP Institute of Civil Engineering
- Professorial Chair Lecture: Flood Hydrology of the September 26, 2009 Extreme Event, 21 July 2010

B. ON-GOING

RAMON F. ABARQUEZ JR.

- Taken for granted or Under-emphasized “Background-Therapy” Survival and Event-free Benefits Compared to “Add-on First-line Therapy” is Revisited in the Chronic Heart Failure Guidelines’ Recommendations (NAST funded, Initial draft submitted last Dec. 2010)

- Digoxin is an Essential Component of “Background Therapy” in the Management of Chronic Heart Failure in Sinus Rhythm
- The Trimetazidine paper: MEDICAL OPTION FOR ANGINA, WHAT AND WHY?
- Microcirculation, Relevance in the Hypertension Syndrome

ANGEL C. ALCALA

- Connectivity of Marine Reserves in the Bohol Sea
- Ecology of River Systems
- Effects of Climate Change on Fish Larvae, Coral Reefs, Mangroves and How Protection can Decrease their Vulnerability to Ocean Warming, Ocean Acidity, etc.
- Vertebrate Biodiversity of Siargao Island

RHODORA V. AZANZA

- Development of Semi-Commercial Scale (Tank Culture) of Pyrodinium for Neosaxitoxin and Saxitoxin Production
- Ecology and Oceanography of Harmful Algal Blooms in the Philippines (as Program Leader)
 - a. Biodiversity/Genetic Diversity of Selected HAB-Forming Species in the Philippines
 - b. Microbial Community (HAB Species and Associated Bacteria) Composition and Succession
 - c. Toxinology and Toxicology of Philippine Harmful algal Bloom (HAB) Species
 - d. Fish Kills, Algal Blooms and Eutrophication in the Tropics
 - e. Eutrophication, Climate and algal blooms in the Tropics (ECABIT)
 - f. Historical Sedimentation Rate and Radiometric Fingerprinting of Suspended-Sediment in selected HAB Areas
 - g. Stratification and Algal Blooms in the Tropics (SABIT)
 - h. Harmful Algal Bloom Mitigation in the Tropics

JOSE MARIA P. BALMACEDA

- Terwilliger Algebra of the Group Association Scheme of PSL(2,7) (with I.C. Orprecio)
- Leonard Triples (with J. Maralit)

ALLAN BENEDICT I. BERNARDO

- Applying Linguistic Categories Model To Studying Implicit Theories Of Intelligence Among Filipino Learners” DLSU University Research Coordinating Office, Research Faculty Grant.

VERONICA F. CHAN

- The role of Japanese Encephalitis virus among Encephalitis cases in Mindanao. As adviser of Ms. Ava Sy, UST Graduate School

LIBERTADO C. CRUZ

- Production of High-Genetics Dairy Water Buffaloes through the use of reproductive biotechniques (PCARRD-DOST funded) in collaboration with Frigorifico Allana Limited, India
- Marker-Assisted selection of dairy buffaloes (BAR/DA-Biotech funder projectZ)
- Cryobanking of animal genetic resources (PL480 funded)
- Cryopreservation by Vitrification of Buffalo Oocytes by Slow Freezing and Vitrification Technique
- Ultra rapid Vitrification of In-Vitro Mature Buffalo Oocytes by Minimum Volume Cooling method
- Cryopreservation of Buffalo Embryos by Conventional Controlled-Rate Freezing: Comparison on the Effect of Glycerol and Ethylene Glucol-Based Protocols on Post-Warming In Vitro and In Vivo Development

- Enhancing Cryo-viability of In Vivo-Derived Goat Embryos by Optimizing Embryonic Stage and In-vitro Culture on Morula to Blastocyst Before Freezing

ALVIN B. CULABA

- Optimization modeling of life cycle based bio-energy systems
- Optimization design of photo-bioreactors for micro-algae production
- Dynamic input-output modeling of nascent bio-energy supply chain
- Life cycle studies of energy systems for transport technology applications
- Health impacts of indoor air quality of hospitals in Metro Manila

SALCEDO L. EDUARDO

- Ectoparasites and Haemoprotozoa of Owls and hornbills in the Philippines

RAFAEL D. GUERRERO III

- Use of Vermicompost as Supplemental Feed for Broilers
- Production of Organic Tilapia (*Oreochromis niloticus*) in Freshwater Ponds with Vermicompost

RODEL D. LASCO

- Tropical forests and climate change mitigation
- Climate change adaptation for small farmers

LEONARDO Q. LIONGSON

- A Review of Hydrologic and Hydraulic Aspects of Flooding in Metro Manila, NAST Research Fellowship. Final report to be submitted on 30 April 2011, pending the results of the on-going relevant/focused hydrologic-hydraulic researches being undertaken, jointly with BS Civil Engineering senior thesis students at the UP-ICE
- Project Leader: Hydraulic Analysis of a Cascade of Flood-Control Dams, 1 June 2010 – 31 May 2011, funded by UP Institute of Civil Engineering
- Project Leader: Flash Flood Analysis for Varied Morphology of Steep Catchments, 1 June 2010 – 31 May 2011, funded by UP Institute of Civil Engineering

EVELYN MAE TECSON-MENDOZA

- Project leader: Introgression of PRSV Resistance into Transgenic Papaya with Delayed Ripening Trait and Field Testing Toward Commercialization; July 2007 to June 2010; Funded by DA Biotech PIU.
- Study Leader, Molecular Strategies to Improve the Nutritional Quality of Mungbean; May 1999-Dec 2006 Phase 1; Phase 2-Jan 2010; Funded by IPB, CA, UPLB
- Study Leader, Molecular and Biochemical Basis of the Makapuno Coconut Endosperm, 2009-2012; Funded by IPB, CA, UPLB

JAIME C. MONTOYA

- Molecular Epidemiology of Tuberculosis in a Suburban Filipino Community in the Philippines
- Molecular Epidemiology of Tuberculosis among Filipino HIV and non-HIV patients in the Philippines
- Molecular Epidemiology of Tuberculosis in Selected Tertiary Care Hospitals in the Philippines
- Molecular Epidemiology of Tuberculosis in Selected Prisons in the Philippines
- Molecular Epidemiology of *M. tuberculosis* isolates obtained from the National Drug Resistance Survey in Cebu, Philippine

EUFEMIO T. RASCO

- Propagation of *Nepenthes truncata*
- Weed management in a banana plantation
- Biology of nipa and its potential for alcohol production

PERLA D. SANTOS OCAMPO

- The Making of Physician – Scientists in the Philippines
- Nurturing Compassion in Filipino Medical Students
- Competency-based Philippine Textbook of Pediatrics
- ORT: New Insights to the New Treatment

GAVINO C. TRONO JR.

- Effects of climate change on the growth, reproductive periodicity and biodiversity of Sargassum-dominated seaweed communities
- In preparation: Manuscript for publication – The structure and diversity of the seaweed communities in Balabac, Southern Palawan

REYNALDO B. VEA

- Philippine Infrastructure Development for New Economic Opportunities

RUBEN L. VILLAREAL

- Building a science culture in Laguna with Los Baños as pilot through improved Mathematics and Science education

S&T POLICY AND PROGRAM IMPLEMENTATION INCLUDING CONFERENCES, SEMINARS, ETC.

ANGEL C. ALCALA

- Speaker, “Possible Impacts of Climate Change and Global Warming on Biodiversity” Conference on Climate Change and Global Warming, La Consolacion College-Bacolod City, February 20, 2010
- Panelist, Candidates’ Forum on Environmental Governance, Environmental Forum sponsored by the Friends of Negros Oriental, March 22, 2010, Valencia Session hall, Valencia, Negros Oriental.
- Speaker, “Research and Development” 2010 National Conference for Science Educators and Science Club Advisers Association of the Philippines, Inc. (SCAAP), April 25, 2010, Almond Inland Resort, Butuan City.
- Participant, Planning Seminar on Integrated Capacity Building for Collaborative Governance, August 6, 2010, De la Salle University-Manila
- Member, Panel of Evaluators, Western Visayas Agriculture and Resources Research & Development Consortium (WESVARRDEC) 20th R & D Highlights, August 13, 2010, University of Negros Occidental Recoletos, Bacolod City.
- Participated in the meeting as member of the Group of Experts, Ad Hoc Working Group of the Whole, for the United Nations Regular Process for Global Reporting and Assessment of the State of the Marine Environment, UNEP, August 29-September 3, 2010, UN Headquarters, New York City, New York, USA.
- Speaker, “Effects of Climate Change on Dumaguete City and what can be done about it” during the regular session of the City Council, September 14, 2010, Session Hall, Dumaguete City.
- Speaker, “Current research, emerging issues and critical gaps on the impacts of climate change on biodiversity,” 2nd Scientists’ and Community Development Practitioners’ Roundtable on Climate Change Adaptation and Risk Reduction, October 15, 2010, Klima Climate Change Center, Manila Observatory, Ateneo de Manila University campus, Loyola Heights, Quezon City.
- Participant, KORDI-IOC/UNESCO Joint workshop on Capacity Building for the UN Regular Process, October 20-22, 2010, KORDI, Ansan, So. Korea

- Speaker, "Climate Change and its Effects" Alliance Men Philippines National Convention, November 1, 2010, Zamboanga City.
- Keynote Speaker on Climate Change, 61st Annual Convention of the Philippine Medical Women's Association, November 5, 2010, Sulo Hotel, Quezon City.
- Speaker, "Status of Marine Bioresources," DOST/PCCI Forum on Business and the Philippine Biodiversity, November 12, 2010, St. Giles Hotel, Makati City
- Speaker
- Participated in the NAST Roundtable on Progress in the Philippine Energy Program, Nov. 19, 2010, Traders Hotel.
- Speaker, "Current Status of Apo Island as LTER and Biodiversity Site, 3rd Symposium on Long-term Ecological and Biodiversity Research, November 20, 2010, Institute of Biology, University of the Philippines, Diliman, Quezon City
- Panelist/Judge, final phase of the Climate Change Youth project, "Multi-sectoral Forum and Proposal Development on Investing on Young Minds for Household Solutions to Climate Change," December 3, 2010, MBA Presentation Room, College of Business Administration, Silliman University.

ALLAN BENEDICT I. BERNARDO

Keynote Addresses & Invited Presentations in International Meetings

- Bernardo, A. B. I. (2010, October). Psychology research and education in Southeast Asia: Observations and prospects. Presidential Address, 3rd Congress of the ASEAN Regional Union of Psychological Societies. Help University College, Kuala Lumpur, Malaysia.
- Bernardo, A. B. I. (2010, July). The National Competency Based Teacher Standards (NCBTS) and the problem of transforming teaching practice. 6th International Conference on Teacher Education, University of the Philippines College of Education, SEAMEO Innotech, Quezon City.
- Bernardo, A. B. I. (2010, May). Learning English, Learning IN English. Biennial Conference of the Center for English Language and Communication, National University of Singapore, Singapore.
- Bernardo, A. B. I. (2010, January). The Lasallian Core Curriculum: Development and early experiences of the Revised General Education Curriculum of De La Salle University, Philippines. Pengajian Umum: Satu Penilaian Semula (Round Table Dialogue), Center of General Studies, Universiti Kebangsaan Malaysia, Putrajaya, Malaysia.
- Symposium Convener (2010, October). "Academic achievement and motivation of Filipino students". 3rd Congress of the ASEAN Regional Union of Psychological Societies, Kuala Lumpur, Malaysia (Seven presentation from Philippines, Hong Kong, Australia.)
- Symposium Convener (2010, July). "Understanding and buffering the consequences of social inequality: Asian and Pacific perspectives". Invited Symposium, International Congress of Applied Psychology, International Association of Applied Psychology (Div. 3: Psychology and Societal Development), Melbourne, Australia. (Four presentations from Australia, Malaysia, Philippines, and South Korea.)
- King, R. B., Ganotice, F. A., Watkins, D., & Bernardo, A. B. I. (2010, October). Which goals are salient for Filipino and Hong Kong students' learning strategies: A causal dominance analysis. 3rd Congress of the ASEAN Regional Union of Psychological Societies. Kuala Lumpur, Malaysia.
- Salanga, M. G. C., & Bernardo, A. B. I. (2010, October). Academic amotivation: Conceptions of Filipino adolescent learners about unmotivated academic performance. 3rd Congress of the ASEAN Regional Union of Psychological Societies. Kuala Lumpur, Malaysia.
- Bernardo, A. B. I., King, R., & Du, H. (2010, July). Locus of hope and subjective well-being among Filipino and Chinese university students. XXth Congress of the International Association for Cross-Cultural Psychology, University of Melbourne, Melbourne, Australia.
- Bernardo, A. B. I., Lising, R. L., & Shulruf, B. (2010, July). Validating Filipino and English versions of the Auckland Individualism and Collectivism Scale with Filipino-English bilinguals. XXth Congress of the International Association for Cross-Cultural Psychology, University of Melbourne, Melbourne, Australia.
- Liem, G. A., Martin, A., Nair, E., Bernardo, A. B. I., & Prasetya, P. (2010, July). Value structure in middle adolescence: Do we need a developmentally modified model. XXth Congress of the International Association for Cross-Cultural Psychology, University of Melbourne, Melbourne, Australia.
- Bernardo, A. B. I. (2010, July). Conflict resolution amidst social inequality: Socioeconomic differences in preferred solution procedures in the Philippines. 27th International Congress of the Applied Psychology, International Association of Applied Psychology, Melbourne Convention Center, Melbourne, Australia.
- Bernardo, A. B. I., Goh, C.L., Nair, E., Suhapti, R., & Tuicompee, A. (2010, July). The education of psychologists in

Southeast Asia: A preliminary report on the original ASEAN countries. 27th International Congress of the Applied Psychology, International Association of Applied Psychology, Melbourne Convention Center, Melbourne, Australia.

- Bernardo, A. B. I. (2010, November). Lost in translation: Challenges in using psychological tests in the Philippines. Exaltacion C. Ramos Distinguished Professorial Chair Lecture in Test and Measurement, De La Salle University, Manila.
- Bernardo, A. B. I. (2010, June). The emergent global model of research universities: Implications for research and publication practices of Philippine colleges and universities. Keynote Address, National Conference for Quality Assurance in International Journal Publications and Sustainable Research Management, Philippine Association for Institutional Research, Our Lady of Fatima University-Valenzuela.
- Bernardo, A. B. I. (2010, March). The promise of BESRA. Forum on Philippine Education. Center for Integrative and Development Studies, University of the Philippines, Diliman, Quezon City.
- Bernardo, A. B. I. (2010, February). BESRA and TEDP Frameworks for teacher development for multilingual education. First Mother-Tongue-Based Multilingual Education Congress, Capitol University, Cagayan de Oro City.
- Bernardo, A. B. I. (2010, August). Number processing in Filipino-English bilinguals: Towards a bilingual encoding complex model of number cognition. Paper presented at the Annual Convention of the Psychological Association of the Philippines, Puerto Princesa, Palawan.
- Salanga, M. G. C., & Bernardo, A. B. I. (2010, August). Why are Filipino students unmotivated in school? Filipino adolescent students' conception of amotivation. Paper presented at the Annual Convention of the Psychological Association of the Philippines, Puerto Princesa, Palawan.
- Capacity building workshop for national psychology associations (with Pamela Maras, Elizabeth Nair, & Saths Cooper), International Union of Psychological Science and ASEAN Regional Union of Psychological Societies, Kuala Lumpur, Malaysia, October 2010.
- The social psychology of culture: Concepts and research. Continuing Professional Education Workshop, Annual Convention of the Psychological Association of the Philippines, Puerto Princesa, Palawan, August 2010.
- Contemporary theories on motivation and learning: Concepts, measurement and research (with D. De La Rosa, F. Ganotice, J. Ouano, & F. Villavicencio). The social psychology of culture: Concepts and research. Continuing Professional Education Workshop, Annual Convention of the Psychological Association of the Philippines, Puerto Princesa, Palawan, August 2010.
- Publishing in Refereed Journals: A Conceptual and Practical Guide to Research and Publication. Faculty Development Program, Far Eastern University, May 2010; CHED Zonal Research Center, March 2010; Negros Oriental State University, February, 2010; University of the East Ramon Magsaysay Memorial Colleges Graduate School, January 2010; CHED Zonal Research Center, September 2010; Saint Mary's University Bayombong, September 2010

CHRISTOPHER C. BERNIDO

- Co-Project Leader, Learning Physics as One Nation (LPON): This project initiated in 2008 by the Fund for Assistance to Private Education (FAPE), with a special grant from the Department of Education, now covers 251 public and private high schools (225 private schools representing all Regions of the Philippines, 26 public schools in the 2nd District of Camarines Sur). Starting June 2011, all public high schools in Bohol will implement the LPON.
- Invited Speaker, TEDx, STI Building, Fort Bonifacio, Philippines, 17 February 2010.
- Speaker, Meet Your Scientist Program (NAST) BPSTEA Building, Tagbilaran City, 17 June 2010.
- Speaker, Meet Your Scientist Program (NAST) University of San Carlos, Cebu City, 25 June 2010.
- Ramon Magsaysay Lecture: "Poverty and Scarcity Are no Barriers to Quality Education," RM Center, Manila, 2 September 2010.
- Invited Speaker, Business Leadership Forum, Asian Institute of Management, Makati City, 3 September 2010.
- Keynote Speaker, 47th People Management Association of the Philippines (PMAP) Annual Conference, Cebu International Convention Center, Cebu City, 13 October 2010.
- Plenary Speaker, 12th Samahang Pisika ng Visayas at Mindanao National Physics Conference, Central Philippines University, Iloilo City, 21 – 23 October 2010.
- Plenary Speaker, 28th Samahang Pisika ng Pilipinas Physics Congress, MMLDC, Antipolo City, 25 – 27 October 2010.
- Invited Speaker, 21st Century Leadership Training (SMART Schools Program), University of San Jose-Recoletos, Cebu City, 29 October 2010.
- Paper Presentor, Alexander von Humboldt Colloquium, Hanoi, Vietnam, 12 – 14 November 2010.
- Invited Speaker, Philippine Association of Private Schools, Colleges and Universities 2010 National Convention, Pearl

Manila Hotel, 23 November 2010.

- Invited Speaker, 13th Annual Convention of the Philippine Association for the Gifted, EDSA Shangri-la, 24 November 2010.
- Plenary Speaker, Leaders in Education Programme International (LEPI) Conference, Ateneo de Manila University, 3-4 December 2010.
- Invited Speaker, 1st National Grid Corporation of the Philippines (NGCP) Management Convocation, Mall of Asia, 16 December 2010.

FILOMENA F. CAMPOS

- Involvement in NAST roundtable discussions, annual scientific meeting, advise on issues on various national issues
- Outreach programs as source of experience and basis for local and national projects
- Involvement on women;s involvement in social and socio-political problems.

GELIA T. CASTILLO

Total of 46; Selected list

- Meeting of the Executive Committee, Human Development Network, January 6, 2010
- Attended the various roundtable discussions for the eight (8) MDGs organized by the Social Sciences Division in preparation for the 32nd ASM.
- Attended the DLSU Conference on Science for Peace by Torston Wiesel, February 1, 2010
- Presented a paper during the Twelfth Anniversary of the College of Public Affairs, UPLB Symposium, 16 February 2010
- Thematic Research Design Workshop on Enhancing Research Utilization for Sweet Potato Livelihood Development in Disaster-Prone Communities, February 22, 2010
- Presented a message, NAST-ISAAA Seminar in honor of Dr. Norman Borlaug, Dusit Thani Hotel, 01 March 2010
- Special Guest, Phil Root Crop 33rd Anniversary, Health and Wealth Through Roots and Tubers, March 15-17, 2010
- Project Completion Workshop on Rice Landscape Management for Improving Farmer Livelihoods in Upper Catchments of the Mekong and Red River Basins, CGIAR Challenge Program on Water and Food and IRRI, March 29-30, 2010, Chiangmai, Thailand
- Panel Forum, Science Forum, "Will There Be an Agronomic Revolution in the Intensive Lowlands?" April 20, 2010, IRRI
- Case Study Book Launch, CARD Microfinance Development Institute, Micro Finance Management Cases on Efficiency, Effectiveness and Business Processes, April 30, 2010
- Ninth Review and Steering Committee Meeting, CURE, Siem reap, Cambodia, May 3-5, 2010
- Workshop on Climate Change, Advanced Technologies of Rice Production for Coping with Climate Changer: No regret options for adaptation and mitigation and their potential uptake, IRRI sponsored by FAO Plant Production and Protection Division, June 23-25, 2010
- Book Launch: In Search of a Human Face: 15 Years of Knowledge Building on Human Development in the Philippines, UP School of Economics, July 21, 2010
- Resource Person, leadership Course for Asian and African Women for Research and Extension in Rainfed Rice Ecosystems, September 6, 2010
- Launch of the MDG Philippine Progress Report: Stakeholder' Step-Up campaign Forum on the Philippines MDG, September 18, 2010
- Member. Board of Judges, Outstanding Rural Women, Philippine Commission on Women, 29 September 2010
- Second Scientists and Community Development Practitioners' Roundtable on Climate Change Adaptation and Risk reduction, Ateneo de Manila, 15 October 2010
- Forum on Advancing a Stronger partnership between Korea and the Philippines, Intercontinental Hotel, 16 November 2010

VERONICA F. CHAN

- Convergence in Divergence, Resource Sharing for Health Research, 4th PNHRS Week Celebration, August 10-11, 2010, Crowne Plaza, Ortigas Center, Pasig City
- Cluster V; Drug Development and Vaccines, August 16, 2010, Paz Mendoza Hall, UP College of Medicine

- UP Manila as a Research University (MAP), September 9-10, 2010, Kimberly Hotel, Tagaytay City
- "Live Well, Stay Well: Depression is Manageable, Suicide is Preventable" by Director Zena B. Bernardo, September 22, 2010, MCM Auditorium
- "Diagnosis and Treatment of the Otitis Media" by Dr. Generoso Abes, October 14, 2010, NIH Centennial Hall
- "Obesity: Its Roots and Reaches" by Dr. Susana Padilla-Campos, November 17, 2010, MCM Auditorium

MERCEDES B. CONCEPCION

- 2008 National Demographic and Health Survey (NDHS) Dissemination Forum, Crowne Plaza, 14 January 2010
- Roundtable Discussion on MDG #: Gender Equity and Women Empowerment, Manila Hotel, 20 January 2010
- 6th Alfonso Yuchengco Seminar, New World Hotel, 01 February 2010.
- Roundtable Discussion on MDG 1: Poverty Alleviation and Hunger Mitigation, Traders Hotel, 02 February 2010
- Philippine Population Association Assembly, 04-05 February 2010, Heritage Hotel
- Roundtable Discussion on Policy Issues on Climate Change, Traders Hotel, 02 March 2010
- Speaker, School of Statistics, UP, 05 March 2010
- BESRA and the Need for Higher Education Reform, NISMED, UP Diliman, 09 March 2010
- Welcome Remarks, Roundtable Discussion on MDG 7: Forest and Agricultural Resources, Traders Hotel, 16 March 2010
- Welcome Remarks, Consultation Meetings on MDG 4 and 5, Traders Hotel, 25 March 2010
- Roundtable Discussion on MDG 6: Malaria, Pan pacific Hotel, 26 March 2010
- Roundtable Discussion on MDG 7: Focus on Urban and Industrial Areas, Traders Hotel, 06 April 2010
- Roundtable Discussion on the State of Presidency and the Role of Media in Achieving the MDGs, Manila Hotel, 07 April 2010
- Participant, "Call for Action for Broad-based Response to AIDS by Headers" Diamond Hotel, 12 April 2010
- Closing Remarks, Roundtable Discussion on MDG 7: Focus on Coastal and Marine Resources, Traders Hotel, 20 April 2010
- Closing Remarks, Awarding Ceremonies, NAST Hugh Greenwood Environmental Science Award, Traders Hotel, 22 April 2010
- Likhaan Forum on the MDGs, Dusit Thani Hotel, 28 May 2010
- Roundtable Discussion on MDG 8: Technologies for the Unserved and Underserved, Traders Hotel, 08 June 2010
- UNDP-NEDA Consultation on 4th Progress Report on the MDGs. Discovery Suites, 16 July 2010
- World Population Day. EDSA Shangri-la Hotel, 12 July 2010
- Convenor, National Convention on Statistics Session on Recent Advances in Demographic Statistics, EDSA Shangri-La Hotel, 04 October 2010
- Organizer, Panel discussion on Population Projections, National Convention on Statistics, EDSA Shangri-La Hotel, 05 October 2010
- Launch of the World 2010 Population Report, New World Hotel, 20 October 2010.
- 7th National Nutrition Survey, New Horizon Hotel, 18 November 2010
- Expert Group Consultation Meeting on Strategic Framework for Anti-Poverty Program, Linden Suites, 25 November 2010
- Opening Remarks, Information Forum on Live Right, Traders Hotel, 10 December 2010

ROMULO G. DAVIDE

- Presented a paper for NAST Roundtable Discussion on the Technical Issues and Problems on the Aerial Spraying of Sigatoka Disease of Banana in Davao. Re: to ban or not to ban the aerial spraying. March 4, 2010. NAST Conference Hall.
- Continue the Operation and Implementation of the Corn-based Farmer-Scientists RDE Training Program (FSTP) for Sustainable Agricultural Development as the National Program under EO 710.
- Attended as resource person/speaker at the First National FSTP Review Conference held in Koronadal City on November 26-27, 2010
- Attended several graduation programs and conferences/meetings/seminars about the operation of FSTP at the provincial and municipal levels.

CEFERINO L. FOLLOSCO

- Attended NAST meetings and workshops

- Lectures and mentoring on entrepreneurship for various institutions, individual scientists, and small and medium entrepreneurship
- Clustering lectures for government and private sectors

EDGARDO D. GOMEZ

- Speaker, International Symposium on Small Islands and Coral Reefs. 4-5 August 2010. Ambon, Indonesia. (Plenary speaker, "Adopting Active Restoration and Restocking to Enhance Biodiversity")
- Speaker, International Conference on Marine Environment and Biodiversity Conservation in the South China Sea . 16-17 July 2010. Kaohsiung, Taiwan. (Plenary speaker: "Enhancing Biodiversity in the South China Sea Through Restoration and Restocking")
- 2nd Asi- Pacific Coral Reef Symposium. 20-24 June 2010. Phuket, Thailand. (Plenary speaker, "Advances in Coral Reef Restoration Research")
- Participant/observer, 6th Coral Triangle Initiative (CTI) Senior Officials Meeting. 10-12 November 2010. Manado, Indonesia.
- Participant/observer, CTI Coordination Mechanism Working Group. 8-9 November 2010. Manado, Indonesia.
- Participant/observer, PEW Fellows Program in Marine Conservation Annual Meeting. 25-29 September 2010. Sant Feliu de Guixols (Barcelona), Spain.
- Participant/observer, Designing and Operating MPA Networks and "Systems" in the Coral Triangle Countries. 17-20 June 2010. Phuket, Thailand.
- Participant/observer, 37th Session of the Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection. 14-19 February 2010. Bangkok, Thailand.
- Workshop on the Coral Triangle Initiative National Plan of Action (CTI-NPOA) Implementation Plan. 26-27 August 2010. Manila.
- 32nd Annual Scientific Meeting, National Academy of Science and Technology. 14-15 July 2010. Manila.
- 77th Annual Meeting, National Research Council of the Philippines. 10 March 2010. Manila.

QUINTIN L. KINTANAR

- Attended meetings of the NAST Executive Council, Committees and general meeting of the Academy

RICARDO M. LANTICAN

- Participant, Round-table discussions on various topics conducted by NAST and participated in the various discussion topics organized by the Biotechnology Coalition of the Philippines.

ANGEL L. LAZARO III

- Attended, consultation planning of MDG #7, Casino Español, 22 January 2010
- Attended, Board of Judges Meeting, NAST-Hugh Greenwood Environmental Science Award, NAST Conference Room, DOST Cpd., Bicutan, Taguig City, 22 February 2010
- Attended, 79th Academy Meeting, NAST Conference Hall, DOST Cpd., Bicutan, Taguig City 26 February 2010
- Participant, COMSTE Meeting chaired by Senator Edgardo J. Angara, Sofitel Phil. Plaza Hotel, 04 March 2010
- Participant, roundtable discussion (RTD) on MDG #7: Ensure Environmental Sustainability: Focus on Forestry and Agriculture, Traders Hotel, March 16, 2010
- Attended, roundtable discussion (RTD) on the State of Presidency and the Role of Media in Achieving the MDGs, Manila Hotel, April 7, 2010
- Moderator and Master of Ceremonies, Round Table Discussion on MDG # 7 Ensure Environmental Sustainability: Focus on Aquatic System, Traders Hotel, Roxas Blvd., Pasay City, April 20, 2010
- Attended, 32nd ASM Scientific Posters Committee, Traders Hotel, April 22, 2010
- Attended, 80th NAST Academy Meeting, NAST Conference Hall, DOST Cpd., Bicutan, Taguig City, May 27, 2010
- Attended, 32nd NAST Annual Scientific Meeting (ASM), Manila Hotel, July 14-15, 2010
- Speaker, Singapore Water Conference SIWW 2010, Hotel Mandarin Singapore, July 28, 2010
- Resource Speaker, 8th CMEAP National Convention theme "Local Government Engineers, Meeting the Challenges of

the Future," The Grand Menseng Hotel, Davao City, 25-27 August 2010.

- Attended, Delphi Assembly for R&D Prioritization, PICC, Roxas Blvd., Manila, October 5, 2010
- Resource Speaker, PICE Seminar on Entrepreneurship, sponsored by PICE, College of Fellows (PICE COF), PICE Conference Room, PICE Bldg., Cubao, Quezon City, October 09, 2010

LEONARDO Q. LIONGSON

- National Delegate, 20th Steering Committee Meeting of the Global Water Partnership Southeast Asia (GWP SEA), 08 June 2010, Benpasar, Bali, Indonesia
- Attended, ASEAN Workshop on Risk and Impact from Extreme Event of Floods in ASEAN Countries, 09-10 June 2010, Benpasar, Bali, Indonesia
- Philippine delegate, 19th Session of the Intergovernmental Council (IGC) of the International Hydrological Programme (IHP) of UNESCO, 05-09 July 2010, UNESCO Headquarters, Paris, France
- Hosted and attended, Global water Partnership- South East Asia (GWP-SEA) Steering Committee Meeting, 10 October 2010, Oakwood Hotel, Ortigas Center, Pasig City, Philippines
- One of the organizers, Expert Group Meeting (EGM) on Monitoring of Investment and Results (MIR) in the Water Sector in Asia and the Pacific, as a supporting event for the ADB Water Week, 11-13 October 2010, ADB, Pasig City, Metro Manila, United Nations Economic and Social Commission for Asia and the Pacific in collaboration with the Philippine Water Partnership (PWP), Global Water Partnership (GWP), FAO, ICHARM < UNESCO, IUCN and ADB.
- Water Week ADB: Water Crisis and Choices, ADB and Partners Conference 2010, 11-14 October 2010. Asian Development Bank (ADB), Ortigas Center, Pasig City, Metro Manila
- Attended, 18th Regional Steering Committee for Southeast Asia and the Pacific UNESCO International Hydrology Programme (18th RSC Meeting for SEAP UNESCO-IHP) in conjunction with the International Conference on Hydrological Regime and Water Resources Management in the Context of Climate Change HWCC2010, 08-12 November 2010, Hanoi, Viet Nam.
- Symposium # 1 on Post Ondoy Assessment, UP Program on Disaster Risk Management (DRM-UP), 08 February 2010, Auditorium, Malcolm Hall, College of Law, organized by the Colleges of Science, Social Sciences and Engineering, University of the Philippines Diliman
- World Water Day 2010. Lakbayan sa Tubig or water trail with Metro Manila student leaders and educators, 25 March 2010, organized by Philippine Water Partnership (PWP) and Manila Water Company, Inc. (MWCI), La Mesa dam and reservoir (water supply of Metro Manila, East Zone) and San Mateo Septage Treatment Plant (Metro Manila East Zone, North Sector)
- Water W.A.T.C.H.- Water Conference on the Wise Adaptation of Technologies for Clean H₂O, 14-16 May 2010, Baler, Aurora, Philippines, organized by COMSTE, Institute of Civil Engineering, University of the Philippines and other organizations and agencies
- 32nd Annual Scientific Meeting under the theme 'Millennium Development Goals (MDGs) and Beyond: Are We Making Progress?' 14-15 July 2010, Manila Hotel, Manila, organized by NAST Philippines
- Symposium on Reducing Risks and Disasters due to rainfall variability —protecting life, food and property from flood and drought, 28 July 2010, organized by UP Diliman and UP Los Baños, UP NISMED Auditorium, University of the Philippines, Diliman.
- Specialty Workshop on Status of Research and education on climate and Ecosystem Change Adaptation in the Philippines, 09 August 2010, Beta Epsilon Multimedia Room, College of Engineering, University of the Philippines, Diliman.
- Dialogue: One Year After the Big Floods. What really happened? Where are we now? organized by the Philippine Water Partnership (PWP), 22 September 2010, Sulu Riviera, Diliman, Quezon City
- UP ICE Centennial Conference on Harmonizing Infrastructure with the Environment, featuring the 3rd ASEAN Civil Engineering Conference, the 3rd ASEAN Environmental Engineering Conference and the 1st Seminar on Asian Water Environments (JSPS Asian Core Program), 11-12 November 2010, EDSA Shangri-la Hotel, Mandaluyong City, Metro Manila

EVELYN MAE TECSON-MENDOZA

- Tecson-Mendoza EM. Pushing the Frontiers of Plant Biochemistry Research in Agriculture in the Philippines. 25th Philippine Chemistry Congress, April 10, 2010, Subic Exhibition and Convention Center.
- Tecson-Mendoza EM. NAST Initiatives in the Improvement of Science Education in the Philippines. Fourth AASA-FASAS

Joint International Conference on 'Science Ducation in Asia and the Pacific', October 20, 2010, Seoul, Korea

- Tecson-Mendoza EM. Strengthening High School Chemistry Education in Southern Tagalog Region. 39th KKP-ST Convention, UPLB, November 4, 2010, UPLB
- Tecson-Mendoza Evelyn Mae. 2010. Establishing UPLB as a Research University. UPLB Centennial Professorial Lecture. November 23, 2010, UPLB.
- Tecson-Mendoza EM. Introduction to Modern Biotechnology. Lecture and workshop. Training Biosafety Assessment of GMOS, Dec., 2010, ERDB, Los Banos, Laguna.

ASUNCION K. RAYMUNDO

Presentations:

- Raymundo, A.K and EMT Mendoza. 2010. Human Resource Development at the University of the Philippines Los Banos. UNESCO Conference. Manila Hotel. February 6, 2010.
- Raymundo A.K, NB. Lantican and F. De Los Reyes. 2010. Comparing Two Methods Of Analysing Microbial Communities of an Extreme Environment in the Philippines. American Society of Microbiology Convention. May, 2010. San Diego, California
- Cadiz, N.M, N.S. Aggangan, N.M. Pampolina, A. Llamado, J.T. Zarate, S. Livelo, and A.K. Raymundo. 2010. Bioremediation Efforts in an Abandoned Mine Area: The Mogpog, Marinduque Experience. First National Bioremediation Conference. Oct. 26-27, 2010. Trader's Hotel, Manila
- Llamado, A. and A.K. Raymundo. 2010. Soil Bacteria as Indicator of Phytoremediation Efforts in an Abandoned Mine Site in Mogpog, Marinduque and as Potential Bioremediation Agents First National Bioremediation Conference. Oct. 26-27, 2010. Trader's Hotel, Manila
- Valino, C.M, A. Llamado, L.C. Villegas and A.K. Raymundo. 2010. Biosorption of Copper by a Bacterial Isolate from Mogpog, Marinduque Using Two Agricultural By-Products as Biofilm Carriers First National Bioremediation Conference. Oct. 26-27, 2010. Trader's Hotel, Manila

PERLA D. SANTOS OCAMPO

- Inspirational Message, Second Asian Vaccine Conference, 22-24 July 2010, Crowne Plaza Hotel, Ortigas, Pasig City
- A Fresh Look at Volunteerism, delivered during the Inception Anniversary of the Ugnayan ng Pahinugod, 22 September 2010, Science Hall, Philippine General Hospital, Taft Avenue, Manila
- Message, Induction Ceremonies, Philippine Society for developmental and Behavioral Pediatrics, 09 December 2010, Discovery Suites, Ortigas Center, Pasig City

TEODULO M. TOPACIO JR.

- Attended and participated in all the meetings of the Agricultural and Social Sciences Division
- Supervise the rabies vaccination drive in Quezon City District 3 at Barangay Matandang Balara, Pansol, Kaingin 1& 2, in coordination with the Rotary Club of QC Circle on January to February 2010 whereby a total of 654 dogs were vaccinated
- Attended and presented the paper of the NAST Agriculture Science Division entitled "Philippine Agriculture 2020: A Strategy for Poverty Alleviation, Food Security, Global Competitiveness, Sustainability, Justice abd Peace," at the 3rd International Animal health, Genetics and Nutrition (INAHGEN) Farmers Congress, February 3, 2010, Mall of Asia, SMX Convention Center, Pasay City
- Conducted monthly meetings as Chairman of the National Advisory Committee for Animal Disease Control and Emergency under the Office of the Secretary of Agriculture with the Director of the Bureau of Animal Industry
- Attended and participated at the Annual Scientific Convention of the Philippine Veterinary Medical Association (PVMA), Naga City, Camarines Norte, 16-19 February 2010. The proposed Animal Health Act was presented
- As charter member of the Veterinary and Comparative Pathologists Society of the Philippines (VCPSP), attended the dedication of the Veterinary Pathology Resource Facility Laboratory Building, 22 February 2010 at the UPLB College of Veterinary Medicine
- Attended the L'Oreal International Women Science Award to NS Lourdes J. Cruz at the French Embassy, 25 February 2010
- Attended and participated at the General Assembly meeting of the NRCP, 10 March 2010, Manila Hotel, Luneta Park, Manila

- Guest Speaker, College of Veterinary Medicine Recognition Rites, 4 April 2010, UPLB, "Science as a Field Practice for Veterinary Graduates"
- Delegate, 10th Science Council of Asia, 13-16 June 2010, Sofitel Philippine Plaza, Manila, Philippines
- Resource Speaker at the Lady Vets Foundation, Inc. Seminar on establishing "Veterinary Epidemiological Network," 17 May 2010. Richmond Hotel, Pasig City
- Resource Speaker, NRCP rabies seminar at Puerto Princesa, Palawan. "Updates on Rabies Prevention and Control." May 20-22, 2010, Puerto Princesa Capitol Conference Hall
- Plenary Speaker 33rd Annual Scientific Convention of the Veterinary Practitioners Association of the Philippines (VPAP). "The Role of Science in Veterinary Practice." 10-11 June 2010, Heritage Hotel, Pasay City
- Attended and participated at the series of seminar workshops sponsored by the Office of World Organization of Animal Health or OIE, (equivalent to the World Health Organization or WHO, for humans), with foreign resource speakers, on June 7, 8, 21 and 29, 2010, regarding the gap analysis of veterinary services in the Philippines. Sulo Hotel and BAI Conference rooms.
- Presented the results of the OIE seminar workshops to the DA Secretary through the Director of BAI. 5 and 7 July 2010, DA Conference Room
- Guest speaker, Opening of the Veterinary Corps Hospital and Dispensary, Armed Forces of the Philippines (AFP) Reserve Officer, Camp Aguinaldo, 25 June 2010
- Delivered the UPLB Centennial Lecture, "Establishing an Ágro-Medical Center at UPLB." 28 July 2010, UPLB College of Arts and Sciences Auditorium

GAVINO C. TRONO JR.

- Call for nominations for the Annual competitions 2010 and 2011 of the Royal Academy of Sciences of Belgium

RUBEN L. VILLAREAL

- Involvement in various NAST activities as participant, convenor, or moderator
- Gave 12 lectures on Building Science Culture in the Philippines in different parts of the country.
- Participant, 40th Annual Scientific Conference and Anniversary, Crop Science Society of the Philippines, Davao City, 16 March 2010
- Moderator, Seminar on Benefits and Impact of a Promising Public Sector Crop Biotechnology, Linden Suites, Ortigas, Pasig City, 27 September 2010
- Lecturer, Ethics in Agriculture. Given to the students of Agriculture 199. College of Agriculture, Agronomy Building, UPLB, 28 September 2010
- Discussion meeting on Laguna e-book project with Board Member Neil Nocon, PDG Leo de Guzman, PP Jorge C. Caparas, eight Rotarians from RC Los Baños and RC Los Baños Makiling, GK Los Baños Day Care Center, Los Baños, Laguna, 17 November 2010
- Speaker, "Happiness is Helping Others," RC Los Baños Makiling, 12th anniversary, UPLB Campus. 01 December 2010
- Participant, Gawad Saka Judging for Outstanding Filipino Farmers (Crops Category), Bureau of Soils and Water Management (BSWM), Quezon City, 14 December 2010
- Donation of Math Student Workbook to Dr. Elsa Medialdia, Supervisor, DepEd Los Baños District and Dr. Loreto Lemizo, Supervisor, DepEd Bay District, PCARRD Headquarters, Los Baños, Laguna. 17 December 2010

HONORS AND RECOGNITION RECEIVED

ANGEL C. ALCALA

- Honorary Member, The Association of Systematic Biologists of the Philippines (ASBP), in recognition of outstanding contributions to the advancement of Philippine systematics through pioneering work in systematic herpetology and various other scientific achievements. Awarded May 21, 2010, during the ASBP Annual Meeting Dinner Banquet, Institute of Biological Sciences, UP Los Baños, Laguna
- CHED RePublica Award 2010 Best Paper in the Natural Sciences with co-author Garry R. Russ for "No-take marine

reserves and reef fisheries management in the Philippines: A new people power revolution." May 19, 2010, CHED Auditorium, HEDC Building, Diliman, Queson City.

ALLAN BENEDICT I. BERNARDO

- Exaltacion C. Lamberte Distinguished Professorial Chair in Test and Measurement, De La Salle University, 2010-2011

CHRISTOPHER C. BERNIDO

- 2010 Ramon Magsaysay Award (given by the Ramon Magsaysay Award Foundation, 31 August, 2010).

GELIA T. CASTILLO

- Most Special "INANG" Award, Philippine Root Crop Research and Training Center, 16 March 2010
- Certificate of Appreciation, Harvard School of Public Health Commission on Health Research for Development, 13 May 2010, "In recognition of her contribution to the Commission's landmark report advancing health research for equity in development."

VERONICA F. CHAN

- Certificate of Recognition as Co-Adviser of Dr. Micheal O. Baclig, 2010 Winner Outstanding Thesis and Dissertation Awards in Advanced Science and Technology (Biology and Allied Fields), PCIEERD-DOST

MERCEDES B. CONCEPCION

- National Scientist Conferment, 15 February 2010, Malacañang
- Parangal ng College of Social Sciences and Philosophy, UP Diliman, 04 March 2010

CEFERINO L. FOLLOSCO

- Metals and Engineering (M&E) Man of the Year – awarded by the sector composed of industry associations and Metals Industry Research and Development Center/DOST
- Fabricator of the Year – awarded by the Agricultural Machinery, Manufacturers and Distributors Association (AMMDA) and M&E Council

QUINTIN L. KINTANAR

- Nominated Member of the Board of Directors, UP Medical Alumni Society
- Appointed Member, Policy and Technical Advisory Committee, Fertilizer and Pesticide Authority

ANGEL L. LAZARO III

- University of the Philippines Outstanding Alumni Awardee, (UPCOE), University Theater, UP Diliman, Quezon City, May 28, 2010

ASUNCION K. RAYMUNDO

- Two UP International Publication Awards
- UP Scientist I
- SEARCA travel grant awardee

PERLA D. SANTOS OCAMPO

- National Scientist, Republic of the Philippines, 25 June 2010, Heroes Hall, Malacañang Palace, Manila

- Achievement Award (Annual St. Luke's Doctors' Night), St. Luke's recognition Ceremonies, 22 October 2010, Isla Ballroom, EDSA Shangri-La Hotel. Mandaluyong City
- Perla D. Santos Ocampo Centennial Professorial Chair in Pediatric Gastroenterology, Hepatology and Nutrition, 28 October 2010, Second FB Herrera Jr. Memorial Lecture, UPMASA-PGH, Science Hall, PGH Manila
- Perla D. Santos Ocampo Research Professorial Chair, 21 December 2010, Rizal Ballroom, Makati Shangri-La Hotel, Makati City

TEODULO M. TOPACIO JR.

- Plaque of Recognition – International Animal Health Genetics and Nutrition (INAHGEN). 1st Farmers Congress. SMX Convention Center, Mall of Asia
- Plaque of Recognition – World Organization for Animal Health (OIE) to the National Advisory Committee for Animal Disease Control and Emergency (NAC ADCE,) Chaired by Dr. Teodulo M. Topacio Jr., for continuing support in Foot and Mouth Disease (FMD) Control and Eradication in the Philippines 28 July 2010, Great Eastern Hotel, QC
- Plaque of Recognition –NRCP 79th General Assembly as Member-at-Large for his support and contribution for basic research and for the establishment of the 13th Veterinary Division of NRCP. March 10, 2010, Manila Hotel, Luneta Park, Manila
- Plaque of Appreciation and Recognition – As Plenary Speaker during the 33rd Annual Scientific convention of the Veterinary Practitioners Association (VPAP). "The Role of Science in Veterinary Practice." June 10-11, 2010, Heritage Hotel, Pasay City
- Plaque of Appreciation – BAI Animal Welfare Division for presenting a paper entitled "Animal Welfare Services: Information, Assessment and Planning." During the 6th Observance of Animal Welfare Week, October 5 -7, 2010, Ciudad Christia Resort, San Mateo, Rizal
- Plaque of Appreciation and Recognition - The National Federation of Hog Farmers, Inc. as "Connoisseur in the Field of Veterinary Science" Taal Vista Hotel, Tagaytay City, 11 March 2010
- Certificate of Recognition and Appreciation for Research – AFP Veterinary Corps, 25 June 2010, Camp Aguinaldo
- Centennial Fellow Award by Chancellor Velasco, UPLB, 28 July 2010
- A new blood parasite of Philippine owl named in honor of NS Topacio, called Hemoprotens topacioi, by noted veterinary parasitologist, former Dean and UP Faculty Regent, Dr. Salcedo L. Eduardo. A rare honor given to veterinarians similar to naming new plant species in agriculture to deserving individuals.

RUBEN L. VILLAREAL

- Recognition as Former Dean of the College of Agriculture on the occasion of the 101th CA Foundation Day Celebration, UPLB, 05 March 2010

National Academy of Science and Technology
CONDENSED BALANCE SHEET
 As of December 31, 2010

ASSETS

Current Assets			
Cash	P	170,200.00	
Receivables		2,691,211.36	
Inventories		141,934.68	
Prepaid Insurance		6,316.09	P 3,009,662.13
Property, Plant and Equipment			
Property, Plant and Equipment		7,698,438.58	
Less: Accumulated Depreciation		2,351,337.13	5,347,101.45
TOTAL ASSETS	P	8,356,763.58	

LIABILITIES AND EQUITY

Liabilities			
Current Liabilities			P 4,190,022.05
Equity			
Government Equity			4,166,741.53
TOTAL LIABILITIES AND EQUITY			P 8,356,763.58

NAST *Executive Council*



EMIL Q. JAVIER
President



MERCEDES B. CONCEPCION
Vice-President



EVELYN MAE TECSON-MENDOZA
Secretary



DOLORES A. RAMIREZ
Member



CEFERINO L. FOLLOSCO
Member



QUINTIN L. KINTANAR
Member

NAST *Secretariat*



LUNINGNING E. SAMARITA
Executive Director

OFFICE OF THE EXECUTIVE DIRECTOR

REIHVELLE A. PEREZ
Planning Officer III

VIRGINIA FRANCIA O. GAVICA
Administrative Aide VI

ROBERTO L. ARAT
Administrative Aide IV

TECHNICAL SERVICES DIVISION

GUADA B. RAMOS
Information Officer V

ROWENA V. BRIONES
Information Officer III

CHARYL C. APUYAN
Information Officer II

FINANCE AND ADMINISTRATIVE DIVISION

ROSEMARIE S. ESPINO
Chief Administrative Officer

CHONA S. SANTOS
Administrative Officer V

ZENAIDA T. MAPUA
Accountant III

DENNIS M. VISTA
Administrative Aide I

PROJECT STAFF

DEXTER LORMA A. BAUTISTA
Science Research Specialist II

EUFEMIA MAE B. PALICPIC
Science Research Specialist II

GENEVIEVE B. FOJAS
Science Research Specialist II

DARVIN S. ROSA
SRS I

MARY ANN B. ESCOTE
SRS I

RHEA A. ROSALES
SRS I

SILVERIO N. CRUZ JR.
IT Officer I

JANE PEARL A. ESPINO
Clerk III

FERDINAND C. GUTLAY
Clerk II

RODEL P. CADION
Clerk I



**National Academy of Science and Technology
(NAST), Philippines**

**3rd Level Science Heritage Bldg., DOST Compound,
Gen. Santos Avenue Bicutan, Taguig, 1631,
Metro Manila, Philippines**

**Tel. Nos. (632) 837 2071 local 2170-75;
(632) 838-7766; 7739; 7792
Fax.No. (632) 837 3170**

**Email: secretariat@nast.ph
Website: <http://www.nast.ph>**