ISSSN- 0119 - 4267

RECOGNITION

ADVISORY

SCIENTIFIC LINKAGES

NAST 1999 ANNUAL REPORT

Department of Science and Technology

RECOGNITION

ADVISORY

SCIENTIFIC LINKAGES

NAST 1999 ANNUAL REPORT

Department of Science and Technology

NATIONAL ACADEMY OF SCIENCE AND TECHNOLOGY
1976
PHILIPPINES

TABLE OF Contents

Message from the President	III
Recognition Function	
Awards	1 - 4
Benefits of Academicians and National Scientist	5 - 6
Other Programs / Projects	6 - 7
Advisory Function	
21st Annual Scientific Meeting	8 - 9
Technical / Oral Papers (Table 2)	10 - 12
Poster Papers (Table 3)	12 - 20
Science Information Forum	20
Rountable Discussion	20
Co-sponsored Activities	21
Senate and Congress Bills on S & T Referred to NAST	21
Scientific Linkages	
International Scientific Linkages	22 - 23
Management Information System Project	23
Academicians on the Eve of the New Millennium	24 - 26
Accomplishment and Activities of Academicians	27 - 51
Financial Matters	52
Budget and Expenditures	53
NAST Committees	54 - 60
Administrative Matters	61
NAST Secretariat	62 - 63

MESSAGE
from the President

The National Academy of Science and Technology (NAST), Philippines, in pursuance of its mandated function as the highest recognition and advisory body on science and technology humbly presents this Annual Report for the CY 1999.

The year 1999 was replete with significant milestones in the Academy's unrelenting efforts in giving recognition to outstanding S&T achievements and in serving as a reservoir of competent S&T manpower in the country.

His Excellency, President Joseph Ejercito Estrada conferred the rank and title of National Scientist to an Academician last year. The general assembly elected a new Academician, keeping its membership to 50. Also, NAST continues to give recognition to young scientists, outstanding scientific papers and publications.

The academy held its 21st Annual Scientific Meeting with the theme *"Food, Population and Environment"* cited by many including Secretary Filemon A. Uriarte, Jr. as appropriate, timely and responsive to President Estrada's national development program.

NAST hosted the Third Annual Meeting of Asean Academies of Science, Engineering and Technology, and similar Organizations which was participated by foreign scientits.

As it moves to another challenging year, NAST commits itself to support scientific and technological advancement and envisions to revitalize its role as the highest recognition and advisory body on S&T in the country.

The succeeding pages of this annual report presents the details of the academy's activities and accomplishments for the CY 1999. It is hoped that this publication will be useful in creating public awareness and understanding of the Academy's role in promoting science and technology as the key to national development.

PERLA D. SANTOS OCAMPO, M.D.
President

RECOGNITION function

A. Awards -

NATIONAL SCIENTIST RANK AND TITLE

Pursuant to Presidential Decree No. 1003-A dated 16 December 1976, His Excellency President Joseph Ejercito Estrada conferred the rank and title of NATIONAL SCIENTIST on Academician Gelia T. Castillo Ph.D. (Rural Sociology) on October 11, 1999 at the Main Conference Room, Malacañang Palace, Manila.

She was recognized for her excellent sociological research and achievements that have contributed immensely to the acceptance and growth of empirically-based social science both in the Philippines and abroad; for her rare ability to synthesize existing works and to elucidate difficult theories and concepts so that they become accessible to policymakers and ordinary citizens, and thus enhance the impact of social science contributions on the society at large; for her commitment to put science in the service of equity and ethics, manifested in her works which put into practice her belief that the best of science and scientists must be devoted to the problems of those who have less in life, and for her enviable capacity to inspire younger scholars, teachers, and students, by both her devotion to her craft and calling, and her ability o balance her multiple roles in academe and home, and her national and international commitments.

National Scientist Gelia T. Castillo recieves the medal from His Excellency Joseph Ejercito Estrada assisted by his husband Academician Leopoldo S. Castillo.

The conferment of the rank and title of National Scientist by the President of the Republic of the Philippines is the highest honor given to a man or woman of science. Recommendees for the rank are selected by the National Scientists Committee and recommended to the Academy. Nominees receiving 60% of the votes of the full membership of NAST are recommended to the President of the Republic of the Philippines for the rank and title.

From the twenty five (25) National Scientists conferred since 1978, only nine (9) are living. They are Fe del Mundo, M.D., M.A. (Pediatrics, 1980); Encarnacion Alzona, Ph.D. (Philippine History, 1985); Alfredo V. Lagmay, Ph.D. (Psychology, 1988); Paulo C. Campos, M.D. (Medicine, 1989); Pedro B. Escuro, Ph.D. (Genetics and Plant Breeding, 1994); Clara Y. Lim-Sylianco, Ph.D. (Biochemistry and Organic Chemistry, 1994); Dolores A. Ramirez, Ph.D. (Biochemical Genetics and Cytogenetics, 1998); Jose R. Velasco, Ph.D. (Plant Physiology, 1998); and Gelia T. Castillo, Ph.D. (Rural Sociology, 1999).

President Joseph Ejercito Estrada hands the citation to National Scientist Gelia T. Castillo.

From left to right: National Scientists Alfredo V. Lagmay, Paulo C. Campos, Gelia T. Castillo, President Joseph Ejercito Estrada, Academician Perla D. Santos Ocampo, National Scientists Fe Del Mundo and Dolores A. Ramirez and Underscretary Rogelio A. Panlasiqui.

RECOGNITION function

MEMBERSHIP IN THE ACADEMY

The latest scientist elected to the Academy is Onofre D. Corpuz, Ph.D. (Political Economics and Government). He was elected for his sterling contributions to the fields of political science and Philippine social and economic history.

To be elected to the Academy, a scientist, duly nominated by Academicians, should received at least 50% of the votes of the full membership of NAST at the time of election. Membership is limited to 50 by Presidential Decree No. 1003 as amended by P.D. No. 1003-A.

Academician Onofre D. Corpuz took his oath before Secretary Filemon A. Uriarte, Jr. With them are Academicians Conrado S. Dayrit and Nat'l. Scientist Dolores A. Ramirez.

OUTSTANDING YOUNG SCIENTIST (OYS) AWARDS

The Academy gave the OYS Awards to eight promising young scientists from various fields of sciences: Eric R. Punzalan, Ph.D. (Chemistry); Sergio R. Canoy, Jr., Ph.D. (Mathematics); Cesar G. Demayo, Ph.D. (Entomology/ Genetics); Danilo B. Largo, Ph.D. (Aquatic Environmental Science); Merdelyn T. Caasi-Lit, Ph.D. (Plant Science/ Entomology); Leocadio S. Sebastian, Ph.D. (Plant Breeding); Vicente Y. Belizario, Jr., M.D. (Tropical Medicine/Hygiene); and Bernadette DI. Libranda-Ramirez, Ph.D. (Immunology).

The total number of OYS awardees has reached 167 since NAST started giving the awards in 1980.

Standing from left to right: Dr. Eric M. Punzalan, Dr. Sergio R. Canoy, Dr. Cesar G. Demayo, Dr. Danilo B. Largo, Dr. Merdelyn T. Caasi-Lit, Dr. Leocadio S. Sebastian, Dr. Vicente Y. Belizario, Jr., and Dr. Bernadette Librando DI. Ramirez. Seated from left to right: Academicians Jose O. Juliano and Ricardo M. Lantican, Nat'l. Scientist Dolores A. Ramirez, Secretary Filemon A. Uriarte, Jr., Academician Conrado S. Dayrit, Mr. Segfredo R. Serrano, and Academician Quintin L. Kintanar.

NAST - TWAS SCIENCE PRIZE IN CHEMISTRY

Dr. Leonorina G. Cada of the Institute of Chemistry, UP Diliman received the NAST-TWAS Science Prize in Chemistry. She was recognized for her pioneering work that contributed to the unification of the diverse scientific explanations in physics, mathematics, and biology of the same phenomena concerning liquid crystals.

Since 1990, the Academy and the Third World Academy of Sciences have granted the NAST-TWAS Science Prize to nine (9) Filipino scientists.

PHILIPPINE TALENT SEARCH FOR YOUNG SCIENTISTS

NAST continuously encourages young but talented individuals to pursue careers in science. To do this, the Academy conducts a yearly search for young (thirty-five years old or younger) Filipino researchers who have made significant scientific and technological contributions to society.

In 1999, NAST awarded five talented young Filipino Scientists:

First Prize	:	Jose H. Santos, Ph.D. *(Chemistry)*
Second Prize	:	Edgar A. Vallar, Ph.D. *(Physics)*
Third Prize	:	Elaine N. Tolentino, Ph.D. *(Chemistry)*
Special Citations	:	Ian June L. Garces, Ph.D *(Mathematics), and* Cynthia Grace C. Gregorio, Ph.D. *(Chemistry)*

National Scientist Dolores A. Ramirez, Dr. Leonorina G. Coda, and Academician Conrada S. Dayrit during the awarding ceremonies.

OUTSTANDING SCIENTIFIC PAPERS

Not only does the Academy encourage Filipino scientists to undertake active research but also to publish their works in local refereed journals. This year, NAST cited six (6) Outstanding Scientific Papers in different disciplines.

(a) Roleda, Roberto C. "A Grassmanian SU(5) x SU(5) Theory." *Agham: The De la Salle Journal of Science* 19:29-43 (1994-1995).

(b) Ruivivar, Leonor A. "Harmonic Functions of Bounded Mean Oscillation and a Class of *Ba* Spaces." *The Manila Journal of Science* 1 (1): 15-24 (1998).

(c) Supe, Arnulfo P. "A Bayesian Analysis of Structural Change in Linear Models." *Mindanao Forum* 10(2): 86-92 (1995)

(d) Sensano, Jane G., Anna Cristeta O. Ragragio, and Ernesto J. del Rosario. "Preparation of Polysulfone Membranes and Their Use in Micellar-Enhanced Ultrafiltration of Coconut Water." *Kimika* 13(2): 49-55 (1997).

(e) Dela Viña, Abella C., Dolores A. Ramirez, Liwayway M. Engle, and Ana Cecilia A. Mendoza. "Cytogenetic Relationship of *Zea mays* spp. *mays* L. and Its Wild Relatives: *Zea moys* spp. mexicana, *Zea diploperennis*, and *Zea perennis*." *Philippine Journol of Crop Science* 19(3): 149-162 (1994); 20(2): 81-93 (1995); 20(2): 94-107 (1995); and 20(2): 108-112 (1995).

RECOGNITION function

OUTSTANDING BOOK / MONOGRAPH

Books and monographs dealing with S&T or related concerns are also of particular interest to NAST to enhance the country's scientific literature.

NAST gave recognition to five books and one monograph in 1999 written by Filipinos and published in the Philippines within the last five years:

(a) Bautista, Victoria A., Ma. Concepcion P. Alfiler, and Eleanor E. Nicolas, Authors. *Forging Community-Managed Primary Health Care*. Published by the University of the Philippines Press, Quezon City, 1998.

(b) Dery, Luis C., Author. *The Kris in the Philippine History: A study of the Impact of Moro Anti-Colonial Resistance, 1571-1896*. ISBN 971-91870-0-X, Published by Cacho-Hermanos, Inc., Manila, 1997.

(c) Decenteceo, Edwin T., Author. *Rehab: Psychological Rehabilitation for Social Transformation (Same Programs and Concepts)*. ISBN 971-91900-0-0, Published by BUKAL Publication, Quezon City, 1997

Authors of the book "Forging Community-Managed Primary Health Care" recieved the award from National Scientist Dalores A. Ramirez and Academician Conrado S. Dayrit.

(d) Agpalo, Remigio E., Bernardita Churchill, Petronilo Bn. Daroy, and Samuel Tan, Authors. The *Philippine Senate*. ISBN 971-91612-0-5, Published by Dick Baldovino Enterprises, Manila, 1997.

(e) Bondoc, Orville L., Author. *Biodiversity of Livestock and Poultry Genetic Resources in the Philippines*. ISBN 971-20-0455-4, Published by IAS/UPLB and PCARRD/DOST, Los Baños, Laguna, 1998.

(f) Tiglao, Teodoro V., Author. *A Century of Public Health in the Philippines*. ISBN 971-20-8982-4, Published by UP Manila, Manila, 1998

PRO SCIENTIA TRANSFORMATRIX AWARD

To expand its recognition function, NAST started to include recognition of enterprises that have great potential to enhance the country's global competitiveness. Launched in 1999, the Pro Scientia Transformatrix Award, is a high scientific recognition aimed to promote a more favorable environment to various enterprises that apply science and technology and eventually contribute to the country's bid to gain greater global competitiveness in all practical endeavors.

Though the search began this year, it is expected that nominations will start coming in next year, after extensive publicity on the award.

An award committee was also established to screen nominations. Members of the committee include Acds. Apolinario D. Nazarea (Chair), Jose O. Juliano, Rafael D. Guerrero III, Raul V. Fabella, and Mr. Rommel Lipio of the Philippine Council for Industry and Energy Research and Development.

B. Benefits of Academicians and National Scientists

RESEARCH FELLOWSHIPS

Ten Academicians availed of research fellowships (RF) grants to conduct further researchers on S&T (Table I). Research results could be used in the NAST advisory activities, scientific information exchange, promotion of S&T culture, among others.

TRAVEL ASSISTANCE

Acd. Benito S. Vergara participated in the 1999 Association of Science and Technology Centers (ASTC) Annual Conference in Tampa, Florida on October 2-5, 1999 with the theme "The Nature of Our Business". The conference was hosted by the Museum of Science and Industry (MSI). Acd. Vergara also visited some science museums.

Concepts and new ideas on S&T museum, gathered from the conference will be very useful for the Philippine Science Heritage Center.

Museum of Science and Industry (MOSI), Tampa, Florida.

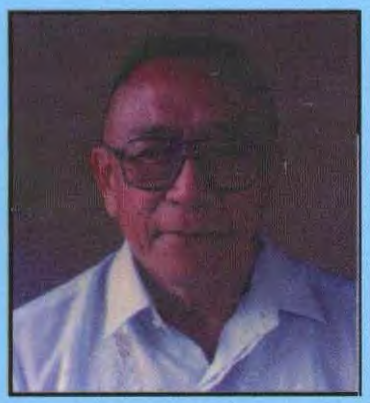
TABLE I. Academician's who availed of RF grants in 1999

Academician	Title of Research
Raul V. Fabella	*Efficient Exchange of Control of Residual Rights*
Ricardo M. Lantican	*Crop Production in the Philippines*
Evelyn Mae T. Mendoza	*Book Writing-Bochemistry of the Philippine Indigenous Legumes*
Apolinario D. Nazarea	*Technology Cyberscon: Assessment of Recently Patented Foreign Processes/Techniques Annotated for Positive Potential Impact on the Philippines*
Faustino T. Orillo	*Development and Publication of a Student Guidebook for the PSHC*
Prescillano M. Zamora	*Annotated Bibliography on Philippine Biodiversity: Philippine Ferns*
Quirino O. Navarro	*Assessment of the State of Nuclear Energy Applications in the Philippines*
Melecio S. Magno	*Assessment of the State of Physical and Geological Sciences and Environmental Concerns in the Philippines*
	Assessment of the Philippine Science Policies
Dolores A. Ramirez	*Video Script Production on the Lives, Research Works, and Contributions of National Scientists*
Benito S. Vergara	*Phase I-D "Literature Research" for the PSHC*

Museum of National History, Los Angeles County.

PUBLICATION ASSISTANCE

After completing the research fellowship on Philippine Biodiversity, Acd. Leopoldo S. Castillo is now having his reseacrh output published. Entitled "Annotated Bibliography on Philippine Biodiversity: Livestock and Poultry 1949-1997", this nine-volume manuscript gained publication supports from agencies of the Department of Agriculture and the Philippine Council for Agricultural,, Forestry, and Natural Resources Research and Development (PCARRD) of the Department of Science and Technology. The Philippine Carabao Center (PCC) offered funding support in the publication of Volume I - *Carabaos*; the National Dairy Authority (NDA) granted support to publish Volumes 2 and 3, *Dairy Cattle* and *Dairy Technology*, respectively; the Bureau of Agricultural Research (BAR) is financing Volume 5 *Goat and Sheep*; PCARRD approved to give financial support to print Volume 7 *Conventional and Non-Conventional Feed Resources*. NAST continues to explore funding support for the publication of the remaining volumes; *Beef Cattle* (Volume 4); *Meat and Egg Processing* (Volume 6); *Poultry* - Parts 1 & 2 (Volume 8); and *Swine* (Volume 9).



Academician Teodulo M. Topacio, Jr.

Acd. Teodulo M. Topacio, Jr. also obtained publication assistance for his research output entitled "Annotated Bibliography on Philippine Biodiversity - Animal Diseases: Prevention and Control (Agrobiodiversity). The Bureau of Agricultural Research (BAR) would also grant support to publish the manuscript.

In addition, NAST published the booklet "NATA DE COCO A Filipino Delicacy" authored by Acd. Benito S. Vergara. The publication was also a product of Acd. Vergara's research fellowship.

ACQUISITION OF PUBLICATION

To keep abreast of recent bills, pending and approved, as well as on other information about legislative services, NAST requested a one-year subscription to the "Legislative Reference Service".

C. Other Programs / Projects

Bookwriting and Video Footoge Production on the Lives, Research Works, and Contributions of Outstanding Filipino Scientists

The third volume was funded by the Department of Science and Technology (DOST) with P833,568.80 under its grants-in-aid (GIA). Acd. Evelyn Mae T. Mendoza requested for a six-month extension (from December 1999 to May 2000) to complete the project.

DOST permitted the printing of the general public version (Volume I) "National Scientists of the Philippines" The book is expected to be finished early next year. The printer, ANVIL Publishing, Inc. also shares rights for the book.

PHILIPPINE SCIENCE HERITAGE CENTER (PSHC) / SALINLAHI

The Department of Science and Technology granted P1,845,605.00 for the second year implementation of the PSHC. The project entitled "Development and Promotion of S&T Culture Through the Philippine Science Heritage Center" covers June 1999 to May 2000.

Mrs. Yoshida, one of the sponsors of Alibata display.

Students viewing the exhibits at the center.

Since the center opened in December 1998, the total number of visitors reached 23,250 in December 1999.

Salinlahi is open to the public daily, but by appointment from 8:A.M. to 5:00 P.M.

SPEAKERS BUREAU

NAST identified two OYS awardees, Dr. Glorina N. Pocsidio and Dr. Blessilda P. Raposa to be the resource speakers for the symposium *"Literacy and Appreciation for Science and Mathematics: The Key to Advancement in Technology"*. The symposium was organized by the ERDA Technical and Vocational Secondary School (ERDA TECH) which also requested NAST for the speakers. The symposium was held last November 19,1999 at the ERDA TECH, in Paco, Manila.

Dr. Blessilda P. Raposa (1997 OYS), one of the resource speakers on the symposium "Literacy and Appreciation for Science and Mathematics: The Key to Advancement in Technology".

The Philippine Science Heritage Center located at the DOST compound, Bicutan, Taguig, Metro Manila.

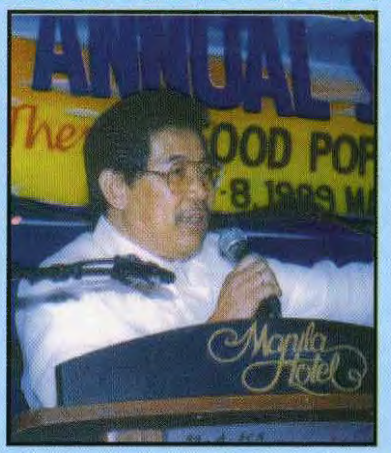
ADVISORY function

ANNUAL SCIENTIFIC MEETING

1. 21st Annual Scientific Meeting

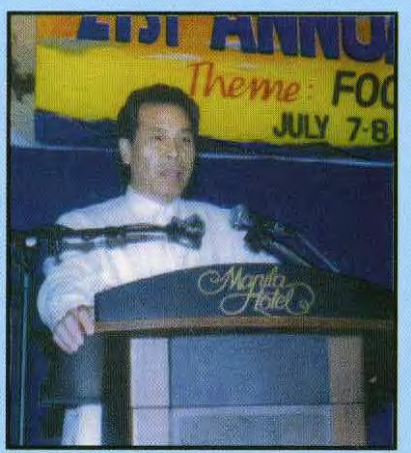
The Academy held its 21st Annual Scientific Meeting (ASM) on July 7-8, 1999 at the Manila Hotel. DOST Secretary Filemon A. Uriarte, Jr. stressed the theme of the ASM *"Food, Population and Environment"*, noting its appropriateness, timeliness, and responsiveness to President Estrada's national development program.

Keynote speaker: Congressman Angelito M. Sarmiento.



Dr. Leonarda A. Gonzalez, plenary speaker- "Carrying Capacity-Food Production: The Philippine and Selected Asian Countries"

Dr. Estrella F. Alabastro, plenary speaker- "Safety of Novel Foods."



Dr. Libertado C. Cruz, plenary speaker- "Major Issues/Policies/Strategies on Animal Industry."

Dr. William D. Dar, plenary speaker- "Major Issues/Policies/Strategies on Major Crops'.

It was co-organized by the Federation of Crop Science Societies of the Philippines, Philippine Society of Animal Science, Philippine Veterinary Medical Association, Philippine Veterinary Drug Association, Association of Professionals in Livestock Production, Philippine Society of Animal Nutritionists, Pest Management Council of the Philippines, and University of the Philippines, Los Baños.

The members of the ASM Program Comittee were Academicians Jose O. Juliano (Chairperson), Ruben L. Villareal (Co-Chair), Leopoldo S. Castillo, Pedro B. Escuro, Rafael D. Guerrero III, Ricardo M. Lantican, Faustino T. Orillo, Teodulo M. Topacio, Jr., Benito S. Vergara, National Scientist Dolores A. Ramirez, Drs. Angel Lambio and Agustin Molina, and Prof. Alfinetta B. Zamora.

Congressman Angelito M. Sarmiento, Chairman of the House Committee on Agriculture and Food was the Keynote Speaker.

Seven (7) plenary papers, seventeen (17) technical papers and sixty seven (67) posters in different disciplines were presented during the two-day meet.

The seven plenary sessions were presented on the following topics: (1) "Carrying Capacity-Food Production: The Philippine and Selected Asian Countries" presented by Dr. Leonardo A. Gonzales; (2) "Safety of Novel Foods" presented by Dr. Estrella F. Alabastro; (3) "Major Issues/Policies/Strategies on the Animal Industry" presented by Dr. Libertado C. Cruz; (4) "Major Issues/Policies/Strategies on Major Crops" presented by Dr. William D. Dar; (5)"Major Issues/Policies

/Strategies on Fisheries"presented by Mr. Nelson A. Lopez; (6) "Global Perspectives on Cereals/Rice" presented by Dr. Ronald P. Cantrell; and (7) "Global Perspectives on Pesticides" presented by Dr. Manfred Kern.

The Board of Judges for the Best Poster Award chaired by Academician Quintin L. Kintanar selected the best posters according to Division:

- Finite Invertible Loop of the Coset Product Type and Latin Square Composition of Factorable Groups and Loops by Dr. Raoul E. Cawagas (Mathematical, Physical, and Engineering Sciences)
- Molecular Evolution of ß-Glucanase in Cereals by Dr. Gabriel O. Romero, et al. (Biological Sciences)
- Benguet Farmers Adopt Aggie Technologies by Wilfredo R. Estolas and C.C. Consolacion (Social Science)
- *Breeding Salt-Tolerant Rice Varieties in the Philippines* by Dr. Philbert S. Bonilla (Agricultural Sciences)
- *Detection of Mycobacterium tuberculosis by Polymerase Chain Reaction* by Jingle R. Candelario, et al. (Health Sciences)

Secretary Uriarte and Mr. Segfredo R. Serrano, Assistant Secretary for Policy and Planning of the Department of Agriculture graced the Awarding and Closing Ceremonies on 8 July. Acd. Ricardo M. Lantican, Chairman of the Resolutions Committee, turned over the recommendations formulated to Secretary Uriarte and Mr. Serrano for their appropriate action or implementation.

A series of articles on the affair was printed on the front page of the Manila Bulletin for several days.

Mrs. Milagros M. Dayrit and Mrs. Genevieve Uriarte cut the ribbon opening the Poster sessions. With them are Academicians Jose O. Juliano and Conrado S. Dayrit.

Academician Ricardo M. Lantican, Chair, Resolutions Committee hands the copy of the resolutions to Dr. Filemon A. Uriarte, Jr., DOST Secretary and Mr. Segfredo R. Serrano, DA Assistant Secretary for Policy and Planning.

Dr. Ronald P. Cantrell, plenary speaker- "Global Perspectives on Cereals/Rice".

Dr. Manfred Kern, plenary speaker- "Global Perspectives on Pesticides".

The members of the board of judges for the Best Poster award during selection of winners.

Table 2. 21st Annual Scientific Meeting - TECHNICAL / ORAL PAPERS

AUTHOR(S)	INSTITUTION/ADDRESS	TITLE OF PAPER
Division: Mathematical, Physical and Engineering Sciences		
1. BALMACEDA, Jose Ma. P.	Department of Mathematics College of Science UP Diliman, Quezon City	Commutative Centralizer Algebras and Related Structures
2. MUGA II, Felix P.	Mathematics Department Ateneo de Manila University Loyola Heights, Quezon City	On Hierarchical Circulant Networks
3. REVILLEZA, Ma. Jamela R., Alfred F. Galvez, Evelyn Mae T. Mendoza and Benito O. de Lumen	Institute of Chemistry College of Arts and Sciences UP Los Baños, Laguna	A Novel Methionine-Rich Protein from Soybean (Glycine max) Cotyledon: Purification, Gene Cloning and cDNA Characterization (Accession No. AF005030)
4. VILLASEÑOR, Irene M., Jennifer Angelada, Arlyn Canlas, Deborah Echegoyen	Institute of Chemistry UP Diliman, Quezon City	Biologically Active Constituents from *Mentha Cordifolia* Opis Leaves
5. TANGTATCO, Michael D., Rommel M. Ong, Fabian M. Dayrit, Emilyn Q. Espiritu, and Paul Hector L. Segarra	Environmental Science Program School of Arts and Sciences Ateneo de Manila University Loyola Heights, Quezon City	Metals and Total Organic Levels in the San Mateo Landfill Leachate and its Receiving Water Systems
Division: Biological Sciences		
1. DIONISIO-SESE, Maribel L.	Institute of Biological Sciences College of Arts and Sciences UP Los Baños, Laguna	Varietal Differences in Growth, Sodium Uptake and Antioxidant Responses of Rice Seedlings to Salinity Stress
2. POCSIDO, Glorina N., Arthur Z. de Vera, Brenda M. Hernandez, Fema Y. Mag-aso, Cheryl P. Mandin, Annabella M. Gorospe, and Olivia C. Cabrera	Institute of Biology College of Science, UP, Diliman, Quezon City	The Occurrence of Ciguatera-Like Poisons in the Visceral Organs of Some Philippine Feral Siganid Fishes

Table 2. continued...

AUTHOR(S)	INSTITUTION/ADDRESS	TITLE OF PAPER
3. VERONICA F. CHAN	College of Public Health UP Manila	Update: Japanese Encephalities Virus Activity in the Philippines
4. MATIAS, Ronald R., Ma. Giselle V. Espiritu, Jhoe Anthony Alfon, Deu John M. Cruz, Ma Luisa G. Daroy, Dengue Research Network and Filipinas F. Natividad	Research and Biotechnology Div. St. Luke's Medical Center 279 E. Rodriguez Sr. Blvd., QC	Detection of Dengue Virus and Antibodies in Patient Sera Collected During the 1995-1999 Outbreaks in the Philippines
Division: Agricultural Sciences		
1. ACORDA, Jezie A.	College of Veterinary Medicine Institute of Animal Science UP Los Baños, Laguna	Diagnosis of Diffuse Hepatocellular Disorders in Dairy Cattle Through Ultrasonography and Digital Analysis
2. GUERRERO III, Rafael D.	Executive Director P C A M R D Los Baños, Laguna	Philippine Lakes: Their Importance Status and Needs for Sustainable Development
3. AQUINO, Vermando M., Hui Wang, Evelyn Mae T. Mendoza, and John S. Hu	Institute of Plant Breeding College of Agriculture UP Los Baños, Laguna	Molecular Cloning of the Philippine Isolate of Banana Bunchy Top Virus (BBTV)
4. REDOÑA, Edilberto D.	Philippine Rice Research Institute Maligaya, Muñoz, Nueva Ecija 3119	Applications of Molecular Marker Technology in Philippine Rice Breeding
Division: Health Sciences		
1. MATIAS, Ronald R., Joyce Irene V. del Rosario, and HPV Study Group	Research and Biotechnology Division St. Luke's Medical Center 279 E. Rodriguez Sr. Blvd. Quezon City	Detection, Sequencing and Genotyping of Human Papilloma Virus Associated with Cervical Cancer Among Filipino Women
2. FESTIN, Mario R., Tito Torralba, Jesus Duenas, and the Philippine Component of the Asian Osteoporosis Study Group	Dept. of Obstetrics and Gynecology, UP-PGH Taft Avenue, Manila	Nutritional Calcium Intake of Elderly Filipinos and its Association with Hip Fractures

Table 2. continued...

AUTHOR(S)	INSTITUTION/ADDRESS	TITLE OF PAPER
Division: Health Sciences		
3. CASAUAY, Arsenia A., Edna A. Amparado, Henry G. Calilung, Sonia D. Jacinto, and Annabelle A. Herrera	Institute of Biology College of Science UP Diliman, 1101 Quezon City	Serous-Papillary Cystadenoma of the Ovary
4. ENRIQUEZ, Ma. Luisa D., Gil M. Vicente, Rhodora R. Santos, and Filipinas F. Natividad	Research and Biotechnology Division St. Luke's Medical Center 279 E. Rodriguez Sr. Blvd. Quezon City	Association Between Chromosome Fragile Site and Oncogene Location: A Profile of Filipino Head and Neck Cancer Patients
5. GUZMAN, Blanquita B. de, Liza P. Faustino, Ma. Corazon B. Paredes, and Filipina F. Natividad	Research and Biotechnology Division St. Luke's Medical Center 279 E. Rodriguez Sr. Blvd., Quezon City	A New Medium for Isolation, Culture and Metronidazole-Sensitivity Testing for Helicobacter Pylori: Diagnostic Value for Early Eradication of H. Pylori Infection

Table 3. 21st Annual Scientific Meeting - POSTER PAPERS

AUTHOR(S)	INSTITUTION/ADDRESS	TITLE OF PAPER
Division: Mathematical, Physical and Engineering Sciences		
CARRASCAL, Alexander S.	ECE Department College of Engineering and Architecture, PUP, Sta. Mesa, Manila	Pseudo-Lexicographic and Anti-Lexicographic Orderings of Permutations and Some Algorithms
CAWAGAS, Raoul E.	SciTech R & D Center Polytechnic University of the Phil. Sta. Mesa,, Manila	Finite Invertible Loops of the Coset Product Type
CAWAGAS, Raoul E.	SciTech R & D Center PUP, Sta. Mesa, Manila	Latin Square Composition of Factorable Groups and Loops
ROSAL, Aurea Z.	SciTech R & D Center PUP, Sta. Mesa, Manila	Construction of a Family of Power Associated Pseudogroups of Order n = 2m with Normal Subsystems of Order m

Table 3. continued...

AUTHOR(S)	INSTITUTION/ADDRESS	TITLE OF PAPER
Division: Mathematical, Physical and Engineering Sciences		
MATEO, Zenaida F. and Yutaka Tanaka	Department of Mathematical Sciences and Physics Central Luzon State University Muñoz, Nueva Ecija 3120	Assessment of Influential Observations in Maximum Likelihood Factor Analysis
MATEO, Zenon Richard P. and Fernando P. Siringan	National Institute of Geological Sciences, UP Diliman	Prediction of Sediment Movement in Lingayen Gulf: An Evaluation of Approaches and Implications to Coastal Stability
SIRINGAN, Fernando P. and Cherry L. Ringor	National Institute of Geological Sciences, UP Diliman	Changes in Water Depths and Shore-Line Positions and Their Implications to Sediment Dispersal and Sedimentation Rates in Manila Bay
SIRINGAN, Fernando P. and Caroline Jaraula	National Institute of Geological Sciences, UP Diliman	Patterns of Sedimentation, Sources of Sediment and Their Implications to Laguna de Bay's LifeSpan
SIRINGAN, Fernando P. and Kelvin S Rodolfo	National Institute of Geological Sciences, UP Diliman	Subsidence and the Worsening Flood Problem in Pampanga and Bulacan
FRANCO, Samuel S., Renelyn M. Andrada, Elsa S. Calantoc, Dennis Warren C. Ines, Jaime C. Portugal and Constante G. Rosales, Jr.	Dept. of Materials Science and Engineering, College of Eng'g. Mariano Marcos State University Batac, 2906 Ilocos Norte	Utilization of Local Raw Materials for White Earthen Wares and Porcelain Bodies Manufacturing
LACSAMANA, Marivic S. and Janusz M. Gebicki	Institute of Chemistry College of Science, UP Diliman, Quezon City	Protein Hydroperoxides: Protein Damage Induced by Peroxynitrite
GUEVARRA, Amelia, Marites Guino-o, and Jenny Mae Perez	Institute of Chemistry College of Science, UP Diliman, Quezon City	Hypoglycemic Activity of Some Folklore Antidiabetic Plants
UBUNGEN, Walfredo P. and Romualdo V. Pascua	Sericulture Research and Development Institute Bacnotan, La Union 2515	Design, Construction and Evaluation of an Acid Treatment Bath
AGUILAN, Jennifer T., Antonio M. Basilio, Edward T. Chainani, Enrico Cruz, Fabian M. Dayrit, Emilyn Q. Espiritu, Noreen Gonzales, Bernadette Matanguihan, and Nina L. Rojas	National Chemistry Instrumentation Center, Department of Chemistry Ateneo de Manila University Loyola Heights, Quezon City	Phosphorous-31 NMR Studies on Escherichia coli and Bacillus subtilis

Table 3. continued...

AUTHOR(S)	INSTITUTION/ADDRESS	TITLE OF PAPER
Division: Biological Sciences		
ONG, Perry S., Marisol DG. Pedregosa and Michael G. de Guia	Institute of Biology College of Science, UP Diliman	Wildlife Inventory of the University of the Philippines Diliman and the Ateneo de Manila University Campus, Diliman, Quezon City, Luzon, Philippines
LOPEZ, Nellie C., Roberto C. Pagulayan, and Francis S. Magbanua	Institute of Biology College of Science, UP Diliman	Zooplankton from Lake Taal
PAREDES, Raissa T. and Nellie C. Lopez	Institute of Biology College of Science, UP Diliman	Distribution and Abundance of ATYID Shrimps in Volcano Island Shores, Lake Taal, Batangas
SAMONTE, Irene E., Werner E. Mayer and Roberto C. Pagulayan	Institute of Biology College of Science, UP Diliman	Lake Taal's Endemic Freshwater Sardine *Sardinella tawilis* (Herre, 1927): Speciation in Progress or Ghost of Ancient Polymorphism? (Insights from Molecular Data)
INTRINA-SONICO, Marnie Grace and Roberto C. Pagulayan	Institute of Biology College of Science, UP Diliman	A Biometric Study of *Sardinella tawilis*, *S. fimbrata*, and *S. abella* (Pisces:clupeidae)
PAGULAYAN, Roberto C. and Francis S. Magbanua	Institute of Biology College of Science, UP Diliman	Fish Composition of the Pansipit River: A Comparison with the First Report Made 70 years Earlier
PAGULAYAN, Roberto C. and Brenda M. Hernandez	Institute of Biology College of Science, UP Diliman	Subic Bay Forest Rivers: What Mollusks Do They Support?
MASAGCA, Jimmy T.	De La Salle University Dasmariñas, Cavite	Diversity of Mangrove Vascular Flora and Associated Macrofauna in Mangal Communities of Catanduanes
CAPALONGAN, Therese C., Clarissa I. Vea and Nellie C. Lopez	Institute of Biology College of Science, UP Diliman	Ovarian Changes in *Apogon thermalis* Cuvier in Relation to Spawning
JUINIO-MEÑEZ, Marie Antonette, Virginia D. Monje, Eiza T. Yu, and Rachel G. Ravago	Marine Science Institute UP Diliman	Preliminary Analysis of the Genetic Structure of Giant Clam (Tidacna crocea) Populations from Northern Palawan and the Kalayaan Island Group (KG)
ROMERO, Gabriel O., Bruce R. Thomas, Raymond L. Rodriguez, Ruben Gapasin, and John Halbrendt	Philippine Rice Research Institute Maligaya, Muñoz, Nueva Ecija	Molecular Evolution of ß-Glucanase in Cereals

Table 3. continued...

AUTHOR(S)	INSTITUTION/ADDRESS	TITLE OF PAPER
Division: Biological Sciences		
IBAÑEZ, Vinzon C., Juan Carlos Gonzalez, and Cynthia T. Hedreyda	Molecular Biology and Biotechnology Program College of Science, UP Diliman	DNA Sequences for the Mitochondrial 16s rRNA and Cytochrome B Gene Loci of the Philippine Hanging Parrot, *Loriculus philippensis*
DOYUNGAN, Zaldy F., Susan J. Brown, Rob E. Denell and Richard W. Beeman	MSU-Iligan Institute of Technology Iligan City 9200	Mapping Homologs of Developmental Genes Engrailed and Hunchback in the Red Flour Beetle
FLETA, Marie Antoinette C., Charissa T. Ronque, Maryland V. Loveria and Ernelea P. Cao	Institute of Biology College of Science, UP Diliman	Transient Expression of Salt-Tolerance Genes in Cyanobacteria
HEDREYDA, Cynthia T. and Albert D. Agomaa	Molecular Biology and Biotechnology Program, College of Science UP Diliman	Screening for Enzyme Producing Bacteria Using Polymerase Chain Reaction and Hybridization
ILAR, Glenn Y., Rhodora R. Aldemita, Lavernee S. Gueco, and Eleanor S. Avellanoza	Philippine Rice Research Institute Maligaya, Muñoz, Nueva Ecija	Optimization of Conditions for *Agrobacterium tumefaciens* Mediated Transformation of Rice
RAMOS, Ma. Rowena R., Gavelline C. Calacal and Saturnina C. Halos	DNA Analysis Laboratory Natural Sciences Research Institute UP Diliman	Effects of Time and Environmental Conditions on STR Primer Amplification of DNA Extracted from Human Bloodstains
SANTOS, Ameurfina D., Syed V. Kashmiri and Eduardo A. Padlan	Molecular Biology and Biotechnology Program College of Science, UP Diliman	Generation and Characterization of a Recombinant Anti-Tumor Humanized Tetravalent Antibody
PALMES-SALOMA, Cynthia and Hisato Kondoh	Molecular Biology and Biotechnology Program College of Science, UP Diliman	Multiple Roles for the N-MYC Gene in Mammalian CNS Development
RIVERO, Gilda C., and Patty B. Lintongan	Institute of Biology College of Science, UP Diliman	Physiological Responses of Four Microalgal Isolates to Cadmium
PULUMBARIT, JR., Nicodemus, and Arsenia A. Casauay	Institute of Biology College of Science, UP Diliman	Hispatological Alterations in the Intestine of Chanos chanos in Response to Molluscicide Metaldehyde
PALMES-SALOMA, Cynthia and Julius Decano	Molecular Biology and Biotechnology Program College of Science, UP Diliman	Genetic Analysis of Chemically-Induced Loss of Albinism in Mice

Table 3. continued...

AUTHOR(S)	INSTITUTION/ADDRESS	TITLE OF PAPER
Division: Agricultural Sciences		
ROMERO, Gabriel O., Thelma Alegado, and Ma. Cristina Newingham	Philippine Rice Research Institute Maligaya, Muñoz, Nueva Ecija	Data Management Systems for Germplasm
ORDOÑEZ, Samuel Jr. A., Teodora M. Esmabe, Stella Marie P. Ablaza, Imelda A. dela Cruz, and Edilberto D. Redoña	Philippine Rice Research Institute Maligaya, Muñoz, Nueva Ecija	Characterization of Heterosis in Philippine Hybrid Rice Germplasm
MORENO, Loida S., Samuel A. Ordoñez, and Edilberto D. Redoña	Philippine Rice Research Institute Maligaya, Muñoz, Nueva Ecija	Molecular Genetic Diversity and Heterosis in Rice
OCAMPO, Theresa D., Imeldalyn G. Pacada, Oliver E. Manangkil, and Edilberto D. Redoña	Philippine Rice Research Institute Maligaya, Muñoz, Nueva Ecija	Identification of Genetic Donors for Rice Seedling Vigor
BONILLA, Philbert S.	Philippine Rice Research Institute Maligaya, Muñoz, Nueva Ecija	Breeding Salt Tolerant Rice Varieties in the Philippines
GUECO, Lavernee S., Rhodora R. Aldemita, Glenn Y. Ilar, and Eleanor S. Avellanoza	Philippine Rice Research Institute Maligaya, Muñoz, Nueva Ecija	Screenhouse Evaluation of Transgenic IR72 Containing XA21 Gene for Bacterial Blight Resistance
ILAR, Glenn Y., Rhodora R. Aldemita, Lavernee S. Gueco, and Eleanor A. Avellanoza	Philippine Rice Research Institute Maligaya, Muñoz, Nueva Ecija	Genetic Engineering Approach to Develop Pest Resistance in Rice
ALBERTO, Ronaldo T., L. Sanchez, G.B. Amar, J. Rillon, V. L. Judal, M. Valdez, S. E. Santiago and S. A. Miller	Central Luzon State University Muñoz, 3120 Nueva Ecija	Management of Soil-Borne Diseases in Rice-Vegetable Systems
JOSHI, Ravindra C. and S. James	Philippine Rice Research Institute Maligaya, Muñoz, Nueva Ecija	Earthworm Complex in the Ifugao Rice Terraces
GERGON, Evelyn B., Victoria Judal, Carlito Ravina, Ruben Gapasin and John Halbrendt	Philippine Rice Research Institute Maligaya, Muñoz, Nueva Ecija	*Meloidogyne graminicola*: A Nematode Pest from Rice to Onion Meloidogyne graminicola: A Nematode Pest from Rice to Onion

Table 3. continued...

AUTHOR(S)	INSTITUTION/ADDRESS	TITLE OF PAPER
CAYABYAB, Bonifacio C., Rolando G. Bayot, Edgardo Gutierrez, Reynaldo Arapan, Fredelino P. Penalba, Rodolfo Desingano and Mario V. Navasero	Plant Quarantine Support Lab. National Crop Protection Center UP Los Baños, Laguna	Monolepta sp. (chrysomelidae: Coleoptera) A New Pest of Corn Seedlings
RECUENCO-ADORADA, Jessamyn D. and Julieta D. Recuenco	National Crop Protection Center UP Los Baños, Laguna	Macrosiphum (Sitobion) miscanthi Takahashi: A New Aphid Attacking Sugarcane (Homoptera:Aphidae)
BILGERA, Benita U.	Cotton Development Administration Batac, Ilocos Norte	Competing Ability and Control of Echinochloa colona (L.) LinkCompeting Ability and Control of Echinochloa colona (L.) Link
LIGAT, Boni, Mario V. Navasero, Rolando G. Bayot, Reynaldo Arapan, Melvin D. Ebuenga, Fredelino Penalba, and Bonifacio F. Cayabyab	Benguet State University La Trinidad, Benguet	*Hispodonta* sp. (Chrysomeliae:Alticinae) A New Pest of Banana
MOLITAS-COLTING, Lita and Cleofas R. Cervancia	College of Agriculture Benguet State University La Trinidad, Benguet	The Endangered Giant Wild Honeybees (Apis dorsata Fab.) Habitat and Behavior
RECUENCO-ADORADA, Jessamyn D. and Victor P. Gapud	National Crop Protection Center UP Los Baños, Laguna	Philippine Species of Illeis Mulsant(Coleoptera: Coccinellidae: Coccinellinae: Psylloborini)
CAYABYAB, Bonifacio C., Melvin D. Ebuenga, Mario Navasero, Rolando G. Bayot, Reynaldo Arapan, Edgardo Gutierez, Renato B. Geli, Jr., Emerita Candelaria, Fredelino Penalba and Dominador Canlas	Plant Quarantine Support Laboratory National Crop Protection Center UP Los Baños, Laguna	El Niño and its Effects on Field Population Increase of Migratory Locust
RECUENCO, Julieta D.	Sugar Regulatory Administration Luzon Agricultural Research & Extension Center, Floridablanca, 2006 Pampanga	Insecticidal Properties of Seven Indigenous Plants Against the Oriental Migratory Locust on Sugarcane
ALBERTO, Annie Melinda P., Epifania Castro and Sherilyn DG. Vicencio	Central Luzon State University Muñoz, Nueva Ecija	Diversity and Foraging Behavior of Insect Pollinators of Common Fruit Trees in Central Luzon State University

Table 3. continued...

AUTHOR(S)	INSTITUTION/ADDRESS	TITLE OF PAPER
GAPUZ, Cristeta F., Julieta P. Abuan, Francisco V. Gapuz, Jr., Edgar F. Padilla, Gemma E. Supsup, Virgilio M. Libunao, Marybel N. Licay, Marlyn A. Milan, and Emilio E. Carino	Don Mariano Marcos State Univ. Sericulture Research and Development Institute, Bacnotan, La Union	Development of Silkworm F1 Hybrids for Semi-Arid Condition
GLOVA, Alvin D., J.L. Mercado, and R. C. Castro	National Tobacco Administration Batac, Ilocos Norte	Extraction and Characterization of Tobacco Seed Oil
DESAMERO, Nenita V., Ma. Corazon N. Julaton, Wilhelmina E. Villalba, Martha V. Chico, Sharon S. Macabale, Celia M. Leano, Leonilo G. Domingo, Robert V. Punzal, Arnel Q. Ambalina, Jose A. Orcino, Emil R. Corpuz and Thelma F. Padolina	Philippine Rice Research Institute Maligaya, Muñoz, Nueva Ecija	Use of Organic Substances to Promote Anther Culture Response in Rice
MACACHOR, Corazon P., Severino R. Romano, and Erma S. Capuno	Cebu State College of Science and Technology College of Fisheries Technology Carmen, 6005 Cebu	The Acceptability of Tilapia *Oreochromis mossambicus* Spread
CALANOGA, Esterlita L. and Priscilla C. Sanchez	College of Fisheries Cagayan State University Maura, Aparri, 3515, Cagayan	*Bacillus cereus var.* Improved Sensory and Protein Qualities of Fermented "Tinabal Molmol" (Scarus spp.)
MUNDO, Raphael Henri B., Ma. Christina V. Dimapilis, and Agnes G. Collado	Agro-Industrial Lab. (AIRLAB) Dept. Sugar Regulatory Administration North Avenue, Diliman, Q. C.	Levels and Sources of Significant Wastewater Parameters in Selected Sugar Mills in the Philippines
PASTOR, Floramante C.	Mariano Marcos State University Science Research Laboratory 2906 Batac, Ilocos Norte	Commulative Effects of the Existing Land Uses on the Water Resource of the Sand Dunes of Ilocos Norte
CAPINPIN JR., Emmanuel C., Jobert D. Toledo, Vincent C. Encena II and Masanori Doi	Aquaculture Department Southeast Asian Fisheries Development Center 5021 Tigbauan, Iloilo	Growth, Feed Conversion Ratio, and Survival of the Philippine Abalone *Haliotis asinina* Cultured in Net Cages at Different Stocking Densities

Table 3. continued...

AUTHOR(S)	INSTITUTION/ADDRESS	TITLE OF PAPER
ROMANO, Severino R.	Cebu State College of Science and Technology College of Fisheries Technology Carmen 6005 Cebu	Culture of "Lato" *Caulerpa lentilifera* in Ponds Using An Artificial Substrate
Division: Health Sciences		
CALACAL, Gayvelline C., Tanya Aletheia P. Bagadion, Ralph Kevin Brett, John Michael L. Danao, Nina Marie C. Fleta, Jose Carlo Z. Natividad and Saturnina C. Halos	DNA Analysis Laboratory Natural Sciences Research Institute UP Diliman	Validation of Two Step DIfferential Extraction from Seminal Fluid Mixed with Epithelial Cells
CRUZ, Deu John M. and Noel G. Sabino	Research and Biotechnology Division St. Luke's Medical Center 279 E. Rodriguez Avenue Quezon City	Bioassay of Paralytic Shellfish Poisoning (PSP) Toxins from Bacteria *(Micrococcus sp.)* Using Brine Shrimp *Artemia salina* (Linnaeus)
CANDELARIO, Jingie R., Ma.Lourdes S.Yanga, Reena Katigbak-Pompa, Loreto Codamos, Evelino N. Lagamayo, Roberto Barzaga, Blanquita B. de Guzman and TB Study Group	Research and Biotechnology Division St. Luke's Medical Center 279 E. Rodriguez Avenue Quezon City	Detection of Mycobacterium tuberculosis by Polymerase Chain Reaction
MIRANDA, Jasmin Jiji B., Josephine Y. Chu, Allan Chris M. Ferreon, Michelle Music F. Magno, and Saturnina C. Halos	Molecular Biology and Biotechnology Program College of Science, UP Diliman 1101 Quezon City	Microsatellite DNA Polymorphisms in Filipinos
PEREZ, Benjamin Gerardo A., Sherrie Querubin de Ocampo, Joseph C. Bocobo, Leonora Trinidad D. Salda, Jesus Y. Perez, and Ronald R. Matias	Research and Biotechnology Division St. Luke's Medical Center 279 E. Rodriguez Avenue Quezon City	Identification of HCV Genotypes in the Filipino Population by Restriction Fragment Length Polymorphism
HERRERA, Annabella A., Sonia Jacinto, Delisa Manuel, Laura Joy Valera, Edna A. Amparado and Arsenia A. Casauay	Institute of Biology College of Science UP Diliman, 1101 Quezon City	Binding Profile to Neoglycoprotein Probes in Cervical Carcinomas
JACINTO, Sonia D., Kathryn T. Sanchez, Marie Antonette H. Suplido, Ma. Loreta V. Quitoriano, Marnie Grace I. Sonico, Annabelle A. Herrera, Edna A Amparado and Arlene A. Casauay	Institute of Biology College of Science UP Diliman, 1101 Quezon City	Binding Profile of a Lectin and Neoglycoprotein Probes on Normal and Thyroid Carcinomas from Filipino Patients

Table 3. continued...

AUTHOR(S)	INSTITUTION/ADDRESS	TITLE OF PAPER
AMPARADO, Edna A., Arsenia A. Casauay, Custer C. Deocaris, Annabelle A. Herrera, and Sonia D. Jacinto	Institute of Biology College of Science UP Diliman, 1101 Quezon City	Breast Cancer with p53 Gene Mutation
Division: Social Sciences		
SANTOS, Daniel S.	Pamantasan ng Lungsod ng Maynila Intramuros, Manila	Educating for Critical Thingking: Review of Literature
ESTOLAS, Wilfredo R. and Cipriano C. Consolacion	Benguet State University La Trinidad, Benguet 2601	Benguet Farmers Adopt Aggie Technologies
MASAGCA, Jimmy T. and Manrico T. Masagca	De La Salle University Dasmariñas, Cavite	Attitudes Toward Biodiversity Conservation of Mangroves among Coastal Dwellers in Catanduanes

2. *Preparation for the 22nd Annual Scientific Meeting*

Preparations are underway for the scientific meeting on 5-6 July next year. The program Committee is chaired by Acd. Jose O. Juliano and co-chaired by Acd. Apolinario D. Nazarea. The theme will be "Challenges in the New Millennium for Science and Technology".

The ASM Committee invited the Philippine-American Academy of Science and Engineering (PAASE) through its President, Dr. Sevilla Detera-Wadleigh, to participate in the two-day meet. NAST received a positive response from PAASE.

SCIENCE INFORMATION FORUM

The Science Information Forum on "IPR on the Karaoke" was organized by the Academy on 4 May at the Casino Español, in Ermita, Manila.

The President of the Filipino Investors Society, Mr. Edgardo G. Vasquez introduced the inventor of the karaoke, Mr. Ramon del Rosario. The affair was attended by S&T media from print and radio. Articles on the forum were printed in several newspapers.

ROUNDTABLE DISCUSSION

The Academy with the Outstanding Young Scientists, Inc. (OYSI), organized a roundtable discussion (RTD) on science and technology assessment. RTD on the paper "Assessment on the State of Chemical Sciences in the Philippines" by Academicians Evelyn Mae T. Mendoza

and Bienvenido O. Juliano, was held on 5 May in UP Diliman.

The event was coordinated by Drs. Cherrie B. Pascual and Alicia M. Aguinaldo, of the OYSI.

A roundtable discussion on the "Biosafety of Biotechnology Products and Their Effects on Human Health" held on 5 November at UP Manila was co-sponsored by NAST with the Institute of Biotechnology and Molecular Biology, UP Manila.

CO-SPONSORED ACTIVITIES

1. The International Symposium on Biotechnology with the theme "Biotechnology for the Next Millennium", held on 24-26 February at the EDSA Plaza Shangri-La Hotel, Mandaluyong City, was co-sponsored by NAST with the Biotechnology Association of the Philippines, Inc., Department of Science and Technology, Department of Trade and Industry, and UNIDO.

2. Symposium on Biosafety of Biotech Products held on 30 August at the Lecture Hall, Institute of Biological Sciences, UP Los Banos, was co-sponsored by NAST with the University of the Philippines Los Baños.

3. The 8th Policy Issues Forum on "Is There a Need to Change the Constitution?", held on 28 September at the Science Teachers Training Center Auditorium, ISMED Bldg., UP Diliman, Quezon City, was co-sponsored by NAST with the National College of Public Administration and Governance, the Center for Policy and Executive Development, and the UP-Center for Integrative and Development Studies.

4. 26th Annual Convention of the Philippine Society of Biotechnology and Molecular Biology, held on December 26 at the Philippine Rice Research Institute, Maligaya, Munoz, Nueva Ecija was co-sponsored by NAST with the OYS, Inc.

5. Symposium on the Recent Development in the Discovery of Biologically Active Natural Products was co-sponsored by NAST with the OYS, Inc. and was held last 6-8 December at the University of Santo Tomas, Manila.

SENATE AND CONGRESS BILLS ON S&T REFERRED TO NAST

NAST actively gave its recommendations and comments on the following bills:

a) House Bill No. 611 "An Act Establishing the Global Warming and Climate Change Appropriating Funds Therefor, and For Other Purposes"

b) House Bill No. 539 "An Act Requiring the National Government to Allocate a Minimum Percentage of the Total GNP for S&T Research and Development"

c) House Bill on "An Act Controlling the Discharge of Pollutants into Our Gulfs, Bays, Creeks, Esteros, Rivers, Drainage Channels and Other Similar Waterways, Declaring Certain Acts Unlawful, Prescribing Penalties Thereto and for Other Purposes"

d) Senate Bill No. 1595 "An Act Instituting an Integrated Solid Waste Management Program, Creating the National and Local Solid Wastes Council and Necessary Mechanism and Incentives, Declaring Certain Acts Prohibitive and Providing Penalties, Appropriating Funds Therefor and for Other Purposes"

e) Senate Bill on "An Act Providing for the Establishment of an Organic Fertilizer Plant in Every Agricultural Legislative District and Appropriating Funds Therefor"

f) Clean Air Act of 1999

g) Clean Water Act of 1999

h) Promotion of Bio-Organic Farming in the Philippines

i) System of Registration of Licensing, Practices of Professions by Multi-Disciplinary, Technological Infrastructure, Partnerships, Corporations, and Cooperatives

SCIENTIFIC Linkages

INTERNATIONAL SCIENTIFIC LINKAGES

1. Expansion of Linkages

The Academy continues international scientific linkages with the following:

a) Academy of Sciences Malaysia (ASM)

b) American Association for the Advancement of Science (AAAS) ASEAN-CASE

c) Australian Academy of Science (AAS)

d) Chinese Academy of Science (CAS)

e) Federation of Asian Scientific Academies and Societies (FASAS)

f) German Research Society (Deutsch Forschungsgemeinschaft-DFG)

g) Indian National Science Academy (INSA)

h) Malaysian Scientific Association (MSA)

i) Philippine-American Academy of Science and Engineering (PAASE)

j) Royal Society of London (RSL)

k) Third World Academy of Science (TWAS)

l) Third World Network of Scientific Organizations (TWNSO)

Officers of the Malaysian Scientific Association visited NAST last August.

2. International Meeting

NAST hosted the Third Annual Meeting of ASEAN Academies of Science, Engineering and Technology, and Similar Organizations on July 8-9, 1999 at the Manila Hotel.

The meeting was participated by about 20 foreign scientists and 75 Filipino scientists, Secretary Uriarte graced the occasion as one of the guest speakers.

3. Scientific Research / Study Visits

a. The Academy under its Memorandum of Agreement with INSA, accepted the study visit of Dr. Jagarlapudi Adinarayana of the Centre of Studies in Resources Engineering, Indian Institute of Technology, Bombay, India from October 9-31, 1999.

Dr. J. Adinarayana visited the International Rice Research Institute (IRRI), SEARCA- UP Los Baños, Philippine Rice Research Institute (PhilRice) at Nueva Ecija, NAMRIA, Bureau of Soils and Water Management, UP - Marine Science Institute, and ICLARM.

He delivered a series of lectures and seminars relating to their work on systems research on watershed/ conservation management and spatial decision support system for rural land use planning.

b. The Academy endorsed the request of Mr. Eduardo V. Manalili, a Senior Science Research Specialist at the Philippine Council for Aquatic and Marine Science and Development (PCAMRD) and presently a DOST scholar, to avail of the privileges under the memorandum of agreement between NAST and the German Research Society (DFG).

Mr. Manalili is currently working on his dissertation

LOCAL SCIENTIFIC LINKAGES

1. Scientific Organizations/Associations

The Academy continues its collaboration with the Center for BioMolecular Science Foundation, Incorporated; Center for Fluid Dynamics; Confederation of Scientific and Professional Organizations Region 7, Inc. (COSPO); Department of Science and Technology Regional Office No. 7; and Outstanding Young Scientists, Incorporated (OYSI).

MANAGEMENT INFORMATION SYSTEM PROJECT

Last year, DOST approved funding under its GIA the project entitled "Upgrading S&T Information Resources of NAST Through Establishment and Installation of IT infrastructures" with an amount of PhP 434,500.00. The IT infrastructures which are to be established are the hub, server, computer hardware, and other equipment for connection to information highway and networking purporses.

The project aims to:

a) develop and establish a Management Information System (MIS) project that complies with the standard requirements in terms of accessibility, compatibility, and connectivity with other information netwoks of which NAST has institutional linkages;

b) design and develop an MIS for the Secretariat, being the support staff that attends to the day-to-day activities of NAST; and

c) enhance NAST's capability, productivity, and efficiency in handling information and better coordination of its activities.

To achieve these objectives, NAST subscribes to Pacific Internet having the e-mail address to: nast@pacific.net.ph

ACADEMICIANS
on the eve of the new millennium

A. Significant Science and Technology Positions

A survey of the activities of Academicians during the year reveals 57 significant S&T positions held including membership/Chairing of Boards of Trustees/Directors; leadership in professional societies;membership in Committees, Technical Working Groups concerned with R&D policy planning, program implementation; evaluation/review teams, research project leadership; research consultancy/fellowship; and membership/ chairmanship in editorial boards of scientific journals, some of them, international. One Academician visited Regional Science Teaching Centers in Manila for familiarization with Project RISE - Rescue Innovations in Science Education. Another one serves as Curator of the Museum of Natural History in addition to several S&T responsibilities. The latter also identified parasitic specimens for a French Laboratory; a Crocodile Farming Institute, and WWF-Philippines. Another Academician was part of a seven-person international team of experts invited by the newly-created College of Rural Development of the China Agricultural University to assist in developing the curriculum and courses of the new College.

The subject matter concerns of the above-mentioned S&T positions include the following:

1. Biodiversity conservation
2. Resource assessment
3. Watershed conservation
5. Intellectual property rights
6. Biosafety
7. Poultry and livestock feeds
8. Animal diseases
9. Eagles working group
10. Veterinary medicine
11. Environment
12. Rice Research
13. Agricultural and rural development
14. Clinical epidemiology
15. Development policy
16. Ecoregional research
17. Rice-Wheat consortium
18. Environmental economics
19. Human development
20. Users' perspectives in agricultural research and development

The Academicians and National Scientists during the NAST Academy Meeting held at the Audio Visual Room, Philippine Science Heritage Center.

21. Economics and business studies
22. Hypertension and cardio-vascular medicine
23. National drug policy planning
24. Coconut R & D
25. National seed industry
26. Plant biotechnology
27. Crop science
28. Engineering and technology career system
29. Human development and behavioral studies
30. Health sciences

In addition to these tasks, Academicians were consulted on various proposed House and Senate Bills on trade; food security; genetic resources conservation; information technology; solid waste management; health hazards of high voltage transmission lines, a development authority for women, etc.

B. S & T Conferences

Speaking engagements, lectures, discussant-reactor roles, resource person functions in scientific meetings were accepted by Academicians whenever their expertise was needed. There were 77 such occasions where they shared their ideas and scientific experiences with wide audiences.

C. Research and Publications

The involvement in research projects and output in publication reflect the various disciplines of the Academicians.

Closely related to their respective disciplines are reseach projects and publications. There were 26 published papers (10 in international publications); 17 in press; and 34 researches in progress. These researches and publications are about animal diseases; crop biotechnology; Philippine biodiversity; medicinal plants; seedlessness in mango; fungi; pediatrics and child health; the girl child direct observed therapy strategy; mass immunization of children; roving health clinics (tiangge); multivariate tests of hypotheses; various aspects of rice grain quality; national drug policy; currency crisis; the soft state, the market and governance, the Great Dragon Effect in China and the Asian Slowdown; Philippine herbal drugs; inventory of Philippine insects; hypertension and cardio-vascular medicine; evaluators and evaluation culture; rural livelihood systems; science in everyday life, etc.

D. Venues of S&T Activities

The S&T activities of the Academicians brought them to many cities and all the provinces: cities of Metro Manila; Iloilo; Cebu; Taytay; Rizal; Lipa City; Pampanga; Tacloban City; Tarlac; Benguet; Nueva Ecija; Olongapo City; General Santos City, etc. Some travelled to 11 countries: Thailand, Vatican City, Indonesia, Hongkong, Japan, China, Singapore, U.S., Vietnam, and India.

The members of the Biological Sciences Division.

ACADEMICIANS
on the eve of the new millennium

E. Honors and Awards

Various organizations, institutions, and scientific agencies recognized the contributions of the Academicians to S&T. Academicians received 17 honors and awards including: Best Paper Award; Gawad Chanselor - *Pinakamahusay na Aklat* (The Philippine Archipelago Science and Technology Cluster); Cited in Who's Who in the World 16th Edition 1999; Certificate of recognition given by the Gamma Sigma Delta Honor Society of Agriculture; Recognized by the International Congress of Tropical Pediatrics as one of the World Leaders in Pediatrics; One of the "Filipina First" awards from the Centennial Committee on Women's Sector; Lingkod Bayan Award given by the President of the Republic of the Philippines, through the Commission on Civil Service; honored as First President and Founder of PMWA 1949-50th Anniversary; Main Hall of the PMWA Building named after one of the National Scientists; received a grant of PhP 5 million from the Japan International Cooperation Agency (JICA) for a Comprehensive Outreach Health Program; Gawad Parangal given by the Statistical Research and Training Center, Distinguished Leadership Award selected by the American Biographical Institute; inclusion in 2000 Outstanding Intellectuals of the 20th Century, International Biographical Centre, listed in the International Directory of Distinguished Leadership (8th Edition American Biographical Institute 1999); included in Biography Today, New Millennium Edition, New Delhi, India; nominated to Asian Who's Who by Rifacimento International, New Delhi, NRCP Achievement Award, etc.

The Academicians while waiting for the meeting to start.

SUMMARY

Although several of the Academicians have officially retired from the academe, industry, and government and private sector S&T leadership positions, their expertise valued and their professional stature respected. They are still sought after in scientific conferences; in R&D undertakings; and their professional articles continue to be accepted for publication here and abroad. Academicians, living up to the recognition bestowed on them, continue to maintain leadership in the scientific community, some even in their twilight years. A shining example is National Scientist Fe del Mundo who has not relaxed her efforts in health R&D and health care. Her deep concern for the health of our people, especially the children, continues to merit, recognition and admiration, not only in our country, but also in international medical circles.

ACCOMPLISHMENTS
and activities of academicians

A. SIGNIFICANT S&T POSITIONS

1. RAMON F. ABARQUEZ, JR.

- President, Philippine Society of Hypertension
- Professor Emeritus, College of Medicine University of the Philippines
- Member, Board of Trustees, Asian Pacific Society of Hypertension (1997-date)
- Consultant, San Miguel Corporation (1994-date)
- Member, National Drug Planning Board, Department of Health (1992-date)
- Member, Philippine College of Physicians - Ethics Committee
- Chairman, Long Range Planning Committee, Philippine Heart Association
- Member, Scientific Editorial Board, International Highlights and Discussions in Schemic Heart Disease Journal
- Member, Consulting Editors, Dialogues in Cardiovascular Medicine, ARTEM, France
- Member, Editorial Board, Medical Progress (since 1998) Medi, Media, Hongkong
- Member, Editorial Board, Medicine Digest, Medi, United Kingdom
- Member, Editorial Board, Cardiology Practice, Australia
- Member, Editorial Board, PIMS - Philippine Index

2. SOLITA F. CAMARA-BESA

- Member, Ethics Review Board of Committee on Research Implementation and Development (CRID), College of Medicine, University of the Philippines, Manila of Medical Specialties.

3. PAULO C. CAMPOS

- Member, UNESCO National Commission
- Member, Board of Regents, (1995-1999)

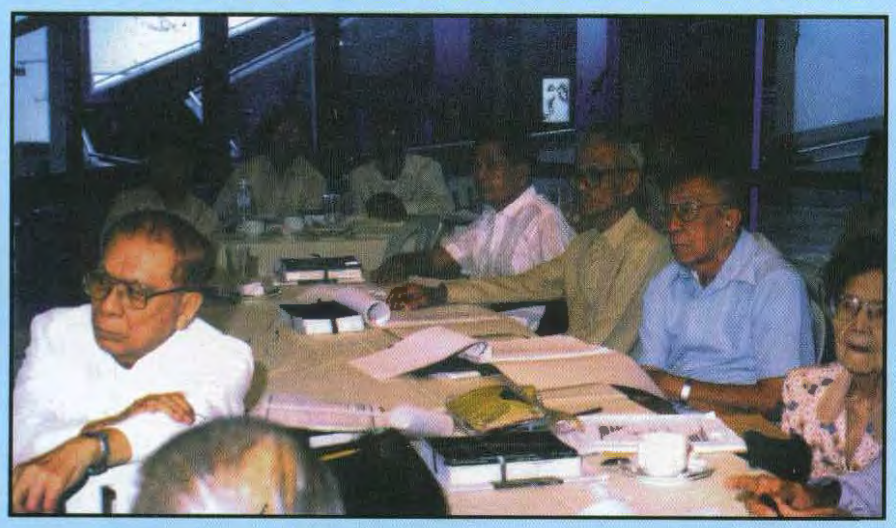
4. MAGDALENA C. CANTORIA

- Chair, Technical Working Group on the project entitled "Preparation of a Philippine Pharmacopeia, Book II (Herbal Drugs), sponsored by the Bureau of Food and Drugs (BFAD) and the Japan International Cooperation Agency (JICA), 1998-2006
- Chair, Editorial Board, National Research Council of the Philippines, 1998-2001
- Member, Centennial Committee on "Women in Health Science and Technology Research"

The members of the Mathematical, Physical and Engineering Science Division.

5. GELIA T. CASTILLO

- Member, Board of Trustees, Philippine Rice Research Institute
- Member Board of Directors, Center for Agricultural and Rural Development
- Member, Board of Trustees, De La Salle University Angelo King Institute for Economics and Business Studies
- Member, Board of Trustees, Foundation for the Advancement of Clinical Epidemiology
- Chair, Board of Trustees, Policy Development Foundation
- Member, International Scientific Advisory Committee, Ecoregional Fund for Methodological Initiatives, The Hague
- Member, Review Team for the Economy and Environment Program for SE Asia, IDRC, Singapore
- Member, Executive Committee, Human Development Network
- Senior Research Adviser, Users' Perspectives with Agricultural Research and Development (UPWARD) (A Network of Young Researchers from six Asian countries), sponsored by the International Potato Center and the Dutch Ministry for Development Cooperation
- Consultant, International Rice Research Institute



Some of the members of the Academy.

6. VERONICA F. CHAN

- Member, MS Epidemiology thesis panel on "Factors associated with Early Fully Immunized Status Among Indonesian Children 9-12 Months of Age".
- Consultant, Bureau of Research and Laboratories, Department of Health
- Member, Technical Working Group, Rubella Immunization, Deparment of Health
- Consutant, Task Force, Emerging Reemerging Diseases, Department of Health
- Director, WHO National Influenza Center, CPH/YPM, 1976 to date
- Member, Steering Committee on the Prevention and Control of Infectious Diseases in Asia, 1995 to date (Smithkline Beecham International)
- Member, DiPH Dissertation Panel on "Studies on the Resistance Potential of Malaria Vector Anopheles Anthropophagus Xo Peng : Diptera culicidae to Deltamethrin under Field Simulated Selection Pressure"
- Temporary Adviser, WHO Global Influenza Surveillance; 50th Anniversary; Geneva, Switzerland, February 1999

7. CONRADO S. DAYRIT

- President, NAST until July, 1999
- Emeritus Professor, UP Department of Pharmacology
- Medical Director, VRP Hospital
- Member, Board of Trustees, Treasurer and Chairman, Philippine Coconut Research and Development Foundation (PCRDF)
- President, NAST Foundation
- Chairman, Daniel dela Paz Foundation
- Honorary Chairman, G. Ocampo Research Foundation

8. SALCEDO L. EDUARDO

- Dean, College of Veterinary Medicine, University of the Philippines Los Baños (UPLB)
- Chief, Intellectual Property Rights Office, UPLB
- Curator, UPLB Museum of Natural History
- Member, National Agricultural and Fishery Council (NAFC)
- Committee on Poultry, Livestock, and Feed Crops
- Member, National Advisory Committee for the Control of Animal Disease and Emergency (NAC-CADE)
- Member, Multiagency Task Force on Equine Epidemic, Philippine Racing Commission
- Member, Academic Consultative Committee, SEARCA
- Member, Philiipine Eagle Working Group, PAWB-DENR
- Member, Advisory Board, School of Environmental Science and Management, UPLB
- Member, Organizing Committee of the International Seminar on Japan-Southeast Asian Agricultural Research Cooperation (JSARC): Past Accomplishments and Future Needs, November 18-23, Bangkok, Thailand

9. EDGARDO D. GOMEZ

- Director, UP Marine Science Institute

10. RAFAEL P. GUERRERO III

- Executive Director, Philippine Council for Aquatic and Marine Research and Development (PCAMRD)
- Program Manager, DOST-UNDP Gainex Program on Milkfish, Seaweeds and Shrimp
- Chairman, Fisheries Institution Review Committee, Bureau of Agricultural Research
- Member, Governing Board, National Fishereis Research and Development Institute
- Member, ASEAN - Committee on Science and Technology, Subcommittee Marine Science

11. CARMEN LI. INTENGAN

- Member, Committee on Research, Philippine Coconut Research and Development Foundation

12. BIENVENIDO O. JULIANO

- Senior Research Fellow, Philippine Rice Research Institute, Los Baños Reelected Member, Rice Technical Working Group Committee, National Seed Industry Council

13. QUINTIN L. KINTANAR

- Member, Executive Board, Philippine Pharmacopeia Project

14. EVELYN MAE T. MENDOZA

- Program Leader, Institute of Plant Breeding Plant Biotechnology Program Chair, Adhoc Committee to establish a Molecular Biology and Biotechnology Program, Graduate School, UPLB
- Member, Special Biotechnology Committee, PCARRD
- Editor-in-chief, Philippine Journal of Crop Science
- Project Leader, NAST-DOST "Bookwriting and Video Footage Production on the Lives, Research Works, and Contributions of Outstanding Filipino Scientists (Volume III)"

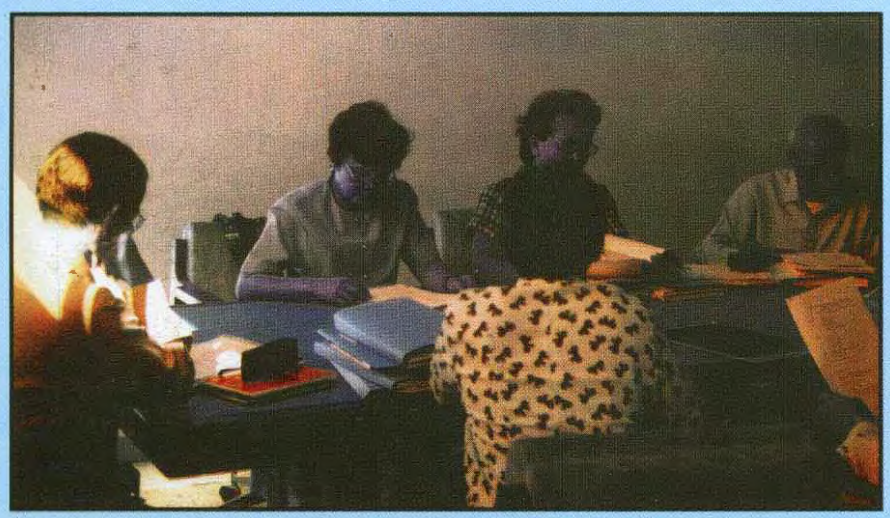
15. TITO A. MIJARES

- Life Member, Philippine Statistical Association
- Life Member, Philippine Economic Society
- Regular Member, National Research Council of the Philippines
- Member, Technical Committee on Engineering and Technology, Scientific Career System, DOST

- Chair, Board of Judges, Philippine Talent Search for Young Scientists
- Chair, Board of Judges, Philippine Statistics Quiz, National Finals (Annual nationwide contest on statistics among first year college students sponsored by the National Statistics Office, Department of Science and Technology, Commission on Higher Education, and Philippine Statistical Association)

16. BIENVENIDO F. NEBRES, S.J.

- Chair, CHED Technical Panel for Science and Mathematics
- Member, PCASTRD Governing Council
- Member, UNESCO Science and Technology Committee



Shot taken during the screening of nominees for the NAST awards by the Mathematicals, Physical and Sciences Division.

- Advisory role in the formulation of Virtual Center for Technology Innovation (VCTI) in Information Technology together with Undersecretary Rufino C. Lirag, Jr., Mr. Arnaldo de Rosario, and others.

17. FAUSTINO T. ORILLO

- Member and Co-Secretary, NAST Executive Council, until July 1999
- Chairman, Agricultural Sciences Division of NAST, until July 1999
- Chairman, NAST Committee on Elections
- Member, NAST Board of Judges for the Best Poster Award
- Member, Board of Trustees, NAST Foundation, Inc.
- Member (Community Representative), National Committee on Biosafety of the Philippines (NCBP), DOST
- Member, Committee on Awards of the UPLB College of Agriculture Alumni Association
- Member, UPLB Committee on Museum and Ceremonial Hall

18. PERLA D. SANTOS OCAMPO

- President, NAST from August 1999 to date
- Executive Director, National Institutes of Health, UP Manila
- Chairperson, Metro Manila Health Science Community, Philippine Council for Health Research and Development
- Member, Board of Trustees, Asian Pacific Society of Hypertension (1997-date)
- Chairperson, University Research Council, UP Manila
- Member, Governing Council, Philippine Council for Health Research and Development
- Program Leader, Human Development and Behavioral Studies Program, National Institutes of Health, UP Manila

19. TEODULO M. TOPACIO, JR.

- Chairman, National Advisory Committe, Animal Diseases Control, Department of Agriculture
- Chairman, Subcommittee on Veterinary Drugs, Department of Health

- Member, Governing Council, Philippine Council for Health Research and Development
- Program Leader, Human Development and Behavioral Studies Program, National Institutes of Health, UP Manila

19. TEODULO M. TOPACIO, JR.

- Chairman, National Advisory Committe, Animal Diseases Control, Department of Agriculture
- Chairman, Subcommittee on Veterinary Drugs, Department of Health
- Chairman, Board of Veterinary Medicine Professional Regulation Commission
- Consultant, Agri-based Livelihood Program, Presidential Commission on Tagaytay, Taal
- Consultant, Agiculture, Public Health and Environmental Protection, Office of the Presidential Adviser for Development Administration, Office of the President
- President, Philippine Society of Veterinary Public Health
- Vice President, Federation of Asian Vetinary Association (FAVA)

20. PRESCILLANO M. ZAMORA

- Director, UP CIDS-NAST Biodiversity Conservation Program
- Consultant-Project Leader, ASCOT (Aurora State College of Technology) Biodiversity Conservation Program Watershed Adviser, WWF-Philippines Sulu-Sulawesi Marine Ecoregion Conservation Program Development
- Team Leader, Resource Assessment Team, WWF-Philippine El Nido Community-Based Conservation Project
- Panel of Examiners, Ph D Dissertation of Z P Lopez-Dee "Ovule Development and Characterization of Ovule-Specific MADS Box Gene in Oryza sativa L."

B. Publications

1. RAMON F. ABARQUEZ, JR.

- Author, Clinical Review Article "Factors Affecting Blood Pressure". *Medical Progress*, 25(4): 13-16(1999)
- Author, Clinical Review Article "Conventional and Novel Uses of Digitals" *Medical Progress*, pp. 23-26
- Author, Controversial Question: In Home Is It Important to Diagnosed Hybernating Myocardium. Medicographia, 21 (2):168-169
- Co-author, "Hypertension Control Concern". *Philippine Journal of International Medicine*, 36: 59-64
- Co-author, "The Role of Trimetazidine in the Short Term Evolution of Acute Myocardial Infarction - A Randomized Double Blind Placebo Controlled Study". *Philippine Journal of Internal Medicine*, 36-173-178
- Co-author, "Cumulative Survival Rates Among Recognized (Hospitalized) and Unrecognized (Non-Hospitalized) Acute Myocardial Infarction Industry - Based Filipino Patients". *Philippine Journal of Internal Medicine*, 37(2): 51-58

Photo taken during the NAST Academy Meeting in February.

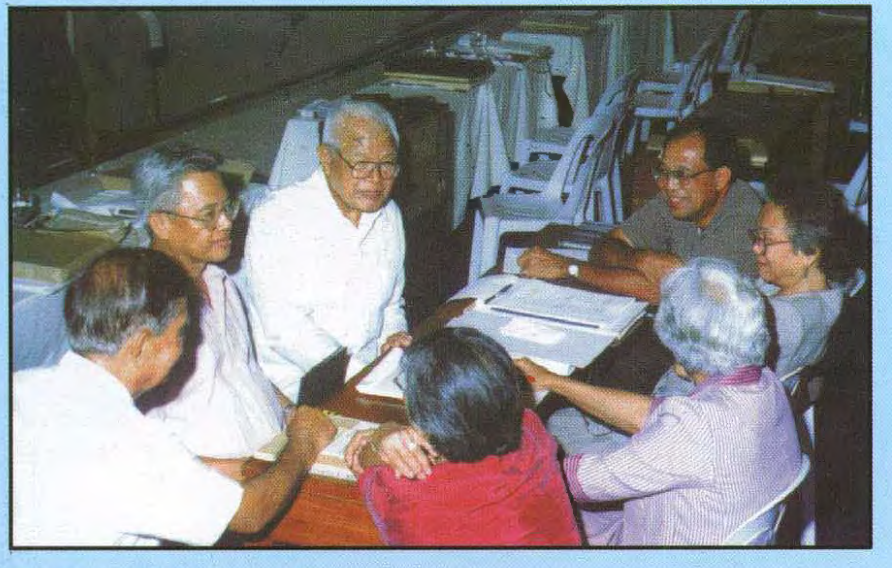
- Author, "The Ubiquitous Digitalis Unmet Needs and Persistent Fears Regarding Its Indications". *Philippine Journal of Internal Medicine*, (37(2): 59-68

2. PAULO C. CAMPOS

- Author, "A Modified Method of Instruction Utilizing Audio-Visual Modules, published by the National Research Council of the Philippines

3. GELIA T. CASTILLO

- Co-author, "Nurturing Network: Lessons in the Evolution of the UPWARD Program" in Niehof, Anke, and Paul Terpstra, eds. Household in Interdisciplinary Perspective, Wageningen Agricultural University, Household and Consumer Studies, Wageningen, The Netherlands, June 1999 pp. 37-46
- Author, "Evaluation: Purposes, Products and Probity" in Knowledge, Technology and Policy, Transaction Periodical Consortium, Winter 1999, Vol. II, No. 4 Rutgers University, pp. 132-151
- Author, "Evaluation, Evaluators, and Evaluation Culture" IRRI Discussion Papers Series No. 35, International Rice Research Institute, Los Baños 13pp.
- Author, "Behavioral Modification Toward a Cancer-Free Lifestyle" 1999 Paterno Memorial Lecture, National Cancer Consciousness Week under the auspices of the Department of Health and the Philippine Cancer Society, Jan. 18
- Author, "The Philippine Social Sciences" in the Life of the Nation: Selective Refelections, Foreign Relations Journal (Publication of the Philippine Council for Foreign Relations), Vol. XIII, No. 2, Centennial Issue, pp. 24-39
- Author, "Science in the Eloquence of Everyday Life" (paper prepared for the lecture series in honor of Dr. Emil Q. Javier, U.P. President with the theme "Scholarship in the Service of the Nation, U.P. Diliman, Quezon City
- Author, "Foreword" Gender-Sensitive and Feminist Methodologies: A Handbook for Health and Social Researchers, Sylvia H. Guerrero, ed. University Center for Women's Studies, UP Women's Health Research Coalition, and UNFPA, UP Diliman
- Author, "Changes in the Concept and Practice of Rootcrops R&D in Asia: Some Experiences of UPWARD Network Members" in Sustainable Livelihood for Rural Households; Contributions from Rootcrop Agriculture, UPWARD, Los Baños, Laguna
- Author, "Local R&D Management: A sense of Shared Faith With Other People", Paper prepared for the UPWARD Program Planning Workshop, Bogor, Indonesia, April 27-30
- Author, "A Dozen Reflections on Participatory Research and



The Biological Sciences Division.

Gender Analysis in the CG System" notes prepared for the Seminar on Research Trends and Capacity-Building for Gender/Stakeholder Analysis and Participatory Research held at the College of Development Communication, UPLB, July 15 sponsored by the CGIAR Program for Participatory Research and Gender Analysis (PRGA)

- Author, "Moving Toward a New Mainstream in Participatory Monitoring and Evaluation: Experiences and Lessons" Workshop Proceedings, International Institute of Rural Reconstruction, Y.C. James Yen Center, Silang, Cavite, pp. 84-85
- Author, "IRRI's Values, Ethics and Corporate Culture" paper prepared for the International Rice Research Institute

4. LEDIVINA V. CARIÑO

- Author, "Beyond the Crossroads: Policy Issues for the Philippine Non-Profit Sector". Voluntas 10(1): 83-91
- Author, "Reengineering the Bureaucracy: Translating Principles Into Performance Indicators," paper submitted to the Development Academy of the Philippines as the final report of the project with the same title
- Co-editor, "Studies in Local History" (in progress)

5. CONRADO S. DAYRIT

- Author, "Centennial History of Philippine Medicine"
- Author, Texbook on Pharmacology

6. SALCEDO I. EDUARDO

- Author, "The Tegumental Surface of Adult Artyfechinostomum malayanum (Leiper, 1911) Medheim 1943 (Trematoda: Echinostomatidae) from Pigs as Revealed by Scanning Electron Microscopy". *Philippine Journal of Veterinary Medicine*, 36(1):14-19, 1999

From Left-Right: Academicians Benito S. Vergara, Evelyn Mae T. Mendoza and :ourdes J. Cruz with Dr. Filemon A. Uriarte, Jr., DOST Secretary.

- Author, "The Japan Society for the Promotion of Science (ISPS) Core University Program: Personal Views of a Philippine Coordinator" In: Twenty Years of Scientific Cooperation under the JSPS Program, Tokyo, Japan (In Press)

7. RAUL V. FABELLA

- Author, "The East Asian Model and the Currency Crisis: Credit Policy and Mundell-Fleming Flows," The Manchester School 67(5) Special Issue, pp: 475-495
- Author, "A Contractarian Approach to Pareto Efficiency in Teams: A Note" Theory and Discussions to appear "The Honest Bureaucrat in a Soft State" in Philippine Daily Inquirer
- Author, "Globalization Poverty, and Inequality" in Balisacan and Fujisoki, eds., Growth, Poverty and Income Inequality

8. EDGARDO D. GOMEZ

- Co-author, "Evidence for Changing Symbiotic Algae in Juvenile Tridacnids", Journal of Exp. Marine Biology Ecol. 241:207-221 ISI Journal

- Co-author, "A Rational Approach to the Development of the Fisheries Sector". PCARRD, Los Baños, 137pp.
- Author, "Environmental Charade". Marine Pollution Bulletin 38(1): 1-2

9. RAFAEL D. GUERRERO III

- Author, "Aquaculture: capitalizing on nature's bounty. *"The Food and Agriculture Centennial Book*, University of Asia and the Pacific, Pasig City
- Editor, "100 Years of Philippine Fisheries and marine Science". Philippine Council for Aquatic and Marine Research and Development, Los Baños, Laguna. 210pp.
- Author, "Advances in tilapia farming in the Philippines". *Aquaculture Asia* 4(2):35-37.
- Author, "The impacts El Niño on Philippines Fisheries". Naga, *The ICLARM Quarterly* 22(30: 14-15
- Author, "Sustainable aquavulture for marginal coastal fisherfolk in the tropics", p. 129-134 In: N. Svennevig, H. Reinertsen and M. New (eds) sustainable aquaculture, A.A. Balkema, Rotterdam

10. BIENVENIDO O. JULIANO

- Author, "Comparative Nutritive Value of Various Staple Foods", *Food Reviews International* 15: 399-434
- Author, "Effect of Cooking Method on Amylopectin Staling as Monitored by Instron Hardness", *Philippine Journal of Science* 128: 171-176
- Author, "Varietal Effects on Properties of molded Puffed Brown-Rice Cakes" Philippine Journal of Science (in press)
- Co-author, "Comparative Protein Digestibility in Growing Rats of Cooked Rice and Protein Properties of Indica and Japonica Milled Rices", *Journal of Cereal Science* (accepted for publication)
- Author, "Grain Quality for Adverse Rice Environments ", *PhilRice Technical Bulletin* 6 (inpress)
- Author, "New Tensipresser and Instron Texture of Cooked Japanese and Philippine Rices", *PhilRice Technical Bulletin* 6 (in press)
- Co-author, "Grain Quality of Maligaya Special Rices", *PhilRice Technical Bulletin* 6 (in press)
- Co-author, "Effect of Decree of Milling and Protein Content on Milled Rice Gel Consistency", *PhilRice Technical Bulletin* 6 (in press)
- Co-author, "Minimum Aging period for Grain Quality Tests", *PhilRice Technical Bulletin* 6 (in press)

11. CLARA Y. LIM-SYLIANCO

- Author, "Gero-Protective Activity of Some Medicinal Plants". *Philippine Journal of Science* (In press)

From left to right: Academician Jose O. Juliano, Dr. Filemon A. Uriarte, Jr. and Dr. Raymundo S. Punongbayan during the review of NAST 1999 Accomplishments and Plans for year 2000.

12. EVELYN MAE T. MENDOZA

- Co-author, "Mungbean [Vigna radiata (L) Wilczek] Globulins: Purification and Characterization". (for publication)
- Co-author, "Purification and Characterization of Lepidopteran Toxin Protein from a Philippine Isolate of Bacillus thuringiensis (Kurstakei)" (for publication)
- Co-Author, "Variation in Polyphenol Profile and Content of Leaves from Different Strains of Mango (Mangifera indica L.) var. Carabao". *Philippine Journal of Crop Science* 24(SI): 54
- Co-author, "Physiological and Biochemical Basis of Salt Tolerance in Com". Philippine Journal of Crop Science 24(SI): 4
- Co-author, "Storage Lipid Variability in Promising Coconut (Cocos nucifera L.) Hybrids and Cultivars: FattyAcid/ Triacylglycerol Composition". *Philippine Journal of Crop Science* 24(SI): 51
- Co-author, "Phenolic Compounds in Coconut (*Cocos nucifera* L.)) Endosperm " (for publication)
- Co-author, "Alakaloids of Several Philippine Indigenous Legumes: Determination and Removal" (for publication)
- Co-author, "Identification of Rambutan (*Nephalium lappaceum* Linn.) Cultivars Using Isozyme Electrophoretic Pattern" (for publication)
- Author, "Designer Foods: Short and Long Terms Impacts". Paper presented during the Symposium "Biotechnology: Safety and Ethics" held on February 15-16 at DLSU
- Co-author, "Physiological and Biochemical Mechanism of Salt Tolerance in Rice (*Oryza sativa L*): II. Sensitivity Threshhold of Ion Absorption Under Saline Conditions". Poster Paper presented during the 28th Annual Convention of the Kapisanang Kimika sa Pilipinas, Los Baños, October 26-27, DL Umali Hall, SEARCA, UPLB
- Co-author, " Indica Rice Proteins are Less Digestive than Japonica Rice Proteins *In Vivo* and *In Vitro*". Poster Paper presented during the 28th Annual Convention of the Kapisanang Kimika sa Pilipinas, Los Baños

13. TITO A. MIJARES

- Author, "On Extending Hotelling's Q-test for Complete Independence between Two Sets of Variates". Philippine Statistician, Vol. 48 (in press)

14. BIENVINIDO F. NEBRES, S.J.

- Author, "International Benchmarking as a way to improve School Mathematics Achievement in the Era of Globalization". *International Comparison in Mathematics Education*, Falmer Press, 200-212

15. FAUSTINO T. ORILLO

- Co-author, "Guide to the Study of Fungi: A Laboratory Manual for Introductory Mycology" (Third Edition). Department of Plant Pathology, College of Agriculture, UPLB

16. PERLA D. SANTOS OCAMPO

- Co-author, "Domestic Violence in Urban Filipino Families" (In progress)
- Author, "Growth and Development". Chapter in *Textbook of Pediatrics and Child Health* Author, "Childe Abuse". Chapter in *Textbook of Pediatrics and Child Health*

17. TEODULO M. TOPACIO, JR.

- Author, "Policy Options To Strengthen Agriculture, Livestock and Fishery Development Programs". Read before the Association of Provincial Agriculturists

- Author, "Necessary Organizational Structure Reforms to Support the Agriculture Fishery Modernization Act (AFMA) of 1997". Read at Agri-Link Congress
- Author, "The Role of the National Advisory Committee for Animal Disease Control and Emergency". Read at the Seminar Workshop for Provincial Veterinarians and Quarantiane Officers
- Author, "The Role of the Veterinarian in Public Health". Read during the 2nd Animal Feeds and Veterinary Drugs Congress

18. JOSE R. VELASCO

- Author, "The Science Act of 1958: A Retrospective Survey", published by the Department of Science and Technology (DOST) and the National Academy of Science and Technology (NAST)
- Author, "Selected Papers of Jose R. Velasco" (in press)
- Author, "Compilation of Laws Concerning Agriculture and Natural Resources, Volume I National Commission to Commonwealth Period 1900-1946
- Minutes of Meetings of the Imus Municipal Council 1903-1916 Translation from the Spanish with Annotation (in progress)
- Author, "Soliloquy On the Methods of Science". *Philippine Agricultural Scientists* (in press)

19. PRESCILLANO M. ZAMORA

- Co-author, "Spore Diversity in Philippine Ferns", *UP CIDS-NAST Biodiversity Conservation Reports* 5: 1-280
- Editor, Cyclopedia of Tress, Palms and bamboos of the UP Diliman

The members of the Health and Sciences Division.

C. Researches (Complemented and In-Progress)

1. CLARE R. BALTAZAR

- Inventory of Philippine Insects. Vol. III Order Hymenoptera, ± 700 manu-script pages
- Annotated Bibliography of Philippine Lepidoptera (for completion of final report)

2. PAULO C. CAMPOS

- A Modified Method of Instruction Utilizing Audio-visual Modules

3. MAGDALENA C. CANTORIA

- Morphology and Histology of Philippine Herbal Drugs

4. VERONICA F. CHAN

- Surveillance of Influenza by Virus Isolation
- Dengue Virus Antigens Production for ELISA IgM Capture DHF
- Surveillance of ELISA IgM Capture

5. CONRADO S. DAYRIT

- Clinical Studies on Monolaurin for HIV/AIDS; Tuberculosis; H. pylori; others

6. SALCEDO L. EDUARDO

- Zoonotic Helminth Parasites of Field Rats from Bay, Laguna
- The Pig as the Intermediate Host of the *Taenia saginata*-like Worm in the Philippines
- Relative Abundance of Helminth Parasites in *Ophicephalus striatus* and *Clarias batrachus* from Laguna Lake

7. RAUL V. FABELLA

- The Great Dragon Effect: Mainland China and the Asian Slowdown
- The Soft State, the Market, and Governance
- The BSP Hits It Right: Is it One Swallow or a Sucrose
- Entry and Exit of the Soft State, A Smith Meets G. Myrdal Monograph

8. EDGARDO D. GOMEZ

- Molecular Genetic Identification and Characterization of Strains of Symbiotic Zooxanthellae for Improved Giant Clam Mariculture (December 1995-April 1999)
- Economic evaluation & biophysical modelling of the Lingayen Gulf in support of management for sustainable use (January 1996-December 1999)
- Marine Biodiversity Enchancement at the Hundred Islands National Park (November 1998 to January 2000)
- Pacific Seaboard R & D Programs:
  Proj. 1: Assessment of Reef Resources in Eastern Phils.
  Proj. 2: Oceanographic Studies on the Mindanao Eddy, North Equitorial
  (October 1999 - September 2001)
- Utilization of Zooxanthellae in Giant Clam Mariculture (January 1999 - December 1999)

9. RAFAEL D. GUERRERO III

- Fisheries Technology Assessment of Three Barangays: A Case Study (Completed)

ACCOMPLISHMENTS
and activities of academicians

The newly elected officers: Academicians Ruben L. Villareal (Vice President); Perla D. Santos Ocampo (President); and Jose O. Juliano (Secretary).

- Development of a Technology Packaging System for the National Aquatic Resources Research and Development System (on-going)

10. BIENVENIDO O. JULIANO

- Various aspects of quality of rice grain and rice products

11. QUINTIN L. KINTANAR

- Acute Oral Toxicity of BPC 1 in Mice (in progress)

12. EVELYN MAE T. MENDOZA

- Physicochemical of IBP Crops (Phase V)
- Control of Ripening Papaya and Mango by Genetic Engineering
- Development of Objective Indices (Biochemical, Physiological, and Physical) for Cultivar Identification of Mango
- Determination of Fatty Acid, Protein, and Triacylglyceride Composition of Different Coconut (*Cocos nucifera L.*) Cultivars and Hybrids
- Development of Gene Constructs and Appropriate Tranformation Systems for the Fatty Acid Modification of Coconut Oil
- Rhizosphere Inorganic Carbon Enhancement of Crop Production
- Molecular Control of Ripening in Sugarcane
- Mutation Breeding of Priority Agricultural Crops
- Avocado Rootstocks Resistant to *Phytopthora* Root Rot Desease in Cell Cultures
- Vatrietal Identification of Rambutan (*Nephalia lapacerum* Linn.) Using Peroxidase Isozyme Pattern

13. TITO A. MIJARES

- The Use of the Elementary Symmetric Functions of the Roots in Multivariate Tests of Hypotheses (in progress)

14. FAUSTINO T. ORILLO

- Development and Production of Student Guidebook for the Philippine Science Heritage Center (PSHC)

15. PERLA D. SANTOS OCAMPO

- Effects of Environment Lead Exposure on the Neuro-developmental Status of Filipino Children
- The Girl Child And Her Equal Right to "First Call" for Children

16. JOVENTINO D. SORIANO

- Inducing Seedlessness in Mango (*Mangifera indica*)
- Tetraploidy in Philippine Plants

17. JOSE R. VELASCO

- The rare earths and the cadang-cadang disease of coconut in Bicol
- Mineral Nutrition of Mandarin citrus (in progress)

18. PRESCILLANO M. ZAMORA

- Annotated Bibliography of Philippine Biodiversity: Filicopsida
- Assessment of Status of Exotic Species Diversity in the Philippines: Flora
- Wetland Resource Inventory and Assessment of Vascular Plants of Casiguran and Dilasag, Aurora
- Ethnobotanical Study of Forest Plants in Aurora
- Urban Biodiversity Study of the UP Diliman Campus, Quezon City
- Studies on the Wetlands of the UP Diliman Campus, Quezon City

D. S & T Policy and Program Implementation Conferences/Seminars, etc.

1. RAMON F. ABARQUEZ, JR.

- Lecturer, "Congestive Heart Failure", Indonesian Heart Association, Jakarta, Indonesia, 9 May
- Speaker, "Congestive Heart Failure Beyond the Current Paradigm of Management", Post-Graduate Course, Department of Medicine University of Indonesia, 8 August
- Reactor, "Moving Towards of the Ideal Angiotensin II Antagonist", Launching Symposium (Glaxo) Hypertension Conference, Indonesia, 12-14 August
- Lecturer, "1st Asian Pacific Society of Hypertension", Philippine Society of Hypertension Control Program, Bali, Indonesia, 18 September
- Lecturer, "Review of JNC & WHO-ISH Guidelines", 1st Asian Pacific Society of Hypertension, Bali, Indonesia, 19 September
- Lecturer, " Paradigm Shift from JNC VI Guidelines", 1st Asian Pacific Society of Hypertension, Bali, Indonesia, 20 September
- Participant, "Opinion Leaders' Meeting, "RALES", Hotel Nikko, Fukuoka, Japan, 9 October
- Speaker, "The Paradigm Shift from JNC VI Guidelines: Caviar or Caviat:, Philippine Society of Hypertension and Philippine Lipid Society Lunch Satellite Symposium (Bristol Myers Squibb), Isla I Edsa Shangri-La Hotel, Mandaluyong City, 8 February
- Reactor, "Putting Lipid Trials in Clinical Context", Academy of Family Physicians Dinner Symposium (Novartis) Panel Discussion, Isla Ballroom, Edsa Shangri-La Hotel, Mandaluyong City, 8 February
- Reactor, "Cerivastatin: A Statin Designed with the Future in Mind" Philippine Society of Hypertension and Philippine Lipid Society 5th Joint Annual Convention, Edsa Shangri-La Hotel, Mandaluyong City, 9 February
- Opening Remarker, "Endothelial Dysfunction as a Systematic Process in Atherosclerosis: Implication for Treatment", Dinner Satellite Symposium, Isla III, Edsa Shangri-La Hotel, Mandaluyong City, 9 February
- Reactor, "Calcium Antagonist Endothelium", Philippine Society of Hypertension Meeting Luncheon Satellite Symposium, Edsa Shangri-La Hotel, Mandaluyong City, 10 February
- Lecturer, "Paradigm Shift from JNC VI: Caviar of Caviat", Philippine Alumni Medical Society of Philippine Heart Center Post-Graduate Course, MAD Hall, Philippine Heart Center, Quezon City, 25-26 February

ACCOMPLISHMENTS
and activities of academicians

- Chair, Philippine College of Physicians Vision Mission Workshop, Eugenio Lopez Training Center, Antipolo, Rizal, 20-21 March
- Lecturer," Paradigm Shift from JNC VI", Philippine Society of Nephrology Luncheon Lecturer, Edsa Shangri-La Hotel, Mandaluyong City, 16 April
- Speaker, "Hypertension Management", Meeting with the GP's-BMS, Edsa Shangri-La Hotel, Mandaluyong City, 21 April
- Speaker, "Angina Pectoris and Diabetes Mellitus Experience and Research Among Specialists Symposium 1999", Specialists Symposium, 2nd Annual Lipid Disorder Essential Hypertension, Edsa Shanri-La Hotel, Mandaluyong City, 23 April
- Reactor, "Endothelial Dysfunction", Philippine Society of Hypertension, 30 April
- Lecturer, "Myths and Realization LDL C-HDL-C Triglyceride", Philippine College of Physicians, Edsa Shangri-La Hotel, Mandaluyong City, 14 May
- Speaker, "Paradigm Shift from JNC VI Guidelines", Philippine Heart Association 13th Annual Convention, Isla Ballroom. Edsa Shangri-LaHotel, Mandaluyong City, 27 May
- Chair, "Hypertension on Special Population to 1999 WHO-ISH Guidelines on the Management of Hypertension", Philippine Heart Association 13th Annual Convention, Isla III Ballroom, Shangri-La Hotel, Mandaluyong City, 27 May
- Speaker, "Myths and Realities LDL, HDL-C, TG", Philippine Heart Association Satellite Symposium, Isla III Ballroom, Edsa Shangri-La Hotel, Mandaluyong City, 27 May
- Speaker, "Lessons Learned from the PHS Guidelines on Hypertension", Philippine Heart Association Heart House First Annual Refresher Course in Cardiology, President Tower, Timog Avenue, Quezon City, 23 June
- Guest speaker," Plaque Stability and Antherothrombosis (Unrecognized and Emerging Concepts)", Iloilo Medical Society Interactive Symposium (Bayer), La Paz Function Room, Days Hotel, Iloilo City, 26 June
- Lecturer, "Current Paradigm in Myocardial Interpretation", Marikina Chapter, Philippine Medical Association, Taytay, Angono Rizal, 14 July
- Lecturer, "Hypertension Management", Philippine Heart Center Alumni Society, Sulu Hotel, Quezon City, 16 July
- Lecturer, "Critical Issues in Hypertension Management", Irbesartan Medical Meeting, Edsa Shangri-La Hotel, Mandaluyong City, 6 August
- Lecturer, "The Critical Relevance of the Hybernating Myocardium", Academy of Family Physicians, Pan Pacific Hotel, 24 August
- Lecturer, "Beyond the Current Paradigm of Hypertension Management Based on JNC VI" Post Graduate Delos Santos Department of Internal Medicine, Quezon Sports Club, 27 August
- Lecturer, "JNC VI & WHO-ISH Guidelines", Manila Medical Society, Edsa Shangri-La Hotel, Mandaluyong City, 28 September
- Speaker, "Hypertension Management", Academy of Family Physicians-Bayer, Water-Front Hotel, Cebu City, 14 October
- Speaker, "Hypertension Management", Academy of Family Physicians-Bayer, Club Malarayat, Lipa, Batangas, 16 October
- Speaker, "Testing the Hypertension Bug - AD Century 20, Pampanga Medical Society, Philippine Academy of Family Physicians Scientefic Symposium, Celebration Dining Plaza, Olongapo-Gapad Road, Dolores, San Fernando, Pampanga, 8 November
- Lecturer, "Hypertension in the Work Place", 16th Asian Conference Occupational Health, Water Front Hotel, Cebu City, 11 November

2. SOLITA F. CAMARA-BESA

- Discussant, paper entitled "Ageing" by Dr. Remedios G. Arellano, read at the Zonta Club of Manila, Champagne Salon, Manila Hotel, 19 October

3. MAGDALENA C. CANTORIA

- Attended the 11th Annual Scientific Conference "animal Welfare and Good Service", sponsored by the Philippine Association of Laboratory Animal Science, Bayanihan Hall, United Laboratories, Inc., Mandaluyong City, 6 May
- Attended the Continuing Professional Education Seminar "Update on the Animal Welfare Act of 1998", sponsored by the Philippine Association of Laboratory Animal Science, Bayanihan Hall, United Laboratories, Inc. Mandaluyong City, 25 November
- Attended the International Symposium on "Recent Developments in the Discovery of Biologically Active Natural Product" and the "Joint 4th Annual Convention of the Natural Product Society of the Philippine and the 21st Annual Convention of the Philippine Environment Mutagen Society, Ateneo de Manila University, Quezon City, 6-8 December
- Attended the Symposium on "Science in Strategies and Policies" in celebration of the National Science and Technology Week and "Tribute to NRCP Past Leaders" sponsored by the NRCP, DOST Executive Lounge, Bicutan, 6 July
- Attended the "Workshop on Multidisciplinary Research", sponsored by the NRCP, UP Alumni Association Hostel, UP Diliman, Quezon City, 27 August
- Resource Speaker and Member, Ogranizing Committee, Seminar on "A Multidisciplinary Approach to Pharmaceutical Research", sponsored by the Division of Pharmaceutical Sciences and the Interagency Commmittee on Legislative and Current Issues of the NRCP in collaboration with the Philippine Council for Health Research and Development, UP Alumni Association Hostel, UP Diliman, Quezon City, 28 September

4. LEDIVINA V. CARIÑO

- Attended and chaired the closing plenary of the International Conference on Volunteerism, sponsored by the USAID and the Philippine National Volunteer Service Coordinating Agency, Clark, Pampanga, 5-6 May
- Attended the World Conference on Governance, EROPA (Eastern Regional Organization for Public Administration) General Assembly, co-sponsored by the National College of Public Administration and Governance, EROPA and the Civil Service Commission, 31 May - 04 June
- Discussantm, "Japanese Public Sector Reform", Structure and Governace Study Group, Internationa Political Science Association, Tokyo Japan, 12-16 November
- Member of the Organizing Committee and Chairman of the Opening Plenary, First Asian Regional Conference on Third Sector Research, Bangkok, Thailand, 20-22 November

5. GELIA T. CASTILLO

- Resource Person, UPWARD-CIP (Users' Perspectives with Agricultural Research and Development - International Potato Center), In-Country Workshop on User Participatory R&D, Los Baños, Laguna, 2 February
- Discussant, Research Validation Workshop on Community Participation, Essential National Health Research, Department of Health, PCED Hostel, UP Diliman, Quezon City, 5 February
- Moderator, Round Table Discussion on the Education Report of M. Ibe and M. Doronila for the Philippine Human Development Report, Ateneo Social Development Complex, 12 February
- Resource Person, 12th National Rice R&D Planning Workshop PhilRice, Maligaya, Nueva Ecija, 3 March
- Resource Person, Workshop on Participatory Approaches to Research, Development and Extension for the Sustainability of Coconut-based Farming Systems, Philippine Coconut Authority, Lipa City, Batangas, 11 March
- Participant, Workshop on the Use of Information Technology

ACCOMPLISHMENTS
and activities of academicians

Improve Farmers' Livelihood, IRRI, 12 March

- Discussant of paper, on "Economic Framework for Research Prioritization, Workshop on Agricultural Research Prioritization", by C. David et al., Bureau of Agricultural Research, Department of Agriculture, 13 March
- Resource Person, Project Development Workshop on Sweet Potato Livelihood Systems , Benguet State University, La Trinidad, Benguet, 16 March
- Resource Person, Project Development Workshop on Sweet Potato Livelihood Systems in the Visayas, UPWARD Network, Philippine Rood Crop Research and Training Center, VISCA, Baybay, Leyte, 26-27 March
- Resource Person, Project Development Workshop on Sweet Potato Livelihood Systems, DA-Regional Research Center, Tarlac, 7 March
- Discussant, College of Public Affairs Workshop on Policy Issues on Ageing and Development, 16 April
- Member, Review Team for the Rice-Wheat Consortium, CGIAR, New Delhi, India, 18-21 April
- Paper Presentor, "Local R&D Management: A Sense of Shared Faith with Other People", UPWARD Program Planning Meeting, Bogor, Indonesia, 27 April to 2 May
- Participant, Philippine Governance Consultative Meeting, Human Development Network, Ateneo Center for Social Policy, 10 May
- Moderator, Workshop on the Project Micro Impacts of Macro Adjustment Policies (MIMAP), Philippine Institute for Development Studies, Puerto Princesa, Palawan, 11-12 May
- Introduced former President Fidel V. Ramos as Keynote Speaker in the General Assembly of the Human Development and Peace in Mindanao", Makati City, 14 May
- Attended the Meeting of the International Scientific Advisory Committee (ISAC) of the Ecoregional Fund for Methodological Initiatives, Beijing, China, 24-28 March
- Discussant, Workshop Strengthening Research and Extension Linkages DA-BAR, Quezon City, 9 June
- Participant, Asia Rice Foundation Meeting, SEARCA, Los Baños, 26 June
- Moderator, Plenary Session on Education and Information Third Annual Meeting of ASEAN Academies of Science, Engineering and Technology, Manila Hotel, 9 July
- Keynote Speaker, Seminar on Research Trends and Capacity Building for Gender/Stakeholder Analysis and Participatory Research UPLB sponsored by the CGIAR Program for Participatory Research and Gender Analysis, Paper "A Dozen Reflections on PRGA in the CGIAR System", 15-16 July
- Participant, launching of the Human Development Report: "Can We Give Globalization a Human Face?", Edsa Shangri-La Hotel, 20 July
- One of Eight International Expert invited to the Strategic Planning Consultation Workshop, College of Rural Development, China Agricultural University, Beijing, China, 3-6 August

From left to right: national Scientist Dolores A. Ramirez, Asst. Secetary Carol M. Yorobe and Dr. Pacita L. Zara during the review of NAST 1999 Accomplishments and Plans for year 2000.

- Member, Review Team for UP-CIDS Cluster IV, Project on Emerging World Environment/Industry Studies, UP Diliman, 11 August
- Visit to Hanoi, Vietnam to interview participants in the Economy and Environment Program for Southeast Asia, 21-26 August
- Member, Panel of Reactors to Benjamin Bagadion's book entitled "Bending the Wind:Lessons from Mt. Makiling: Empowering People for Natural Resources Management", Asian Institute of Management, 16 September
- Evaluator of proposals to the Socio-Economic Research Program of DA-BAR, SEARCA, Los Baños, 22 September
- Resource Person, Training Course on Participatory Methodology for Agricultural Research and Development, APEC, UPLB, 28 September to 2 October
- Participant, International Conference on Improving Human Nutrition through Agriculture:"The Role of International Agricultural Research", IRRI, 5-7 October
- Participant, International Symposium on System Research for Optimizing Future Land Use, IRRI, 11-13 October
- Participant, Meeting of the International Scientific Advisory Committee of the Ecoregional Fund for Methodological Intitiatives, Washington, D.C., 24 October
- Participant, Rice in the Filipino Culture workshop, Asia Rice Foundation, 9 November
- Participant, Reviewer: Semi Annual Workshop of the Economy and Environment Program for Southeast Asia, Singapore, 14-20 November
- Participant, Workshop on Biosafety, IPR, and Regulatory Issues on Development of Transgenic Crops in the Field, IRRI, 15 October

6. VERONICA F. CHAN

- Participant, WHO 50th Global Inluenza Surveillance, Geneva, Switzerland, February
- Participant, 4th International Emerging Infectious Diseases in the Pacific Rim, sponsored by US-Japan in Bangkok, Thailand, March
- Member, Steering Committee on Prevention and Control of Infectious Diseases in Asia meeting on "Chronic Liver Diseases", Phuket, Thailand, April
- Lecturer, Emerging Diseases: Japanese Encephalitis Laboratory Diagnosis, May
- Paper presentor, "Japan Encephalitis Activity in the Philippine: Update", during the NAST Annual Meeting at the Manila Hotel, 08 July
- Lecturer, Emerging Viral Infections, Manor Hotel, July
- Lecturer, Testimonial for President Emil Q. Javier, "Vaccine Protection", UP Manila, 04 August
- Lecturer, "Dengue Hemorrhagic Fever", FEU-MT Interns, August
- Lecturer, "Influenza and Rubella", Pan Pacific Hotel, 30 October
- Consultant, 2nd Meeting on Emerging and Other Communicable Diseases, Manor Hotel, October and 24 November

7. CONRADO S. DAYRIT

- Attended the 3rd Annual Meeting of the ASEAN Academies on Science, Engineering and Technology
- Attended the conference of the Philippine Heart Association and Philippine College of Physicians

8. SALCEDO L. EDUARDO

- Plenary Speaker, 66th Annual Convention of the Philippine Veterinary Medical Association, Subic Bay Freeport Zone, Olongapo City, 18-20 February
- Speaker, Inspirational Talk Annual Initiation Rites of Phi Sagma, Biological Sciences Honor Society, Alpha Chi Chapter, Science Teachers Training Center, UP Diliman, Quezon City, 17 March
- Speaker, Joint Meeting of the Southern and Northern

California Filipino Veterinary Medical Associations, Fresno, California, USA, 4-5 September
- Paper Presentor, International Seminar on Japan-Southeast Asian Agricultural Research Cooperation (JSARC), Kasetsart University, Bangkok, Thailand, 18-23 November
- Participant, 66th Annual Meeting of the National Research Council of the Philippines, Edsa Shangri-La Hotel, Mandaluyong City, 13 March
- Participant, 2nd International Animal Feeds and Veterinary Drugs Congress, PICC, Manila, 29 June to 2 July
- Participant, 36th Annual Convention of the Philippine Society of Animal Science, Heritage Hotel, Pasay City, 21-22 October
- Participant, Annual Symposium of the International Society for Southeast Asian Agricultural Sciences (ISSAAS), Kasetsart University, Bangkok, Thailand, 18 November

9. RAUL V. FABELLA

- Speaker, "Substance and Process in the Constitutional Change Debate: A Reflection", Workshop for the Press, Makati City, 8 December

10. RAFAEL D. GUERRERO III

- Paper Presentor, "The Theory of Artificial Sex Reversal in Tilapias and its Relevance to Aquaculture". National Workshop on "The Use of Gonadal Hormones in the Manipulation of Sex and Growth in Fishes", Bangalore, India, 18-19 January 1999
- Paper Presentor, "The Status of All-Male Tilapia Culture in the Philippines".
- National Workshop on "The Use of Gonadal Hormones in the Manipulation of Sex and Growth in Fishes", Bangalore, India, 18-19 January 1999
- Paper Presentor, "Philippine Lakes: Their Importance, Status and Needs for Sustainable Development". 21st Annual Scientific Meeting of the National Academy of Science and Technology, July 7-8, 1999, Manila

11. CARMEN LI. INTENGAN

- Participated in the screening of project proposals for funding on coconut and its products; monitor and evaluate findings, Philippine Coconut Research and Development Foundation

12. BIENVENIDO O. JULIANO

- Paper Presenter, "Comparative Nutritive Value of Various Staple Food Commodities", Pontifical Academy of Science Study Week "Food Needs of the Developing World in the Early Twenty-First Century", Vatican City, 27-30 January
- Comments Presenter, "How Might the Philippine Agricultural System Participate/Make a Contribution?", International Food Policy Research Institute Conference "Improving Human Nutrition Through Agriculture: The Role of International Agricultural Research", IRRI, 5-7 October
- Progress Report Presenter, ad hoc Committee on Grain Quality Criteria for Adverse Rice Environments, Rice Varietal Improvement Group Annual Meeting, National Rice Cooperative Testing Project, Aborlan, Palawan, 15-16 April
- Participant, Rice Varietal Improvement Group 6th Semi-Annual Meeting, National Rice Cooperative Testing project, PhilRice, Maligaya, Muñoz, Nueva Ecija, 11-12 November

13. QUINTIN L. KINTANAR

- Speaker, "Action in Equity in Health: Revitalization of the National Drug Policy", Ateneo Professional School, Rockwell Center, Makati City, 5 November

14. EVELYN MAE T. MENDOZA

- Resource Speaker, "Crop Varietal Improvement", Bureau of Agricultural Research, Biotechnology Review Workshop of the Current Status of Agricultural Technology, BIOTECH, UPLB, 22-23 January
- Resource Speaker, "Current Status of Ongoing Biotechnology R&D", PCARRD Workshop on Biotechnology, PCARRD, Los Baños, Laguna, 2-4 February
- Speaker, "Designer Foods:Short and Long Term Imparc", De La Salle University Symposium on Biotechnology:Safety and Ethics, De La Salle Unversity, Manila, 15-16 February
- Discussant, PCARRD Multi-Sectoral Conference on Biotechnology, PCARRD, Los Baños, Laguna, 5 March
- Resource Speaker, "Biosefety Assessment of Biotechnology Products", IBS-NAST-UPLB Genetics Society and UP Cell Biological Society, Symposium on Biosafety of Biotechnology Products, IBS Lecture Hall, UPLB, 26 August
- Resource Speaker, "Crop Biotechnology in the Philippines: Status and Prospects", UPLB Lecture Series in Honor of Dr. Ruben L. Villareal, 5th Chancellor UPLB, Abelardo Samonte Hall, UPLB, 25-28 October
- Speaker, "Safety Assessment of Food and Food Products Derived from Modern Biotechnology: Institute of Biotechnology and Molecular Biology, UP Manila, Symposium on Biosafety of Biotechnology Products: Effects on Human Health, College of Nursing, UP Manila, 5 November
- Speaker, "Crop Biotechnology in the Philippines: Status and Prospects", PCARRD: Bringing S&T to the Masses, PCARRD 27th Anniversary, E.O. Tan, Hall, PCARRD, Los Baños, Laguna, 9 November
- Speaker, "Safety Assessment of Food Products Derived from Modern Biotechnology", AGR 1999 Colloquium, Animal Science Lecture Hall, 15 November

15. BIENVENIDO F. NEBRES, S.J.

- Speaker, "Education and Values", 65th Anniversary Symposium of *Phi Kappa Phi* International with the theme "Meeting the Challenges of the Millennium through Academic Excellence", Bahay ng Alumni, UP Diliman, Quezon City, 24 Febuary
- Speaker, "The Challenge of Quality and Equity in Financing Catholic Higher Education", ASEACCU (Association of Southeast And East Asia Catholic Colleges and Universities) Annual Meeting, Caleruega Retreat House, Batangas, 19-20 August
- Speaker, "Challenges to General Education in the 21st Century", 95th Foundation Anniversary of Manila Central University, 29 September
- Speaker, "Strategies in University Management of a Private University", Third AUAP (Association of Universities of Asia and the Pacific) General Conference, Angeles University, 26 November
- Speaker, "Developing Mutually Beneficial Relationships between Universities in the Philippines and Other Asian Christian Universities", ACUCA (Association of Christian Universities and Colleges in Asia) International Conference on 21st Century Christian Higher Education in Multi-Cultural Asian Societies, Fu Jen University, Taiwan, 6 December
- Keynote speaker, "Developing Culture and Values in School and Community Towards Stronger School Science and Mathematics Achievement: Some Conclusions Emerging from International Comparative Investigations", 1999 Annual Convention of the Mathematical Society of the Philippines (Caraga Chapter) and the 1999 Southern Philippines Mathematics Forum, Surigao State College of Technology, Surigao City, 9-10 January
- Speaker, "Challenges in Assessing Numeracy", International Conference on Science, Mathematics and Technology Literacy:Strategies for the 21st Century, UP ISMED, 24 November
- Speaker, "Organization of Science and Technology for Better Technology Transfer and Innovation", Conference on Technology Transfer and Innovation sponsored by the

AIM Washington Sycip Policy Forum, Hanns Seidel Foundation, Konrad Adenauer Foundation, Dualtech Training Center, AIM Conference Room, 24 September

16. FAUSTINO T. ORILLO

- Attended the meeting of the Division of Agriculture and Forestry of the National Research Council of the Philippines, Department of Soil Science, UPLB-CA, 10 Feruary
- Attended the 66th Annual Meeting of the National Research Council of the Philippines, "Basic Research for New Horizons in Science and Technology", Edsa Shangri-La Hotel, Mandaluyong City, 13 March
- Attended the Conference on "The International Biosafety Protocol: Issues and Concerns in the Transboundary Movement of Living Modified Organisms (LMOs)", Institute of International Legal Studies, UP Law Center, UP Diliman, Quezon City, 17 March
- Attended the Memorial Lecture on GATT's Impact on Philippine Agriculture" in honor of the late Dr. Dioscoro L. Umali, Centennial Scientist, D.L. Umali Auditorium, SEARCA Building, UPLB, 2 July
- Attended the Agri-Kapihan Symposium on Agriculture, Food Security and Biodiversity and Testimonial for Retired GSD-HSA Members, organized by the Gamma Sigma Delta (The Honor Society of Agriculture) Philippine Chapter, ACCI Auditorium, UPLB, 7 October

17. TEODULO M. TOPACIO, JR.

- Participant, Annual Scientific Convention, Philippine Veterinary Medical Association, sponsor of the lecture on: "Hazard Analysis Critical Control Points (HACCP) for Animal Food Production
- Read a paper on "Public Health Protection", 2nd International Animal Feeds and Veterinary Drugs Congress
- Recommend organizing the Asia Pacific Veterinary Public Health Workers, Bangkok, Thailand, hosted by the Thai Veterinary Medical Association
- Participant, Seminar on Japanese Encephalitis for Veterinary Quarantine Officers, Department of Agriculture
- Attended the seminar on Malaysian Nipah Virus Disease for Veterinarians
- Attended the Philippine Society of Animal Science Annual Convention
- Attended the PCASTRD Workshop on Technology Transfer
- Attended the Philippine Society for Microbiology meeting

18. JOSE R. VELASCO

- Speaker, Science Forum in the Technological University of the Philippines
- Speaker, Gamma Sigma Delta Annual Convention

19. PRESCILLANO M. ZAMORA

- Participant, Seminar on "Experience in Community-Based Action Projects in Biodiversity Protection", UP CIDS-NAST Biodiversity Conservation Program, UP Diliman, Quezon City, 24 February
- Participant, Seminar on "The Relevance of Inventory Work for Biodiversity Conservation:, UP CIDS-NAST Biodiversity Conservation Program, UP Diliman, Quezon City, 24 February
- Moderator, Seminar on "The Hotspots of Moss Biodiversity in East Asia", UP CIDS-NAST Biodiversity Conservation Program, UP Diliman, Quezon City, 25 February
- Participant, WWF-Philippines Workshop "Orientation on GPS and Resource Inventory Techniques", El Nido, Palawan, 22-25 March

- Speaker, WWF-Philippines Seminar on "The Mangroves of the Sulu-Sulawesi Marine Ecoregion Conservation Program Development Study Site (Philippine Component)", Richmonde Hotel, Pasig City, 26 November

E. Honors and Recognition Received

1. CLARE R. BALTAZAR

- Received a Plaque of Appreciation "In recognition of and admiration for her valuable and exemplary services as chairperson of the Department of Entomology from 1989 to 1992. In view of her invaluable service to the Department, we express our deep appreciation for such a gifted individual", 90th Anniversary of the Department of Entomology, UP Los Baños, 11 October

2. PAULO C. CAMPOS

- Gawad Bayani given by the De La salle University
- President Emiritus, De La Salle University

3. GELIA T. CASTILLO

- Conferred the rank and title of National Scientist by His Excellency Joseph Ejercito Estrada, Malacañang, Manila, 11 October

4. RAUL V. FABELLA

- Received the 1998 NRCP Achievement Award, 13 March 1999

5. RAFAEL D. GUERRERO III

- Elected President, Philippine Fisheries Association (1999-2001)
- Promoted to CESO II Career Executive Service Board

6. BIENVENIDO O. JULIANO

- Included in 2000 Outstanding Intellectual of the 20th Century, International Biographical Centre, Cambridge, England, 2000
- Included in Biography Today, New Millennium Edition, New Delhi, India, 2000

7. QUINTIN L. KINTANAR

- Nominated to the Asian WHO's WHO by Rifacimento International, New Delhi, India

8. EVELYN MAE. T. MENDOZA

- Best Paper Finalist, "Physiological and Biochemical Basis of Salt Tolerance in Com", Federation of Crop Science Society of the Philippines Annual Convention, Family Country Home, General Santos City, 10-14 May
- Best Poster Paper, "Indica Rice Proteins are Less Digestible than Japonica Rice Proteins In vivo and In vitro, 1999 Annual Convention Kapisanang Kimiko sa Pilipinas, D.L. Umali Hall SEARCA, UPLB, 26-27 October

9. TITO A. MIJARES

- Gawad Parangal in "Pananaliksik, Pagsasanay at Edukasyon sa Estatistika Kaagapay sa Pagsulong ng Bagong Siglo"

given by the Statistical Research and Training Center, 10th National Celebration of Statistics Month, the Manila Hotel, 1 October

- Distinguished Leadership Award, for Outstanding Contributions to Contemporary Society, selected by the American Biographical Institute, Raleigh, North Carolina, USA for inclusion in the International Directory of Distinguished Leadership, Ninth Edition
- Included in the 2000 Outstanding Intellectuals of 20th Century, International Biographical Centre, Cambridge, CB2 3QP England

10. FE DEL MUNDO

- Honored as the First President and Founder of the PMWA 1949 - 50th Anniversary, The Main Hall of the PMWA Building was named after Fe Del Mundo

11. BIENVINIDO F. NEBRES, S.J.

- Stanford University Asian-American activities Center Alumni Hall of Fame, October

12. FAUSTINO T. ORILLO

- Received a Certificate of Recognition for "Serving as a Testimony of a Truly Honorific Life While in Active Service Through Excellence, Dedicated Work, Committed Public Service and Distinguished Accomplishments", given by Honor Society of Agriculture, Gamma Sigma Delta, Philippine Chapter, UPLB, 7 October

13. PERLA D. SANTOS OCAMPO

- World Leaders in Pediatrics Award given by the International Congress of Tropical Pediatrics
- One of the "Filipina First" Awardees from the Centennial Committee on Women's Sector
- Lingkod Bayan Awardee given by the President, Republic of the Philippines, through the Commission on Civil Service

14. JOVENTINO D. SORIANO

- Cited in "Who's Who in the World", 16th Edition, 1999 p. 1539

15. TEODULO M. TOPACIO, JR.

- Elected Vice President of the Federation of Asian Veterinary Associations

16. JOSE R. VELASCO

- Outstanding family given by the Imus Women's Club
- Testimonial plaque given by the Samahang Kimika sa Pilipinas, Los Baños Chapter
- Testimonial plaque given by the Gamma Sigma Delta Los Baños Chapter

17. PRESCILLANO M. ZAMORA

- Listed in the International Directory of Distinguished Leadership (Eight Edition, ABI, 1999)
- Recipient, Gawad Chanselor - Pinakamahusay na Aklat "The Philippine Archipelago" with Dr. R. S. Punongbayan and Dr. P. S. Ong, 22 October

F. Involvement in NAST Activities

1. CLARE R. BALTAZAR

- Moderator, Plenary Session VII "Global Perspectives on Pesticides" 21st Annual Scientific Meeting, Manila Hotel, 8 July

2. SOLITA F. CAMARA-BESA

- Retired from the Board of Judges for the Philippine Talent Search for Young Scientists After 10 years of service
- Attendance at symposia on various scientific subjects with the media as the special target for public dissemination of information

3. MAGDALENA C. CANTORIA

- Attended the Science Information Forum on "The Intellectual Property Rights (IPR) of the Karaoke", Casino Español, Manila, 4 May
- Attended the 52nd Academy Meeting, Audio Visual Room, PSHC Building, Bicutan, 27 May
- Attended the 21st Annual Scientific Meeting on the theme "Food, Population and Environment, Manila Hotel, 7-8 July
- Member, Board of Judges, Best Poster Award in the Biological Sciences, Manila Hotel, 7-8 July
- Attended the Third Annual Meeting of ASEAN Academics of Science, Engineering and Technology and Similar Organizations, Manila Hotel, 9 July
- Contributor to the Philippine Science Heritage Center
- Attended the 53rd (Special) Academy Meeting, PSHC Building, Bicutan, 12 August
- Attended the Conferment of the Rank and title of "National Scientist" on Acd. Gelia T. Castillo by President Joseph Ejerdito Estrada, Ceremonial Hall, Malacañang, 11 October
- Attended the 54th (Special) Academy Meeting, PSHC Building, Bicutan, 9 December
- Nakiramay, Pagdadalamhati para kay LUZ OLIVEROS BELARDO, Pambansang Sayantist, ika-16 ng Disyembre, Kagawaran ng Agham at Teknolohiya, Bicutan

4. VERONICA F. CHAN

- NAST representative to the Senate Hearing on "Clean Water Act" bill

5. CONRADO S. DAYRIT

- Performed all functions as President of NASTup to July 1999
- Member, Steering Committee on Philippine Pharmacopea

6. SALCEDO L. EDUARDO

- Participated in the Executive Council Meeting
- Chaired Divisional (Biological Sciences) Meetings
- Moderator, Simultaneous Scientific Session (Biological Sciences), 21st Annual Scientific Meeting, Manila Hotel, 8 July
- Member, Board of Judges, Best Poster Award in the Biological Sciences, Manila Hotel, 7-8 July

7. PEDRO B. ESCURO

- Attended the Academy Meetings on February 25, May 27, and August 12
- Attended the 21st annual Scientific Meeting Program Committee meeting on February 10, March 10, May 12, June 9 & 30, Office of the Chancellor, UPLB

- Attended the 21st Annual Scientific Meeting, Manila Hotel, 7-8 July
- Attended the National Scientists Committee meetings on February 5 and August 25 at the Medical Center Manila
- Submitted comments and reccommendations to the NAST Secretariat on the following Senate and House Bills; (a) Senate Bills on Trade and Food Categories: SBN 171, SBN 400, SBN 993, and SBN 976; (b) Senate Bills on Food Category Only: SBN 319, SBN 1131, SBN 1420; (c) SBN 264 on Investment; (d) SBN 170 and SBN 1219 on Economics and Food Categories; and (e) House Bills on Environment: HBN 135, HBN 766, HBN 177, and HBN 4729

8. EDGARDO D. GOMEZ

- Attended the Annual Scientific Meeting on 7-8 July at Manila Hotel

9. RAFAEL D. GUERRERO III

- Participated in the 21st Annual Scientific Meeting on 7-8 July at the manial Hotel
- Attended the Roundtable Discussions on Mega Issues, UP Diliman

10. BIENVENIDO O. JULIANO

- Member, NAST Election Committee
- Member, Best Poster Board of Judges
- Member, Year 2000 Annual Scientific Meeting Program Committee

11. QUINTIN L. KINTANAR

- Submitted comments and suggestions on Senate Bill No. 1595 "Integrated Solid Waste Management Act"
- Helped organize the proposed Roundtable Discussions on the Health Hazards of High Voltage Transmission Lines" which has been postponed indefinitely
- Participated in all NAST meetings, regular and special

12. CLARA Y. LIM-SYLIANCO

- Attended the National Scientists Committee Meeting, Medical Center Manila, 1 October

13. EVELYN MAE T. MENDOZA

- Member, Year 2000 Annual Scientific Meeting Program Committee
- Member, Committee on the Philippine Science Heritage Center
- Project Leader, Bookwriting and Video Footage Production on the Lives, Research Works, and Contributions of Outstanding Filipino Scientists" Volume III
- Study Leader/Research Fellow, Assessment of the State of the Chemical Sciences in the Philippines

14. TITO A. MIJARES

- Member, Year 2000 Annual Scientific Meeting Program Committee
- Chair, Board of Judges for the Philippine Talent Search for Young Scientists

15. FE DEL MUNDO

- Chair, National Scientists Committee; presided over three (3) meetings of the Committee
- Attended regular and special Academy meetings of NAST
- Attended the Conferment of the Rank and Title of National Scientist on Acd. Gelia T. Castillo by President Joseph Ejercito Estrada, Malacañang, Manila, 11 October

16. FAUSTINO T. ORILLO

- Member, 21st Annual Scientific Meeting Program Committee
- Screening of nominees for the NAST awards under the Agricultural Sciences
- Member and Co-Secretary, NAST Executive Council, until July 1999
- Chairman, Agricultural Sciences Division of NAST, until July 1999
- Chairman, NAST Committee on Elections
- Member, NAST Board of Judges for the Best Poster Award
- Member, Board of Trustees, NAST Foundation, Inc.
- Evaluation of technical/scientific papers under the Agricultural Sciences to determine their suitability for publication in the NAST Transactions
- Served as Chairman/Moderator in the Simultaneous Scientific Sessions of the Agricultural Sciences during the 21st ASM, 7-8 July
- Attended the Conferment of the Rank and Title of National Scientist to Acd. Gelia T. Castillo by President Joseph Ejercito Estrada, Malacañang, Manila, 11 October

17. PERLA D. SANTOS OCAMPO

- Member, Advisory Committe

18. JOVENTINO D. SORIANO

- Member, Board of Judges for the Philippine Talent Search for Young Scientists
- Member, NAST Elections Committee

19. TEODOLO M. TOPACIO, Jr.

- Attended Regular and Special Meetings of NAST
- Attended the conferment of the Rank and Title of National Scientist to Acd. Gelia T. Castillo by President Joseph Ejercito Estrada, Malcañang Palace, Manila, 11 October

20. JOSE R. VELASCO

- Attended NAST Annual Meeting
- Attended NAST Regular and Special Meetings

21. PRESCILLANO M. ZAMORA

- Director, UP CIDS-NAST Biodiversity Conservation Program
- Attended the 21st Annual Scientific Meeting

FINANCIAL MATTERS
FY 1999

NATIONAL ACADEMY OF SCIENCE AND TECHNOLOGY
BALANCE SHEET
December 31, 1999
General Fund

ASSETS

Current Assets		
Cash	3,848,271.96	
Inventories	76,836.98	
Miscellaneous	1,540.00	
Total Current Assets		3,926,648.94
Contingent Assets		52,701.21
Fixed Assets		
Buildings and Structures	2,622,033.50	
Furniture, Fixtures, Equipment, Work Animals and Books	4,083,140.68	
Total Fixed Assets		6,705,174.18
TOTAL ASSETS		**10,684,524.33**

LIABILITIES

Current Liabilities		
Payables	3,999,409.01	
Trust Liabilities	3,858,295.11	
Depository Liabilities	2,780.00	
Deferred Credits		
Semi-Expendable Supplies, Containers and Property	62,585.00	
Supplies and Materials Charged to Appropriations	14,251.98	
Total Current Liabilities		7,937,321.10

RESIDUAL EQUITY

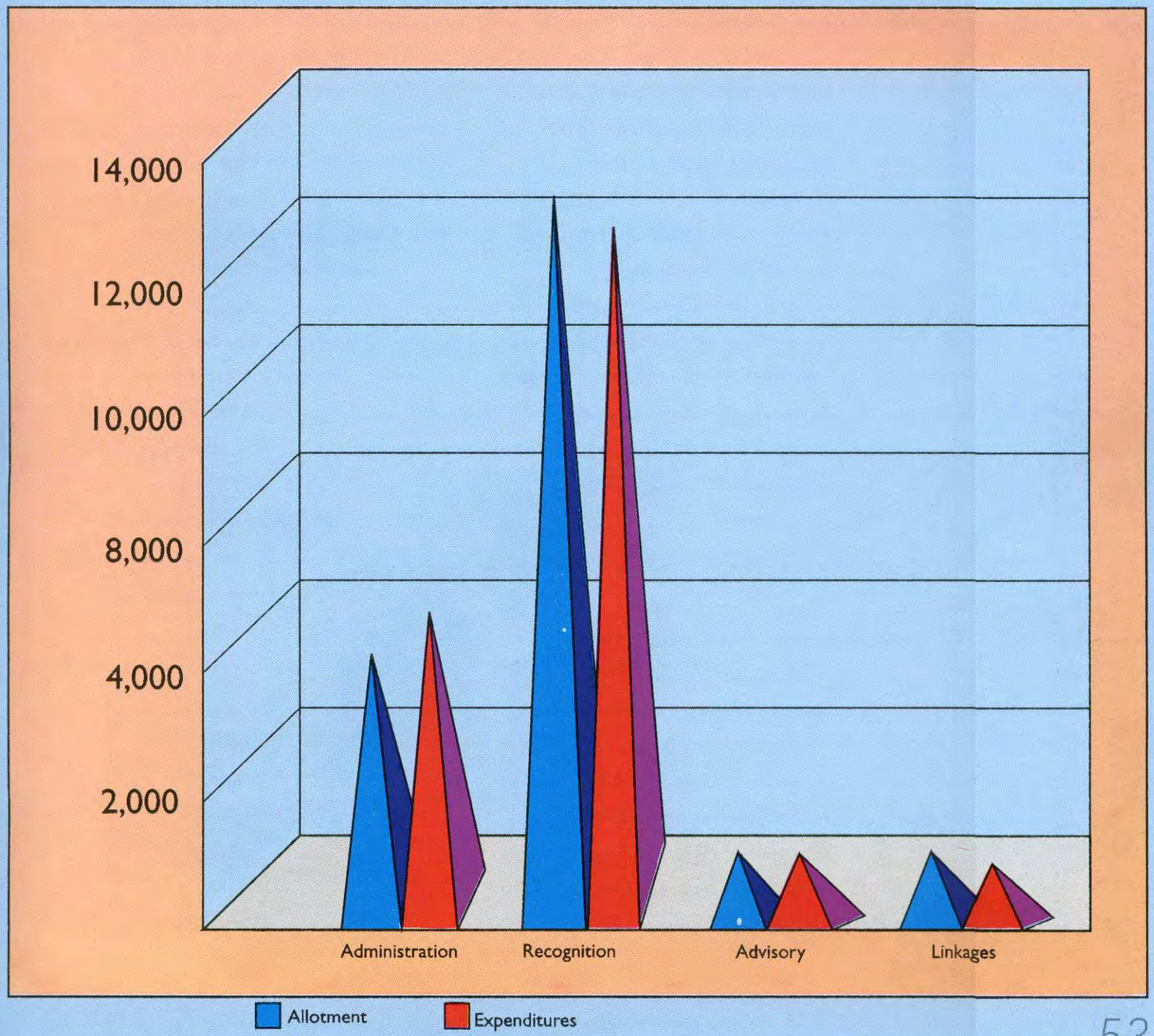
Cumulative Results of Operations		
Per Statement of Operations	309,205.78	
National Clearing Account	(4,319,877.94)	
Total Cumulative Results of Operations		(4,010,672.16)
Invested Capital		6,705,174.18
Contingent Capital		52,701.21
TOTAL RESIDUAL EQUITY		2,747,203.23
TOTAL LIABILITIES & RESIDUAL EQUITY		**10,684,524.33**

Certified Correct:

ZENAIDA T. MAPUA
Accountant III

BUDGET & EXPENDITURES

CY 1999



ADVISORY COMMITTEE

National Scientist Paulo C. Campos	-	Chair
National Scientist Gelia T. Castillo	-	Member
Academician Veronica F. Chan	-	Member
National Scientist Fe del Mundo	-	Member
Academician Andrew Gonzalez, F.S.C.	-	Member
Academician Emil Q. Javier	-	Member
Academician Melecio S. Magno	-	Member
Academician Bienvenido F. Nebres, S.J.	-	Member
National Scientist Luz Oliveros-Belardo	-	Member
Academician William G. Padolina	-	Member
Academician Perla D. Santos Ocampo	-	Member
Academician Ruben L. Villareal	-	Member

Committee on the Philippine Science Heritage Center

From 01 January to 11 August 1999

Academician Conrado S. Dayrit	-	Chair
National Scientist Dolores A. Ramirez	-	Member
Academician Jose O. Juliano	-	Member
Academician Gelia T. Castillo	-	Member
Academician Salcedo L. Eduardo	-	Member
Academician Melecio S. Magno	-	Member
Academician Faustino T. Orillo	-	Member
Academician Benito S. Vergara	-	Member

From 12 August to 31 December 1999

Academician Perla D. Santos Ocampo	-	Chair
Academician Ruben L. Villareal	-	Member
Academician Jose O. Juliano	-	Member
Academician Ledivina V. Cariño	-	Member
Academician Ernesto O. Domingo	-	Member
Academician Emil Q. Javier	-	Member
Academician Apolinario D. Nazarea	-	Member
Academician Benito S. Vergara	-	Member

Advisory Committee for the Philippine Science Heritage Center

Academician Conrado S. Dayrit (Jan.-Aug.)	-	Chair
Academician Perla D. Santos Ocampo (Aug.-Dec.)	-	Chair
Fr. Gabriel S. Casal	-	Member
Hon. Amaury Gutierrez	-	Member
Dr. Maripaz L. Perez	-	Member
Academician Benito S. Vergara	-	Member

Working Committee for the Philippine Science Heritage Center

Academician Benito S. Vergara	-	Chair
National Scientist Gelia T. Castillo	-	Member
Academician Salcedo L. Eduardo	-	Member
Academician Evelyn Mae T. Mendoza	-	Member
National Scientist Dolores A. Ramirez	-	Member
Miss Luningning E. Samarita	-	Member
Dr. Augusto C. Sumalde	-	Member

Committees

21st Annual Scientific Meeting Program Committee

Academician Jose O. Juliano	-	Chair
Academician Ruben L. Villareal	-	Co chair
Academician Leopoldo S. Castillo	-	Member
Academician Pedro B. Escuro	-	Member
Academician Rafael D. Guerrero III	-	Member
Academician Ricardo M. Lantican	-	Member
Academician Faustino T. Orillo	-	Member
National Scientist Dolores A. Ramirez	-	Member
Academician Teodulo M. Topacio, Jr.	-	Member
Academician Benito S. Vergara	-	Member
Dr. Angel Lambio	-	Member
Prof. Alfinetta B. Zamora	-	Member
Dr. Agustin B. Molina	-	Member

CY 2000 (22nd) Annual Scientific Meeting Program Committee

Academician Jose O. Juliano	-	Chair
Academician Apolinario D. Nazarea	-	Co chair
Academician Lourdes J. Cruz	-	Member
Academician Bienvenido O. Juliano	-	Member
National Scientist Clara Y. Lim-Sylianco	-	Member
Academician Melecio s. Magno	-	Member
Academician Evelyn Mae T. Mendoza	-	Member
Academician Tito A. Mijares	-	Member
Academician Quirino O. Navarro	-	Member
Academician Bienvenido F. Nebres, S.J.	-	Member
Academician William G. Padolina	-	Member

Committee on Technical and Poster Sessions

Academician Jose O. Juliano	-	Chair
Academician Ruben L. Villareal	-	Co Chair
National Scientist Dolores A. Ramirez	-	Member
Academician Ledivina V. Cariño	-	Member
Academician Veronica F. Chan	-	Member
Academician Mercedes B. Concepcion	-	Member
Academician Ernesto O. Domingo	-	Member
Academician Salcedo L. Eduardo	-	Member
Academician Evelyn Mae T. Mendoza	-	Member
Academician Perla D. Santos Ocampo	-	Member

Best Poster Award Board of Judges

Academician Quintin L. Kintanar	-	Chair
Academician Ramon F. Abarquez, Jr.	-	Member
Academician Benjamin D. Cabrera	-	Member
Academician Magdalena C. Cantoria	-	Member
Academician Leopoldo S. Castillo	-	Member
Academician Lourdes J. Cruz	-	Member
Academician Salcedo L. Eduardo	-	Member
Academician Bienvenido O. Juliano	-	Member
Academician Alfredo V. Lagmay	-	Member
Academician Ricardo M. Lantican	-	Member
Academician Melecio S. Magno	-	Member
Academician Faustino T. Orillo	-	Member
Academician Joventino D. Soriano	-	Member

Committees

Editorial Board

Academician Melecio S. Magno
Academician Salcedo L. Eduardo
National Scientist Gelia T. Castillo
Academician Faustino T. Orillo
Academician Ernesto O. Domingo

Standing Committee on S&T Fora

Academician Jose O. Juliano	-	Chair
Academician Ramon F. Abarquez, Jr.	-	Member
Academician Clare R. Baltazar	-	Member
Academician Filomena F. Campos	-	Member
Academician Magdalena C. Cantoria	-	Member
Academician Ledivina V. Cariño	-	Member
Academician Mercedes B. Concepcion	-	Member
National Scientist Pedro B. Escuro	-	Member
Academician Carmen LI. Intengan	-	Member
Academician Evelyn Mae T. Mendoza	-	Member
Academician Quirino O. Navarro	-	Member
Academician Apolinario D. Nazarea	-	Member
Academician Joventino D. Soriano	-	Member
National Scientist Jose R. Velasco	-	Member
Academician Prescillano M. Zamora	-	Member

Committee on Elections

Academician Faustino T. Orillo	-	Chair
Academician Filomena F. Campos	-	Member
Academician Ernesto O. Domingo	-	Member
Academician Bienvenido O. Juliano	-	Member

Publication Awards Committee

National Scientist Dolores A. Ramirez	-	Chair
Academician Gelia T. Castillo	-	Member
Academician Ernesto O. Domingo	-	Member
Academician Salcedo L. Eduardo	-	Member
Academician Melecio S. Magno	-	Member
Academician Faustino T. Orillo	-	Member

Philippine Talent Search for Young Scientists Board of Judges

Academician Tito A. Mijares	-	Chair
Academician Edgardo D. Gomez	-	Member
Academician Ricardo M. Lantican	-	Member
Academician Joventino D. Soriano	-	Member
Dr. Eliezer A. Albacea	-	Member
President of NRCP	-	Member
President of Engineering Society	-	Member

Committees

National Scientists Committee

National Scientist Fe Del Mundo	-	Chair
National Scientist Encarnacion Alzona	-	Member
National Scientist Paulo C. Campos	-	Member
National Scientist Pedro B. Escuro	-	Member
National Scientist Alfredo V. Lagmay	-	Member
National Scientist Clara Y. Lim-Sylianco	-	Member
National Scientist Dolores A. Ramirez	-	Member
National Scientist Jose R. Velasco	-	Member

NAST Pro Scientia Transformatrix Award Committee

Academician Apolinario D. Nazarea	-	Chair
Academician Raul V. Fabella	-	Member
Academician Rafael D. Guerrero III	-	Member
Academician Jose O. Juliano	-	Member
Mr. Rommel Lipio	-	Member
Academician Ruben I. Villareal	-	Vice President

ADMINISTRATIVE Matters

NAST EXECUTIVE COUNCIL

The Academy elected its new set of officers. They are:

Academician Perla D. Santos Ocampo	-	President
Academician Ruben I. Villareal	-	Vice President
Academician Jose O. Juliano	-	Secretary
Academician Ledivina V. Cariño	-	Member
Academician Ernesto O. Domingo	-	Member
Academician Emil Q. Javier	-	Member
Academician Apolinario D. Nazarea	-	Member

His Excellency Joseph Ejercito Estrada congratulates the new members of the NAST Executive Council after their oath taking at the Malacañang Palace, Manila.

NAST Secretariat

Office of the Executive Director

Miss Luningning E. Samarita
Executive Director

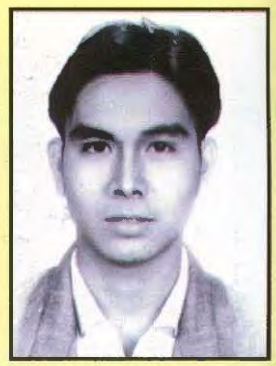
Mr. Ferdinand C. Gutlay
Clerk II
(Casual)

Mr. Roberto N. Medina
Driver II

Technical Services

Mr. Redocindo L. Santillan
Information Officer V

Mr. Richard G. Apuyan
Stenographer II



Mr. Gilbert O. Rondilla
Science Research Specialis
(Contractual)

Seminars Attended By The Staff

Ms. Rosemarie S. Espino, Administrative Officer V, and Ms. Zenaida T. Mapua, Accountant III, attended the GACPA First Membership Meeting on 01 March at the Edsa Shangri-La Hotel, Mandaluyong City.

Division (TSD)

Ms. Rowena V. Briones
Information Officer III

Mr. Carlo B. Castillo
Information Officer II

Ms. Charyl S. Castelleja
Science Research Specialist I
(Contractual)

Ms. Quennie E. Galvan
Clerk II
(Contractual)

Administrative Services Division (ASD)

Ms. Rosemarie S. Espino
Administrative Officer V

Ms. Zenaida T. Mapua
Accountant III

Ms. Chona S. Santos
Cashier III

Mr. Eliseo D. Raganit
Utilityman / Messenger

The Executive Director, Miss Luningning E. Samarita, attended the "First Manila Premium and Incentive Show" particularly the Incentive Seminar on 02 September at the Megatrade Conference Room A., SM Mega Mall, Ortigas Complex, Mandaluyong City.

Mr. Carlo B. Castillo, Information Officer II, attended the "6th Annual GO for IT National Convention" on 26-28 October at the Pryce Plaza, Cagayan de Oro City.

NATIONAL ACADEMY OF SCIENCE AND TECHNOLOGY, PHILIPPINES

2/F Philippine Science Heritage Center

DOST Complex, Bicutan, Taguig, 1631 Metro Manila

Tel. No.: (632) 837-2071 loc. 2170 to 73 • Telefax (632) 837-3170

E-mail: nast@pacific.net.ph