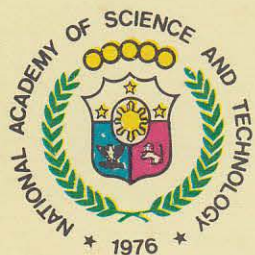


Academy News

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NATIONAL ACADEMY OF SCIENCE AND TECHNOLOGY

National Scientists

Teodoro A. Agoncillo, Litt. D. (*honoris causa*)⁺
Encarnacion Alzona, Ph.D.
Julian A. Banzon, Ph.D.⁺
José Encarnación, Jr., Ph.D.
Francisco M. Fronda, Ph.D.⁺
Hilario D.G. Lara, M.D., Dr. P.H.⁺
Fe del Mundo, M.D.
Geminiano T. de Ocampo, M.D.⁺
Luz Oliveros-Belardo, Ph.D.
Eduardo A. Quisumbing, Ph.D.⁺
Casimiro del Rosario, Ph.D.⁺
Juan S. Salcedo, Jr., M.D. D.Sc. (*honoris causa*)⁺
Alfredo C. Santos, Dr. phil.
Francisco O. Santos, Ph.D.⁺
Dioscoro L. Umali, Ph.D.
Gregorio T. Velasquez, Ph.D.⁺
Carmen C. Velasquez, Ph.D.
Gregorio Y. Zara, D.Sc.⁺

Academicians

Teodoro A. Agoncillo, Litt. D. (*honoris causa*)⁺
Encarnacion Alzona, Ph.D.
Clare R. Baltazar, Ph.D.
Julian A. Banzon, Ph.D.⁺
Benjamin D. Cabrera, M.D., M.P.H.
Solita Camara-Besa, M.D., M.S.
Paulo C. Campos, M.D.
Filomena F. Campos, Ph.D.
Magdalena C. Cantoria, Ph.D.
Gelia T. Castillo, Ph.D.
Lourdes J. Cruz, Ph.D.
Amando M. Dalisay, Ph.D.⁺
Conrado S. Dayrit, M.D.
José Encarnación, Jr., Ph.D.
Pedro B. Escuro, Ph.D.
Raymundo A. Favila, Ph.D.
Francisco M. Fronda, Ph.D.⁺
Edito G. Garcia
Emerita V. de Guzman, Ph.D.⁺
Carmen LI. Integan, Ph.D.
Émil. Q. Javier, Ph.D.
Bienvenido O. Juliano, Ph.D.
Jose O. Juliano, Ph.D.
Quintin L. Kintanar, M.D., Ph.D.
Alfredo V. Lagmay, Ph.D.
Ricardo M. Lantican, Ph.D.
Hilario D.G. Lara, M.D., Dr. P.H.⁺
Clara Y. Lim-Syllianco, Ph.D.
Cecilio F. Lopez, Dr. phil.⁺
Melecio S. Magno, Ph.D.

NAST Executive Council (1985-1988)

Paulo C. Campos	—	President
Melecio S. Magno	—	Vice-President & Secretary
Julian A. Banzon	—	Member
José Encarnación, Jr.	—	Member
Alfredo V. Lagmay	—	Member
Dioscoro L. Umali	—	Member
Carmen C. Velasquez	—	Member

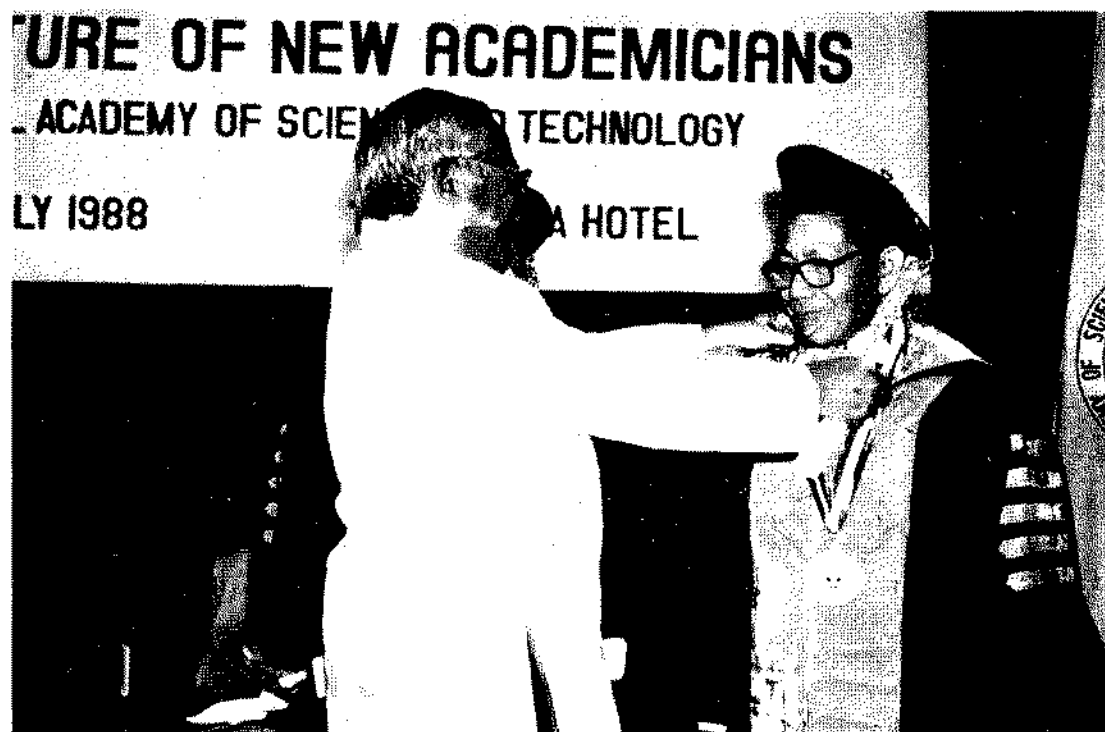
Tito A. Mijares, Ph.D.
Fe del Mundo, M.D.
Quirino O. Navarro, Ph.D.
Bienvenido F. Nebres, S.J., Ph.D.
Geminiano T. de Ocampo, M.D.⁺
Luz Oliveros-Belardo, Ph.D.
Faustino T. Orillo, Ph.D.
Eduardo A. Quisumbing, Ph.D.⁺
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Carmen C. Velasquez, Ph.D.
Gregorio T. Velasquez, Ph.D.⁺
Benito S. Vergara, Ph.D.
Gregorio F. Zaide, Ph.D.⁺
Prescillano M. Zamora, Ph.D.
Gregorio Y. Zara, D.Sc.⁺

⁺deceased

Address: Mezzanine Floor
TAPI Bldg.,
DDST Compound
Bicutan, Taguig, M.M.
Tel. No. 822-0961 to 67
Local 242

Membership

The total membership of the Academy during the year comprises 38 academicians, nine of whom are also National Scientists. Dr. Ricardo M. Lantican was elected to the Academy on May 26, 1988. National Scientists Julian A. Banzon and Juan S. Salcedo, Jr. died during the year.



Ricardo M. Lantican, Ph.D.

Dr. Lantican, an agronomist and plant breeder is recognized for his works on cytoplasmic hypersensitivity of maize to *Helminthosporium maydis* Mish and Miy. His basic discovery resulting from a series of studies in this area of research has received worldwide attention after the outbreak of the Southern leaf blight disease in the United States. The discovery in the Philippines was regarded as important that it had been acknowledged by U.S. Agriculturist as very significant, because, had the work received wider attention in the U.S., the multi-billion dollar loss to the widespread infestation by the Southern corn leaf blight disease which occurred in 1970 could have been averted.

Dr. Lantican's series of studies on the development of varieties for adaptation to intensive cropping system also culminated in the release of legumes widely adaptable to different ecologic environments.

For his remarkable and laudable research achievements, Dr. Lantican received several awards notably: Pro Patria Presidential Award; the National Research Council of the Philippines (NRCP) Achievement Award; Research Award, Crop Science Society of the Philippines. He is the first awardee of the International Business Machine (IBM) and National Science and Technology (NSTA) Awards.

Recognition and other awards conferred

Dr. Alfredo V. Lagmay was conferred the rank and title of National Scientist by the President of the Republic in a simple rites at Malacañang Palace on July 13, 1988. In the same ceremony, six young scientists were also conferred the Outstanding Young Scientist Awards for their contributions in their respective fields on specialization.



1988 DUTSTANDING YDUNG SCIENTIST AWARDEES

Polly W. Sy, Ph.D. (Mathematics)

In recognition of her contributions to the advancement of mathematics in the country particularly in the area of function spaces. Dr. Sy's researches cover topics such as the dual of Cesaro function spaces, Kothe spaces and matrix transformations of sequence spaces which found publication in foreign journals.

Rolando E. Ramos, Ph.D. (Mathematics)

In recognition of his research contribution in the Theory of Graphs which is an important subject within combinatorial mathematics. Study along this field helps to provide a natural framework for the study of the structure of the relationships between discrete objects of any sort.

Dr. Ramos' scientific contribution in the field of Graph Theory is important as its application is all embracing. It is applied among others in economics, psychology, sociology, genetics, and operations research.

Benito C. Tan, Ph.D. (Botany)

In recognition of his contributions to plant taxonomy. His work on moss flora especially on Philippine moss significantly contributes to the updating of information accumulated since 1914, by presenting new interpretation, conclusion and speculation based on recent findings. Dr. Tan was able to identify several species of Philippine mosses including their taxonomic and phyto-geographic distribution.

Ma. Cynthia Rose B. Bautista, Ph.D. (Sociology)

In recognition of her researches on agricultural household which have important implications to the improvement of living standards of the Philippine peasantry and to the theories of social change. Also, new study concerning overseas workers has helped identify the workers' problems at place of destination and of origin, culminating into the proposed solutions to such problems.

Manuel M. Lantin, Ph.D. (Plant Breeding)

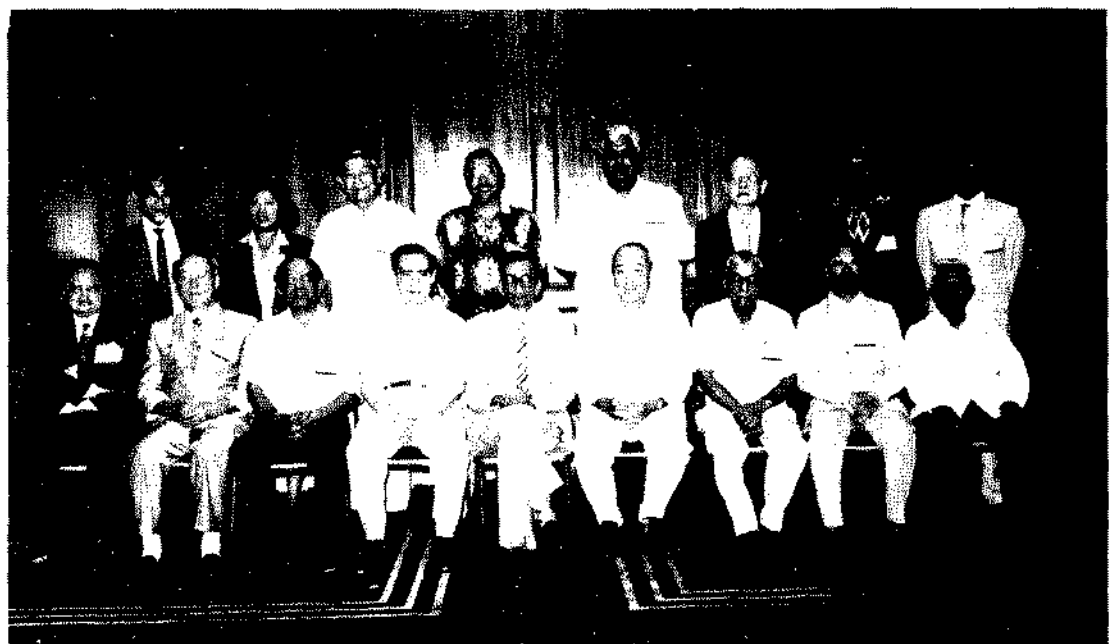
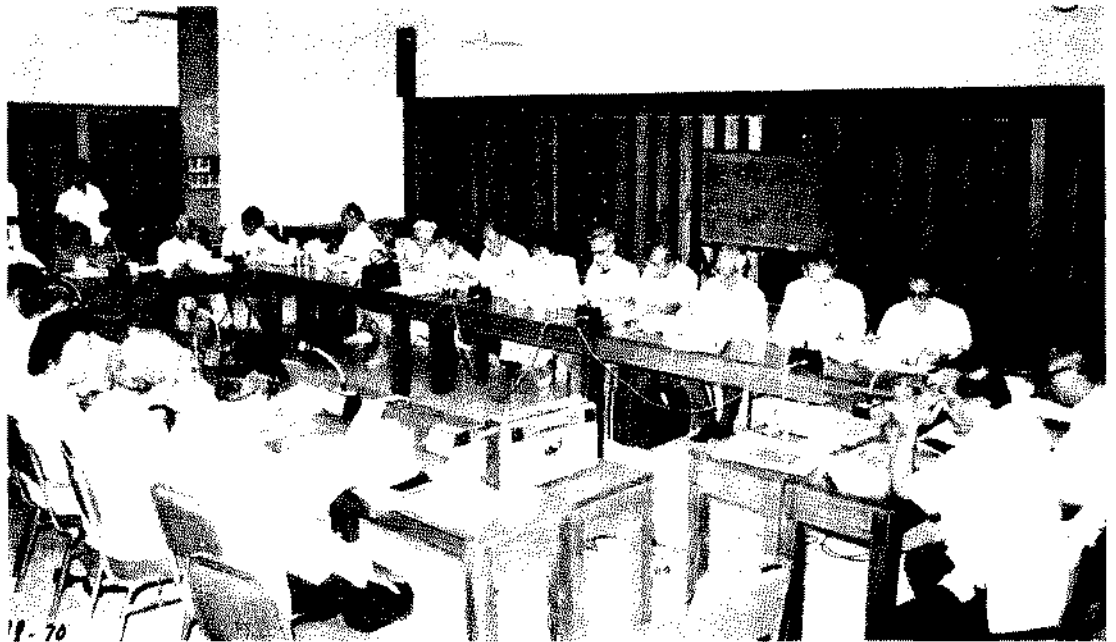
In recognition of his significant researches in plant breeding. Within a short period of five years, Dr. Lantin and his research team were able to develop a white corn variety, IPB Var 2, and improved the yellow corn variety, IPB Var 1. These varieties are both high yielding and have high level of resistance to downy mildew disease. These are now being used for commercial production of corn in the country. Also through a comprehensive breeding program which he formulated and implemented, a number of corn breeding populations, were developed and improved. These are now used as sources of superior varieties. One of these was a source of resistance to the highly destructive Asiatic corn borer.

Francisco M. Basuel, Ph.D. (Animal Science)

In recognition of his contributions to poultry industry in the country, Dr. Basuel generated technologies utilizing non-conventional feedstuffs especially for broilers such as giant toads, mulberry leaves, tamarind leaves and various legumes. The use of these technologies will contribute to the reduction of high cost of poultry feeds.

Benefits

As in the past, the Academy continued to provide monthly gratuities, medical/hospitalization benefits, travel support for attendance and participation in international conferences, and other incentives to its members. To encourage research activities and other scholarly pursuits such as book writing, the Academy has also awarded research fellowships to thirteen members.



RESEARCH FELLOWSHIP

<i>Name</i>	<i>Inclusive Dates</i>	<i>Title of Research</i>	<i>Resolution No.</i>
Paulo C. Campos	1 April 1987 (part-time)	The First Cavite Electric Cooperative: A Case Study	
Joventino D. Soriano	1 October 1987- 30 September 1988 (full-time)	Induction and Selection of Mutations for Resistance to the Leaf Spot Disease in Peanut in Red Leaf Mosaic Disease in Sorghum through Seed Irradiation	319
Carmen C. Velasquez	1 December 1987- 30 November 1988 (part-time)	Monogenea of Philippine Fishes	322
Clare R. Baltazar	1 January 1988- 31 December 1988 (full-time)	Inventory of Philippine Insects	343
Luz Oliveros-Belardo	1 January 1988- 31 December 1988 (full-time)	<i>Diospyros discolor</i> wild <i>Cymbopogon citralus</i> (DC) Stapf	328
Dioscoro L. Umali	1 January 1988- 30 June 1988 (part-time)	Science Education in the Philippines	343
Melecio S. Magno	15 February 1988- 14 February 1989	Some Aspects of Physical Meteorology, Especially the Application of Remote Sensing	345
Raymundo Favila	1 April 1988 (full-time)	Differential Geometry of Three-Dimensional Euclidean Space	401
Jose R. Velasco	15 August 1988	A Socio-Economic Study of Philippine Agricultural Development	408
Filomena F. Campos	16 August 1988- 16 September 1988 (full-time)	Integrated Farming System	407
Lourdes J. Cruz	15 March 1989- 14 March 1990 (part-time)	The Development of Bio-chemical Assays for Monitoring the Level of Paralytic Shell-fish Poisons in Philippine Waters	412
Clara Y. Lim-Sylianco	November 1, 1988- October 31, 1989 (full-time)	Molecular Nutrition	411
Tito A. Mijares	1 August 1988- 31 July 1989 (full-time)	1. The Normal Approximation to the Bartlett-Nanda-Pillai Trace Test in Multivariate Analysis. 2. On the Normal Approximation to Lawley-Hotelling's T_0^2	

The Academy provided travel grants to seven (7) of its members this year to attend various conferences.

ACADEMICIANS WITH TRAVELS SUPPORTED BY NAST

- | | |
|--------------------------|---------------------------|
| 1) Clare R. Baltazar | 5) Clara Y. Lim-Syllianco |
| 2) Filomena F. Campos | 6) Joventino D. Soriano |
| 3) Paulo C. Campos | 7) Prescillano M. Zamora |
| 4) Magdalena C. Cantoria | |

Activities of Academicians

The Academicians were also involved in various capacities in several activities of the Academy and the science community. NAST President Paulo C. Campos was Chairman of the steering/executive committees of 10th NAST Anniversary Celebration, First ASEAN Talent Search and the National Science Center Task Force.

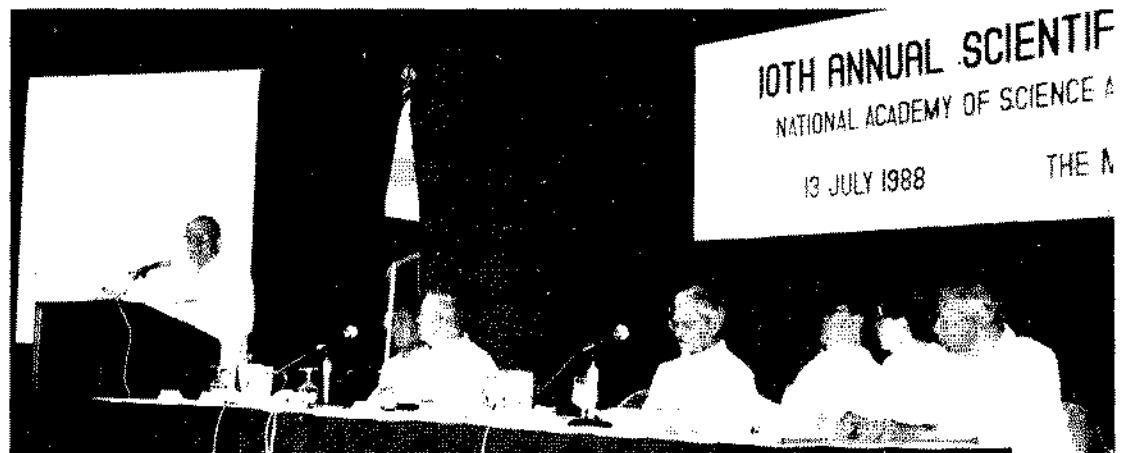
Acad. Melecio S. Magno, the Vice-President was Chairman of the Congressional Task Force on Science and Technology Code, while Acad. Bienvenido F. Nebres, S.J. became a member of the Presidential Task Force on Science and Technology.

Acads. Joventino D. Soriano and Pedro B. Escuro were Chairmen of the 1988 ASM Program and Biosafety Committees, respectively. The National Board of Judges of the First ASEAN Talent Search included Acads. Tito A. Mijares who was Chairman, Solita D. Camara-Besa, Dolores A. Ramirez and Joventino D. Soriano.

Representatives from the Academy were invited to two public hearings of the Senate regarding Resolution No. 192 entitled "Future of Science and Technology by the Year 2,000" as well as the issue on "Red Tide". The Academy through the Mathematical, Physical and Engineering Sciences Division was requested to comment on Senate Bill filed by Senator Santanina Rasul.

Activities of the Academy

The Academy celebrated its 10th Anniversary by hosting two international conferences, namely: the International Conference on Science Policy (ICSP) for Developing Countries and the Federation of Asian Scientific Academies and Societies (FASAS) Executive Council Meeting. The Academy also convened its 10th Annual Scientific Meetings (ASM) during the celebrations. The conferences were held at the Manila Hotel from July 12-14, 1988. The ICSP was attended by foreign scientists and their Filipino counterparts as well as policy makers and the general public.

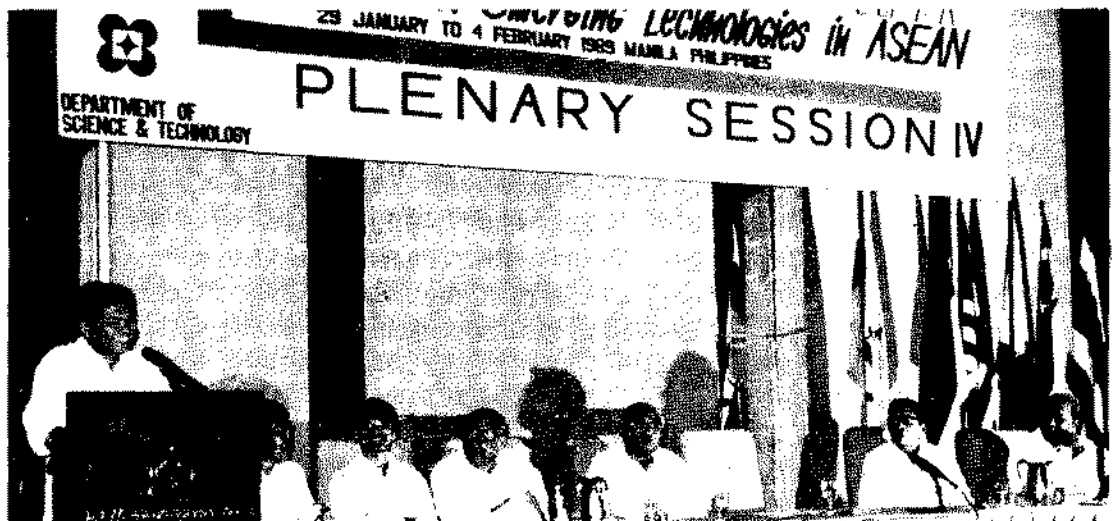
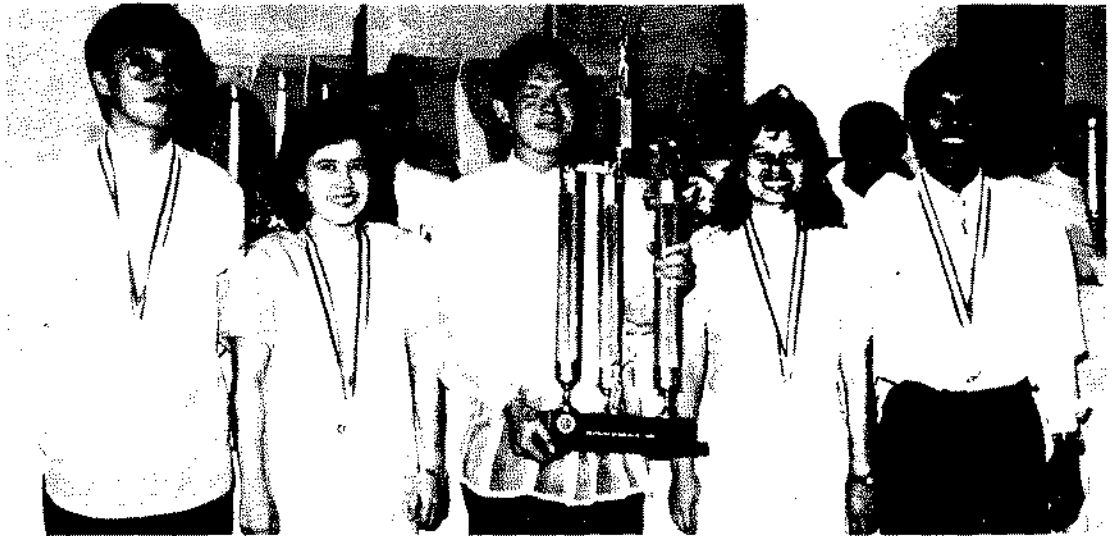




Three plenary papers were presented in the 10th ASM by guests, namely: Dr. Francis J. Klocke, M.D. of the State University of New York at Buffalo School of Medicine; Dr. Herbert Morawtz of the Polytechnic University of New York; and Dr. Stephen H. Salter of the University of Edinburgh. In addition, 29 scientific papers were read by Academicians, Outstanding Young Scientist awardees and other scientists during the scientific sessions in the afternoon.

For the ICSP, a total of nine papers were presented. The foreign presentors were Dr. Hoagy Kim of the Korean Ministry of Science and Technology, Prof. A.K. Sharma who is President of FASAS, Prof. Yan Dong Sheng of the Chinese Academy of Sciences in Beijing and Dr. M.O. Ghani of Bangladesh. The local speakers who represented the legislative, executive, academe and the private sectors were: Sen. Jose D. Lina, Jr., Cong. Eduardo P. Pilapil, Science Undersecretary Ricardo M. Lantican, Mr. Meneleo Carlos and Acad. Paulo C. Campos.

The Academy coordinated the First ASEAN Talent Search for Young Scientists (University Level) upon the request of UNESCO Regional Office in Jakarta, Indonesia. The Philippine Search which was launched on September 5, 1988 by Sen. Jose D. Lina, Jr. resulted in identifying Mr. Joseph Dubouzet, an Instructor at the University of the Philippines in Los Baños as the country winner who will represent the Philippines in the regional contest scheduled early next year in Manila.





The Academy conducted a series of roundtable conferences on science policy, monthly forums on science literacy and joint legislative-NAST/PNSS science policy. The science literacy forums which began on February 25, 1988 were intended for the science writers of the major dailies.

1988 SCIENCE LITERACY FORUM

<i>Date</i>	<i>Venue</i>	<i>Topic</i>
April 28, 1988 11:00 a.m.	Casino Español	Biological agents and integrated pest control management
June 2, 1988 11:00 a.m.	Casino Español	Issues on drugs
June 30, 1988 11:00 a.m.	Casino Español	Issues on marine and aquatic resources
July 28, 1988 11:00 a.m.	MCM Board Room	Updates on current drug issues
August 25, 1988 11:00 a.m.	Casino Español	Palawan eyed as second Philippine Biosphere reserve
September 29, 1988 11:00 a.m.	Casino Español	What is happening to our oceans
November 24, 1988 11:00 a.m.	MCM Board Room	Metro Manila garbage problems

The science policy forums which started on September 14, 1988 were intended for legislators and other policy makers.





**1988 JOINT LEGISLATIVE-NAST/PNSS
Science Policy Forum**

<i>Date</i>	<i>Venue</i>	<i>Topic</i>
October 12, 1989 10:00 a.m.	Asian Institute of Tourism	<ul style="list-style-type: none"> — Harnessing S&T for economic recovery — S&T master plan — Organizational structure to implement plan
November 22, 1988 10:00 a.m.	Asian Institute of Tourism	<ul style="list-style-type: none"> — S&T policy from the point of view of the science community — S&T policy from the point of view of the private sector — Policy listings derived from the 1987 Constitution
December 13, 1988 10:00 a.m.	Asian Institute of Tourism	<ul style="list-style-type: none"> — Science policy

A biosafety committee created by the Academy in response to a request to evaluate and make recommendations on a set of guidelines prepared by a multi-agency group led by IRRI and UPLB has started meeting regularly.

The Academy followed up the recommendations for implementation it had submitted to the Department of Science and Technology regarding the Guidelines for Collecting Biological Specimens in the country by foreigners.

In April 1988, the Executive Committee released two statements in connection with the recently released bills on Free High School Education and Alkyl Benzene for the manufacture of soaps and detergents. The Academy proposed a delay in the implementation of the plan to offer free public secondary education starting in June 1988 as the bill may aggravate the status of education in the country considering the acute lack of competent teachers and adequate facilities. It has also expressed strong objections to the alkyl benzene bill from the House of Representatives in favor of coconut-based materials.

**STATEMENT OF THE NATIONAL ACADEMY
OF SCIENCE AND TECHNOLOGY OF THE PHILIPPINES
APRIL 16, 1988**

WHEREAS, there is an urgent need to upgrade the general quality of education of our people, particularly in the sciences, as mandated by the Constitution of the Republic;

WHEREAS, even as we would like to give our youth, at least a high school education, it would not be possible to do so effectively for lack of competent instructors to teach high school literature, the basic sciences, the social sciences and the humanities;

WHEREAS, a 1985 survey found the performance and knowledge of our 4th year high school students to be generally distressingly equivalent only to those expected of the 4th grade elementary school;

WHEREAS, with inadequate resources and personnel, the present plan for free high school education that is going to be implemented very soon may only compound our educational problems;

WHEREAS, because of the foregoing, it might be a waste of the nation's valuable scarce resources to implement at this time a free high school education for all;

NOW, THEREFORE BE IT RESOLVED, as it is hereby resolved, that the National Academy of Science and Technology convey to the President of the Republic, the Senate Education Committee, Education Committee of the House of Representatives, the Secretary of Education and other members of the Cabinet the following recommendations:

- (1) That the present bill on free high school education for all be temporarily held in abeyance;*
- (2) That priority be given to a bill that will strengthen elementary and high school education by:
 - (a) A good training program for all elementary and secondary school teachers on the particular subjects they are teaching.**

- (b) Allowing college graduates with at least baccalaureate degree and the requisite knowledge in the sciences to be absorbed in the teaching force.*
- (3) That free vocational education be pursued with greater vigor in order to provide the necessary skills necessary in agriculture and industry for the country's economic development.*
- (4) That the curricula of our elementary and secondary schools be re-examined and improved continually in order to meet the highest standards of excellence possible for our people.*
- (5) That further increase in the budget for education is in order, to bring the compensation of teachers and the facilities of the schools to adequate standards.*

Approved unanimously by the Executive Council of the National Academy of Science and Technology, April 16, 1988.

(SGD.) PAULO C. CAMPOS, M.D.
President

The Academy as an adviser on Science and Technology to the government after serious and prolonged deliberation decided to come out with an official statement on the merits and demerits of House Bill No. 5122 which is presently on Second Reading in Congress.

**STATEMENT OF THE NATIONAL ACADEMY
OF SCIENCE AND TECHNOLOGY OF THE PHILIPPINES
APRIL 16, 1988**

WHEREAS, Alkyl Benzene is an environmental pollutant;

WHEREAS, its use is already banned in many countries of the western world;

WHEREAS, being a petroleum-based product, it has necessarily to be imported into this country;

WHEREAS, although Alkyl Benzene is slightly cheaper than a comparative detergent manufactured from coconut oil, its price is pegged to the unstable price of petroleum in the world market;

WHEREAS, petroleum is a non-renewable resource whereas coconut oil is renewable;

WHEREAS, and most important, importation of Alkyl Benzene would seriously jeopardize the coconut industry to which at least 5,000,000 Filipinos depend for their livelihood.

RESOLVE, THEREFORE, as it is hereby resolved, that the National Academy of Science and Technology (NAST) strongly oppose the passage of House Bill No. 5122;

RESOLVE, FURTHER, that copies of this statement be sent to the Office of the President, to both houses of congress, to the press, and to various sectors and agencies that the information it carries can be more widely disseminated.

Approved unanimously by the Executive Council of the National Academy of Science and Technology, April 16, 1988.

(SGD.) PAULO C. CAMPOS, M.D.
President

The Academy has arranged the state funerals of National Scientists Julian A. Banzon and Juan S. Salcedo, Jr. who died on September 14 and October 20, 1988 respectively.

DECEASED ACADEMICIANS

<i>Academician</i>	<i>Date of Death</i>	<i>Date of Burial and Necrological Services</i>
Julian A. Banzon	14 September 1988	17 September 1988
Juan Salcedo	20 October 1988	26 October 1988

International Linkages

The Academy has signed in June 1988 agreements with the Third World Academy of Sciences (TWAS) and the International Network of Scientific Organizations.

THIRD WORLD NETWORK OF SCIENTIFIC ORGANIZATIONS

Agreement

The Third World Academy of Science (hereinunder called TWAS) and the

National Academy of Science and Technology

of the Philippines (hereinunder called the Partner Organization), recognizing the importance of strengthening cooperation between them with the purpose of furthering the development of natural sciences as well as their proper applications in relation to the requirements of society, have agreed to undertake the following:

- 1) Consult and cooperate with one another in the development of activities of common interest designed to foster and promote scientific research performed by individual scientists in the Philippines and facilitate their contacts with the World's Scientific Community, especially that of the Third World;*
- 2) Exchange scientific information of common interest and relevant scientific publications such as books, journals, newsletters and proceedings;*

- 3) *The Partner Organization will use its good offices to disseminate information on TWAS programmes and activities to scientists working in various scientific institutions in its country and will receive copies of TWAS Request Forms filled out by scientists from its country for appraisal and comments;*
- 4) *Within the Scheme entitled "TWAS South-South Fellowship Programme", the Partner Organization will assist in implementing the programme and in facilitating the visits to the Philippines;*
- 5) *This arrangement may be reviewed at any time by mutual agreement between the Partner Organization and TWAS;*
- 6) *This arrangement shall enter into force upon signature by the President of the Partner Organization and the President of TWAS.*

(SGO.) ABDUS SALAM
President, TWAS

Trieste
Place

June 17, 1988
Date

(SGO.) PAULO C. CAMPOS
President, National Academy
of Science and Technology

Manila, Philippines
Place

May 24, 1988
Date

In October 1988, the President of the Academy visited with officials of the Israel Academy of Sciences to pursue linkage agreements.

**PROPOSED AGREEMENT ON COLLABORATION BETWEEN THE
ISRAEL ACADEMY OF SCIENCES
AND THE
NATIONAL ACADEMY OF SCIENCE AND TECHNOLOGY OF THE PHILIPPINES**

RECOGNIZING the mutual benefit of scientific interchange and the convenience of set procedures for its administration the Israel Academy of Sciences and the National Academy of Science and Technology of the Philippines, hereinafter called the Sides, conclude the following agreement:

I. Scientific contracts

Both Sides will do all in their power to facilitate collaboration between specialists in the scientific disciplines within the mutual competence.

II. Exchange visits

Each year commencing 1 April the Sides will organize and finance visits in each direction by postdoctoral scientists in the natural sciences and technology in two categories:

- (a) *Study visits: usually for short periods of from one to three weeks, to a total of four person-months on either Side, with the aim of visiting a number of laboratories in the host country for discussions and liaison, or for field study visits.*

(b) Fellowships: Usually for longer periods to carry out research projects or learn new techniques predominantly in one laboratory or site, but with provision for short subsidiary visits to other places.

III. Financial responsibilities

(a) Study visits: The sending Side will pay the international fares of its visitors, while the host Side will provide for the local costs of the visit (board, lodging and transport connected with the objects of the visit) in accordance with the Financial Annex to this agreement.

(b) Fellowships: The sending Side will pay for all the expenses of the visit, both international fares and local costs, with the host Side helping with the placing of visitors and the administration of their programmes, as may be necessary.

IV. Selection and nomination of visitors

The sending Side will be responsible for selecting and nominating visitors from that country to the host Side, although the host Side may ask that certain named scientists or certain subject areas may be given favorable consideration where it is known that they would be particularly welcome. Especially with Fellowships preference will be given to applicants involved in joint projects (See Article VI).

Nominations are to include the following details:

- 1. The category of visit for which the scientist is nominated.*
- 2. Full surname, forenames and title.*
- 3. Date and place of birth.*
- 4. Short scientific biography and details of degrees.*
- 5. Current appointment.*
- 6. Field of specialization.*
- 7. Main scientific publications (to a maximum of six).*
- 8. Knowledge of languages.*
- 9. Proposed scientific programme:*
 - (a) For Study visits – Scientific centers or type of institution which it is desired to visit; length of stay in each center; specific scientists with whom meetings are requested and the type of questions to be discussed.*
 - (b) For Fellowships – precise details of the work to be carried out including prospective host institute; places or people to whom short subsidiary visits are requested.*
- 10. Desired date of commencement and length of visit.*
- 11. Anything else desired by the nominee which is not connected with the programme of scientific work.*

12. Whether to be accompanied by dependent(s) at own expense.

Nominations are to be forwarded to the host Side in sufficient time for at least three months' notice to be given in each case. Not later than two months following receipt of a nomination the receiving Side is to inform the sending Side as to the acceptability of the proposed visitor, the suggestions for the programme and the period of the visit. A provisional programme should be sent as soon as possible for the visitor's information and approval.

Once a nominated scientist has been accepted for a visit, the receiving Side is to take all necessary steps to facilitate the issue of any necessary visas, work, residence or other permits. Precise details of the visitor's travel arrangements, e.g. flight number, estimated time of arrival at airport, etc., are to be cabled to the receiving Side not less than seven days before departure.

V. Attendance at meetings

Although the purpose of visits under Article II should not primarily be attendance at conferences, etc., such attendance may be included within a visit if both Sides agree.

VI. Joint projects

Both Sides will encourage joint scientific research between laboratories in the two countries including the conclusion of inter-institutional agreements where this is necessary.

VII. Medical insurance

Both Sides will ensure that visitors from their respective countries are adequately insured against medical expenses which may be incurred as a result of falling ill or sustaining bodily injury in the course of visits under this agreement.

VIII. Limitation

The provision of this agreement as well as of subsequent implementing arrangements or programmes shall be subject to the laws and regulations in force in the country of each Side.

IX. Validity of agreement

This agreement will come into force on _____ . It will be implemented directly between the Israel Academy of Sciences and the National Academy of Science and Technology of the Philippines. It is open to either Side at any time to submit suggestions or recommendations for amendment or modification of the Agreement which will not otherwise be subject to regular renegotiation.

*For the Israel Academy
of Sciences*

*For the National Academy of
Science and Technology in
the Philippines*

Financial Annex to the Agreement on collaboration between the Israel Academy of Sciences and the National Academy of Science and Technology of the Philippines.

As stated in the body of the Agreement, Study Visits under Article II(a) will generally be on the basis of the sending Side paying international fares and the host Side local

costs, whereas Fellowships under Article 11(b) will be entirely at the expense of the sending Side.

Study Visits

Accommodation

The Host Side will reserve and pay directly for the visitor's occupation of a room with use of bath or shower in a hotel, college, hostel, or other suitable establishment for the period of the visit.

Maintenance

Additionally visitor will be paid in advance a daily allowance for meals not included in the price of accommodation and for incidental expenses, the amount to be agreed by the Sides by correspondence and regularly reviewed.

Travel

For other local travel visitors will be given pre-paid tickets or, where this is impracticable, such expenses will be reimbursed retrospectively.

Conference fees

At the request of the sending Side the host Side will pay the fees for attendance at meetings under Article V.

Accompanying dependents

Accompanying dependents will be at the expense of the visitor concerned. However, if requested in good time, the host Side may help by reserving economically priced double rooms, making extra provision for local travel, etc., on the understanding that the extra cost will be repaid by the visitor.

Fellowships

Although Fellowships under Article 11(b) will be entirely at the expense of the sending Side, the host Side, if requested, may help with accommodation by making inquiries and reservations on behalf of the sending Side; providing information on availability, cost etc., either to the sending Side or directly to the visitor.

*For the Israel Academy
of Sciences*

*For the National Academy of
Science and Technology of
the Philippines*

The Academy hosted the visit of five Chinese astronomers who came to the country to observe the total solar eclipse in Mindanao on March 15-24, 1988 under the NAST-Chinese Academy of Sciences memorandum of agreement. The delegation was composed of Prof. Shen Long Xiang, Dr. Wang Jingxiu, Dr. Wang Kemin, Engr. Lu Bauluo and Engr. He Dingguo.

On November 7-12, 1988, the Academy also received Dr. Carl Schiel, President of the International Foundation for Science and Dr. Joachim Wiercimok of the Deutsche Forschungsgemeinschaft (DFG) under the NAST-DFG memorandum of agreement.

Drs. Stephen Salter and Herbert Morawetz were invited as plenary speakers in the Annual Scientific Meeting (held July 1988) through agreements with the Royal Society and TWAS, respectively. Through the Royal Society, the Academy has likewise endorsed the attendance of Ms. Jane Gerardo of the Department of Environment and Natural Resources at the International Conference on the Application of Geology in Developing Countries held in London.

In August 1988, the attendance to the International Congress of Scientific Unions Annual Meeting (ICSU) of a delegation from the Philippine National Science Society including Acad. Cantoria was endorsed by the Academy.

Publications

This year, the Academy published its 1987 Transactions and NAST: The First Decade.

Fragmentos by National Scientist Encarnacion Alzona, the Selected Papers of Acad. Paulo C. Campos and Dairy Proceedings are in press.

The 1988 Transactions, 1988 Academy News and the Proceedings of the International Conference on Science Policy for Developing Countries are in the process of editing preparatory to printing.

NAST Secretariat

The staff complement during the year consist of nine permanent and two emergency employees.

Three staff members were hired early during the year. Dr. Cesar P. Madamba was appointed Executive Director on February 15, 1988 while Mr. Abdurackman Mama and Mrs. Editha Grado were hired effective February 1, 1988 as Information Officer and Senior Stenographer, respectively. Miss Nancy Caceres, science apprentice under the Career Incentives Program (ICP) of the Science Education Institute (SEI) was detailed to the Academy for the duration of her program.

Miss Suzette Despabiladeras was emergency clerk typist from June 8 to October 18, 1988. Mr. Melito Lynch was hired as emergency office utilityman and driver on December 1, 1988.

Two staff members pursued graduate studies under the DOST scholarship program. Mrs. Stella Marie R. Ramos, Supervising Information Officer, undertook a doctoral program in botany at the University of the Philippines in Diliman while Ms. Luningning Samarita pursued a masteral program in communication research, also at UP Diliman.

On December 1, 1988, Mrs. Ramos was granted a one and a half year study leave of absence with pay to attend a 4-month advanced language course at the Goethe-Institute to be followed by a one-year research study visit in genetics in an appropriate university in West Germany under the NAST-DFG Memorandum of Agreement.

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