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ACADEMY NEWS

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President Marcos Names Two New National Scientists

Dr. Fe del Mundo, a medical stateswoman and Dr. Eduardo Quisumbing, a well-known botanist because of his pioneering effort in medicinal plants were named National Scientists by President Ferdinand E. Marcos during the celebration of the 22nd Anniversary of the National Science Development Board last July 18.

The leading lady physician is the director and founder of the Children's Medical Center Philippines, Inc. and director of the Institute on Community and Family Health as well as the new Lungsod ng Kabataan in Quezon City. Not to mention a row of other positions she had held in the past.

A specialist in herbarium taxonomy, Dr. Quisumbing restored and gathered 76,983 specimens to form part of the national herbarium, when he served as director of the National Museum. His more important publication is the volume on Medicinal plants of the Philippines.

It will be recalled that the Academy recommends annually for Presidential award not more than ten scientists for distinguished individual or collaborative achievement in science and technology who shall be accorded by the President the rank and title of "National Scientists." Given the option, the Academy can recommend to no one the award for any given year.

There are three National Scientists proclaimed in July 1978 during the National Science and Technology Week celebration. They are: Juan L. Salcedo, Jr., M.D., for his contributions in the fields of Nutrition and Public Health; Alfredo C. Santos, Dr. phil. for his contribution in Chemistry and Gregorio Y. Zara (deceased), Ph. D., engineering and inventions.

The proclaimed "National Scientists" are given each a gratuity in amounts fixed by the Academy and are entitled to other privileges as are enjoyed by the "National Artists."



The newly-proclaimed National Scientists, Dr. Fe del Mundo, a leading pediatrician and Dr. Eduardo Quisumbing, a botany expert pose with President Marcos at the Heroes Hall in Malacañang last July 18.

With them are eight of the 10 outstanding young scientists. Each awardee received a Presidential Trophy and a P10,000 cash. They were selected by the Executive Council of the NAST. The search was launched in connection with the 22nd anniversary celebration of the NSDB.

The 10 scientists are: Rafael E. Guerrero for aquaculture; F. M. Orjana, food processing and quality control; S. Eduardo, zoology; E. del Mundo, chemistry; V. Vicente, chemistry; E. Duana, engineering; T. Ramos, infectious diseases; A. G. Romualdez, Jr., tumor immunology; R. Herrera, physics and E. M. Pernia, social sciences.

Its 2nd Year too

Academy Holds 2nd Annual Paper Presentation

The National Academy of Science and Technology, setting its sights high on future goals and ambitions was in convention at the PICC last July 15th. And the occasion was the 2nd Annual Papers Presentation where they took positive action by presenting papers on different areas.

These include —

- Social Sciences, chaired by Dr. Alfredo V. Lagmay, vice president of the Executive Council of the NAST. Paper presented was "Doctor T. H. Pardo de Tavera and Philippine Historiography" by an Academician, Dr. Encarnacion Alzona.

- Mathematical and Physical Sciences, chaired by another Academician, Dr. Raymundo A. Favila.

Bienvenido F. Nebres, S.J., Ph. D. presented "Algebraically Closed Groups (An Application of Model Theory to Algebra)."

- Chemical Sciences, chaired by no less than our National Scientist, Alfredo C. Santos, Dr. phil. There were three papers presented under this area. One, Dr. Santos' own paper on "Phytochemical Research and Drug Development." Two is newly-named Academician Dr. Luz O. Belardo's "Essential Oils" and "In Quest of Certainty: An Odyssey Into the Cadang-Cadang Problem." by Dr. Jose R. Velasco.

- Under Medical Sciences, chaired by NAST President Paulo C. Campos, M.D. another equal number of papers

were presented. "Antimutagenic Effects on Aflatoxin B-1, Aflatoxin G-1 Dimethylnitrosamine, Metronidasole and Mitomycin C" was presented by a newly-induced Academician, Dr. Clara Y. Lim-Sylianco. An Academician, Geminiano T. de Ocampo, M.D. read his piece on "Biological Pathways." While the recently-named National Scientist, Fe del Mundo, M.D. read "Seroepidemiologic Studies of Three Vaccine-Preventable Viral Diseases in Philippine Urban and Rural Communities."

- Biological Sciences, chaired by another Academician, Dr. Gregorio T. Velasquez. Under this area, three papers were presented by newly-elected Academician Dr. Emerita V. de Guzman's "Embryo Culture, Callus Growth and Morphogenesis in Vitro in Coconut," and "Physiology and Biochemistry of the Volatile Oils of *Mentha* Species (Family Labiatae) Grown in the Philippines" was presented by Dr. Magdalena C. Cantoria, herself, a newly-induced Academician. Third, Dr. Filomena Campos read "Sunflower Breeding and Production Under Tropical Conditions."

Earlier, after delivering the Presidential report, Dr. Campos gave an overview on "Population Growth in Human Progress."



• National Scientists at work.



Above—

Dr. Alfredo C. Santos, Dr. phil., phytochemistry presents his paper on Phytochemical Research and Drug Development. He is shown at extreme right.

At left—

While Dr. Fe del Mundo, M.D. in pediatrics as she reads her paper on Seroepidemiologic Studies of Three Vaccine-Preventable Viral Diseases in Philippine Urban and Rural Communities.

NAST Head Gives Account of its Achievements

The Second Annual Presentation of Papers of the Academy was about to be held simultaneously at Meeting Rooms 4 and 5, when Dr. Paulo C. Campos, reported out healthy accomplishments of the Academy.

Dr. Campos is the President of the Executive Council of the Academy. The following was excerpted from his remarks:

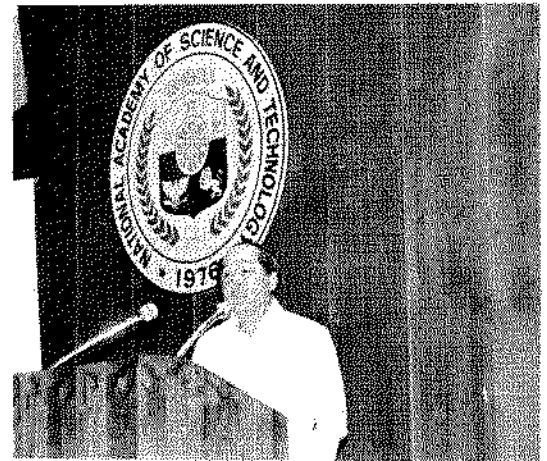
The Academy has learned to live up to the noble traditions of the Academy of Science of the world. It has generously covered important goals, functioned as an Advisory Body in science both from its membership and also collectively as a body or parts thereof.

It has presented position papers on various issues such as health care, energy, nuclear plant, strengthening the various disciplines of sciences and reorganization of science bodies and other problems that confronted the government the past two years. And the Academy has in one way or another participated in their deliberations.

Among the privileges an Academician enjoys are 1) lifetime pensions; 2) numerous privileges among which is opportunity to travel; 3) Publication of current and past works; 4) Mechanisms for exchange with other science bodies locally and abroad and 5) Research fellowships and a number of others.

All its memberships, for example the research fellow, can generously enjoy stipends from 5,000 to 10,000 monthly in seven fields, namely, tropical medicine, mathematics, physics, chemistry, solar energy, biological sciences and psychology. But, up to now, no fellowships, rather no applicant has submitted his interest in the Research fellowship.

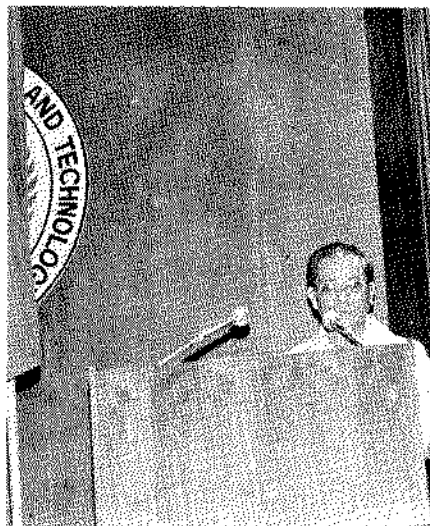
Dr. Campos, at right.



Dr. Mijares Opens All-Filipino Presentation

During the Second Annual Presentation of Papers of the NAST, Dr. Tito Mijares, secretary of its Executive

Dr. Mijares below, welcomes the members of the NAST, researchers and scientists and guests.



Council welcomed the members of the scientific community, guests as well as the members of the Academy.

This year's paper presentation we have an all-Filipino presentation to highlight our scientific contribution to our national development, he said. He added that the Academy has the works of local men and women of science which he believes will be stimulating to those who work in the same area, and as relevant and rewarding to those who are sharing with us and have worked closely with us.

Dr. Mijares stressed that "as a fitting contribution to the second anniversary celebration of the National Science Development Board, the Academy voted to hold this presentation on the second day of the week-long celebration."

He recalled that the First Annual Presentation of Papers of the Academy was held at the Asian Institute of Tourism in Diliman, Quezon City last May '79.

The Seven New Members of the Academy

Right after its paper reading session at the PICC last July 15, when the National Academy of Science and Technology held the investiture of its new members, it was doubtless one of the most distinguished group in the scientific community we had seen for some time. And its sheer diversity was noteworthy.

It will be recalled that seven new members were elected March 12th during the third meeting of the NAST held at NIST building on Pedro Gil cor. Taft avenue.

The new Academicians who took their oath that evening before Science Minister Melecio S. Magno, an Academician himself, were: Luz Oliveros Belardo, Ph. D. in pharmaceutical Chemistry, University of Connecticut; Magdalena C. Cantoria, Ph. D. in Botany, University of Chicago; Conrado S. Dayrit, a doctor of medi-

cine from the University of the Philippines; Emerita V. de Guzman, Ph. D. in Plant physiology from Cornell University; Francisco O. Santos, Ph. D. in Chemistry from Yale University; Joventino D. Soriano, Ph. D. in Botany, University of Chicago and Clara Lim-Sylianco, Ph. D. in Biochemistry and Organic Chemistry, University of Iowa.

Meanwhile, Minister Magno addressed the congregation that evening where he said and we quote him in part—

“...The status of the scientist, in effect, has been elevated to that of the artist and for this we are grateful to the President and the First Lady. Their words and their deeds indicate their recognition that while the arts serve to uplift the human spirit, science and technology are instrumental in bringing about material progress. This new found responsibility of the scientist,

therefore carries with it a great responsibility. Far from putting the scientist on a pedestal, he or she is expected to help in solving the Filipino's basic needs of food, clothing and shelter.

“As the Minister of NSDB, I cannot help but be acutely conscious of this. The national structure in the country's reservoir of scientific manpower must respond to national priorities. Membership in the Academy should not place the scientist above the rest of the community...” he stressed and added that —

“Research should not stop at the publication of a scientific paper for only fellow scientists may understand this. It is incumbent upon the scientist to explain to the layman and to the rest of the society, the importance of his work and how this may be directly or indirectly be made relevant to everyday human existence, social and economic activity...”

The new Academicians —

Magdalena C. Cantoria,
Ph.D. in Botany

Conrado S. Dayrit, M.D.
(Cardiology and Clinical Pharmacology)

Emerita V. de Guzman,
Ph.D. in Plant Physiology





Science Minister Melecio S. Magno, at right, swows into office the seven new Academicians during the investiture rites held at the PICC last July 15. Shown from left are: Francisco O. Santos, Ph. D. in Chemistry; Clara Y. Lim-Sylianco, Ph. D. in Biochemistry and Organic Chemistry; Joventino D. Soriano, Ph. D., Botany; Emerita V. de Guzman, Ph. D., Plant Physiology; Conrado S. Dayrit, M.D. in Cardiology and Clinical Pharmacology; Magdalena C. Cantoria, Ph. D., Botany; Luz Oliveros-Belardo, Ph. D., Pharmaceutical Chemistry.

Francisco O. Santos, Ph.D.
in Chemistry

Joventino D. Soriano,
Ph.D. in Botany

Clara Y. Lim-Sylianco,
Ph.D. in Biochemistry and Organic Chemistry



The New Academicians

Luz Oliveros-Belardo, Ph.D., Pharmaceutical Chemistry

"My concept of an Academician is not the elitist savant in his ivory tower, but one who can come down to earth to share his wisdom with the common man in order to help the latter attain and maintain a good quality of life."

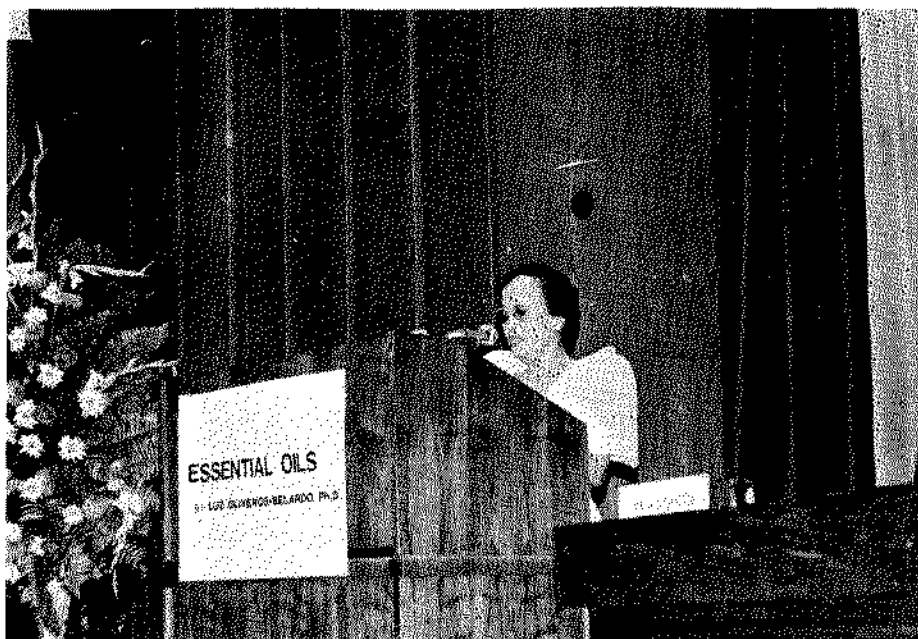
Those are the inspiring words of Dr. Luz Oliveros-Belardo, Ph.D. in Pharmacy, who, as a new Academician, feels that her membership in the NAST carries great responsibility and high expectation. She is willing to offer her talent and service "not only to a few but to a greater number of people who may want or need me in matters of scientific projections and involvement", she stressed in an interview.

A pharmacist who specialized in Pharmaceutical Chemistry (M.S. 1933 & Ph.D., 1957), her interest is in the study of chemistry of natural products. For the last decade, the greater part of her researches was devoted to the extraction of oils from Philippine plants. As you know, essential oils yield components used in making perfumes and flavoring agents, and even in medicine.

She has been involved likewise in the phytochemical investigation of some Philippine medicinal plants. A present project isolates and aims to identify a hypotensive substance from an herbal plant. This is known as "tanglad" in Pilipino, effectively used in folk medicine for keeping blood pressure low.

Asked about the relevance of her most significant projects, she detailed that each of her individual project has its own merit and its own relevance to the conditions obtaining at the time it was planned and undertaken. Her works on essential oils are collectively significant in terms of their multi-directional relevance — chemical, medicinal, industrial and purely academic. Economically, these researches could lessen importation.

All her awards, Dr. Oliveros-Belardo explained, are equally important because they were the results of awards committees' careful study of the merits for which these awards/citations were



given. Among these awards are Award in Science (PWU Alumnae Assn., 1958); Outstanding Pharmacist Award (Phil. Pharmaceutical Asso., 1963); Highest Faculty Award for Scientific Research and Science Education (PWU, 1965); Doctor of Science, *honoris causa* (PWU; 1970) Achievement Award in Natural Science, (Philippine Asso. of University Women, 1974) Int'l. Women's Year Award (The UN Asso. of the Phil., 1973) and Outstanding Achievements in Pharmacy (UP Pharmacy Alumni, 1976).

She mentioned "The influence of structural variation on molecular refraction in the terpene series" (Runner-up in the Lunsford-Richardson National Pharmacy Award) as her most significant research paper because she was still a doctoral student then and the only Filipino participant in the competition conducted in all colleges of pharmacy in the eastern states of USA.

The thrust of her present research is investigation of local plants for sources of energy, aimed at exploring the possibilities of Philippine plants and essential oils for components that would serve either as supplements to or as substitutes for gasoline. She re-

veals that if the exploratory experiments give positive results, the project will move on to the next phase—development of "energy plantations" using trees and hydrocarbon-producing plants as renewable sources of energy. This is *different* from the projects now being undertaken by the sugar or cassava groups that produce alcohol for alco-gas.

Although laymen usually relate pharmacists as the "glorified sales-girls" who tend drugstores, Dr. Oliveros-Belardo, whom we find to be a versatile scientist, detailed that pharmacists actually have a variegated functions or involvement such as in industrial development, analytical work, research, science education, social service thru health centers and drugstores especially in rural areas, community development and leadership in the country.

A science-educator, school administrator, science researcher, wife, mother and big sister rolled into one, Dr. Oliveros-Belardo at 74 is very much involved in professional undertakings. At this stage, she hopes to fulfill her present research work soonest, and still contribute, even in a small measure, to national development.

Emerita V. de Guzman, Ph.D., Plant Physiology

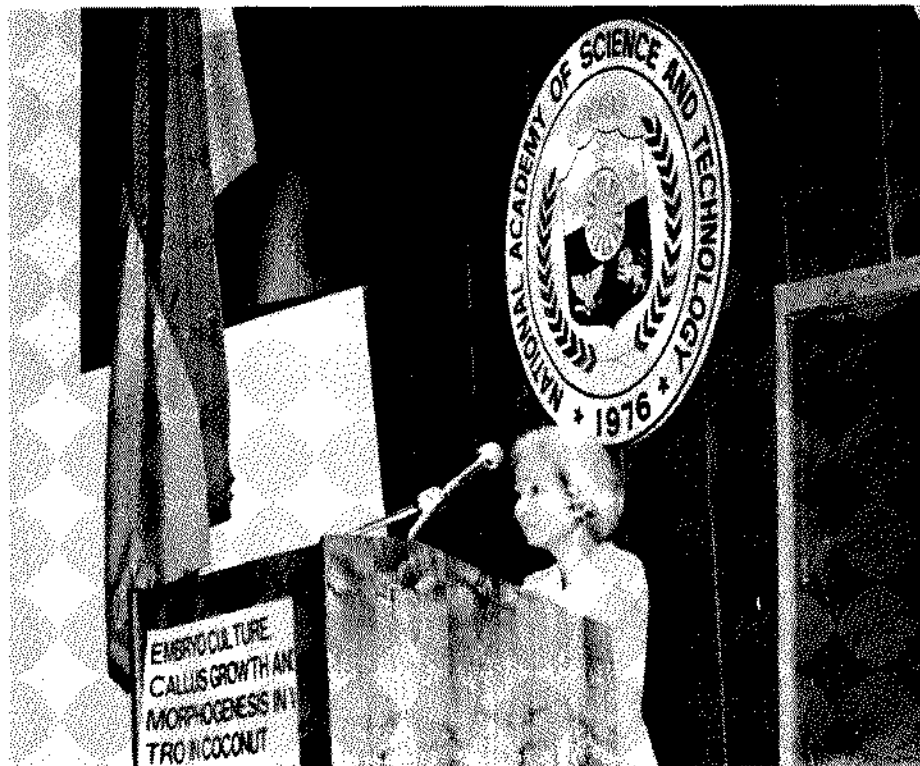
Dr. Emerita V. De Guzman, holder of Ph.D. & M.S. Plant Physiology from Cornell University, has been engaged for a number of years now in pioneering researches on Tissue Culture.

This study of the culture in vitro of excised tissues has its appeal in the fact that since the intact plant is a very complicated system some insights into the working of the whole organism could be obtained by studying the behaviour of its component parts separately in vitro outside the complicating influence of the other parts.

Dr. de Guzman's studies deal mostly with the coconut.

Her research started with the culture of excised makapuno embryo because the makapuno nut does not germinate in situ. Before her involvement, existing makapuno trees bear very few makapuno nuts, about 8-15% only. Through the embryo culture technique, she and her co-workers produced very high—if not an all makapuno yielding trees. Consequently, production of makapuno nuts will be increased with reduced cost; expansion of makapuno-based food industry will be likely, such as production of sweets, pastries and ice cream.

Dr. De Guzman dedicates full time to science endeavors—working on researches, attending international and local conventions/conferences as well as performing science education chores. She believes that teaching is one of her important responsibilities. She has been serving as a professor at the College of Agriculture, UPLB since 1954 to date. In 1972-73 she was Chairman of the Department of Agricultural Botany. Since 1977 she has been the recipient of the Philippine Coconut Research and Development Foundation Professorial Chair on Tissue Culture.



She lends herself actively to Biology workshops both as resource speaker or a member of the organizing committee. She has served as adviser in summer research training programs to teachers and high school students, like those sponsored by the National Science Development Board, Biology Teachers Association and others.

Like any academician, Dr. De Guzman treasures her various awards and considers the citations and other forms of recognitions, an incentive to do more and be of greater service to her fellowmen. Always striving perfection in her work, she has a very high scholastic record having graduated Valedictorian at the Dagupan City High School and finished B.S. Botany, *magna cum laude* in UP. As a professional she too is not lacking in awards/distinctions received from dis-

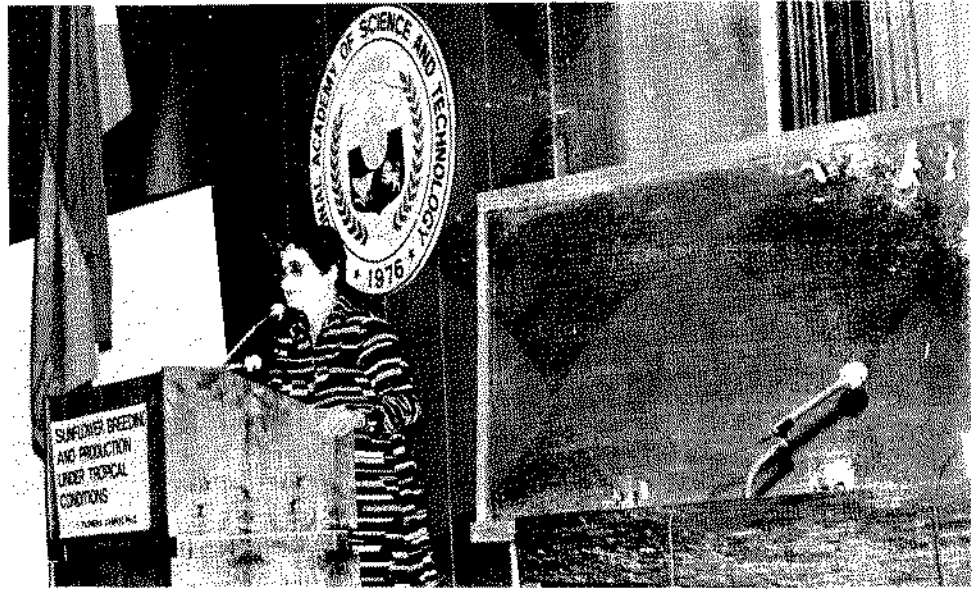
tinguished organizations and societies. Among these are the Rizal *Pro Patria Award* (Republic of the Philippines, 1976), *Professorial Chair in Plant Physiology* (SEARCA, 1974-76) and in *Tissue Culture* (1977 to date); *Outstanding Scientist Award* (PAAS, 1976); *Research Achievement Award* (1979); *Distinguished "Biotan" Award* (1980) and various fellowships and travel grants.

She was able to pursue graduate work and advanced training abroad through scholarships—a thing which she thinks is simply great. Travel grants from local and foreign sources enabled her to meet scientists and visit laboratories abroad updating her knowledge on recent developments.

Born in Binmaley, Pangasinan, she will be 51 years on September 22.

the rest
of the
presentors

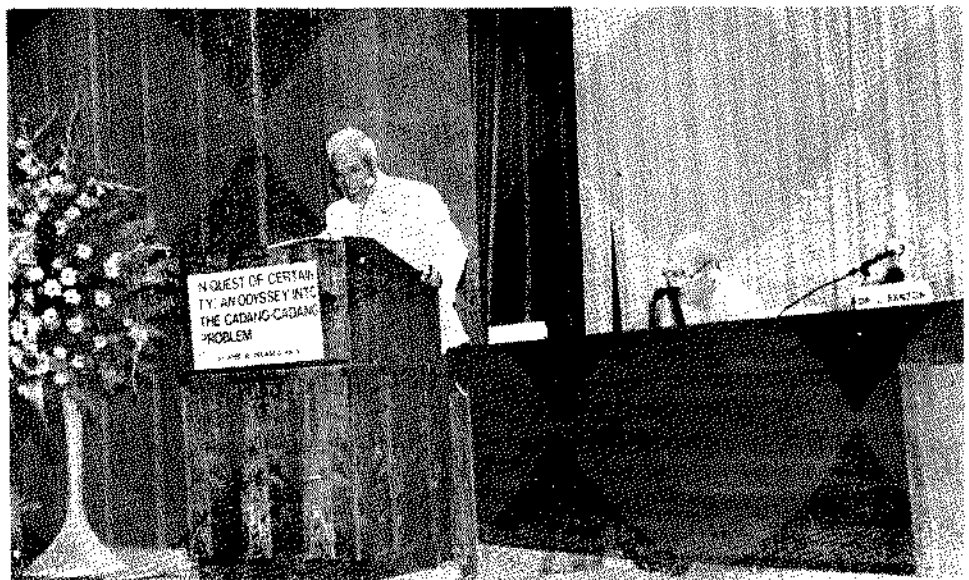
Filomena F. Campos, Ph.D.
in Cytogenetics



Bienvenido F. Nebres, S.J.,
Ph.D. in Mathematics



Jose R. Velasco, Ph.D.
(Agricultural Chemistry, Plant
Physiology and Comparative Bio-
chemistry)



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