

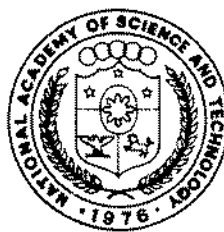


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ACADEMY NEWS

VOL. 2

NO. 4



Agreement between the Academy and Royal Society of London Inked Lord Todd is NAST Visitor, Agrees to Return to See if Accord is Working

Lord Alexander Robertus Todd, Nobel Prize awardee in Chemistry and president of the Royal Society of London, visited the country from December 17 to 24 under the auspices of the National Academy of Science and Technology (or NAST).

A Special Science Award in a form of an engraved gold medallion was conferred on him by the NAST at a dinner tendered at the Mandarin Hotel last December 20th.

That night, the agreement on collaboration between the two societies, the Royal Society of London and the NAST of the Philippines was inked.

The agreement includes scientific contacts between specialists in scientific disciplines within their mutual competence. Each year beginning 1 April the two societies will organize and finance study visits and fellowships, in each direction by post doctoral scientists in the natural sciences and technology. The study visits maybe from either country, with the object of visiting laboratories in the host country. On the other hand, the fellowship is for longer periods to carry out research projects or learn techniques predominantly in one laboratory or site, with provisions for short subsidiary visits to other places. For these, the sending party pays the international fares of its visitors, while the host side provides the local costs of the visit.

Todd, in receiving the award said that "I am grateful and I doubt if I even deserve such award. The Royal Society of London looks forward to a valuable cooperation with you, there is a great possibility of cooperation between the two societies. . .

"I believe that progress of science depends on free exchange between countries. Some day I might come back to find out whether the agreement

(Continued to page 2)



Lord Todd and Dr. Campos signing the agreement.

Sir Harrie Here for Lecture Series

Budget Ministry Ok's Use of NAST Savings to Renovate Garcia Hall at Herran

Budget Minister Jaime C. Laya has approved and gave NAST the go-signal to use its unexpended balance of two hundred thousand pesos to repair the Dr. P.J. Garcia Memorial Hall at Pedro Gil corner Taft Avenue. This is expected to ease-up the difficulty in coordinating the Secretariat and the Academicians.

(Continued on next page)

A series of lecture was given by Sir Harrie Massey, F.R.S. of the British Royal Society under the auspices of the National Academy of Science and Technology.

His lecturing, which he delivered at different places on several occasions at the Holiday Inn, the NRCP in Bicutan, PAG-ASA in Quezon City, the Ateneo, La Salle and the University of the Philippines, boiled down to the—

- Problems of Science Policy, an account of the experience of the United Kingdom in establish-

ing national science policy in pure as well as applied sciences.

- Upper Atmospheric Physics, the understanding of the behaviour of the outer atmospheres of the earth and the planets Venus and Mars has been greatly improved in recent years through the use of sphere techniques. This will include the study methods employed and the results obtained.

- Physics Today, a resume of

the attained conditions and the main lines of progress in the different major branches of physics at present. These include high energy and nuclear physics, astro physics, solid state physics, atomic and molecular physics, plasma physics and geophysics.

Earlier, he made courtesy calls on Deputy Minister Segundo V. Roxas of NSDB, and later to the heads of the different agencies of

NSDB, as well as other government agencies engaged in research.

Meanwhile, he toured to the Manila Observatory, the PAG-ASA lab, the Natural Science Research and Marine Science centers in Diliman and to Forpridecom and U.P. laboratories in Los Baños.

Commenting on his Laguna tour, he said that the applied research activities in the University of the Philippines in Los Baños is quite impressive. He even added that compared to other Third World nations, the Philippines has made a splendid start in R and D.



Sir Harrie Massey, at extreme left, with the Academicians during the dinner tendered by the Academy, held at the Intercon. With him, from left are: Dr. Gregorio Velasquez; Dr. Alfredo Santos, national scientist; Dr. Encarnacion Alzona; Dr. Alfredo Lagmay, Dr. Clara Y. Lim-Sylianco and Dr. Bienvenido Juliano.

For his scientific contributions to England, Sir Harrie Massey was Stewart Wilson before the Queen of England knighted him. The energetic and slim gentleman is the vice president and physical secretary of the Royal Society and quain professor of Physics at the University College in London. The 72-year old scientist is one-time consultant of the U.S. Space Science Board Priority Study and president of the Council of the European Space Research Organization.

Ha hails from Melbourne, Australia.

Since November is proclaimed National Metrication month, metrication stories fill the air and the press releases fly thick and fast.

During the course of Sir Massey's stay here, he was invited to talk at the metrication seminar held at the National Research Council of the Philippines.

The NSDB, for its part, in promoting metrication, assigned and named members of the NSDB Metrication board. Minister Melecio S. Magno inducted the members, one from the board proper, and the rest come from the different agencies under NSDB.

The British Royal Society therefore, with the coming of Sir Massey has broken down new grounds in the relationship between the two scientific bodies.

Agreement between . .

(From page 1)

is really working or not," he stressed in making a strong pitch for cooperation.

Science Minister Melecio S. Magno who gave the closing remarks said that aside from basic sciences like physics, biology, and mathematics, we do hope that a program like this can be arranged by the society and the council, to be carried out by the British universities or even here, at the Ateneo, U.P. or La Salle, since we have a consortium here initiated by NSDB.

Asked how come the Royal Society of London includes only natural science, Lord Todd replied that the society made it clear in their constitution that they shall work for the improvement of natural conditions. Perhaps, areas not covered by this can do something else.

The British visitor is noted for his research on the structure and synthesis of nucleotides, nucleosides and nucleotide coenzymes. These compounds are of utmost importance in understanding the working of genes. This gained him the Nobel Prize in Chemistry in 1957.

BUDGET Ministry . . .

(From page 1)

An estimate on the work orders to make the said hall usable, as submitted by the acting chief of the Science Community Development Division of NSDB, follow:

1. Repair of the centralized air conditioning system . ₱30,000.00
 2. Repair of the Roof Water Proofing ₱65,000.00
 3. Replacing existing floor finish with vinyl floor 68,000.00
 4. Painting 30,000.00
 5. Other minor repair works 7,000.00
- Total P200,000.00

The Steps Involved in the Election of an Academician

I Nomination by three members



Member 1



Member 2



Member 3

Note: A nominee is nominated by three members of the Academy. Each member submits to the Secretariat a brief personal data sheet of nominee duly signed by the nominating member.

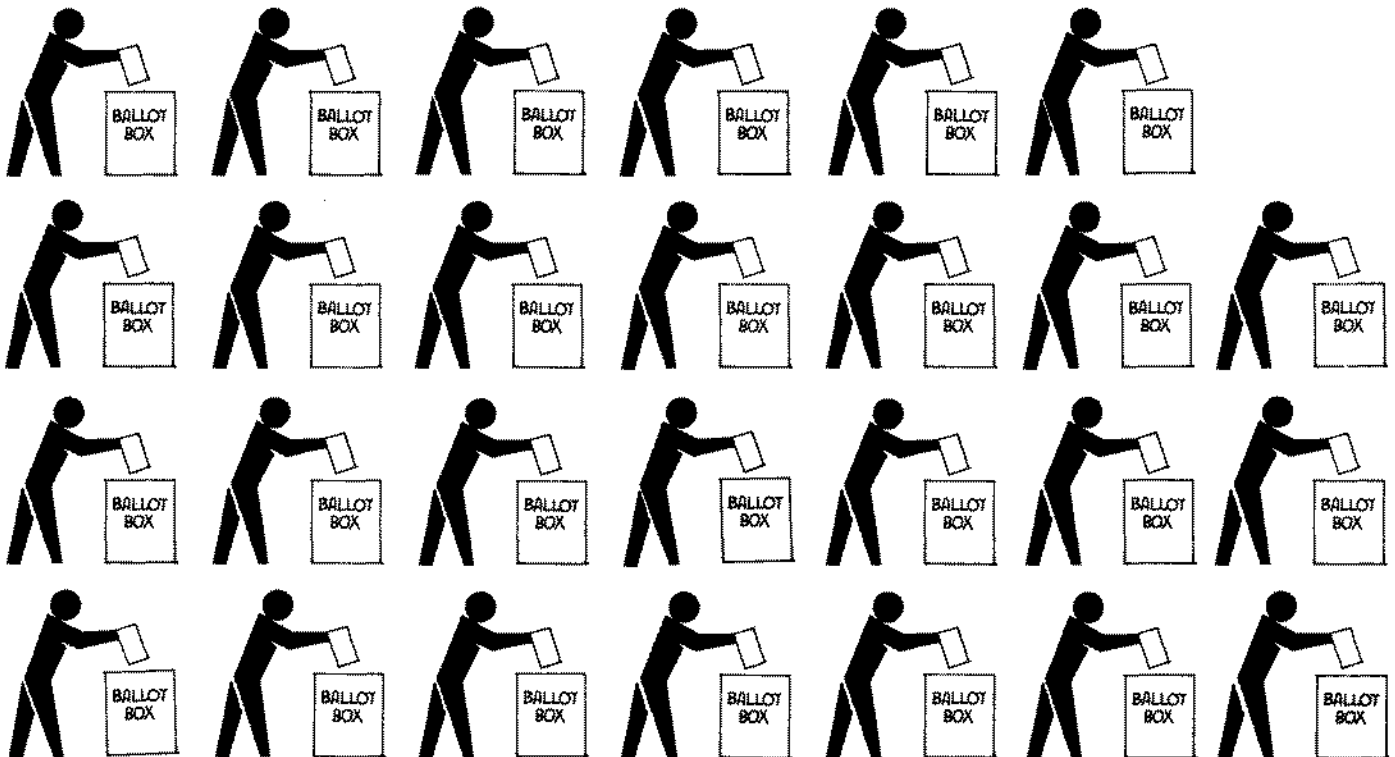
II Screening and Recommendation (After three months).



The NAST Executive Council

Note: The NAST Executive Council screens and recommends the nominees.

III Election (After one and a half month).



Note: The NAST en-banc casts votes. The nominee who gets the majority votes of the Academy, gets elected automatically.

Conrado Dayrit, M.D.

Francisco O

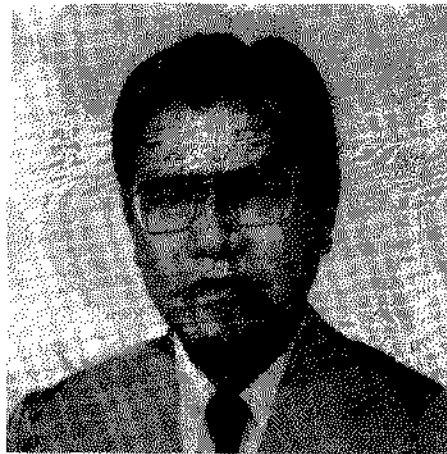
It was during the war and life was hard when Conrado Dayrit obtained his Doctor of Medicine degree at the University of the Philippines in 1943. A consistent honor student, he managed to land in the upper crust, despite the hard times. He was immediately taken in as assistant instructor in the U.P. College of Medicine, Department of Pharmacology. With the ravages of war, the department was literally an empty box, but through his ingenuity, his laboratory was soon filled with innovations which he was able to utilize.

When peace was already restored, he won a fellowship of W.K. Kellogg Foundation in the prestigious laboratory at the University of Michigan where he made some studies on chlorinergic mechanism: There he was ushered into biochemical pharmacology, a field practically unknown in this country at that time. The year following, he acquired another fellowship in clinical pharmacology at the Cornell University Medical School. Here he did collaborative work on digitalis glycosides which was soon to become his trademark.

Soon he was to do a series of collaborative efforts with prestigious teams which stamped several "Firsts" in Philippine medical history. For instance, he was with the team of Dr. A. C. Santos who won first prize in the 1954 Manila Medical Society Basic Research Award. Their studies revealed pharmacological action that tagged the compound as potential in the control of hypertension.

Again, he was a member of the team that performed the first open heart surgery at the Philippine General Hospital. Involved both at the basic and clinical levels, he was awarded the "Most Outstanding Young Man in Science in 1955" the fore-runner of the TOYM Award.

Setting a record standards for sodium and potassium levels in the human heart among Filipinos, establishing the full di-



gitalizing dose for Filipino cardiac patients so critical in successful therapy, and investigating on "chorella", found to have a very high protein content are among his other team-up researches.

In 1963 an investigation on the effect of dynamic exercise in the electrocardiogram of cardiac patients compared to the normal which he did together with some colleagues for which they won the Republic Cultural Heritage Award. He established the first research laboratory in an all-Filipino private drug firm.

Other research awards came just as naturally, let alone citations and certificates of merits. Winning a prize became almost a habit. Some 2B certificates of appreciation for his speaking engagements and 15 diplomas of merit, project a scientist who is not limited in the confines of his laboratory.

He has published some 76 scientific papers here and abroad. Though primarily a cardiologist, other health problems did not escape his innate urge to investigate, thus his research interest also included nutrition, control of infectious diseases like TB, parasiticide, analgesic, anti-inflammatory agents, anti-cancer drugs, hormones — even hiccups.

An internationally-recognized cardiologist, he is listed in the World's WHO'S

One of the pioneers in Philippine science, his particular interest is the improvement of nutrition of the Filipinos. For his unrelenting efforts in nutrition, he was a recipient of a "Distinguished Service Medal" — aside from several other awards he had reaped in the past. For a number of years, he was a professorial lecturer in nutrition at the UP's School of Hygiene and Public Health and at the School of Health Nursing. Because of his expertise, he was appointed Consultant in Nutrition at the Bureau of Public Welfare (now Ministry of Social Services); Member, Committee on Nutrition, Public Institution and Health (Dept. of Health).

Francisco O. Santos, Ph.O., by the way, is Professor Emeritus of Agricultural Chemistry at the College of Agriculture, University of the Philippines. He had specialized training at the University of Minnesota, Columbia University, Cornell University Medical School and Japanese Imperial Institute of Nutrition.

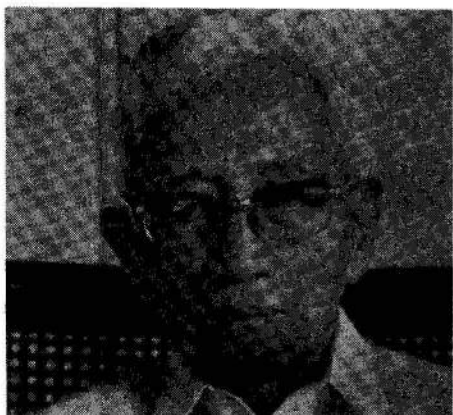
Born 88 years ago in Calumpit, Bulacan, Dr. Santos obtained both his Bachelor of Arts (1914) and Master of Science

WHO in SCIENCE, WHO'S WHO in the WORLO, elected to the Phi Kappa Phi and Phi Sigma Honorary Biological Society, UNESCO Pool of International Consultants, WHO Advisory Panel on Cardiovascular Disease and Charter Member/Fellow in different American scientific associations.

Presently he holds some 15 vital positions — government and private, among which are: Professor of Pharmacology and Medicine, U.P. College of Medicine; Head of Service, Dept. of Medicine, Polymadic General Hospital and Member, Active Staff, Philippine Heart Center for Asia.

His involvement is indeed a manifestation of zeal and dynamism, Dr. Dayrit's total devotion to his profession.

Santos, Ph.D.



(1914) degrees from the U.P. Later, he earned his Doctor of Philosophy from Yale University.

He made comprehensive studies on Philippine nutrition problems. These included the chemical composition of Philippine foods, amount of nutrients in Philippine food materials, nutrition problems among the Filipinos then, some probable effects of one-sided diets and the present status of nutrition work in the Philippines. Along this line, he conducted studies on nutrition plans/food intakes of the Philippine athletes delegation to the Far Eastern Olympics in 1930, and again among the inmates at the Bilibid prison as well as those of the Correctional Institute for Women, children in Welfareville, trainees and enlisted men of the Philippine Army.

Proper nutrition program and dietary habit of the laboring class was his major concern as reflected in several of his projects in the different parts of the country, namely, Sta. Catalina, Ilocos Sur; Paoay, Ilocos Norte; Pototan, Iloilo; Paco, Manila; Calabanga, Camarines Sur; Los Baños, Laguna and Ramain, Lanao.

Beriberi, one of the prevalent diseases then spurred a series of researches of his as well as the establishment of Bataan Enriched Rice Project where he was a consultant. His researches on beriberi includes vitamin B contents in some plant sources, in tiki-tiki extracts, in glutinous rice, of some fruits and vegetables,

(Continued on next page)

Joventino Soriano, Ph.D.

Dr. Joventino Soriano's fondest hope during his active period of research work is to be able to attain the goals of his current projects; that is, induction of protein-rice strains of crop plants for improving existing varieties. Rice being the staple food of millions of Filipinos, Asians and some parts of the globe, and considering the protein deficiency of their diet, he believes that a high protein rice strain or variety will probably solve more protein insufficiency in the world.

A Ph.D. in cytogenetics and mutation research, he has devoted more than 30 years of his life in research work. Development of techniques toward effective and efficient, mutagenic treatment which he had espoused in his researches, have been recognized in radiation circle in different parts of the world. This is shown in his many appearances in international conferences where his papers were presented and discussed. And on many occasions he was invited to workgroup meetings in the headquarters of the International Atomic Energy Agency in Vienna to assess, evaluate, and plan the world's progress in mutation induction. Generally, these workgroup meetings are small groups of specialists whose works have been recognized by their peers.

His paper — "Modifying the Effects of Neutron on Rice Seeds by Post-Treatment with Chemical Mutagens", got enthusiastic response from his peers in international circles. Factly, it opened the way to a new technique as well as new concepts in mutation induction. He describes the method thus—

"It consists of exposing pre-treated seeds (14% moisture content) at 75% level of LD 50. After irradiation, the seeds are treated with a chemical mutagen at a sub-lethal dose 9x (a maximum of LD-50 dose), washed for two hours in water at 30°C and planted immediately in soil or blotting paper."

"The frequency of seedling mutations is the M₂ which was increased by a factor



of 3-5 over those treated only with radiation or chemical mutagens. A cytological examination of roottips of M₁ seedlings showed very low frequency of chromosomal aberration compared with either radiation or chemical mutagen alone.

"It is believed that further treatment with a mutagenic agent after neutron or gamma irradiation provides an opportunity for repair of genetic damage judged from the response of the controls. On the other hand, a long period of post-irradiation rehydration or washing increases biological or even genetic damage."

With this technique available, it is now time to use them in the induction of useful mutations in crop plants.

A devoted academician, he has been in the teaching profession since 1949, and on various occasions held Administrative positions, in the U.P. He said, hinders the progress of an individual in his research career. Our society should provide equal, if not more incentives to research work than administrative work, he added. He immediately remarked, however we are gradually going into this situation where researchers are given due recognition in the form of cash awards and membership to the National Academy of Science and Technology and many others.

(Continued on page 7)

De La Salle U Honors Dr. Belardo with Testimonial Dinner

"I am at Your Service" — Dr. Luz Oliveros-Belardo

(Following is the remarks delivered by Dr. Luz Oliveros-Belardo, newly-inducted member of the National Academy of Science and Technology, during the testimonial dinner given in her honor on August 8, 1980. This is a reprint from La Salle's *Abot-Tanaw*.

Words are inadequate to express my thanks and appreciation to the Integrated Research Center for the honor bestowed upon me this evening. I feel greatly elated at the thought that with my association with you in the short, short span of just one year, you have accepted and adopted me a supporting element in your structure, however humble the services I have rendered in the development of the research program of the Department of Chemistry of De La Salle University.

It has been a distinct privilege and a great pleasure for me to have worked under the Integrated Research Center and with the faculty and staff of the Department of Chemistry. Now for the sake of reviewing certain highlights which served as challenges that catalyzed past performance, allow me to share with you some recollections.

Last June, 1979, my research project started in a very small crowded room which was dubbed as a "bodega". Being a newcomer at DLSU, there were times when I felt lost. However, it was encouraging for me to have that wiry but gracious and talented little woman, Luz Rivero, start her project in the same bodega with me, she and I sharing the ups and downs encountered within the very limited space and facilities. It was also gratifying to see Brother Winka, Elma and Bob Torres always on the go to have the bodega transformed into what is now a very presentable Faculty Research Room. However, in the process of renovations, we underwent new downs,

among which were the pounding and noise of carpenters' tools, cement dust flying all over the room, installations of new laboratory tables and pipes, etc. It was really a major renovation so much so that we had to migrate from one room to another lugging our fragile glassware and delicate apparatus just so our work would suffer the least interruptions in order to be able to produce some worthy results for inclusion in reports that IRC expected of us every three months.

Anyway, with that new Faculty Research Room things have settled down quite well. However, research needs are endless. (Luz)² meaning Belardo and Rivero, do not seem to be contented yet. They still see several areas in which improvements can be made. Added to their group are several faculty members — Celia, Karen, Maricel, Gerry and others — who, having been inspired to start research work—have posed a formidable group for Rony who has become the Department's most "sought after" figure, being frequently stormed with requisitions for research. But of course, Rony in all his charisma is a very understanding laboratory supervisor and always exudes a hopeful response to our needs in the laboratory.

The progress that the Department of Chemistry is making in research and academics is truly impressive and admirable. The encouragement and support received from IRC and DLSU top administrators have accelerated the momentum of faculty involvement in professional growth and academic advancement. A very noteworthy observation is the camaraderie that exists in the Department, an aspect that makes tasks lighter and enjoyable, redounding to the smooth and prompt fulfillment of commitments.

Mention was made of my membership in the National Academy of Science and Technology, NAST for short. First of all, I hope and wish to see many of you elected members of the Academy, I am often asked, "How do you feel being elected a NAST member?" My answer is: It is indeed very gratifying to realize that my lifelong work as a science researcher has been given recognition by so prestigious body as NAST; therefore, I feel greatly honored and happy at having been elected a member of NAST. Alongside the joy that was generated by my election came the awareness that membership in NAST carries tremendous

F. O. SANTOS. . . (From page 5)

about the common anti-beriberi vitamin containing-fond. He came out with the causes and prevention of beriberi in the Circular No. 14 of the UPCA. He was among the very first to advocate home-gardening, its fruits and vegetables as good source of supplementary vitamins. Likewise, he investigated carefully the nutritive value of balut, kandule, copra meal, cane sugar and Philippine cereals. Eventually, he established the chemical composition of some Philippine food materials, the food chemistry in rural areas, and an inventory of the Ilocano diet.

Put to print here and abroad were some of his works among which are "Some Plants Sources of Vitamins B and C" and "The Influence of Meat Upon Physical Efficiency."

His involvement in mathematical and chemical sciences adds up to four years teaching Math and Chemistry, 36 years.

Starting out as Assistant in Mathematics in 1917-1919; then to Assistant Professor in Agricultural Chemistry in 1922-1936, to Associate Professor in 1926-1930 and to Professor of the same subject in 1930-1959. He was Dean, College of Agriculture in 1943-1945 and Head, Department of Agricultural Chemistry in 1929-1955 at the UPLB.

A science mentor since 1915, he has helped mold young minds, many whom are now equally successful in their chosen fields of endeavor.

responsibilities and high expectations. It means COMMITMENT. 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 while ever mindful that God has given man the gift of intelligence and power of reasoning to be able to use wisely and properly the bounty and resources which Mother Earth has received the blessings from above. Thus, whereas in the past I could, by choice, confine my activities within a limited sphere, today I realize that as an Academician, I belong not only to a few, but to a greater number of people who may want and need me. Therefore, I belong to all of you and I am at your service.



RP to Host XVIIth Congress of Pediatrics

NAST Urges RP's Participation at Int'l Center for Chemical Research, Education

A proposal concerning an international center for chemical research and education came up during the 20th session of the UNESCO's General Conference which was held in Paris, last November-December in 1978. The Secretariat was assigned this task: undertake a feasibility study on such center, and came up with a 133-page document.

Anyway, the document proposes the establishment of an international organization for the chemical sciences which would concentrate on developing activities of an applied nature in Third World countries. The modus operandi of such an organization would complement what already exist. Already,

J. SORIANO. . . (From page 5)

A recipient of various honors, fellowships, grants, awards and citations, he considers his election to the NAST as the most important award/citation in his life so far because it gives him the recognition of being a senior researcher—and among the cream of the crop in the science community.

His citation in the International Scholars Directory is likewise a milestone in his life work because it opened his correspondence with other scholars throughout the world.

Dr. Soriano has been a major participant who acted either as speaker, discussant or moderator in local and international meetings and conferences for the past years now.

A writer-researcher invariably both in scientific and popular publications he has also published several books which found their way as useful textbooks.

Presently a professor of Botany in UP, he resides with his family inside the Campus. His wife, the former Beatriz Aglibut also teaches at the same school.

representatives of the professional groups from Latin America, Arab states, Asia and Africa supported the idea. It is a promising development for the expanding chemical activities in their region, they opined.

On the other hand, chemists from both industrialized and developing countries felt that the present proposal was the most likely to attract non-governmental funding because of its minimal overhead costs and its commitment to socio-economic development. Meanwhile, in its draft budget for 1981-83, Unesco will provide seed funding for the first three years of operation.

In reply to NSDB's inquiry on this, the Executive Council stated the willingness of the NAST to participate in the programmes. Two academicians were invited to air their views on this proposal.

There is an urgent need for an international organization for Chemical Sciences in Development, which can serve as a focal point for coordination in harnessing chemical sciences to solve socio-economic problems. This is according to Dr. Clara Y. Lim Sylianco, who even added that there is a need for an umbrella organization that can catalyze greater interactions in chemical sciences between developing and developed countries. Interactions that can lead to new activities for self-sustaining growth in developing countries, she said. This, naturally can help upgrade researches along this line in our country, not to mention that this will encourage more to go into the field of chemical sciences, as well as update the chemical education in the Philippines.

The XVIth International Congress of Pediatrics was held September 7 to 13, 1980 at the Palacio de Congreso in Barcelona, Spain attended by six thousand pediatricians from 90 countries. Immediately before the congress, the International College of Pediatrics held a board meeting, where our national scientist Dr. Fe del Mundo, was presented and accepted as honorary member.

Incidentally, during its closing ceremonies, it was announced that the Philippines was selected to host country the XVIth Congress of Pediatrics scheduled on November 28 to December 3, 1983.

Varied papers were presented during the Pediatrics Congress covering all aspects of the child, from the prenatal period through all the stages of adolescence. The papers varied in scope from the basic and experimental to applied clinical and social researches.

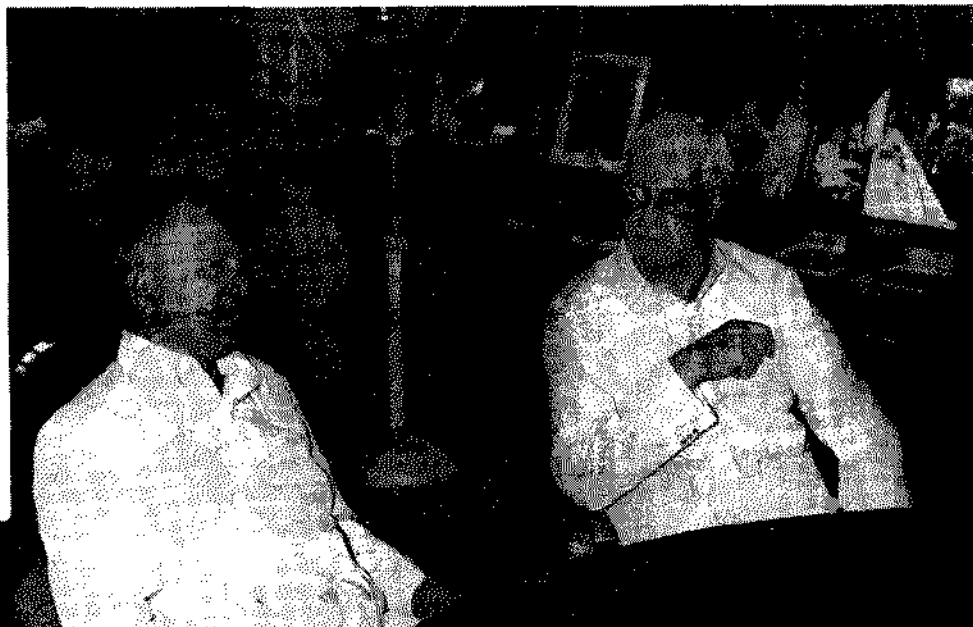
Majority of the papers were highly scientific, advanced and sophisticated since most of the participants came from developed countries. Only a handful of papers dealt with community pediatrics and tropical diseases, which were not attended well.

The Philippines, for its part, came up with two papers — One, on Pediatric and another on Rural Manpower Development.

Her participation in that one-week congress was under the auspices of the National Academy of Science and Technology.

On the other hand, Dr. Bienvenido O. Juliano another Academician supported the ideas embodied in the proposal. He suggested that for flexibility, the participation of the Academy should be on a more case-to case basis.

Lord Todd with Minister Magno at the NSDB.



With the Academicians at the Mandarin Hotel during the signing of the agreement. From left, Dr. G. de Ocampo, Dr. Tito Mijares, Dr. Fe del Mundo, national scientist, the minister and Lord Todd, Dr. Lagmay and Mrs. de Ocampo.

World Federation of Parasitologists Invites Participation

Participation of young parasitologists in future congresses is being sought by the World Federation of Parasitologists in its desire to increase the activities of the federation. To encourage this, cash prizes and certificates are being planned to be awarded to young parasitologists, for the best research work and papers presented at congresses.

The Federation is likewise seeking participation of Parasitologist Associations throughout the world in the forthcoming International Congress of Parasitologist Associations VI (or ICOPA).

The World Federation of Parasitologists' Executive Board met during the 3rd European Multi-colloquium in September 7-13,

1980. Activities of the federation during the past two years were reviewed, including the participation of its president, Dr. Bogdan Czaplinski at the First Annual Presentation of Papers of the NAST held in May, 1979 at the Asian Institute of Tourism in Diliman, Q.C. His paper dealt on the specificity of helminths.

Meanwhile, the federation has proposed to prepare a book containing short biographies of past prominent parasitologists of the world. The volume may either be called "Short Biographies of Prominent Parasitologists", "Who was Who in Parasitology" or "Short Biographical Dictionary of Prominent Parasitologists of the World." It is designed to record the scientific

accomplishments of former colleagues. Each national society should prepare in English a list of candidates. Together with this, should be a short biography of each candidate on a separate sheet of paper.

The biography should contain the following data: Complete name, scientific degrees and titles, nationality, places and dates of birth and of death, main scientific and social organizations, achievements in parasitology, honorary degrees and prizes, photo or portrait if available. In the event that the council adopts this idea, a special committee shall be appointed for selection.

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