A TRBIBUTE

to

Vidya Jyothi Dr. R.O.B. Wijesekera

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for his contribution towards

The Development of Science and Technology in Sri Lanka

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The Ministry of Science and Technology
The National Science Foundation (NSF)
Industrial Technology Institute (ITI)
Sri Lanka Association for the Advancement of Science (SLAAS)
The National Academy of Sciences of Sri Lanka (NAS)

Tribute to an Eminent Scientist

Contribution of Dr. R.O.B. Wijesekera to the National Science and Technology Commission

He brought out a brilliant likeness visualizing developing countries as 'pedestrians' amidst the fast moving vehicles 'the developed countries' on the highway of main stream science. He characterized these pedestrians by their origins and their present dilemmas. Given the intimidating pace on the highway he asked the questions 'How can the pedestrians get into the highway?' Is there any hope at all? What are the choices, What are the opportunities and What are the impediments?'

Fondly called by his friends as ROB, Dr. Wijesekera made a strong plea for a more equitable world using the very tools of S&T that are threatening to widen the inequalities in his recent publication 'Pedestrians on the highway of Global Science' published by COSTED, the Committee on Science and Technology in Developing Countries. This is indeed a Occasional paper that should be read by all scientists who wish to understand the implications of practice and applications of S&T in developing countries.

After returning from Austria where he served as the Special Technical Advisor to the UNIDO Technical Assistance Programmes Dr. Wijesekera took up the post of Chairman, CISIR. Having completed that assignment he was asked to take up a new challenge by the then Minister of Science and Technology Mr. Batty Weerakoon to establish the NASTEC. He became the First Chairman of NASTEC in 1998 when he consented to take up the challenge. He knew that he had a very difficult task ahead of him: setting up an Apex Body for the Development of Science and Technology in Sri

Lanka with absolutely no resources. But he took up the challenge and by end of 2000 he was able to get the required staff to start operations at NASTEC. Today NASTEC has the full complement of staff and has been slowly but surely moving forward towards it mission.

Having attended the World Conference on Science for the 21st Century, held in Budapest, Hungary in June 1999 along with the then Minister of Science and Technology Mr. Batty Weerakoon and Commissioner Prof. Tissa Vitarana, Dr. Wijesekera pioneered the concept of the Young Scientists Forum (YSF), a forum for the younger generation of scientists to view their opinion on S&T matters both within and outside their respective institutions. This I believe is one of the most significant achievements of NASTEC, whereby the young scientists of the country have been given the opportunity to actively participate and contribute towards the decision making process in matters pertaining to the development of S&T. Thus YSF is considered important as a means of fulfilling some of the requirements of the S&T Act, especially in relation to popularization of science, foresight initiative and inculcating a scientific culture amongst the Sri Lankan people.

During his tenure as the Chairman of NASTEC he espoused a clear vision towards the development of S&T in Sri Lanka. He knew that his task was difficult but believed that this task would require the support of the scientific community. Therefore, he strongly believed in consultation and this led to the formation of two more consultative groups at NASTEC, the Forum of Directors (FOD) and the Research Leaders Forum, which was later renamed as the Senior Scientists Forum (SSF).

Apart from his contribution to science in Sri Lanka Dr. Wijesekera has been the beacon of light both to NASTEC staff and other scientists in the country. His mild mannerism in dealing with people made him a 'father

figure' to most of us at NASTEC. His knowledge and wisdom motivated and inspired us to achieve our goals and objectives. Dr. Wjesekera has been our guide, mentor and friend.

He was excellent in decision making and it was his meticulous approach that helped steer NASTEC to what it is today.

National Science and Technology Commission
Nawala, Rajagiriya

CONTRIBUTION OF DR. R. O. B. WIJESEKERA TO THE NATIONAL SCIENCE FOUNDATION (NSF)

In the early 1960's the scientific community of Sri Lanka felt the need for an apex body to nurture the "research culture" or the "research tradition" in this island. A key figure in the scientific community Dr. R. O. B. Wijesekera, as the Vice President of the Association of the Government Scientific Officers, in his address at the Annual General Meeting in 1965 gave the outline of the functions to be carried out by this envisioned institution.

In his speech he stressed the importance of Science and Technology for the survival of a nation. Dr. R. O. B. Wijesekera is one of the scientists who put forward the idea of a "National Council for Scientific Research", as an utmost priority not only to advise the government on science policy, but also to execute national scientific research priorities and to put the available resources to the best possible use from the standpoint of national development.

These ideas, strengthened by the agitation of the Ceylon Association for the Advancement of Science (now SLAAS), laid the corner-stone to a new era in the field of Science and Technology, the setting up of the National Science Council (NSC, presently the National Science Foundation) in 1968. Since then Dr. Wijesekera has been involved in different capacities in the work of the NSC, the Natural Resources Energy & Science Authority of Sri Lanka (NARESA), and the National Science Foundation (NSF) for the development of Science and Technology in Sri Lanka.

Dr. R. O. B. Wijesekera was a member of the first Editorial Board of the Journal of National Science Council of Sri Lanka, during 1973 and 1974, where he gave the benefit of his expertise in the field of chemistry to the NSC. He later served as the Chairman of the Editorial Board of the

journal, strengthening the continuous publication of the journal that is now cited in reputed indices *viz.* Biological Abstracts and Chemical Abstracts.

Dr. R. O. B. Wijesekera also gave leadership to the institution by serving as the Acting Secretary General of the NSC. Again, in 1994 he was appointed a member of the Board of Management of the Natural Resources, Energy and Science Authority of Sri Lanka where he served until 1998. Dr. Wijesekera played a leading role in the formulation of the National Science & Technology Policy and Plan of Action as a member of the Committee on Science & Technology Policy appointed in 1995 by the Minister of Science, Technology & Human Resource Development.

Dr. Wijesekera continues to serve the cause of science through the NSF by giving his time and expertise as a referee and reviewer of research papers, research proposals and in other ways when invited to do so.

The NSF wishes to record its appreciation to Dr. R. O. B. Wijesekera for his contributions over a period of several decades.

National Science Foundation
Colombo

Contribution to the Industrial Technology Institute (ITI) (formerly the Ceylon Institute of Scientific & Industrial Research)

Dr. R.O.B Wijesekera, joined the Ceylon Institute of Scientific & Industrial Research in June 1966 as a Senior Research Officer, leaving the services of the Medical Research Institute, where he was then employed. He graduated from the University of Ceylon, Colombo with a Special Degree in Chemistry in 1954, and obtained his doctorate in 1958, from the University of Sheffield, England. At the CISIR, the Director of the Institute Dr. George Ponnamperuma, having recognized his capability, gave him a free hand to build up a new section of Natural Products, which he did most ably. The planning and layout of the entire laboratory was carried out under his direction. He was appointed Head of the Section during the same year. The first two research officers recruited to work under him were Mr. Upali Senanayake and Mr. V. Pasutpathy.

Initially, the work in the section was concentrated on analytical techniques such as Thin Layer and Column Chromatography. In 1968 Dr. Wijesekera went overseas as a Postdoctoral Research Fellow to the Department of food Science & Technology, University of Davis, California. There he followed an intensive course of study on advanced Gas Liquid Chromatographic (GLC) techniques under Prof. Clinton O. Chichester. On his return to the CISIR in 1968, he imparted the fruits of the knowledge gained through his overseas studies to the section, by introducing systematic GLC analysis through the subsequent purchase of the first Varian Gas Chromatograph to CISIR.

During the gestating period of the newly set up National Products Section, cocoa beans was the substance under study. One aspect was the analysis of caffeine, theobromine and theophyline and three purine based chemicals found in

cocoa seeds. TLC methods were developed for their analysis and also for the analysis of the various sugars found in the seed pulp. A number of research papers were published in the Journal of Chromatography on this work. Work was also carried out on the rate of production of these chemicals from the formation of the fruit until maturity. To reap some practical benefits from this work, extraction methods for caffeine, theobromine and theophyline from waste cocoa shell were worked out, as these were pharmaceutically important chemicals, and the methodology was transferred to the private sector. It is noteworthy that even at this time, Dr. Wijesekera realized that laboratory research must eventually leave the bench and end up in Industry.

With the acquisition of the Gas Chromatograph and Infra-Red Spectrometer (IR), Dr.Wijesekera then directed his attention to local aromatic plants and spices with the international market in view. Laboratory scale methods developed for the distillation of essential oils from plants, were scaled up to industrial level. The first plant selected was cinnamon, the selection being based on the fact that Sri Lanka produced 80% of the world's supply of cinnamon at the time. Studies were based on cinnamon bark oil, leaf oil and root oil – each of which had varying chemical compositions. Dr. Wijeskera's work on this was widely acclaimed and he received several accolades, particularly after his monograph on the subject.

Officers of the caliber of Mr. A.L Jayawardene and Mr. V. U. Ratnayake were for long years after, known as Dr. R.O.B's faithful protégés. They were followed by Miss Lakshmi Rajapakse, Mr. Drupathy Fonseka, Mr. D.V.M Geevaratne, Mr. Anura Senaratne, Miss Kanthi Fonseka and Mr. Chandraratne. Several students also worked as Research Assistants under various research grants under his direction.

The areas of research gradually expanded and a study of local citronella oil, lemon grass oil and eucalyptus oil were undertaken. Mr. Ratnayake, Mr. Geevaratne and Miss Rajapakse, selected local medicinal plants as their field of study and today Dr. Lakshmi Rajapakse (now Arambewela) has become one of the leading researchers in this field in the country. The first plants worked on were Cinchona, Nux vormica and Catherantsu and a series of booklets were complied under the leadership of Dr. E.R. Jansz a subsequent Head of the Section.

Dr. Wijesekers's immense contribution in building up a knowledge base on local essential oil bearing plants and medicinal plants, was recognized internationally by being presented with the Guinness Award for Scientific Achievement in 1974. With this award he had the opportunity to visit many famous Indian essential oil industries accompanied by Mr. Kelkar, a leading Indian flavour and perfume expert.

Dr. Wijeseker's many international contacts were instrumental in obtaining training for research staff, not only of the Natural Products Section, but of the entire CISIR. One in particular, was his association with Prof. Sandburg of the Uppsala University in Sweden, through which several research officers were able to follow both formal and informal study courses in Sweden. Due to his immense contribution to the Institute, Dr. Wijesekera named the new laboratory of the Natural Products Section the Fin Sandberg Laboratory.

The Natural Products Section continued to prosper with Dr. Wijesekera at the helm. The Section grew in prestige and was recognized as a core centre for natural products research. Several scientific papers were published in international journals. Researchers vied to work under Dr. Wijesekera as it was considered a privilege to be selected to work under him. He had the enviable ability to guide and

motivate his students to greater heights, imparting in them a keen interest in research. The NPS group was known to burn the midnight oil in the cause of research - and if they also enjoyed this nocturnal activity his team and a familiar sight at CISIR was Dr.Wijesekera 'batting' away to an enthralled audience on one of his favorite subjects - cricket. However, in as much he was revered, he was nevertheless able to foster a father-child relationship with his team and the NPS group was almost envied for being a noisy but happy group.

His success as a team leader and guide is amply demonstrated by the heights to which many of his team members Upali Senanayake, V.U. Ratnayake, A.L Jayawardene and Lakshmi Rajapakse successfully completed their doctoral degrees in the field of natural products. They are all renowned for their expertise. Of his other students. Dr. Azeez M. Mubarak, is now the Director of the Industrial Technology Institute, Dr. Rosh Chandraratne is the Head of a research team in a international pharmaceutical company and Dr. Anura Senarathe has already received much acclaim in his field of pharmaceutical research. Several of his other students are now occupying research positions all over the world.

Dr. Wijesekera left the CISIR in July 1976 to take up a consultancy post in British Guyana, and from here his international research career was launched. On his return to Sri Lanka, he once again took up the reins of CISIR, this time as Chairman of the Institute, from 1994-1998.

Compiled by Ms. Dilmani Waransuriya.
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A tribute from the National Academy of Sciences of Sri Lanka

At a time when a significant item on the agenda of the National Science Academy of Sciences of Sri Lanka is the question why science in the country has not been as successful as in some of our south Asian neighbors, it is appropriate for the Academy to recall the strenuous efforts of Dr. R.O.B. Wijesekera, over the last several decades, to have science and technology accepted as a crucial force in the development of the national economy. This he has done not only from within the walls of what was, until recently, The Ceylon institute of Scientific and Industrial Research, first as a working scientist and then as Chairman, but also on the broader national scene where he became to many of us a rallying point in the on-going struggle against disinterest and recalcitrance in high places.

He was in the vanguard of the movement to have science and scientific research enthroned in the enactments of Government, and the fact that we have now had a Ministry for Science and Technology in existence for a quarter of a century, is to a large part, a result of this movement and his wise piloting of it. Another result is the establishment of the National Academy of Sciences, of which Dr Wijesekera is a founder fellow.

In the Academy, he has filled and continues to fill, admirably the role of guide, philosopher and friend. Several of the Academy's initiatives bear his stamp. He has always been outspoken and forthright in Council and meetings of the Academy and not being one to suffer fools gladly, or indeed at all, he has never been slow to chastise and criticize when necessary. Equally he has never withheld credit when this is due.

My knowledge of him spring from on easy relationship where we could discuss men and matters, half bantering, but always with an underlying seriousness of purpose. I spoke to him regularly on policy and other issues when he was Chairman of NASTEC and served with him on a Presidential Task Force connected with science and technology. I found him ready to share his not inconsiderable knowledge and more importantly his wisdom.

Awards, honors, degrees and honorifics sit lightly on ROB Wijesekera. He trod the corridors of power with self-assurance and integrity, and certainly cannot be described as a quick, fond lackey who fetched and carried.

I am fond of the story, perhaps apocryphal, perhaps not, that, when as Chairman of NASTEC he was summoned with other luminaries to meet a youthful new Minister of Science and Technology, he remained steadfastly seated while the other elderly persons present were stumbling to their feel. When each had to introduce themselves, ROB gave his name and designation, and added the single, explanatory comment: "Minister, I belong to your father's generation"

This story, while illustrating his lack of obsequiousness, demonstrates also a tidiness of thought that can get straight to the point, with no attempt at messing about in the foliage. He is the perfect counterpoint to leaden bureaucracy. To him a spade is a spade, not an agricultural implement.

I have valued his advice, which I have found remarkably perspicacious. Five years ago, he first suggested to me that I write a book on the beneficial effects of tea drinking, which with a colleague I subsequently did (Tea and Health, WWD Modder and AMT Amarakoon 2002. The Tea Research Institute of Sri Lanka). To our delight, people here and abroad keep telling us that they find the book useful.

ROB's interests extend not only to tea and herbal science, but to science and technology in general, and to the particularity of ayurveda. His advocacy of ayurveda to a mostly dismissive, westernised mind-set is passionate and unrelenting.

That in the end is the measure of the man: passionate and unrelenting.

The Academy joins all who wish Dr Wijesekera well on this celebratory occasion. Long may he serve our country, doing what he does so well in that characteristic fashion of his.

Dr. W W D Modder
President, The National Academy of Science
of Sri Lanka

A tribute from the Sri Lanka Association for the Advancement of Science

Sri Lanka Association for the Advancement of Science is pleased to be associated with the occasion to felicitate Dr R.O.B. Wijesekara for over 50 years of dedicated service to science and technology and the scientific community both in Sri Lanka and overseas.

He was a very active member of the SLAAS contributing to its development and progress from the time he became a member immediately after graduation. He has held positions of responsibility as the General President, General Secretary, Sectional President and a Council member for many years. He was also a member of most of the statutory Committees of the SLAAS.

He had to undertake the responsibility of the General President, nearly an year before he was due take it up but he steered the activities effectively and productively. It was during his tenure as president that the S&T Ethics Committee was set up to draw up a code of ethics for scientific professionals. Dr Wijesekera had to consolidate the activities of the Media Resource Service one year after inauguration.

His distinguished services to S&T as a leader, policy maker, researcher, innovator and a contributor to industrial development are globally recognized. His accomplishments have been duly acknowledged by a number of Universities both in Sri Lanka and abroad by honouring him with Doctor of Science degrees. SLAAS was privileged to have his services as the General President and we wish him good health and more years of valuable service to the scientific community.