

Robert Maybury's contributions to IOCD



Robert Maybury
29 January 1923 – 12 April 2021

Background

Robert Harris Maybury (born in Lehigh, Pennsylvania, USA) trained as a chemist, receiving a PhD from Boston University in 1952 in physical chemistry, with Prof. Lowell Coulter. He then held a postdoctoral position in protein chemistry at Harvard University, 1951-53. From 1954 to 1963, he taught analytical and physical chemistry and carried out research in protein physical chemistry at the University of Redlands, California and also worked for a summer period in 1955 in the laboratory of the Nobel laureate Linus Pauling. While at Redlands, Maybury developed interests in encouraging students in research and in communicating chemistry, science and education. In this period, he also began to take note of the importance of science in foreign affairs and the problems faced by scientists in low- and middle-income countries.¹ He undertook science missions to Pakistan in 1962 and to Nicaragua, Honduras, Guatemala, El Salvador and Costa Rica in 1963.

When a former colleague and friend at Redlands, Albert Baez,² moved to UNESCO in Paris and set up a science teaching division there, Maybury accepted the invitation to join him as the team's chemist in 1963. In 1972-73, he took leave to work for the Ford Foundation on a 1-year study of the Foundation's projects for improving science education in developing countries, with a particular focus on Argentina, Brazil, Lebanon, the Philippines and Turkey. This led to the publication of a book, *Technical Assistance and Innovation in Science Education*.³ Following this, he was appointed Deputy Director of the UNESCO Regional Office for Science and Technology for Africa (ROSTA), in Nairobi, Kenya, where he served from 1973 to 1980. He described this work in a short article⁴ contributed to *Sixty Years of Science at UNESCO, 1945-2005*, in which he highlighted the success in helping to establish and then, from 1980, host the secretariat for the African Network of Scientific and Technological Institutions (ANSTI). In 1980 Maybury returned to UNESCO headquarters, where he worked with Sidney Passman and Jacques Richardson in the field of science and society, serving as Managing Editor of the journal *Impact of Science on Society*.

After retiring from UNESCO in 1983, Maybury joined the World Bank in Washington DC as a consultant, working with the Science and Technology Advisor, Charles Weiss and his colleague, Mario Kamenetzky, to create courses on Science and Technology for Development, and lecturing in many low- and middle-income countries. Maybury and Kamenetzky subsequently published a series of articles on the management of technology and natural resources.⁵

Robert Maybury and IOCD

The International Organization for Chemical Sciences in Development (IOCD) was launched in Paris in 1981 following meetings convened by UNESCO. With the Nobel laureate Glenn T. Seaborg as its Founding President and Pierre Crabbé, a distinguished organic chemist, as its Founding Executive Director,⁶ IOCD became registered as an international NGO in Belgium, but from 1985 was provided with Secretariat facilities by the government of Mexico and was headquartered in Mexico City. IOCD was the first international NGO to be concerned specifically with promoting capacity for and by chemists in low- and middle-income countries.^{7,8} The initial working groups established were focused on the discovery of potential new drugs for tropical diseases (chaired by Sidney Archer, Rensselaer Polytechnic, USA) and fertility regulation (chaired by Josef Fried, Chicago University, USA).

When Crabbé died in a traffic accident in 1987, the Executive Committee of IOCD identified Maybury to succeed him as Executive Director and Maybury took up this post in 1988, moving IOCD's headquarters to the USA where he lived. He used his extensive experience in science research, education and policy and wide contacts among scientists to build on the foundations already laid.

Maybury soon created several additional working groups to round out IOCD's attention to the needs and limited resources of low- and middle-income countries, convincing outstanding scientists to accept leadership of these new groups. He also worked with IOCD officers – in particular, IOCD's President Glenn Seaborg and his successor, the Nobel Laureate Jean-Marie Lehn, and with the Treasurer, Elkan Blout (Dean for Academic Affairs at Harvard School of Public Health), in obtaining grants for IOCD.

A working group on plant chemistry was set up under Sir Leslie Fowden, Director of the Rothamsted Experimental Station, UK, later to become a working group in natural products chaired by Kurt Hostettmann, Director of the Institute of Pharmacognosy and Phytochemistry at the University of Lausanne, Switzerland. This group established the practice of holding an international conference on natural products every 1-2 years in a different part of the world, which involved both research presentations on the isolation, structure elucidation, screening and potential pharmacological use of natural products and practical training workshops on relevant laboratory techniques.

In 1992, along with the International Science Programme (Uppsala, Sweden), IOCD supported the launch of the Network for Analytical and Bioassay Services in Africa (NABSA).⁹ This became based at the University of Botswana, initially headed by Berhanu Abegaz, a chemist who later became Executive Director of the African Academy of Sciences. NABSA promoted the development of scientific activities in Africa by offering analytical, bioassay and literature support services to chemists, as well as joint short-term intensive research at the well-equipped laboratory in Botswana and the professional development of young scientists by arranging sub-regional symposia. From 2005, NABSA's focus shifted into research cooperation with research groups in selected countries and institutions in order to help build and strengthen capacities and increase the overall impact of the collaboration.

Two environmental programmes were added under Maybury's leadership. In 1993, IOCD and IUPAC formed a Joint Working Party on Environmental Analytical Chemistry, with Walter Benson, a retired US Food and Drug Administration scientist, becoming chairman. Workshops were organized in many different countries to provide analytical chemists and laboratory managers with up-to-date information and methods related to environmental analytical chemistry. In 1992, the US National Academy of Sciences invited IOCD to cooperate with Thomas Eisner of Cornell University in setting up a global body that could promote expansion of bioprospecting in low- and middle-income countries. IOCD accepted this challenge and organized the Biotic Exploration Fund as an IOCD working group, chaired by John Kilama, a Ugandan chemist living in the USA. Over a number of years, this group collaborated with scientists, institutions and governments, including in South Africa, Kenya, Guatemala and Uganda, who were interested in planning a national bioprospecting programme.

In 2004, IOCD established the Books for International Development project to help organize the transfer of large quantities of journals and technical materials to low- and middle-income countries, organized by James Cosentino at the University of Millersville, USA. Through the assistance of Alexandre Pokrovsky (Russia: formerly Director of the Division of Basic and Engineering Science, UNESCO), IOCD also promoted the use of micro-scale chemistry, helping to reinforce an international programme¹⁰ supported by UNESCO to provide low-cost, small-scale equipment to enable students to gain hands-on practical skills in experimental chemistry even in very resource-poor settings.

Writing on the occasion of IOCD's 20th anniversary, Lehn, Blout and Maybury¹¹ noted the changing nature of challenges and, based on a critical examination of IOCD's successes to date, the need for further engagement both with scientists in countries with whom IOCD wished to work and with other agencies with whom alliances could be forged.

On the management side, Maybury had no staff to support him, but was responsible for raising funds from public and private sources and for the overall administration of the projects carried out by each of the working groups of scientists that made up IOCD. At the same time, he took care of the communications functions, including preparing an IOCD quarterly newsletter and sending this to a mailing list of about 300. He cultivated the long-standing relationship IOCD had with IUPAC as an affiliate and collaborator, and he made periodic reports to IUPAC on IOCD's progress, some of which were published in the IUPAC journal, *Chemistry International*.^{11,12,13,14}

In the early 1990s, taking advantage of the internet and world-wide-web, Maybury adopted email and, after himself learning html computer language, established IOCD's website (www.iocd.org), identifying an internet organization that was willing to host the site as a contribution to IOCD (continuing to the present day) and recruiting a volunteer webmaster (Yves Beaudoin) who has also continued to provide his free service to the present. Having engaged with the UK's Open University and development of distance learning programmes while at UNESCO, Maybury was enthusiastic about the potential of the internet to make knowledge and training more available to chemists in low- and middle-income countries. Carlos Rius (UNAM, Mexico City), who was IOCD's Secretary for many years, established on-line tutorials in chemistry in Spanish in a website linked with IOCD's. Maybury encouraged the work by a long-time IOCD member Lester Mitscher, a prominent medicinal chemist at the University of Kansas, to develop distance education programmes on this subject.

Throughout his period as Executive Director, Maybury remained closely engaged with all aspects of the work and the activities of the burgeoning groups being formed, as well as with the overall management of the organization. As an example, he took a close interest in the progress of the working group on fertility regulation, participating in a workshop of the group held in New Haven on the shore of Lake Michigan in 1994 which involved the group's chair (Josef Fried), vice-chair (Stephen Matlin) and biologist (James Cosentino), who were reviewing progress and developing plans for further work on compounds for male fertility regulation.



Workshop of IOCD working group on fertility regulation, New Haven 1994
Left to right: Robert Maybury, James Cosentino, Josef Fried, Stephen Matlin

In 2008, after 20 years as Executive Director of IOCD, Maybury stepped down and was succeeded in 2009 by the eminent organic chemist Alain Krief at the University of Namur, Belgium. In recognition of his outstanding service, Robert Maybury was granted the status of Emeritus Executive Director in 2010. He continued to take a keen interest in IOCD affairs for several more years, offering comments and suggestions. Following his death on 12 April 2021, he is deeply missed and fondly remembered by all those who knew and worked with him in IOCD.

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Secretary, IOCD
April 2021

Suggested citation:

S. A. Matlin. *Robert Maybury's contributions to IOCD*. International Organization for Chemical Sciences in Development, Namur, 2021. <http://www.iocd.org/WhatWeDo/publications.shtml>

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