

ORIGINS AND EARLY HISTORY OF THE USJCMSP

In Japan, during the 1930s and 1940s, a range of infectious diseases posed serious problems to public health. In 1947, to address the situation, the Japanese government established the National Institute of Health.¹ Through these and related efforts, many infectious diseases that had plagued Japan came under control during the 1940s and 1950s. By the 1960s, the attention of prominent Japanese physician-scientists was turning to other health problems, in addition to infectious disease. These scientists included several original members of the Japanese Delegation, Delegation Chairman Dr. Toshio Kurokawa, then director of the Cancer Institute Hospital in Tokyo; Dr. Shuji Hasegawa, president of Gunma University in Maebashi-City; and Dr. Keizo Nakamura, director of the National Institute of Health.

Meanwhile, in the United States, a group of U.S. physician-scientists—Drs. Colin MacLeod, Theodore Woodward, Ivan Bennett Jr., James Shannon, and their colleagues—sought ways to address the challenges of infectious disease on an international scale. After World War II, multiple international, health-related organizations had come into being, in part because diseases such as cholera, malaria, and other infectious and parasitic diseases were taking a heavy toll throughout Asia. In 1959, the U.S. Department of State had asked then-NIH director Dr. Shannon to develop a program affiliated with the Southeast Asia Treaty Organization (SEATO) to cope with the area's devastating health problems.² In 1960, Dr. Joseph Smadel (who was associate director of NIH in the United States from 1956–1960, and who had served in World War II with Dr. Woodward), Drs. Fred Soper,³ MacLeod, Woodward, and others helped establish the Cholera Research Laboratory, a cholera treatment and research facility in Dacca, East Pakistan (now Dhaka, Bangladesh).

The Cholera Research Laboratory, although difficult to set up because of many logistical problems, became a leading facility for clinical research on cholera. The personal and professional connections of its founders proved fruitful when the USJCMSP was established five-years later. The NIH Cholera

Advisory Committee, the USJCMSP Cholera Panels, the Johns Hopkins University International Center for Medical Research and Training, in Calcutta,⁴ and the Cholera Research Laboratory in Dacca pooled their resources to facilitate rapid progress in the treatment and study of cholera.⁵ (The Dhaka, Bangladesh, facility thrives today, with wide international support, and has been renamed the International Center for Diarrheal Diseases Research, Bangladesh, or ICDDR,B.)

Another development helped set the stage for the formation of the USJCMSP. According to a 1999 paper coauthored by Dr. Takashi Sugimura, President Emeritus of the National Cancer Center Research Institute in Tokyo, a bilateral program called the U.S.–Japan Cooperative Science Program served as an immediate forerunner of the USJCMSP.⁶ (Dr. Sugimura was a member of the Japanese Environmental Mutagenesis and Carcinogenesis Panel from 1972–1989, and a member of the Japanese Delegation from 1988–2001). The U.S.–Japan Cooperative Science Program was formed in 1961 when Japanese Prime Minister Hayato Ikeda and U.S. President John F. Kennedy met in Washington, D.C., to promote scientific collaboration between the two countries. Because the 1961 program involved various fields of science, the Japan Society for the Promotion of Science⁷ and the U.S. National Science Foundation^{8,9} were the responsible organizations. The U.S.–Japan Cooperative Science Program continues to function, and now serves as an important bilateral exchange program in science and technology.

It is widely assumed that, behind the scenes on the American side, Dr. Colin MacLeod^{10,11} devised the plan for what would soon become the USJCMSP. Dr. MacLeod served in President Kennedy's Office of Science Policy and continued as a member of that office after Kennedy was assassinated in November 1963, and Vice-President Lyndon B. Johnson was named U.S. President. Unfortunately, no official records are available that specify MacLeod's role in

proposing the USJCMSP. [See PROFILE of Colin MacLeod, p. vii].

“The idea for the USJCMSP was developed by Colin MacLeod who was then Deputy Director of the U.S. Office of Science and Technology,” said Dr. Charles Carpenter in a July 2004 interview. “Developing a bilateral medical research program was a positive thing to do.” Dr. Carpenter was U.S. Chair of the Cholera Panel from 1965–1972, served as a member of the U.S. Delegation from 1972–1989, and was Chairman of the U.S. Delegation from 1990–2000.

On January 12 and 13, 1965, U.S. President Lyndon B. Johnson and Prime Minister Eisaku Sato of Japan met in Washington, D.C., to discuss a range of issues important to both countries. At the conclusion of the conference, the two leaders issued a 14-point joint communiqué that, in addition to describing other international issues, established the U.S.–Japan Cooperative Medical Science Program. Unlike its more broadly concerned precursor, the USJCMSP was designed to focus on health issues important in Southeast Asia. President Johnson’s authority to establish the bilateral program was granted by the International Health Research Act of 1960, PL 86-610.¹² In the United States, the Department of State helped work out the details of the Program. In Japan, the Ministry of Health and Welfare and the Ministry of Education played key roles. Paragraph 13 of the 1965 Johnson-Sato Joint Communiqué states:

The President and the Prime Minister, mindful of the many areas of human health which are of great concern to all the peoples of Asia, agreed to undertake a greatly expanded program of cooperation in medical science with respect to such diseases as malaria, cholera, schistosomiasis, tuberculosis, and stomach cancer, in addition to cooperative efforts on problems of air pollution and pesticides. As a first step to implement the agreement, they agreed to convene a conference of the foremost medical scientists from the United States and Japan to work out the details of the new program for discussion with other governments concerned.¹³

“Johnson and Sato gave critical impetus to important and often-neglected scientific research,”

said Dr. John La Montagne, in a June 2004 interview. “They set an important agenda.” Dr. La Montagne was Deputy Director of the National Institute of Allergy and Infectious Diseases, a component of the NIH, and USJCMSP Program Director in the United States from 1988–2004.

Soon after the Sato-Johnson summit, Dr. MacLeod and his colleagues organized a series of meetings between American and Japanese scientists and public officials. The meetings resulted in the formation of the U.S.–Japan Joint Planning Committee. From its inception, the organization of the USJCMSP closely resembled that of the U.S. Armed Forces Epidemiological Board (AFEB), in which Drs. MacLeod and Theodore Woodward had participated.¹⁴

“The USJCMSP was an outcropping of the AFEB,” said Dr. Woodward, in a June 2004 conversation about the U.S.–Japan Program. “I would say the AFEB had a lot to do with the creation of the USJCMSP.” Dr. Woodward served as a member of the original U.S. Delegation to the USJCMSP and remained in that capacity until 1995, when he became an emeritus member.

From April 19–21, 1965, three months after President Johnson and Prime Minister Sato issued their joint communiqué, the U.S.–Japan Joint Planning Committee met at the National Education Hall in Tokyo to discuss the scope, organization, and management of the new bilateral program. Dr. MacLeod led the U.S. Delegation and Dr. Toshio Kurokawa led the Japanese Delegation. [See PROFILE of Toshio Kurokawa, p. v.] The new entity, soon to be named the U.S.–Japan Cooperative Medical Science Program, would greatly enhance U.S. collaboration with its close ally, Japan, on biomedical research.

By the end of the April 1965 meeting, the U.S.–Japan Joint Planning Committee had finalized a “Summary of Understandings.” It set forth general guidelines for the scope of the USJCMSP that indicated: (1) the focus of the program would be on diseases prevalent in Asia; (2) the areas of Asia would include, but not be restricted to, India, Pakistan, the Republic of Korea, and other countries in Pacific region; (3) the program’s emphasis will be on medi-

cal research; (4) the program's initial operation will be within a "bilateral governmental framework."¹⁵

The 1965 "Summary of Understandings" also defined the organization and management of the USJCMSP. It called for the establishment of a U.S.–Japan Cooperative Medical Science Committee, with members to be appointed by the U.S. Department of State and the Japanese Ministry of Foreign Affairs. Now known as the Joint Committee, the group's primary responsibilities are to advise the governments of the United States and Japan about broad aspects of the USJCMSP, to set policy for the program, to develop review procedures that could ensure fulfillment of the objectives for which the program was established, to establish a panel for each disease or disease category, and to appoint scientists to conduct an annual review of the scientific progress reported by each panel. The five health problems initially selected for study were cholera, tuberculosis, leprosy, parasitic diseases (particularly schistosomiasis and filariasis), and virus diseases (respiratory and insect-borne). For each disease category, there would be a Japanese Panel and a U.S. Panel, which would function as Joint Panels at annual meetings.

The Joint Committee also determined that each Panel would consist of no more than 10 scientists; five would be chosen by the United States and five by Japan. Each Panel member would serve a term not to exceed 3 years, although their terms could be extended. Scientists from other countries could serve on Panels, and consultants could be nominated by Panels and appointed by the Committee. Separate secretariats in United States and Japan were to be maintained and staffed. Other key elements of the program were provisions for the exchange of visit-

ing scientists between the United States and Japan and the option of supporting special projects in other countries. In the United States, the USJCMSP "... was authorized under the International Health Research Act of 1960, which empowers the President 'to advance the international status of the health sciences, research planning, and research training.'"¹⁶

The U.S.–Japan Cooperative Medical Science Programme [*sic*] held its first scientific meeting in Honolulu, Hawaii, from October 4–7, 1965. The conference included meetings of the Joint Planning Committee, five scientific Panels, and a study group on nutrition. At several plenary sessions, which were alternately chaired by Delegation chairs Dr. Colin MacLeod of the United States and Dr. Toshio Kurokawa of Japan (then also Director of the Cancer Institute Hospital in Tokyo), participants reviewed the current knowledge about the diseases of special concern in Asia. Also, each Panel issued a Joint Panel Report that identified specific areas of health research to pursue. The Japanese Panels reported the results and status of their most recent studies in each of the designated disease areas. Additionally, the Joint Planning Committee recommended that a panel be added to study the problem of malnutrition. The Malnutrition Panel was officially added in 1966.¹⁷

From 1966 through 1970, the USJCMSP Delegations and Panels held annual conferences in alternate sites in the United States and Japan. In 1969, U.S. President Johnson transmitted to Congress the second annual report of the USJCMSP.¹⁸ Several years later, the "United States–Japan Cooperative Medical Science Program: Five Year Report, 1965–1970," summarized the program's progress and developments between 1965 and 1970.¹⁹ In 1971, Dr. MacLeod wrote an editorial in the journal *Science*,

After only five-years of existence, the USJCMSP reported important progress in several scientific areas in its first five-year report, "United States–Japan Cooperative Medical Science Program: Five Year Report, 1965–1970." Dr. Colin M. MacLeod, Chairman of the U.S. Delegation, summarized the most important accomplishments in his 1971 editorial in the U.S. journal *Science*, an excerpt of which is reproduced here:

...[I]n cholera, substantial progress has been made toward understanding its pathogenesis, significantly improved treatment and immunization, and considerable basic physiological knowledge of intestinal fluxes of salt and water has been learned in the process. In leprosy, important new understanding has been gained about the host's immune response and the testing of chemotherapeutic agents. Under the broad heading of malnutrition, studies have resulted in greatly expanded knowledge of the effects of malnutrition in children in mental development, behavior and physical capability. The parasitic diseases filariasis and schistosomiasis have been investigated from the point of view of biological control of vectors and host immune response. In tuberculosis, new information has been gained about cellular immune reactions from tubercule bacilli as well as better animal models for experimental infections. Finally, in virology, progress has been made toward development of a human rabies vaccine, which will be free of contaminants causing serious reactions in patients."

which described the accomplishments of the U.S.–Japan Program during its first five-years.²⁰

Roles of the USJCMSP Joint Committee and Subcommittee. When the USJCMSP was established, each country appointed prominent medical and scientific advisors as Delegates to the Joint Committee,²¹ a practice that continues today. The roles of the Joint Committee are to advise the U.S. and Japanese governments on the scope, direction, and other broad aspects of the Program and to develop review procedures that help fulfill the objectives for which the Program was established. During their annual meetings, the members of the Joint Committee establish and change policy, review the activities of the U.S.–Japan Program, and plan for the future.

At the sixth meeting of the USJCMSP, held June 1970 in Tokyo, Dr. Colin MacLeod chaired the U.S. delegation, and Dr. Toshio Kurokawa chaired the Japanese delegation. At this meeting, the members of the Joint Committee decided to review and evaluate the activities of the Joint Panels on a regular basis. They established a standing Joint Subcommittee on Program Review and Planning “... to carry out program reviews and to recommend further activities.”²² The next year, at their meeting in Bethesda, Maryland, the Joint Committee adopted specific guidelines for reviewing and evaluating the panels.

Since 1971, the Joint Subcommittee of the USJCMSP has met semiannually to make recommendations to the Joint Committee regarding the continuation, addition, or deletion of specific programs. The Subcommittee also deals with all actions prior to the formal Joint Committee Meeting.

Funding for the USJCMSP. When the organization and management of the USJCMSP were first envisioned, the United States and Japan agreed to share the costs of the program and to support the research of each country’s own scientists. In the United States, the International Health Research Act of 1960, PL 86-610, authorized funding. In Japan, the Ministry of Health, Labour and Welfare (previously called the Ministry of Health and Welfare) provided financial support for Japanese scientists working on problems identified by the USJCMSP.

“The budgeting system is very different in the United States and Japan,” said Dr. Tadao Shimaō in

an August 2004 interview. Dr. Shimaō was Chair of the Japanese Delegation from 1992-2001, and a Delegation member from 1977-1993. “Today, the money in Japan comes from three different sources,” he explained.

In Japan, from the creation of the USJCMSP in 1965 until 1981, the Japanese Ministry of Health, Labour and Welfare supported the activities of the Japanese members of the disease-related Panels. When the Immunology Board was established in 1981, the Japanese Ministry of Education, Science, Sports and Culture undertook the support of its activities. The Ministry of Foreign Affairs supports the Joint Committee and Subcommittee meetings, and the International Conferences on Emerging Infectious Diseases.

In the United States, the U.S. National Institutes of Health (NIH) have provided support for U.S. scientists affiliated with the USJCMSP. In 1965, the NIH set aside a special pool of funds earmarked specifically for USJCMSP-related research projects. Initially, the NIH Office of International Research was responsible for the operation of the program. In 1966, the National Institute of Arthritis, Diabetes, and Digestive and Kidney Diseases began to fund the research activities of U.S. scientists on the newly formed Malnutrition Panel. Then, in 1968, the National Institute of Allergy and Infectious Diseases (NIAID) assumed responsibility for overall management and financial support.²³ Another change in U.S. funding occurred in 1972, when the Environmental Mutagenesis and Carcinogenesis Panel was established and the National Institute of Environmental Health Sciences assumed responsibility for its funding.

Involvement of the U.S. Department of State and Japanese Ministries. Since the inception of the USJCMSP in 1965, the U.S. Department of State, the Japanese Ministry of Foreign Affairs, and the Japanese Ministry of Health, Labour and Welfare have played key roles in the Program. Representatives from the Japanese Ministries have often attended major USJCMSP meetings, as have officials from the U.S. State Department and the American Embassy in Tokyo.

For example, William Hall, Minister Counselor for Health, Embassy of the United States of America,

spoke at the 2000 USJCMSP meeting and emphasized the importance of the Program in bilateral scientific exchange and cooperation. And, at the 2001 meeting of the Joint Committee in Princeton, New Jersey, Dr. Takeda introduced Mr. Taichi Ono, First Secretary, Economics Section, Embassy of Japan, who welcomed USJCMSP Delegates on behalf of the

Embassy. At the same meeting, Nancy Carter-Foster, Director of Emerging Infectious Diseases and HIV/AIDS Program at the Department of State, welcomed the participants on behalf of the U.S. Government, and provided information about the Global Trust Fund for HIV/AIDS, Malaria, and Tuberculosis.

Footnotes

- ¹ In 1997, the Japanese National Institute of Health (NIH) became the National Institute of Infectious Diseases (NIID) and focused on the development of antibiotics and vaccines against infectious diseases. NIID (and the former NIH) are research institutions within the Japanese Ministry of Health, Labour and Welfare, which also includes eight other institutes: the National Institute of Public Health, National Institute of Health and Nutrition, National Institute of Health Sciences, National Institute of Mental Health, National Institute of Population and Social Security Research, National Institute of Health Services Management, National Rehabilitation Center for the Disabled, and International Medical Center of Japan. [From Japanese Government.com— <http://www.unitedgovt.com/nippon%20national%20institutions%20j.htm>.]
- ² Woodward, TE. *Research on Infectious Diseases at the University of Maryland: 1807 to 2000*. University of Maryland Medical Alumni, 2000; p. 99–100.
- ³ Fred Lowe Soper (1893–1977) was the first director of the Southeast Asia Treaty Organization (SEATO) Cholera Research Laboratory, a position he held from 1960–1962. During World War II, Dr. Soper became an infectious disease consultant to the U.S. Secretary of War. He joined the U.S. Typhus Commission to help the Allies control typhus fever in Algiers, and worked there with the Rockefeller Foundation’s Typhus Team (RFTT) and the Pasteur Institute using DDT, a newly available pesticide, in an eradication campaign to kill typhus-transmitting lice. In 1944, Soper advised Egyptian officials to use similar eradication techniques to control the *Anopheles* mosquitoes that transmit malaria. [From: <http://profiles.nlm.nih.gov/VV/Views/Exhibit/narrative/biographical.html>]
- ⁴ The Johns Hopkins University International Center for Medial Research and Training began in 1961, and ended in 1971 due to Indo-U.S. foreign policy and security concerns associated with the Pakistan-Bangladesh Civil War. Throughout its 10 years, the Johns Hopkins Center was funded by the NIH.
- ⁵ The United States–Japan Cooperative Medical Science Program: The First Five Years, 1965–1970. Abbreviated edition. U.S. Government Printing Office: 1971 (O-421-976) May 1971.
- ⁶ Sugimura T and Matsushima T. Recollection: Dr. Frederick J. de Serres and the Environmental Mutagenesis and Carcinogenesis Panel established under the auspices of the US-Japan Cooperative Medical Science Program. *Mutation Res* 1999;437:83–7.
- ⁷ “The Japan Society for the Promotion of Science (JSPS) or *Gakushin* for short, is a quasi-governmental organization, established by national law for the purpose of contributing to the advancement of science. It operates under the auspices of the Ministry of Education, Science, Sports and Culture (MEXT). JSPS plays a key role in the administration of various scientific and academic programmes.” [From: Embassy of Japan in Pakistan—Educational Information. http://www.pk.emb-japan.go.jp/EDUCATION/Education_in_Japan.htm]
- ⁸ “In 1961, the U.S. State Department designated NSF to implement the U.S.–Japan Cooperative Science Program. This program supports the exchange of scientists and engineers for cooperative research projects

and bilateral seminars with Japan across all NSF-supported disciplines. Until recently, cochairmen, appointed by the State Department and the Japanese Ministry of Foreign Affairs, provided policy guidance for the program. As of 2000, NSF, with the concurrence of JSPS and of the US Department of State, has decided not to appoint future US Co-chairs and also has taken steps to streamline and revitalize the NSF-JSPS relationship including rethinking the US–Japan Cooperative Science Program.” [From: The U.S.-Japan Cooperative Framework, <http://www.nsf.gov/sbe/int/pubs/02overview/00japan.htm>]

- ⁹ The US-Japan Cooperative Science Program continues today and is the longest running bilateral program of NSF; the majority of activities under the program involve exchanges of a few days (e.g. seminars and workshops) to a few weeks (e.g. collaborative research). Participating scientists totaled over 25,000 from 1961–1998; about 47 percent were from the U.S.” [From –NSF, Hearing On The Global Framework And Modes Of Interaction http://www.nsf.gov/nsb/ise/events_991029s.htm]
- ¹⁰ McDermott W. *Biographical Memoirs: Colin Munro MacLeod*. National Academy of Sciences. Volume 54. National Academy Press. Washington, D.C. 1983. Also available at: <http://books.nap.edu/books/0309033918/html/1.html#pagetop>
- ¹¹ The United States–Japan Cooperative Medical Science Program: The Second Five Years: 1970-1975. Department of State Publication 8864. East Asian and Pacific Series 215. Bureau of Oceans and International Environmental and Scientific Affairs. Released August 1976. See: “Dedication,” p vii.
- ¹² Study Report on U.S.–Japan Cooperative Medical Science Programme: 1965. Japanese Committee; U.S.–Japan Cooperative Medical Science Programme, p. 2.
- ¹³ “Sato-Johnson Communiqué: Washington, D.C. 13th January, 1965.” Available at: Sato-Johnson Communiqué Archive, <http://www.niraikanai.wvma.net/pages/archive/sato65.html>. The Sato-Johnson communiqué also reaffirms the partnership between the two countries, recognizes the valuable role of the United Nations in maintaining world peace and posterity, and expresses concern over the troubling conflict in Vietnam. U.S. Secretary of State Dean Rusk, Japanese Foreign Minister Etsusaburo Shiina, and Secretary-General Takeo Miki of the Liberal Democratic Party in Japan assisted the two heads of state.
- ¹⁴ From 1946 to 1955, Dr. MacLeod was president of the Armed Forces Epidemiological Board, and participated in the post-World War II restructuring of the Board. The effort resulted in an organization comprised of six, disease-oriented “commissions,” on which the original panels of the USJCMSP appear to be based. The AFEB commissions were: (1) Commission on Acute Respiratory Diseases, (2) Commission on Environmental Hygiene, (3) Commission on Influenza, (4) Commission on Malaria, (5) Commission on Tropical Diseases, and (6) Commission on Virus and Rickettsial Diseases. Federal funds provided to the AFEB were used for biomedical research, travel, and honoraria for consultants. Dr. Woodward served as AFEB president from 1976–1978 and again from 1980–1990; he wrote a 50-year history of the AFEB. See: Woodward, TE. “The Armed Forces Epidemiological Board: Its First Fifty Years,” Section 1, Part 1, in: Zajtchuk, R, Jenkins, DP, Bellamy, RF, Ingram, VM, Quick, CMI, and Woodward, TE (eds.), *The Armed Forces Epidemiological Board*, Office of the Surgeon General, Department of the Army, 5111 Leesburg Pike, Falls Church, Virginia, 22041-3258.
- ¹⁵ Study Report on U.S –Japan Cooperative Medical Science Programme: 1965. Japanese Committee; U.S. Japan Cooperative Medical Science Programme, p. 2.
- ¹⁶ Mannina, George J. “United States, Japan Inaugurate Historic Cooperative Medical Research Program.” *The NIH Record*, October 19, 1965. Vol. XVII, No. 21, p. 4
- ¹⁷ In 1997, the Malnutrition Panels were renamed Nutrition and Metabolism Panels.
- ¹⁸ Lyndon B. Johnson: 1963–1969. 685 Message to the Congress Transmitting Annual Report on the United States-Japan Cooperative Medical Science Program, January 16, 1969. The report, dated November 13, 1968, is entitled “United States-Japan Cooperative Medical Science Program: Annual Report to Congress

in Accordance with Section 5(h) of P.L. 86-610 (The International Health Research Act of 1960)” (16 pp., processed). [From - <http://www.presidency.ucsb.edu/ws/index.php?pid=29343&st=&st1=>]

¹⁹ Every five years thereafter, the USJCMSP published a similar report that described the program’s accomplishments for that period.

²⁰ MacLeod, CM. “International Cooperation in Science.” Draft 2 of an editorial for *Science*. 29 June 1971.

²¹ The U.S. Department of State and the Japanese Ministry of Foreign Affairs appoint the United States and Japanese Delegations, respectively.

²² The United States–Japan Cooperative Medical Science Program. The Second Five Years: 1970–1975. Department of State Publication 8864. East Asian and Pacific Series 215. Bureau of Oceans and International Environmental and Scientific Affairs, p.1.

²³ Winnick J. Draft of an article about the 20th anniversary of the USJCMSP for *The NIH Record*, dated July 5, 1985, and obtained in manuscript form from the NIAID Office of Communications.