The creation of the USJCMPSP: Dr. Charles Carpenter, Brown University, has been active in the USJCMPSP since its inception in 1965, is a former U.S. Chairman of the Cholera Panel, and served as Chairman of the U.S. Delegation to the CMSP. Dr. Carpenter attributes the concept of the USJCMPSP to Dr. Colin MacLeod (1-3). Dr. MacLeod was Canadian-born, brilliant, entered McGill University at the age of 16, and completed his medical studies by age 23. In 1934 he joined the hospital staff of the hospital at Rockefeller Institute for Medical Research (now Rockefeller University) where he worked in the laboratory of Dr. Oswald Avery. Avery, Dr. Maclyn McCarty, and Dr. MacLeod were the trio responsible for the series of paper in Journal of Experimental Medicine demonstrating that DNA was the principle responsible for transformation of R pneumococcus into S pneumococcus. Dr. MacLeod subsequently served in President John F. Kennedy’s Office of Science Policy and continued on as Deputy Director of that office after the assassination of President Kennedy in November 1963, and the assumption of the presidency by Lyndon B. Johnson. An important event during Mr. Johnson’s presidency was the meeting on January 12 and 13, 1965, at the National Education Hall, Tokyo, led by Dr. Toshio Kurokawa and Dr. MacLeod as Chairmen of their respective Delegations. This was a key meeting from which arose a “Summary of Understandings” (focus on diseases prevalent in Asia; emphasis on medical research; and operation within a “bilateral government framework”). There was also a definition of the management and structure of the USJCMPSP with the establishment of the “Joint Committee”, whose members would be appointed by the Japanese Ministry of Foreign Affairs and the U.S. Department of State. The Joint Committee was to advise their respective governments about broad aspects of the Program, set policy, develop review procedures to ensure fulfillment of the objectives of the Program, and to provide a scientific basis to the governments for health priorities and allocation of resources. Most importantly the Joint Committee established the panel system applicable for each disease or disease category and the appointment of scientists to conduct an annual review of the scientific progress of each panel (the Joint Committee panel system).

Thus was born the USJCMPSP in January 1965.

According to the definitive history of the first 40 years of the Program (1), following the Sato-Johnson summit, Dr. MacLeod organized a series of meetings between American and Japanese scientists resulting in the formation of the U.S.-Japan Joint Planning Committee (nowadays called the Joint Committee and Joint Delegation) which has provided the leadership of the entire program over its years. The second watershed meeting was held April 19-21, 1965, at the National Education Hall, Tokyo, led by Dr. Toshio Kurokawa and Dr. MacLeod as Chairmen of their respective Delegations. This was a key meeting from which arose a “Summary of Understandings” (focus on diseases prevalent in Asia; emphasis on medical research; and operation within a “bilateral government framework”). There was also a definition of the management and structure of the USJCMPSP with the establishment of the “Joint Committee”, whose members would be appointed by the Japanese Ministry of Foreign Affairs and the U.S. Department of State. The Joint Committee was to advise their respective governments about broad aspects of the Program, set policy, develop review procedures to ensure fulfillment of the objectives of the Program, and to provide a scientific basis to the governments for health priorities and allocation of resources. Most importantly the Joint Committee established the panel system applicable for each disease or disease category and the appointment of scientists to conduct an annual review of the scientific progress of each panel (the Joint Committee panel system).
itself would appoint members to review each panel on a 5-year cycle). The five health problem areas initially designated for joint panel formation were: cholera, tuberculosis, leprosy, parasitic diseases, and virus diseases. For each disease category there would be a Japanese Panel and a U.S. Panel functioning as Joint Panels at annual meetings to be held alternatively in each country, and each Joint Panel would consist of no more than 10 scientists, five from Japan and five from the U.S.

Dr. MacLeod sadly died in London on February 12, 1972 at the early age of 63, while en route to help conduct a scientific review of the Cholera Research Laboratory in Dacca (now Dhaka). He was succeeded as Chairman of the U.S. Delegation by Dr. Ivan L. Bennett, Jr. who held the position until his early death in Tokyo in 1990 while attending the USJCMSP Joint Committee Meeting. Dr. Bennett was schooled as a clinician at Emory University and achieved prominence in infectious disease research at Yale University, Johns Hopkins University, and finally New York University where he rose to become Dean of the NYU School of Medicine and Provost of the NYU Medical Center. He was Acting President from 1979-1981 and continued as Vice President for Medical Affairs until his death in 1990. Dr. Bennett had one of the most incisive minds and outstanding leadership in American medicine in his time. Dr. Toshio Kurokawa served as Chairman of the Japanese Delegation from its creation in 1965 until 1979. Dr. Kurokawa was one of the most distinguished oncologists and researchers in Japan and earned a worldwide reputation in cancer research and control. Dr. Kurokawa was born in Hokkaido in 1887 and earned his medical degree from Tohoku University. He did his post-graduate work in Vienna where he became involved in the use of X-rays for diagnosis of stomach cancer. On his return to Tohoku University he developed photofluorography for the screening of early stage stomach cancer then very prevalent in Japan. He died in 1988 at the age of 91 (4). During Dr. Kurokawa’s tenure the USJCMSP expanded to 8 Joint Panels with the inclusion of Malnutrition in 1966, Environmental Mutagenesis and Carcinogenesis in 1972, and Hepatitis in 1978. The Program continued to expand and thrive beyond the times of Drs Kurokawa, MacLeod, and Bennett under the great leadership of Drs. Charles Carpenter, Adel Mahmoud, and Ashley Haase as Chairmen of the U.S. Delegation and of the Japanese Delegation, Drs. Norio Suwa, Shiro Someya, Tadao Shimao, Yoshifumi Takeda, Takehiko Sasazuki, and Yutaka Seino. I have served as a U.S. Delegation member since 2000 and Chair since 2010. In 2013, Aikichi Iwamoto, M.D., Professor, Division of Infectious Diseases, Advanced Clinical Research Center Institute of Medical Science became the Japan Delegation Chair. Dr. Iwamoto is a graduate of the University of Tokyo and is the former Chairman of the Japanese AIDS Panel. Among the many influential Joint Committee/Delegation members throughout these formative years who helped lead the USJCMSP to its present eminence were: Drs. Theodore Woodward, Richard Krause, Robert Shope, John La Montagne, Carole Heilman, Gail Cassell, Toru Mori, Akira Oya, Yuichi Yamamura, as well as Dr. Karl Western of the U.S. Secretariat (5, 6-8).
By the early 2000s, the USJCMSP had expanded to 9 Joint Panels and one Board (the Immunology Board which was created to serve all Panels). The Joint Panels, with some name modifications to reflect changing encompass, were: Acute Respiratory Infections; Cholera and Other Bacterial Enteric Infections; Environmental Genomics and Carcinogenesis; Hepatitis; HIV-AIDS; Immunology; Nutrition and Metabolism; Parasitic Diseases; Tuberculosis and Leprosy; and Viral Diseases. The Tuberculosis and Leprosy individual panels were combined in 1996 and in many respects this move was a stimulus for leprosy research on account of the perception of the ‘elimination of leprosy’ due to the success of the WHO multiple drug therapy (MDT) campaigns.

The scientific accomplishments over these years were impressive best exemplified at the 40th Anniversary celebrations, December 7-10, 2004 (6), organized by Dr. Toshifumi Takeda during his tenure as Chairman of the Japanese Delegation, and held at the Kyoto International Conference Hall. The greatest testimonial to the prestige and achievements of the USJCMSP was the attendance of members of the Japanese Imperial Family. This was the one and only time that all members of both the Japanese and U.S. nine panels and one board met together at the same time. Examples of the accomplishments of the Program over those initial 40 years include the control of cholera through oral rehydration therapy, the development of vaccines to control hepatitis B, rotavirus, influenza, cholera, other important diseases, control of leprosy and tuberculosis through development and implementation of multiple drug therapy, development of ivermectin as a treatment for river blindness, sponsorship of international meetings, workshops and conferences on far-reaching medical and research challenges leading to critical scientific exchange and collaborations among scientists not only from Japan and the U.S. but from many countries in S.E. Asia. Most importantly, “the USJCMSP has demonstrated that two nations can work productively for over 40 years, develop strong scientific bonds, and also make meaningful, permanent contributions to the betterment of society” (4).

The very important innovation of an annual meeting on emerging infectious diseases was introduced to the USJCMSP in 1996 by Dr. Tadao Shimao during his tenure as Chairman of the Japanese Delegation. The U.S.-Japan Regional Conference on “Emerging Infectious Diseases (EID) in the Pacific Rim” was initially primarily funded by the Japanese Ministry of Foreign Affairs and subsequently by the National Institute of Allergy and Infectious Diseases and the U.S. Department...
of State. This innovative addition to the structure and annual agenda of the USJC MSP has had far reaching implications in that it now provides the primary framework for the joint aspects of the Program as we advance towards our second 50 years. Already 16 such EID meetings have been held in the following Asian settings, in order: Kyoto, Bangkok, Bali, Bangkok, Chennai, Manila, Shanghai, Kyoto, Hanoi, Singapore, Haikou on Hainan Island, Kolkata, Penang, Singapore, Dhaka, on topics of great urgency within the Pacific Region, such as avian influenza, dengue, hepatitis, malaria, infection and carcinogenesis, drug resistance (largely to tuberculosis and acute bacterial respiratory diseases), bacterial diarrhea, viral and parasitic zoonoses, the HIV-TB pandemics, new diagnostics for infectious diseases, and other priority areas.

The need for change: The 46th Joint Committee meeting of the USJC MSP held at the NIAID Rocky Mountain Laboratories (RML), Hamilton, Montana June 21-13, 2010 first witnessed the need for change within the established framework of the Program. Dr. Yutaka Seino and Dr. Patrick Brennan were now the respective delegation chairs and the activities of all of the panels and one board were reported as scheduled and deemed satisfactory. There were the scheduled and satisfactory 5-year reviews of two of the panels by delegation members. There was also a very informative scientific workshop themed “Rocky Mountain-Regional Center of Excellence and Emerging Infectious Diseases and Biodefense” largely centered on the research at RML and the greater Rocky Mountain States.

Dr. Suzuko Tanaka and Mr. Takashi Suzuki, attended the Delegation/Joint Committee meeting representing the Japanese Ministry of Health, Labour and Welfare (MHLW). Dr. Tanaka revealed that the Ministry of Foreign Affairs (MOFA) would not be able to continue to support the program henceforth. Dr. Carole Heilman, Program Director of the U.S. component of the USJC MSP and Director, Division of Microbiology and Infectious Diseases (DMID), NIAID, and U.S. Delegation member, revealed that NIAID was also concerned over the costs and benefits of the program, especially yearly meetings, and the toll of associated work-load on DMID, NIAID scientific program officers assigned to each panel/board. She also mentioned that DMID was in the process of a whole-scale evaluation of the Program in the light of present-day health priorities in the greater Asian Region, budgets, and staffing.

At the historical October 23-25, 2011 Delegation/Joint Committee meeting in Tokyo, only months following the tragedy of the Great East Japan Earthquake, the extent of the challenges faced by each government’s funding agencies was discussed and a new framework for the future of the USJC MSP was developed after considerable discussion. As recorded in the Joint Communique of this 47th Joint Committee meeting (9), a major driving force for change was budgetary constraints. On the Japanese side, up to 2010 funding had been provided by three ministries, MOFA, MHLW and MEXT. MHLW supported the activities of 9 Panels through health research grants provided to Panel Chairs who, in turn, supported meeting travel and research costs for Japanese Panel members. MHLW also provided support to help scientists attend Panel and EID meetings and to facilitate the Joint Committee meetings. MEXT supported the research and meetings of the Immunology Board. Prior to 2011 Japanese funding had also come from MOFA; however, beginning in 2011, the Program no longer receives MOFA support. Each year’s funding is dependent on the Japanese Government’s financial administration. Thus, in 2011, there had been a budget reduction of 10% and a similar reduction was anticipated for future years.

Mr. Gray Handley, Associate Director for International Research Affairs, NIAID, reported that over the most recent decade, support for the U.S. Panels/Board and Joint Committee has been provided primarily by NIH, an agency of the U.S. Department of Health and Human Services. Limited funding over the last few years, now ceased, also has been provided through NIH from the State Department Biosecurity Engagement Program (BEP). Over the last year, however, this funding was no longer available. He also noted that NIH was then facing the most severe budgetary constraints in its history. Most NIH funding for the USJCMS Program came from NIAID, to support the 7 panels related to infectious diseases, the Immunology Board, the Joint Committee Meetings and the EID Conferences. In the past, funding for the Nutrition and Metabolism Panel has come from the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) and for the Environmental Genomics and Carcinogenesis Panel (confusingly, often named Genomics, Environment and Disease, GED), from the National Institute of Environmental Health Sciences (NIEHS). The continuation of these non-NIAID sources of funding was then highly uncertain and, indeed, was subsequently to cease. Mr. Handley emphasized that within these budgetary constraints and within the constraints of focus...
on infectious diseases/immunology dictated by the mission of NIAID and its sole responsibility for the U.S. component of the USJCMSP, commitment to the Program was unwavering. Obviously, however, a new framework must be developed to accommodate those constraints. Over the two following years, 2011 and 2012 the essence of that framework was developed through extensive correspondence between Dr. Seino, Chairman of the Japanese Delegation, representatives of the MHLW and NIAID, the latter represented by Mr. Gray Handley. The essence of the new format of the USJCMSP can be summarized as follows:

NIH/NIAID, as sponsors of the U.S. component of the US-JCMSP felt that the Program “has accomplished many of its (original) goals”; “should evolve to engage scientists (and) counterpart institutes from multiple countries in the Pacific region”, and “other factors both in Japan and the U.S.” dictated the following changes.

- Since the U.S. portion of the Program is concentrated at NIAID, the focus should be on infectious diseases and immunology, at least from the U.S. perspective
- Individual yearly Joint Panel meetings in alternating countries was no longer optimal or feasible
- Instead NIAID would support yearly EID-type meetings in Pacific Rim countries.
- These meetings would be the responsibility of panels related in whether they addressed viral or bacterial/parasitic diseases, *i.e.* the Viral Diseases + HIV/AIDS + Hepatitis + ARI (viruses) Panels on one year; the Tuberculosis & Leprosy + Cholera & Other Bacterial Enteric Diseases + Parasitic Diseases + ARI (bacteria) + Immunology Panels/Board, the next year, and so on in 2-year cycles
- The relevant U.S. and Japanese Panels should hold their individual joint meetings during these EID meetings
- Individual U.S. and Japanese Panels should/could meet yearly/regularly but no support for such meetings during the non-EID years would be forthcoming from NIH/NIAID; U.S. Panel members were encouraged to seek alternate sources of support for such regular/yearly meetings

**To date two USJCMSP scientific meetings** have been held under this new format. The first was the 15th International Conference on Emerging Infectious Diseases in the Pacific Rim, “Vaccines and Protective Immunity” held in Singapore, March 11-13, 2013. This was followed by parallel 1-day meetings of the Joint AIDS, ARI (viruses), Hepatitis, and Viral Diseases Panels. The format was regarded as a spectacular success in the standard of speakers addressing contemporary topics, speakers from Japan, the U.S.A., and many Pacific Rim countries. The Joint Panel meetings were also of the highest standard with multiple substantial scientific presentations by Panel members and guests.

**The second such meeting**, the USJCMSP 16th International Conference on Emerging Infectious Diseases in the Pacific Rim was held this year, February 9-11, 2014, at the International Center for Diarrheal Disease Research *(icddr,b)*, Dhaka, Bangladesh, on the theme of “Antimicrobial Drug Resistance in Bacterial and Parasitic Diseases” organized by the Cholera and other Bacterial Enteric Diseases, Parasitic Diseases, Acute Respiratory Infections (Bacterial), and Tuberculosis and Leprosy Joint Panels. The importance of such meetings to the Greater Pacific Region and the revolutionary aspect in the context of the long and prestigious history of the USJCMSP was recognized by the attendance of the Mr. Shiro Sadoshima, Ambassador of Japan to Bangladesh, and Mr. Dan W. Mozema, Ambassador of the U.S.A. to Bangladesh, and their inspiring addresses. The scientific presentations ranged across the spectrum of established and emerging infectious diseases afflicting the entire geographical region with emphasis on the problems of drug resistance. Major topics addressed were: emerging infectious diseases in Bangladesh with an emphasis on drug susceptibility and resistance; antibiotic resistance of *Shigella* and Gram negative rod infections; new drugs and drug targets; *Vibrio cholera*, cholera, and relevant vaccines in Bangladesh and Kenya; impact of vaccination on drug resistance; insecticide resistance and malaria. There were also several sessions on translational research, applied and field research, clinical trials and observational studies in the context of these overriding disease topics. The final two days of the meeting were devoted to scientific presentations in the context of the interests of the individual Joint Panels and, as for the Singapore meeting, were intensive, comprehensive and highly beneficial.

**Thus, over the past two years** the USJCMSP has navigated a sea-change in its mission, which now primarily addresses infectious diseases in the Greater Asian Region through yearly meetings, alternating between viral and bacterial/parasitic diseases. To date the Joint Panel concept in existence since the founding of the Program in 1965 is still
thriving at these EID meetings. The Japanese Panels, including those on Nutrition and Metabolism, and Genomics, Environment and Disease (GED), continue to be supported by the Japanese MHLW and to meet yearly. However, the only formal, NIAID-supported meetings of the U.S. Panels, now all addressing infectious diseases and immunology only, are at those EID meetings which means that about half of them in reality are brought into existence only every other year. It is doubtful that the individual U.S Panels can continue to exist as before with half of them essentially in abeyance every other year. Nevertheless, the auspicious USJCMSP after 50 years has shown an unprecedented ability to evolve other than in linear fashion and respond robustly and imaginatively to the new, emerging infectious disease challenges of Asia, underpinned by a new, more embracive, economical framework. If the Joint Panel component of the Program be a victim of the continuing evolution that is now clearly an inherent part of the USJCMSP, it will surely be replaced by a mechanism that benefits the continuing efforts to control the myriad infectious diseases in the Greater Pacific Region.

In retrospect and on reading the various 5-year, 25-year, 40-year histories of the Program I am impressed that every major scientific accomplishment in the relevant topic was presented and discussed at U.S. - Japan forums and thus provided the seeds for further progress through knowledge dissemination. It is in that context lies the scientific success of the Program. The new rendition of the Program now extends those principles to that greater Asian region that urgently requires that form of interaction and education as initiated 50 years ago in the context of the United States and Japan.

Citations*


7. 30 Years of Progress. U.S.-Japan Cooperative Medical Science Program. Sixth Five Year Report, 1990-1995


9. Later developments in the evolution of the USJCMSP are recorded in the programs and Joint Communiqués from the Joint Committee/Delegation meetings of 2010 – 2014.

*Those responsible for these historical reports and the publishers were usually the chairmen of the Joint Delegation/ Joint Committee at the time in conjunction with members of the U.S. Secretariat. The people responsible for the most definitive history of the first 40 years of the Program (1) were acknowledged in that report. From the U.S. they were: Dr. Deborah M. Barnes; Dr. Charles C. Carpenter; Dr. Jane Kinsey; Dr. John La Montagne; and Dr. Karl A. Western. Those from Japan were: Dr. Takehiko Sasazuki; Dr. Tadao Shimao; Dr. Yoshifumi Takeda; Dr. Masahiko Terada. Dr. Karl Western and Ms. Gayle Bernabe were generally responsible for the preparation of the Joint Communiqués (9) arising from Joint Committee/Delegation meetings and these are an invaluable source of information on the evolution of the Program over recent years.