

History

The first efforts toward the study of those microbial forms that would eventually be called mollicutes really began with the pioneering efforts of a group of French bacteriologists. In 1898, E. Nocard and E.R. Roux, and their collaborators, A. Borrel, A. Salimbeni, and E. Dujardin-Baumetz, first cultured the microbe of contagious pleuropneumonia of cattle on artificial broth. Two years later, E. Dujardin-Baumetz was able to adapt the organism to a solid medium. He observed the small colonies with the now familiar dark center and light peripheral area, and documented the filterability of the organism. Twenty-five years went by (1923) before J. Bridre and A. Donatien, again in France, cultivated the organism associated with agalactia of sheep and goats and established the etiologic role of the organism in the disease.

These discoveries stimulated considerable interest in filterable bacteria and by the mid to late 1930s more researchers began to study additional members of this group of microbes that had come to be known as "pleuropneumonia-like organisms," or "PPLO". In England, Ledingham worked on their morphology; Klieneberger-Nobel was isolating the organisms from rodents; and Laidlaw and Elford were cultivating what would later turn out to be acholeplasmas from sewage. In Germany, Seiffert was also growing so-called saprophytic PPLO from soil and compost. In the US, Nelson was isolating the so-called pleuropneumonia-like organisms from chickens and rodents, Sabin was also studying similar organisms with neurotoxic properties, and, in 1937, Dienes and Edsall cultivated the first pleuropneumonia-like organism from the urogenital tract of a female patient.

Although the period of 1940-60 saw further progress in understanding the biology of these organisms, the 1962 discovery of the causative agent of primary atypical pneumonia of humans provided not only an important stimulus to study further the organisms in man and their pathogenicity, but it provoked a major change in the classification and nomenclature of the organisms. Now these filterable, wall-less prokaryotes were given the collective term "mycoplasmas," since it was proposed by an international taxonomy subcommittee that all organisms in this collection be assigned to the genus *Mycoplasma*. However, this terminology became outdated relatively soon, because many new and different mycoplasmas were being isolated and characterized, and new taxonomic names and classification levels were being used to separate these organisms from those in the genus *Mycoplasma* (such as members of the genus *Acholeplasma*, genus *Ureaplasma*, etc.). Eventually, a revised classification scheme was devised whereby all filterable, wall-less prokaryotes were covered under a broad system called the class Mollicutes.

One might well consider the next thirty-years as the "golden age" of mycoplasmaology. Major advances occurred on many fronts, including the discovery of mollicutes in plant and insect hosts, the first helical mollicutes (spiroplasmas), new strictly anaerobic mollicutes (anaeroplasmas), of mycoplasma and acholeplasma viruses, the occurrence of many newly isolated mollicutes from man and animals and their pathogenicity, the expanding field of molecular biology and genetics of mollicutes, and new concepts of how mollicutes interact with host immune responses. Some of the most exciting developments are now taking place in understanding how mollicutes might avoid host immune defenses and interact with other microbial agents to induce disease. Again, these major advancements have produced changes in our understanding of the evolution and classification of Mollicutes, so that we now recognize such new organisms as the mesoplasmas, entomoplasmas, asteroleplasmas, etc.

Events leading to the eventual formation of an international society of workers in the field of mycoplasmaology really began in early 1972. The Ciba Foundation in London sponsored a symposium on "Pathogenic Mycoplasmas", whereby a small group of researchers interested in human, animal, plant, and insect mollicute diseases gathered to discuss problems of mutual interest. This symposium stimulated considerable international interaction and cooperation among workers in the field, and eventually led to discussions and plans for a larger international symposium on "Mycoplasmas of Man, Animals, Plants and Insects" in Bordeaux, France in 1974. This meeting, sponsored by the University of Bordeaux II and the Institut National de la Recherche Agronomique (INRA) in France, was attended by over 300 participants from 31 countries. The proceedings of the conference were published as a document in the Institut National de la Santé et de la Recherche Médicale (INSERM) series (volume 33).

During the Bordeaux symposium, discussions were held with some of the participants regarding whether an international organization might be formed to stimulate further cooperation and promote future meetings. As a result of these discussions, a group of individuals were invited to meet (including D.G. ff Edward, E.A. Freundt, G.S. Cottew, J.M. Bove, W. Bredt, M.F. Barile, S. Razin, R.F. Whitcomb, and J.G. Tully) to plan a series of ad hoc committees for the formation of a new international organization. The committees were charged with the preparation of a constitution for the organization, to nominate candidates for office, to formulate membership publicity and financial appeals, and to plan for the first scientific congress of the organization. As a consequence of these joint efforts, the first election of officers for the newly formed International Organization for Mycoplasmaology occurred in the Spring of 1976: Chair, Joseph G. Tully (USA); Chair-Elect, Shmuel Razin (Israel); Secretary-General, D. Taylor-Robinson (UK), and Treasurer, Michael F. Barile (USA). At Large Members appointed to the Board included: G. Biberfeld (Sweden), J.M. Bove (France), E.A. Freundt (Denmark), L. Stipkovits (Hungary), and R.F. Whitcomb (USA). The numerous individuals and members of the IOM who have later served the Organization in elective office or in appointed positions and have contributed greatly to the growth and recognition of the Organization are listed in the IOM Handbook.

The **First** International Congress of the IOM was held in September 1976 in Glasgow, Scotland, in conjunction with a meeting of the British Society for General Microbiology. D. Taylor-Robinson was the Chair of the Program Committee for the meeting. Over 90 communications were presented during the congress, and the abstracts were published in the Proceedings of the Society for General Microbiology (Vol. III, Part 4, August 1976). The **Second** International Congress was held August 28 to September 1, 1978 in Freiburg, Germany, and W. Bredt was the Chair of the Program Committee. Abstracts of this meeting were published in Zentralblatt für Bakteriologie, Parasitenkunde, Infektions-krankheiten und Hygiene (Band 241 (2), 1978). The **Third** International Congress of IOM took place in Custer, South Dakota, USA, on September 3-9, 1980. The Chair of the Program Committee was P.F. Smith, and the proceedings of the meeting were published in Reviews of Infectious Diseases (Vol.4, supplement, 1982). The **Fourth** Congress of IOM occurred on September 1-7, 1982 in Tokyo, Japan. O. Kitamoto was the Chair of the Program Committee, with the proceedings published in the Yale Journal of Biology and Medicine (Vol. 56, Nos. 5-6, 1983). The **Fifth** Congress of IOM was held in Jerusalem, Israel from June 24-29, 1984, with S. Razin as the Chair of the Program Committee. Symposia papers were published in the Israel Journal of Medical Sciences (Vol. 20, Nos.9-10, 1984). The **Sixth** IOM Congress was held on August 26-30, 1986 in Birmingham, Alabama, with G.H. Cassell as Chair of the Program Committee. Proceedings were published in the Israel Journal of Medical Sciences (Vol. 23, 1987). The **Seventh** IOM Congress was held on June 2-9, 1988 in Baden (near Vienna), Austria. The Chair for the Program Committee was G. Stanek, and the proceedings appeared in a supplement (20) to Zentralblatt für Bakteriologie, Mikrobiologie und Hygiene. The **Eighth** IOM Congress took place in Istanbul, Turkey July 8-12, 1990, with S. Rottem as Program Chair. Meeting abstracts appeared in IOM Letters, vol.1. The **Ninth** IOM Congress convened in Ames, Iowa on August 2-7, 1992, with R. Rosenbusch as Program Chair. Meeting abstracts appeared in IOM Letters, vol. 2. The **Tenth** IOM Congress, which represented the 20-year anniversary of the rounding of IOM, took place on July 19-26, 1994 in Bordeaux, France. It was significant and highly appropriate that this milestone in the history and development of IOM occurred in the city where the concept of an international mycoplasmaology society was born. The **Eleventh** IOM Congress took place in Orlando, Florida on July 14-19, 1996, with J. K. Davis as Program Chair. Meeting abstracts appeared in IOM Letters, vol. 4. The **Twelfth** IOM Congress took place in the Australian Technology Park in Sydney, Australia on July 22-28, 1998. Kim Wise was Program Chair. The Thirteenth IOM Congress took place in Fukuoka, Japan on July 14-19, 2000. Renate Rosengarten was Program Chair. The **Fourteenth** Congress took place in Vienna, Austria on July 7-12, 2002 with Duncan Krause as Program Chair. The **Fifteenth** IOM Congress is scheduled for Athens, Georgia USA in July of 2004. During the past years, the IOM has either set aside funds or has had the cooperation and generosity of corporate and governmental sponsors in funding student travel fellowships to IOM meetings. This is an important contribution to developing interest and training within the field for new investigators.

[Past Congresses](#)

It is appropriate also to detail here some of the other major events that have occurred within the development of IOM and how these have contributed to the field of mycoplasmaology. In 1978-79, two important additions occurred in the area of IOM international activities. The International Research Program on Comparative Mycoplasmaology (IRPCM), which had been launched in 1971 under auspices of the World Health Organization (WHO) and the Food and Agricultural Organization (FAO) of the United Nations, became an integral part of the IOM. This collaborative research program was initially formed to promote the characterization of animal mycoplasmas at the international level,

and it operated through a directing group (the Board) composed of the heads of specific working teams and a group of outside experts. The Board and program coordinated information on animal mycoplasmas and their diseases, and published a series of working group documents on standard mycoplasma techniques. Today, the IRPCM is composed of mycoplasmologists from over 100 laboratories around the world collaborating within thirteen working teams on the development of improved techniques for isolation and characterization of mollicutes from man, animals, plants and insects. In 1983, the IRPCM sponsored publication of the first two volumes of *Methods in Mycoplasma* (Academic Press, Inc.), providing wide dissemination of standard techniques for mollicutes.

In 1979, in association with the University of Bordeaux II and the French Institut National de la Recherche Agronomique, the IOM began the sponsorship of the first of a series of International Mycoplasma Techniques Courses in Bordeaux, France. Twenty-nine participants from 16 countries spent three weeks in an intensive and comprehensive program learning basic bench techniques for mollicutes. The faculty was composed of 15 IOM members from outside France and 5 local faculty. A repeat of the course was given in 1983, with 31 participants from 14 countries. In 1987, the central theme of the course was changed to an emphasis on gene technology and the molecular biology of mollicutes, including monoclonal antibody techniques. Thirty students, from 9 countries, attended the two and 1/2 week course in Bordeaux. Again, eleven IOM members from Bordeaux and outside areas participated in the teaching program. In collaboration with the Federation of European Microbiological Societies (FEMS), the IOM also participated in a techniques course on "Rapid Diagnosis of Mycoplasmas" at the Hebrew University, Hadassah Medical School in Jerusalem, Israel on August 11-23, 1991. Again, in all of these programs, the IOM has contributed funds for fellowships to cover partial support of travel expenses of student participants.

In addition to the biennial congresses, the IOM has sponsored a number of special symposia. The first, "Mycoplasma hominis, a Human Pathogen" was organized by P-A. Mardh (Sweden), B.R. Moller (Denmark), and W.M. McCormack (USA), and was co-sponsored with a number of other organizations. The symposium was held March 8-12, 1983 in Bietostolen, Norway, with the proceedings published in *Sexually Transmitted Diseases* (Vol. 1 O, supplement, 1983). The second symposium, entitled "Ureaplasmas of Humans, with Emphasis Upon Maternal and Neonatal Infections" was held in Seattle, Washington (USA) on October 10-12, 1985. The organizers were G.H. Cassell (USA), W.A. Clyde (USA), G.E. Kenny (USA), W.M. McCormack (USA), and D. Taylor-Robinson (UK). Abbott Laboratories acted as co-sponsor. In December 1991, the IOM cosponsored, along with The National Institute of Allergy and Infectious Diseases and Abbott Laboratories, an international symposium in Scottsdale, Arizona on "The Changing Role of Mycoplasmas in Respiratory Disease and AIDS". The Program Chair was G.H. Cassell, with a Program and Planning Committee of J.B. Baseman, J.M. Bove, S.C. Lo, L. Montagnier, R.L. Quackenbush, D. Taylor-Robinson, and J.G. Tully. The proceedings were published in *Clinical Infectious Diseases* 17(supplement 1), in August 1993.

Today, the IOM represents a growing membership of active research scientists, teachers, and industrial and commercial scientists, including a broad spectrum of scientific disciplines within microbiology, biochemistry, molecular biology, genetics, immunology, virology, clinical medicine, veterinary science, plant pathology, and entomology. The members, from all parts of the world, have through their support of the IOM promoted cooperative international study and dissemination of knowledge of wall-less eubacteria and the diseases they cause. We look forward to the second "golden age" in mycoplasmaology in the years to come.

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IOM Archivist 1978-88
Admended by F. Chris Minion last on 9/30/02