

The International Union of Microbiological Societies, IUMS[☆]

1. Introduction

The International Union of Microbiological Societies (IUMS) has been in existence now for over 80 years. It was created as the International Society for Microbiology (ISM) in a ceremony held on April 28, 1927 in the Council Chamber of the Pasteur Institute of Paris, on the occasion of an International Rabies Conference under the sponsorship of the Committee of Hygiene of the League of Nations [1]. About 34 persons from 15 nations are listed as Foundation Members. The Foundation Members were asked to organise National Committees in their home countries and additional countries were contacted to organise Committees. The international community of microbiologists is, in fact, one of the oldest international federations, although its structure has changed considerably since its official beginning, e.g. originally it was planned to include protozoology. The Belgian Nobel Laureate Jules Bordet was elected as the first president, R. Kraus of Vienna as General Secretary and as Associate Secretaries R. de la Rivière (Paris), E. Gildemeister (Berlin) and H. Plotz (USA) to handle correspondence in French, German and English, respectively. Later on, other well known microbiologists served as presidents, e.g. J. Ledingham (UK), T. Madsen (Denmark), M. Burnet (Australia), S. Mudd (USA), A. Lwoff (France), V.M. Zhdanov (USSR), A. Miles (UK), H. Smith (UK), H.R.P. Seeliger (Germany), R. Colwell (USA), H. Mäkela (Finland) and B. Mahy (USA). The new Society was placed under the patronage and support of the Honorary Members: Beijerinck, Kitasato, Pfeiffer, Roux, Welch, Winogradsky, Wright and Yersin.

The International Society for Microbiology became the International Association of Microbiological Societies (IAMS) within the International Union of Biological Science (IUBS) in 1967. In 1980 the International Association of Microbiological Societies changed its name to the International Union of Microbiological Societies and acquired independence as a Union. It was accepted as a member of the International Council of Scientific Unions (ICSU) in 1982.

ICSU is a non-governmental organisation comprising both national scientific bodies (104 members) and international

scientific unions (29 members). Through its international network, ICSU plans and coordinates interdisciplinary research to address major issues of relevance to both science and society. It acts as an advisor in matters ranging from the environment to scientific ethics. ICSU actively advocates for freedom in the conduct of science, such as equitable access to scientific data, science education and capacity building in the developing world.

The IUMS currently comprises 117 microbiological societies and national committees in 67 countries and 1 international organisation as full members, and a further 7 microbiological societies and 11 multinational organisations as associate members. Because of its broad contact with thousands of microbiologists worldwide, the IUMS can be regarded as the global voice of microbiology.

2. Activities and objectives of the IUMS

As an international non-governmental organisation, the IUMS promotes and supports the study of microbiological sciences worldwide. It maintains contact with other international organisations such as the UN, UNESCO, WHO and IUBS. It fosters the communication of global microbiological issue and facilitates and coordinates research and other scientific activities among microbiologists from developed and developing countries.

The major goal of the IUMS is to promote research and the open exchange of scientific information for advancement of the health and welfare of humankind and the environment and it strongly discourages any uses of knowledge and resources to the contrary. In particular, the IUMS strives to promote ethical conduct of research and training in the areas of biosecurity and biosafety so as to prevent use of microorganisms as biological weapons and therefore to protect the public's health and to promote world peace. The IUMS seeks that all its member societies adopt or develop a Code of Ethics to prevent misuse of scientific knowledge and resources.

3. International congresses

International congresses of microbiology are held regularly under the auspices of the IUMS. The first International Congress of Microbiology took place at the Institut Pasteur

[☆] IUMS website: www.iums.org

in Paris on July 21–25, 1930. Following the opening ceremony, the delegates were invited to pay homage to Pasteur by visiting his tomb. Following the first Congress in Paris, nine International Congresses for Microbiology were held between 1936 and 1970 (London, New York, Copenhagen, Rio de Janeiro, Rome, Stockholm, Montreal, Moscow and Mexico City). In 1969 it was agreed to subdivide the microbiology union into three sections (divisions): Bacteriology, Mycology and Virology. The virologists preferred to organise separate international congresses. They had already held the first International Congress of Virology in Helsinki 1968. Since then the virologists have held separate congresses in Budapest (1971), Madrid (1975), Strasbourg (1981), Sendai (1984), Edmonton (1987), Berlin (1990) and Glasgow (1993), whereas the bacteriologists and mycologists held their congresses together in Jerusalem (1973), Munich (1978), Boston (1982), Manchester (1986), Osaka (1990) and Prague (1994). Starting with the meeting in Sydney (1999), the International Congresses of Bacteriology and Applied Microbiology (BAM) and Mycology and the International Congress of Virology have been held back-to-back over a two-week period (as will be the case in Istanbul in 2008) or all three Congresses were held during a single week (Paris in 2002 and San Francisco in 2005).

4. Awards and fellowships

The IUMS confers two awards to outstanding microbiologists in recognition of their major scientific contributions. The award ceremony usually takes place at the International Congresses.

The Stuart Mudd Award for Studies in Basic Microbiology is given to a person who has performed excellent research in basic microbiology. Previous recipients of this award have been: R. Porter (USA, 1978), L.J. Mata (Costa Rica, 1982), F. Fenner (Australia, 1986), D.C. Gajdusek (USA, 1990), H. Smith (UK, 1994), H. Koprowski (USA, 1999), D. Hopwood (UK, 2002) and J.J. Skehel (UK, 2005).

The Arima Award for Applied Microbiology is presented to a person who has made excellent contributions to applied microbiology. Previous recipients of the Arima awards have been: T. Beppo (Japan, 1990), L. Ajello (USA, 1994), I. Chet (Israel, 1996), J.F. Martin (Spain, 1999), R. Rappuoli (Italy, 2002) and A.L. Demain (USA, 2005).

The IUMS also awards short-term fellowships in collaboration with UNESCO and the Society of General Microbiology (UK). There are also limited funds available to help junior scientists from developing countries to attend and present their research findings at international symposia, workshops or congresses. The IUMS lectureship was initiated in the year 2005. The lecture has to be presented at an international or interregional congress taking place preferably in a developing country. The first IUMS lectureship was given in 2006 by R. Conrad (Germany) at the 18th Latin–American Congress of Microbiology, Pucon (Chile).

5. Divisions of the IUMS

Most of the work under the umbrella of IUMS is conducted by the three divisions within IUMS and, in particular, by their committees, commissions and federations (see below).

The IUMS is subdivided into three divisions: Bacteriology and Applied Microbiology, Mycology and Virology. Following the selection of the venue of the triennial international congresses by the IUMS Executive Board, the Vice-Chairpersons of the three divisions are responsible for the scientific programme of these congresses in collaboration with national organising and international advisory committees.

6. Committees, commissions and federations (COMCOFs)

The major scientific activities of IUMS take place within the international COMCOFs. These ad hoc committees are established with one of the three divisions. They deal with special subjects and can organise their own congresses, workshops and publish journals, newsletters or reports. They are obliged to deliver an annual progress report to their division.

There currently exist the following committees, commission and federation within the division of Bacteriology and Applied Microbiology.

6.1. *International Committee on the Systematic of Prokaryotes (ICSP)*

The Committee was founded in 1930 and is responsible for all matters related to nomenclature and taxonomy of prokaryotes. There are 28 subcommittees dealing with the taxonomy of different groups of bacteria and archaea. A Judicial Commission issues opinions concerning taxonomic matters and revisions to the Bacteriological Code. ICSP is also responsible for the scientific contents of the *International Journal of Systematic and Evolutionary Microbiology* published for ICSP by the Society of General Microbiology. For further information contact the homepage of ICSP: www.the-icsp.org.

6.2. *International Committee on Food Microbiology and Hygiene (ICFMH)*

The Committee was founded in 1953 and deals with scientific matters of food microbiology, food biotechnology and food spoilage. It holds every second year an international congress on food microbiology and helps to organise workshops and/or advance training courses in developing countries. It publishes the *International Journal of Food Microbiology*.

6.3. *International Commission of Microbiological Specification for Food (ICMSF)*

The ICMFS was founded in 1962 to provide guidance on controlling the microbiological quality and safety of foods.

It develops internationally accepted microbiological standards and analytical methods for food safety controls. It organises annual symposia, workshops and advanced training courses and publishes the series *Microorganisms in Foods*. For further information on ICMSF see: www.icmsf.iit.edu.

6.4. World Federation of Culture Collections (WFCC)

The WFCC was founded in 1970 as a joint federation with IUBS. It is an association of all internationally acknowledged microbial culture collections. It is important to ensure free access and exchange of microbial and cell cultures. It deals with international shipping, biosecurity and patent issues. It offers workshops, advanced training courses and every third year an International Congress of Culture Collections. For further information see the homepage: www.wfcc.info.

6.5. The Division of Mycology

The Division of Mycology harbors the following commissions and committees.

6.5.1. International Commission on the Taxonomy of Fungi (ICTF)

This commission was founded in 1982 and subdivided into sub-commissions dealing with various aspects of fungal taxonomy.

6.5.2. International Commission on Food Mycology (ICFM)

The ICFM was founded in 1990 and is concerned with improvement and standardisation for isolation and identification of fungi in foods. It interacts with national and international regulatory bodies for standards for mycological quality in foods.

6.5.3. International Commission on Antigens and Molecular Diagnostics (ICAMD)

This commission was founded in 1994 to promote international cooperation in the development and evaluation of molecular and immunological methods for detection of fungal diseases of humans.

6.5.4. International Commission on Yeasts (ICY)

It was founded in 1966 to promote the study of yeasts in science and industry. It organises international symposia on yeasts and publishes the *Yeast Newsletters*.

6.5.5. International Commission on *Penicillium* and *Aspergillus* (ICPA)

The ICPA was founded in 1985 to improve systematics for the genera *Penicillium* and *Aspergillus* and the accuracy of their identification. For further information see: www.cbs.knaw.nl/ICPA/ICPA.HTM.

6.5.6. International Commission on Indoor Fungi (ICIF)

This commission was founded in 2002 and deals with topics of mould problems at home and in the working environment.

6.5.7. International Commission on Bionomenclature and Bioinformatics (ICBB)

This is a rather new commission that was founded in 2004 to develop the nomenclature of genes and the bioinformatics of several fungal genomes.

6.6. The Division of Virology

The Division of Virology governs the International Committee for the Nomenclature of Viruses.

6.6.1. International Committee for the Nomenclature of Viruses (ICTV)

The ICTV was founded in 1966 to develop an internationally agreed taxonomic classification of viruses and to establish internationally agreed names for species and genera of viruses. Meanwhile, a universal taxonomic scheme for viruses has been developed. A major aim is to describe all the viruses of living organisms. The ICTV publishes information on taxonomic issues in the *Archives of Virology* and publishes a regular report. See also: www.ictvonline.org.

The Committee also operates an authoritative database (ICTVdB) containing taxonomic information for thousands of virus species. The online virus database can be found under www.ncbi.nlm.nih.gov/ICTVdb/.

7. Outlook

It is well known that publications, in particular the edition of scientific journals, are very helpful as financial resources for scientific societies. Some of the COMCOFs produce special publications that are rather successful and generate some income for the respective COMCOF. The financial support of IUMS depends mainly on the membership fees from the national committees and societies and on a capitation fee from the international congresses. To improve the current rather meager financial situation of the IUMS, it is absolutely necessary to find some sponsoring in the near future.

8. IUMS Congresses in 2008

The three divisions of IUMS have been invited by the Turkish Society of Microbiology to held their triannual international congresses next year in Istanbul. The XII International Congress of Bacteriology and Applied Microbiology as well as the XII International Congress of Mycology will take place from August 5–9, 2008 and the XIV International Congress of Virology from August 10–15, 2008. The General Assembly of IUMS is scheduled

for Sunday, August 10, 2008. More information about the three congresses can be found under www.iums2008.org. I am looking forward to meeting many French microbiologists in Istanbul.

Reference

- [1] Gibbons, N.E. (1974) History of the International Association of Microbiological Societies. *ASM News* 40, 419–438.

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