

Professor Iain Sutcliffe (delegate of the Microbiology Society, UK)

Candidate for Chair

Candidate Statement:

My contributions to systematics include

- Extensive publication on systematics (see <http://nrl.northumbria.ac.uk/view/creators/Sutcliffe=3A%3A%3A.html>)
- Editor-in-Chief, *Antonie van Leeuwenhoek* (2009-2019), establishing the journal as a significant systematics journal, including trial of the Digital Protologue Database (in conjunction with *Systematic & Applied Microbiology*).
- Edited *New Approaches to Prokaryotic Systematics. Methods in Microbiology* 41 (2015).
- President of the Bergey's International Society for Microbial Systematics (2017-2021).

I have been Chair of ICSP since 2017, during which time I have ensured the ICSP has expanded its activities, which have included:

- Plenary meeting in Glasgow 2019 and associated ICSP-organised session at FEMS2019.
- Co-ordinating the vote on sequence as type, including conducting the first full online discussion of the ICSP.
- Amendment of the ICSP statutes to improve functionality.
- Improving contact between IUMS and ICSP, including membership review.
- Co-ordinated ICSP votes on Requests for an Opinion 97-102 (the first to be finalised since 2008).
- Award of the Van Niel prize in 2020.
- Efficient conduct of routine business, including monthly EB meetings with Minutes online.

I hope to be given the opportunity to continue this work as we face future challenges, notably dialogue with those working with as-yet-uncultivated taxa and ongoing issues raised by the Nagoya protocol. I have an active interest in resolving the nomenclatural quandary of the as-yet-uncultivated taxa and whether this will be addressed by creating an "Uncultivated Code". Indeed it is vital that the ICSP explore all options that will allow for the eventual formal and stable naming of all prokaryotes, whether cultivated or not, in line with General Considerations 1 and 5 of the Code.

Conflict of Interest: I declare no known conflict of interest.

Professor Ed Moore (delegate of the Swedish Society for Microbiology)

Candidate for Vice Chair, Executive Secretary or Secretary for Subcommittees

Candidate Statement:

Current position and affiliation: Professor of Bacteriology, Department of Infectious Disease, University of Gothenburg, and Microbiologist and Curator/Director, Culture Collection University of Gothenburg (CCUG), Sahlgrenska University Hospital, Gothenburg, Sweden.

I received the PhD in Microbiology in 1990 from the University of Houston (USA), working in the labs of Profs Peter Jurtshuk, Jr. and George E. Fox. Jurtshuk was a biochemist studying microbial metabolism and Fox was a postdoc of Carl Woese and one of the first to use rRNA sequences to reconstruct phylogenetic relationships of microorganisms. My background is from those influences. I have worked and held research and academic positions in Germany, Scotland, and now Sweden, where my lab focuses on clinical microbiology and diagnostics. My career reflects the use of molecular microbiology in research. I am a proponent of the polyphasic approach, including genomics and proteomics, for characterising bacteria in understanding microbial systematics. My background and publications at ResearchGate: www.researchgate.net/profile/Edward_Moore.

I propose that the next term of the ICSP should consider issues of genomics on microbial taxonomy; assessing issues of priority for Candidatus spp.; addressing restrictions of the Nagoya protocol on microbial taxonomy. I propose that the ICSP Statutes should be reassessed to insure that important issues facing microbial taxonomy should be open for consideration by the wider microbiology world. These are some of the major problems I see facing the incoming ICSP.

Conflict of Interest: I declare no known conflict of interest.

Professor Aharon Oren (delegate of the Israel Society for Microbiology)

Candidate for Chair or Vice Chair

Candidate Statement:

My curriculum vitae and list of publications can be found at:

<https://www.bio.huji.ac.il/en/content/oren-aharon>

As the delegate of the Israel Society for Microbiology, I am a long-time member of the ICSP, and I have performed many related functions in the past:

- Chair of the ICSP (2002-2008)
- Executive secretary and treasurer (2008-2014)
- Member of the Judicial Commission (2017)
- Member of the working group on the organization and structure of the ICSP that drafted the new statutes (2017-2019)
- Member (1986-1994) and secretary (1994-present) of the Subcommittee on the taxonomy of Halobacteria
- Member of the Subcommittee on the taxonomy of Halomonadaceae (2008-present)
- Member of the Subcommittee on the taxonomy of photosynthetic bacteria (1991-present)
- Editor (2001-2012) and Editor-in-Chief (2012-2017) of the IJSEM
- List editor and nomenclature reviewer of the IJSEM (~2015-present)
- Appointed Editor-in-Chief of the International Code of Nomenclature of Prokaryotes (2019)

In addition, I am an editor for Bergey's Manual of Systematics of Archaea and Bacteria, and work as a nomenclature reviewer for Systematic and Applied Microbiology and Antonie van Leeuwenhoek. I have given nomenclature workshops in Hangzhou (China), Pune (India) and Busan (South Korea).

I believe that this performance in the past makes me well qualified to serve the ICSP in the coming years. As I will soon retire as a university professor, I will have plenty of time to devote to a function in the ICSP Executive Board, if elected.

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Conflict of Interest: I declare no known conflict of interest.

Dr Preben Nielsen (delegate of the Danish Microbiology Society)

Candidate for Treasurer

Candidate Statement:

I did a PhD supervised by Fergus Priest at Heriot-Watt University (1992-1995), although in practice a major part of the work was performed at DSMZ supervised by Dagmar Fritze, in which I characterized alkaliphilic Bacillus strains by polyphasic, biochemical and physiologic methods. I also did 16S sequencing together with Fred Rainey and Erko Stackebrandt. After a short Postdoc with Prof. Jan Sørensen at the Agricultural University in Copenhagen, I joined Novozymes/Novo Nordisk. My first task was to implement the use of 16S sequencing for systematic characterization of strains in our culture collection. In Novozymes I have been involved in various collaborations with academic groups around the world, contributing with phylogenetic analyses. In the past years we have to a large extent changed our systematics and today we widely use MALDI-TOF identification complemented with draft genome sequencing for characterization of new isolates. I have been the Danish Microbiology Society (DMS) delegate to ICSP since 2017.

Conflict of Interest: I declare no known conflict of interest.

Dr Stephen On (delegate of the New Zealand Microbiological Society)

Candidate for Vice Chair or Secretary for Subcommittees

Candidate Statement:

Associate Dean of Research and Associate Professor of Food Microbiology, Lincoln University, New Zealand

I am interested in joining the ICSP either as Secretary for Subcommittees (preferred); or as Vice-Chair, as deemed suitable.

I completed my PhD in 1995 on "Identification methods for rRNA Superfamily VI" (now the class Epsilonproteobacteria). My passion for taxonomy is displayed in >150 articles that have included development, evaluation and application of many phenotypic and genotypic taxonomic methods; descriptions of new species and subspecies; and reclassifications.

I was proud to be invited onto the ICSP Subcommittee for the taxonomy of *Campylobacter* and related bacteria in 1995. In 1997, I was elected as Secretary; and in 2007, I became Subcommittee Chair, a position that I still hold.

Since my involvement, the Subcommittee has published not only Minutes of our meetings, but taxonomic recommendations (2001, DOI:10.1099/00207713-51-2-719), and two sets of Minimal standards (2000, DOI:10.1099/00207713-50-6-2231; 2017, DOI:10.1099/ijsem.0.002255). I believe the latter were the first such standards to include guidelines for whole genome sequence analyses. Members actively collaborate on pertinent research topics.

As a candidate for one of the following:

(a) Secretary for Subcommittees. I have been active in an active Subcommittee. Through Subcommittees, the detailed work that underpins sound standards and recommendations can be undertaken that benefits all. I would seek to further invigorate the Subcommittee cohort.

(b) Vice-Chair. I have strategic development and leadership (~50 people) experience. Consequently, I have excellent communication, negotiation and organisation skills.

A passion for the field underpins my interest in joining the ICSP. It would be a privilege to serve the Committee at this crucial time.

Conflict of Interest: I declare no known conflict of interest.

Dr Yogesh Shouche (delegate of the Indian National Society Academy)

Candidate for Vice Chair, Secretary for Subcommittees or Member-at-Large

Candidate Statement:

Dr Yogesh Shouche is the founder and head of National Centre for Microbial Resource [(NCMR, previously known as Microbial Culture Collection (MCC)] since 2008. It was established to house a large collection of bacteria collected (in a mission mode) from many different ecological niches of India and today it is the largest collection of microorganisms in the world under a single roof. The collection also has a good representation of fungi and archaea. He leads a team of researchers at NCMR in varied taxonomic groups like Anoxygenic Photosynthetic bacteria, anaerobes to mention a few. He and his team has described more than 50 novel taxa belonging to diverse taxonomic groups. For the last few years he has also taken a lead to resolve issues related to India's Biodiversity law and the need for deposition in culture collections under the rule 30 (a) of International Code of Nomenclature of Prokaryotes.

His interest in microbial diversity led him study wide range of ecological niches in India from extreme habitats to human microbiome using both culture dependent and culture independent approaches. In these exercises he developed in depth knowledge about a wide variety of bacteria belonging to many different taxonomic ranks. He is a leading microbiologist studying human microbiome in India and showed that Indian human microbiome is unique.

Microbial taxonomy nowadays emphasises greatly on genome data and Dr. Shouche is a leading expert in this field. His group is presently very actively engaged in genome sequence analysis of large number of genomes including environmental microbiomes.

Conflict of Interest: I declare no known conflict of interest.

Dr Richard Hahnke (delegate of the German Society of Hygiene and Microbiology)

Candidate for Member-at-Large

Candidate Statement:

Current position and affiliation: Curator, German Collection of Microorganisms and Cell cultures (Leibniz Institute DSMZ), Baunschweig, Germany. I have been an editor for the IJSEM and am guest editor for a section of Bergey's Manual of Systematic Bacteriology. I serve as reviewer for more than 20 journals. I am a member of the ICSP subcommittee on aerobic *Bacteroidetes*.

During my career as a scientist, I have learned that making progress and producing scientific publications of excellent quality can only be achieved based on an excellent education and not by simply adapting rules. I have had the chance to see and learn many aspects, including the impact of taxonomy on issues dealing with science, industry and health. As a Ph.D. student at the MPI for Marine Microbiology (Bremen, Germany) my training in microbiology was with Prof. Harder and Prof. Widdel and in ecology and taxonomy with Prof. Amann. During that time I contributed to systematics by cultivating, identifying and characterizing (physiology and genomics) more than 300 marine *Flavobacteriaceae* (Hahnke and Harder, SAM, 2013) and some very interesting key bacteria that occurred during phytoplankton blooms (Hahnke et al, EMI, 2014 and e.g. Xing and Hahnke et al., ISME J, 2015). In addition to species descriptions, I have investigated how whole-genome phylogeny can contribute to a better understanding of the differentiation of taxa within the *Bacteroidetes* (Hahnke et al., FrontMicrobiol, 2016 and García-López et al., FrontMicrobiol, 2019).

Apart from the mission of taxonomists to shed light on the diversity of microorganisms, we should not forget the considerable impact of taxonomy on risk assessment and risk mitigation of microorganisms (risk groups, dual-use, pathogens, biological weapons) as well as the relevance of the Convention on Biological Diversity and Nagoya Protocol.

Conflict of Interest: Employment as a curator in the culture collection at the Leibniz Institute DSMZ and the position as editor might be seen as conflict of interest. However, my position is as a nominated full member of the ICSP by the German Society for Hygiene and Microbiology (DGHM).