

## **Candidates' statements:**

### **Carolee Bull**

I have been an active participant in the International Committee on the Systematics of Prokaryotes since 2015, first as a representative of the American Phytopathological Society and in recent years as a member of the Judicial Commission. In particular, I have enjoyed working with the Judicial Commission over the past few years due to the collegial leadership and vibrant members of the group. This collegial environment was important to maintaining a diverse and representative membership as well as to accomplishing our goals. Specifically, we cleaned up the backlog of Requests for Opinions and provided guidance on writing requests for opinions. My goal will be to keep the rigorous and collegial working environment intact now that it has been established. As a senior member of the Judicial Commission, I hope to continue to encourage early career scientists to learn about bacterial taxonomy. Specifically, I hope to find ways to train others in our work. My specific research focuses on translational taxonomy to manage bacterial diseases of plants and mushrooms. I have focused on both research and agricultural advancements using taxonomic approaches. I have used my knowledge in this field to provide workshops, lectures, and other trainings on translational taxonomy for phytopathogens since 2000. In addition to my work with the ICSP and the Judicial Commission, I am a leader in Phytobacterial Taxonomy and served as the Convener of the International Society of Plant Pathology Committee on Taxonomy of Plant Pathogenic Bacteria from 2006-2022. Lastly, as the inaugural director of the One Health Microbiome Center <https://www.huck.psu.edu/institutes-and-centers/microbiome-center> I worked with those engaged with the microbiome sciences to realize the importance of a coherent taxonomy and nomenclature. This is an area of education that is critical for maintaining the connection between previous literature and future advancements. I look forward to working with members of the EB and ICSP in the coming decade.

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

### **Christopher Dunlap**

I am a Research Scientist at the United States Department of Agriculture , Agricultural Research Service. My research is focused on developing beneficial bacteria to improve agricultural systems (<https://www.ars.usda.gov/midwest-area/peoria-il/national-center-for-agricultural-utilization-research/cbp/people/christopher-dunlap/>) . I was an early adopter of genome sequencing and started a next generation DNA laboratory in my facility in 2011. Now we sequence thousands of bacterial genomes and microbiome samples every year. This experience has put me on the frontlines of understanding the importance of taxonomy in modern science laboratories. My taxonomic research has

been focused on the order Bacillales, where I have described more than 25 novel genera and species

([https://scholar.google.com/citations?view\\_op=list\\_works&hl=en&user=h2CVchsAAAAJ](https://scholar.google.com/citations?view_op=list_works&hl=en&user=h2CVchsAAAAJ)

). I reorganized the subcommittee on Bacillales and served as its chairman. I served as an Associated Editor and Editor in Chief of *Antonie van Leeuwenhoek* handling hundreds of taxonomic papers. During this period, I have been exposed to a large number of taxonomic issues and their handling through the regulations of the International Code of Nomenclature of Prokaryotes. I feel very pragmatic about taxonomy, since I see its impact on regulatory and intellectual property issues frequently in my research.

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

### **Marian Figge**

I am the curator of The Netherlands Culture Collection of Bacteria (NCCB) which is a general culture collection incorporated in the Westerdijk Fungal Biodiversity Institute (CBS-KNAW) and located in Utrecht. The Netherlands Culture Collection of Bacteria (NCCB) was formed by the merger of the LMD collection (Kluyver Institute for Biotechnology, Laboratory of Microbiology, Delft), Phabagen and the CBS actinomycetes collection. Some strains (and their corresponding data) have been stored in the collection for over 100 years. After finishing my bachelor degree in microbiology at the Saxion University in the Netherlands I have been working at the Westerdijk institute for more than 25 years. One of my tasks is to maintain the NCCB collection and to perform quality and molecular authenticity checks on new proposed type strains as well as the strains which are already present. I am also responsible for the bacterial isolation and identification service in the institute. To be able to perform these tasks I use the list of prokaryotic names each day to check if a species is validly published.

I have worked with many different bacterial genera in the lab and identified species with classical microbial techniques as well as molecular techniques. The past few months we started with nanopore sequencing of possibly new bacterial species in the collection. I was involved in several research projects isolating and identification bacteria from a variety of sources and co-authored the description of *Photobacterium pisicicola* and *Collimonas fungivorans*.

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Conflict of interest statement: No known Conflict of Interest to be reported.

### **Rafael R. de la Haba**

I would like to apply as a candidate member of the Judicial Commission of the International Committee on Systematics of Prokaryotes (ICSP) for which I enclose below a short statement providing my relevant experience for this role. I am an Associate

Professor at the Department of Microbiology and Parasitology, University of Sevilla, Spain. I possess a background in pharmaceutical sciences and a PhD dealing with the phylogeny and taxonomy of the family *Halomonadaceae*. My research interests are, among others, the diversity and taxonomy of hypersaline environments using both classical methods and, more recently, omics approaches. My background as a taxonomist made me aware of the importance of the International Code of Nomenclature of Prokaryotes and I have followed with attention the recent changes introduced into it. Concerning the description and reclassification of prokaryotic taxa, I have co-authored the proposal of a new family, 5 novel genera, 15 new species, and 18 new combinations, comprising the phyla *Actinomycetota*, *Bacillota*, *Bacteroidota*, *Balneolota*, *Pseudomonadota*, and *Euryarchaeota*. In the last years I have contributed to the systematic of prokaryotes by developing a home-made pipeline to study the microbial relationships based on their core-genome and on the identification of signature genes exclusive of certain groups. This approach is aimed to review and update the current classification of several prokaryotic taxa using whole genome data. I am a member of the ICSP-Subcommittee on the taxonomy of the family *Halomonadaceae* since 2011 and I have contributed to define the minimal standards for describing new taxa within this family. I have reviewed numerous systematic-focused manuscripts for *International Journal of Systematic and Evolutionary Microbiology* (132), *Systematic and Applied Microbiology* (12), *Antonie van Leeuwenhoek* (8) and *Bergey's Manual of Systematics of Archaea and Bacteria* (4).  
Researcher identifiers: ResearcherID, K-1788- 2014; Scopus, 26424910500; ORCID, 0000-0002-4615-780X.

I think my experience could be of help for the services provided by the Judicial Commission to the taxonomist community as well as for guaranteeing the transfer between generations.

Conflict of Interest statement: No known Conflict of Interest to be reported

### **Maria del Carmen Montero Calasanz**

I am a Senior Researcher at Andalusian Institute of Agriculture Research (IFAPA, Spain) and an Associate Lecturer at Newcastle University (UK). My research is focused on systematics and bioprospecting of plant-growth promoting bacteria for agriculture in drylands. From the beginning of my career I felt attracted by bacterial diversity and its systematics. Already during my PhD at IFAPA I was keen to physiologically characterise and test in plants a collection 500 isolates. Nevertheless, soon I realised that I needed to know more about their evolutionary history and classification and, when I finished my PhD in 2011, I joined as a postdoctoral researcher at the German Collection of Microorganisms and Cell Cultures Leibniz Institute-DSMZ. In that 4-year period, I developed an expertise in bacterial systematics and functional genomics of actinomycetes from drylands and a special passion for the order of *Geodermatophilales*, a slow growing group dominant in Deserts, presenting culturing

difficulties and hardly explored until then. Later in 2015, I was appointed as a Lecturer and Principal Investigator at Newcastle University (UK). Here I established my own research group on the biology of actinomyces and I was the curator of the internal culture collection of School of Natural and Environmental Sciences (SNES) (2015-2021), a collection holding over 6000 bacterial strains. In 2021 I was awarded with a Spanish highly competitive contract (RyC Programme) and I returned to IFAPA. Since then I combine the development of my research line in bacterial systematics and bioprospecting with the setting up of the future official Andalusian Collection of Microorganisms of Agricultural and Environmental Interest, a collection of plant-growth promoting bacteria unique in Europe and holding over 4000 strains with biotechnological potential. Through my career, I have demonstrated a personal commitment with scientific integrity and the utilisation of novel approaches and techniques for improving reliability and efficiency. In this way, I early incorporated the statistical analysis of high-throughput phenotypic microarrays and genomic data to my research and published some of first papers using phylogenomics and phenotype-genotype correlations applied to systematics. I have described 58 novel species, 4 genera, 7 combinations and I have emended the description of 50 species and 5 genera so far. I have also worked in the accommodation of 4 not validly named subspecies. I have besides published 4 chapters at Bergey's Manual as a single author. Since 2020, I am also an Editor in the International Journal of Systematics and Evolutionary Microbiology (IJSEM). This year I have besides organised the I Workshop-Contest "Give me a Name", an outreach activity supported by IJSEM and ICSP, in which High School students learn about bacterial diversity, systematics and nomenclature and have the opportunity to propose names to "real" novel species following the rules of the International Code of Nomenclature of Bacteria. It was really well embraced by students and teachers and caused a high impact in media. Recently, I was appointed as an opt-to member at ICSP. From that position I aiming at the design and development of outreach activities that spread the importance and labour of the ICSP. I am also a member of the Spanish Society of Microbiology (SEM).

<https://orcid.org/0000-0002-2373-3683>

Conflict of Interest statement: I declare that I have no conflicts of interest.

### **Paola Mattarelli**

I am Associate Professor at the Department of Agricultural and Food Sciences (DISTAL) at the University of Bologna (Italy). I have worked mainly on the taxonomy of the family Bifidobacteriaceae and Lactobacillaceae. I have co-authored: the proposal and description of 25 species and 4 subspecies of bifidobacteria; the description of 23 novel genera, emended description of the genus *Lactobacillus* Beijerinck 1901, and union of Lactobacillaceae and Leuconostocaceae (Int J Syst Evol Microbiol. 2020. 70:2782-2858. doi: 10.1099/ijsem.0.004107). I co-authored the Proposed minimal standards for the description of new taxa of the genera *Bifidobacterium*, *Lactobacillus* and related

organisms (Int J Syst Evol Microbiol 2014 64:1434-1451. doi: 10.1099/ij.s.0.060046-0). During the last few years, I applied diverse molecular biology techniques to study gut microbiota in animals and insects both in controlled environments and in the wild. These studies confirmed the importance of taxonomic knowledge for the study of microbial biodiversity; in fact, with the increasing use of genomic sequences in taxonomy, it is fundamental the update of frequent and important nomenclature changes.

Member of the Subcommittee on Taxonomy of *Bifidobacterium*, *Lactobacillus* and related organisms (since 2011, secretary since 2019) and responsible for its website (<https://site.unibo.it/subcommittee-lactobacillus-bifidobacterium/en>)

Editorial boards: Systematic and Applied Microbiology (Elsevier) since 2022 and International Journal of Systematic and Evolutionary Microbiology (Microbiology Society) since 2019. Link to the web page at the University of Bologna: <https://www.unibo.it/sitoweb/paola.mattarelli>; ORCID 0000-0001-9112-4786

Conflict of Interest statement: No known Conflict of Interest to be reported.

### **Pavel Švec**

I am a full-time staff member of the Czech Collection of Microorganisms (CCM, <https://ccm.sci.muni.cz>), embedded in the Institute of Experimental Biology, Faculty of Sciences, Masaryk University, Brno. Within my position (Associate Professor), I am involved in 'routine' activities of the bacterial part of the CCM collection (e.g. deposit of patent strains, deposit of bacteria in liquid nitrogen, molecular techniques for services and research, maintenance of CCM database and online catalogue) and teaching activities (practical courses and lectures on bacterial taxonomy, supervision of bachelor, master and PhD theses). My research activities focus on the taxonomy of different bacterial groups. As first or co-author, I have described one genus, 65 species and seven subspecies (mainly *Enterococcus* and *Staphylococcus*). My recent studies focus on the taxonomic study of bacteria isolated from James Ross Island (Antarctica) in the framework of the Polar Research Programme of Masaryk University (<https://carp.sci.muni.cz/>). So far, these studies have yielded more than 30 new species (mainly *Pediococcus*, *Massilia*, *Hymenobacter* and *Corynebacterium*). I deal with the nomenclature of prokaryotes in my daily work and research activities. I consider the correct application of the ICNP to be the cornerstone of communication between all those dealing with prokaryotic organisms. As a bacterial taxonomist and member of ICSP, I follow the work of the Judicial Commission with great interest and respect and would be honoured to participate and contribute. Full member of the International Committee on Systematic of Prokaryotes since October 2020 (delegated by the Czechoslovak Society for Microbiology).

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Conflict of interest statement: I have no known conflicts of interest to disclose.

## **Peter Vandamme**

I studied Biology (1982-1986) at Ghent University and obtained a PhD in Microbiology in 1991 at the Laboratory of Microbiology (Ghent University) with Prof. Jozef De Ley and Prof. Karel Kersters as supervisors. I did postdoctoral studies in medical (Faculty of Medicine, University of Antwerp, Belgium) and pharmaceutical (Faculty of Pharmaceutical Sciences, Ghent University, Belgium) microbiology and was trainee at the Institut Pasteur, Unité des enterobactéries (Paris, France), the Department for Molecular Biology, SSDZ (Delft, the Netherlands) and the Deutsche Sammlung von Mikroorganismen und Zellkulturen GmbH (Braunschweig, Germany). In 2001 I became Research Professor at the Laboratory of Microbiology (Department of Biochemistry and Microbiology, Faculty of Sciences, Ghent University, Belgium), full professor in 2011 and department chair in 2014 (until 2022). In 2015, I was appointed Director of the BCCM/LMG Bacteria Collection (<http://bccm.belspo.be/>). My research group studies basic and applied aspects of microbial diversity in human, food, environmental, and insect microbiology. Among my key technological interests are the large-scale cultivation, dereplication (i.e. the selection of genetically unique strains) and identification of bacteria for which we acquired a high-throughput infrastructure. To this end we use MALDI-TOF mass spectrometry (since the early 2000s) and whole genome sequence analysis (we sequenced >3000 bacterial genomes thus far). My research group described and named >50 novel bacterial genera and >320 novel bacterial species. I have been/am chairperson/member of several Taxonomic Subcommittees and served as an editor for several microbiology journals. I co-authored >600 peer-reviewed papers which have been cited >41,000 times (Web of Sciences) or >65,000 times (Google Scholar) (ORCID: 0000-0002-5581-7937).

Conflict of Interest statement: No known Conflict of Interest to be reported

## **Antonio Ventosa**

Full Professor at the Department of Microbiology and Parasitology of the University of Sevilla, Spain. PhD in Microbiology (1981) at the University of Granada, Spain. Dean (1997-2001) of the Faculty of Pharmacy, Vice-rector of Postgraduate and Doctorate Studies (2003-2006) and Head of the Department of Microbiology and Parasitology (2008-2016) of the University of Sevilla. President of the International Society for Extremophiles (ISE) (2015-2018). President of the Spanish Society for Microbiology (SEM) (2015-2022). Currently, Vice-President of the International Union of Microbiological Societies (2022-present). He has published more than 440 research papers in international books and journals. Principal Investigator of projects at international (3 EU projects, 1 National Science Foundation, USA), national (10 Spanish Ministry), regional (6 Junta de Andalucía) or industry (3 projects) level. Supervisor of 30

PhD Thesis. Associate Editor of the International Journal of Systematics and Evolutionary Microbiology and Frontiers in Microbiology, and member of the Editorial Board of 6 scientific journals. Member of the International Committee of Systematics of Prokaryotes (ICSP), Secretary (1982-1994) and Chair (1995-present) of the ICSP-Subcommittee on Taxonomy of *Halobacteria*, and Chair of the ICSP-Subcommittee on Taxonomy of *Halomonadaceae* (1999-present). He received the Bergey's Manual Award on Systematics of Prokaryotes (2010), Top Ten 2011 New Species Award, The International Institute for Species Exploration at Arizona State University, USA, "for the discovery of the remarkable new species *Halomonas titanicae*" (2011) and Prize Lifetime Achievement 2022 of the international Society for Extremophiles. Fellow of the American Academy of Microbiology (2004), European Academy of Microbiology (2009) and Academia Iberoamericana de Farmacia (1998). His research activities are focused on the study of extremophilic microorganisms, mainly halophilic archaea and bacteria, their biodiversity, taxonomy, comparative genomics and metagenomics. H index: 60 (WoS), 64 (Scopus). Total number of citations: 15729 (WoS), 15764 (Scopus).

Conflict of Interest statement: No known Conflict of Interest to be reported.

### **Stefano Ventura**

I have been employed as a researcher at the National Research Council of Italy (CNR) since 1985, and currently hold a position of Research Director at the CNR Research Institute on Terrestrial Ecosystems in Firenze, Italy. Early in my career, I studied the biodiversity and taxonomy of several microbial groups, from agricultural and industrial bacteria to phototrophs, developing and applying molecular approaches for the identification and typing of bacterial strains. Subsequently, and until today, I have dealt with the molecular microbial ecology of extreme terrestrial environments, mostly in the polar regions, paying particular attention to cyanobacterial and fungal biodiversity. At the same time, I studied the molecular phylogeny, taxonomy and nomenclature of cyanobacteria. Since 2005 I have been the representative in the ICSP of the Italian Society of General Microbiology SIMGBM. In the same year I was elected to the Judicial Commission, of which I was Vice-President in 2014-2017. Then I was re-elected in March 2018. During that time, the JC had serious problems, internal strife among the JC members and disagreements of some of them with the ICSP Executive Board. The situation severely reduced its functions and productivity, and work accumulated; I have done my best since I was elected Vice-President to encourage the commissioners to participate in JC activities, including ballots, but the results have been limited. However, through my participation in the JC and constant contact with expert members of the ICSP and the IJSEM Editorial Board, I have gained a very good working knowledge of the International Code of Nomenclature of Prokaryotes and have started to collaborate in the development of an integrated approach to the taxonomy of cyanobacteria, the definition of new nomenclature rules for cyanobacteria and the revision and updating of the Code. I also served as a member of the Nomenclature Review Panel of the

International Journal of Systematic and Evolutionary Microbiology. Then, in October 2018 I was appointed Scientific Attaché of the Italian Embassy in Tel Aviv and my professional and personal life changed radically. For four years I was fully engaged in a new, exciting commitment, which left no free time for my previous activities. On my return from that scientific-diplomatic service last October, I resumed my scientific activity, also trying to put to good use the skills gained as a Scientific Attaché. So, I recently rejoined the IJSEM nomenclature review panel, I represent SIMGBM again in the ICSP, and after contacting the ICSP EB, I decided to apply for the JC, wanting to put nomenclature and taxonomy back into focus in the coming years of my professional activity. I realise that a lot of work has been done in the past four years by the ICSP, the JC and the Editorial Committee, resulting in the publication of the 2023 Revision of the ICNP (which I already use for nomenclature reviews), the completion of the pending Opinions, and the inclusion of the Cyanobacteria under the rules of the ICNP. If I am elected, I want to draw my attention to the application of the 2023 Revision of the Code to the Requests of Opinion that the JC will receive in the next period, considering that the changes that this revision has introduced have just started to spread in the scientific community. I also want to work on the consequences of the inclusion of the Cyanobacteria under the ICNP, which finally had a formal recognition with the validation of the names *Cyanobacterium* and *Cyanobacterium stanieri*, and the proposal of *Cyanobacteriota* phyl. nov. This paves the way for much work to ensure that cyanobacterial taxa have a full standing under botanical and prokaryotic codes.

Conflict of Interest statement: I hereby declare no known conflict of interest