

Professor David Arahal

I am Associate Professor at the Department of Microbiology and Ecology & Spanish Type Culture Collection (CECT), University of Valencia Spain. As taxonomist of prokaryotes, I have worked mainly with chemoheterotrophs from marine environments (*Proteobacteria*, *Bacteroidetes*), halophiles (*Proteobacteria*, *Firmicutes*, *Euryarchaeota*) and food (*Firmicutes*). I have co-authored the proposal and description of 9 new genera, 48 new species and 7 new combinations. In the last five years, my research activity has implemented considerably genome sequencing helping to make it a routine method and exploring actively the benefits and possible uses for systematic of prokaryotes. I am an author of the Proposed minimal standards for the use of genome data for the taxonomy of prokaryotes (Chun et al., 2018 doi: 10.1099/ijsem.0.002516) which has received by now about 500 cites. Among my participation in research projects I put forward my role as Principal Investigator in one of the EU 7th framework program entitled European Consortium of Microbial Resource Centers-EMBARC (FP7-228310).

Member of the Judicial Commission since August 2014 and current Chair (elected April 2019). Member of two ICSP subcommittees: *Halomonadaceae* (since 2002, Secretary since 2008) and *Aeromonadaceae*, *Vibrionaceae* and Related Organisms since 2011. Co-opted member of the International Committee on Systematic of Prokaryotes for two periods (2005-2011). Editorial boards: Systematic and Applied Microbiology (Elsevier) since 2010 and International Journal of Systematic and Evolutionary Microbiology (Microbiology Society) since 2015. Researcher codes: WoS Researcher ID A-9344-2008; SCOPUS Author ID 6603276433; Open Researcher and Contributor ID (ORCID) 0000-0002-8926-9801.

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

Dr Maria Chuvochina

I thank you for considering me as a potential member of Judicial Commission of the International Committee on Systematics of Prokaryotes and enclose below a short statement providing my relevant experience for this role.

With a background in biochemistry and molecular biology obtained during my studies in Russia and France, I have been working as a postdoctoral researcher, tutor and recently as a senior research assistant at the University of Queensland, Australia, for the last eight years. During that time, I applied diverse molecular biology techniques to study microbial communities in natural environment such as snow and sediments, which gave me an appreciation of the importance of precise identification and description of microbes. In 2016, I joined a project directed by Prof. Philip Hugenholtz at the Australian Centre for Ecogenomics, to improve classification of prokaryotic organisms through the development of a genome-based taxonomy (Genome Taxonomy Database, GTDB). As a member of the GTDB curation team, I manually inspect inferred phylogenies, ensure appropriate rank assignments, and make decisions on application of names. I incorporate novel and existing taxonomic opinions in our framework and coordinate closely with the development team to improve the resource. Thanks to this experience, I realised the importance of nomenclature as an essential 'instrument' that allows communicating about taxonomical changes in a standard and well-established manner. I learnt the rules of official prokaryotic nomenclature with the great help of Prof. Oren and Prof. Garrity and joined a nomenclature reviewing board of IJSEM. I have been providing assistance on nomenclature-related issues to my colleagues, the GTDB project and community members. I believe that my experience could be a great addition for provision of community services on the matters of nomenclature rules, their applications and future revisions.

Conflict of Interest statement: I hereby declare no conflicts of interest.

Dr Markus Göker

I am an employee of the Leibniz Institute DSMZ – German Collection of Microorganisms and Cell Cultures, Europe's largest biological resource centre. My contributions to microbial systematics include, but are not limited to, managing the DSMZ input to the KMG-2, KMG-4 and ACTINO1000 phases of the Genomic Encyclopedia of *Bacteria* and *Archaea* (GEBA) type-strain genomes sequencing initiative; elucidating the modern taxonomic role of the genomic G+C content (<https://dx.doi.org/10.1099/ijs.0.056994-0>) and of 16S rRNA gene sequencing (<https://dx.doi.org/10.1007/s00203-013-0888-4>); proposing an approach for genome-based subspecies delineation (<https://dx.doi.org/10.1186/1944-3277-9-2>); publishing the Genome-to-Genome Distance Calculator (GGDC) service for microbial species and subspecies delineation (<https://ggdc.dsmz.de>; <https://dx.doi.org/10.1186/1471-2105-14-60>); publishing its successor, the Type Strain Genome Server (TYGS) for microbial genome-scale phylogeny, species and subspecies delineation (<https://tygs.dsmz.de>; <https://dx.doi.org/10.1038/s41467-019-10210-3>); and conducting genus-scale to phylum-scale genome-based reclassifications in *Spirochaetes* (<https://dx.doi.org/10.4056/signs.3096473>), *Planctomycetes* (<https://dx.doi.org/10.1186/1944-3277-910>), *Bacteroidetes* (<https://dx.doi.org/10.3389/fmicb.2019.02083>; <https://dx.doi.org/10.3389/fmicb.2016.02003>), *Actinobacteria* (<https://dx.doi.org/10.3389/fmicb.2017.02501>; <https://dx.doi.org/10.3389/fmicb.2018.02007>), proposing 149 validly published names) and *Alphaproteobacteria* (<https://dx.doi.org/10.3389/fmicb.2014.00416>; <https://dx.doi.org/10.3389/fmicb.2020.00468>). I am the maintainer of the List of Prokaryotic Names with Standing in Nomenclature (LPSN), which was merged with DSMZ's Prokaryotic Nomenclature Up-To-Date (PNU) service in February 2020, yielding a completely new, database-driven website with many additional facilities (<https://lpsn.dsmz.de>). I thus have to deal with the International Code of Nomenclature of Prokaryotes (ICNP) on a daily basis from both the microbiological and the bioinformatic viewpoint. DSMZ is a state-owned non-for-profit organisation. Safeguards of the Leibniz association ensure the scientific independence of its researchers.

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

Charles (Chuck) Parker

My contributions to prokaryotic taxonomy began in 1996, when I was hired as a software developer for the *Ribosomal Database Project* as it transitioned from Carl Woese's group at the University of Illinois Urbana-Champaign to James Tiedje's Center for Microbial Ecology at Michigan State University. At the time, I also provided technical assistance for *Bergey's Manual Trust*, which had recently moved to Michigan State University with George Garrity as editor-in-chief. Since 2008, I have been the software architect for NamesforLife, LLC, developing commercial and free services that assist organizations and practitioners in the microbiology field stay current with prokaryotic nomenclature and taxonomy.

In 2012, I accepted responsibility from the Microbiology Society to re-develop, maintain and host the ICSP web site, which had not been actively maintained since 2002. I contributed hundreds of hours to re-developing the ICSP web site, including researching the complete history of the ICSP subcommittees, as well as identifying and collating proposals for modifications to the *International Code of Nomenclature of Prokaryotes* (ICNP). I compiled and co-edited the first electronic publication of the ICNP by systematically and incrementally updating the 1990 Code based on my cross-referenced history of proposed, accepted and rejected amendments from 1990 through 2008. I presented this revision of the Code during the ICSP Open Meeting in 2014, along with a curated history of ICSP Taxonomic Subcommittees, meetings and publications, ICSP officers and board composition. I also advocated on behalf of the *American Phytopathological Society* for the inclusion of a new appendix to the ICNP to cover naming of plant pathovars, and assisted the acting ICSP secretary with transcription of the audio recordings of the Open Meeting. In 2019, I accepted an invitation to become a co-opted member of the Editorial Board of the ICNP to assist in editing the next revision of the ICNP, an undertaking that I expect to continue during the next Congress.

During the past decade, I have employed the Code on a near daily basis while curating nomenclature and developing data structures and business logic that embody the Rules of the ICNP. I am familiar with every part of the Code, read every Judicial Opinion, and I have worked with many of the edge cases in nomenclature that have occurred since the Approved Lists. I believe my experience and working knowledge of the ICNP can greatly benefit the Judicial Commission.

I believe while the core of the ICNP is solid, there are many parts that may be improved or clarified to facilitate a more uniform interpretation of the Rules. However, I also believe that any major changes to the Code should be measured and properly vetted by the broader community prior to acceptance, and I will continue to advocate for such involvement. I strongly feel that diversification of membership in the ICNP is critically needed in order for the community to have a voice in the future of the ICSP and ICNP.

Conflict of Interest statement: Charles Parker is a full time employee and 10% owner of NamesforLife, LLC, a for-profit company and licensee of Michigan State University based in the United States that provides nomenclatural and taxonomic services to the Microbiology Society.

Dr Brian J. Tindall

With 44 years professional experience in the area of systematics, 32 years have been as a member of the curatorial staff in the Leibniz Institute DSMZ, an organisation that in its 50 year history has become one of the major internationally recognised service culture collections and a centre of excellence in prokaryote systematics. Curators are aware of the importance of supplying accurate, verifiable information to end users worldwide as well as maintaining neutrality and confidentiality. 300 publications mostly devoted to systematics document first-hand experience in the isolation and characterisation of Bacteria and Archaea. A significant number of these publications since 1999 address changes to the Code to improve its wording and implementation or provide expert interpretation available to a wider audience, including taxonomists, those who maintain nomenclatural lists (eg. NCBI, PNU, LPSN, N4L, GTDB, JGI, EzBioCloud, or Bergey's Manual Trust), or end users less familiar with the workings of the Code. More recent activities include pioneering work in supplying quality controlled, authentic cell material for the GEBA project and its successors (currently ~950 strains).

Having been involved with the International Code of Nomenclature of Bacteria/Prokaryotes since 1994 an essential aspect of the work of the Judicial Commission is an in depth knowledge of the Code and to be able to interpret it in the light of proposed changes as well as provide expert advice on Requests for an Opinion submitted to the Judicial Commission. An important element in understanding the Code is to appreciate the scope and limitations of the text, in that it governs the way names are created and the way they are subsequently used, rather than attempting to govern classification or characterisation of the taxa that are covered by the Code. Perceived problems with the Code can often be attributed to lack of familiarity with the text.

That in depth knowledge of the Code has been instrumental in guiding the Judicial Commission in the interpretation of the Code since 2002 and is documented in published Opinions of the Judicial Commission as well as in documents made available to the Judicial Commission. This expertise has also been made available to organisations such as the NCBI, or curators of LPSN and the DSMZ Prokaryote nomenclature-up-to-date (both recently combined) and an earlier period in the publication of the IJSEM.

Conflict of interest statement.

The candidate is employed by an organisation that commercially offers both taxonomic services as well as biological material to the scientific community. This may be perceived as a potential conflict of interest, but there is no documented evidence that this is the case.

The candidate receives no funding for his research relevant to work for the Judicial Commission and is not involved with the activities of publishers in the form of being a member of an editorial board or receiving benefits from carrying out work for a publisher.

Professor William (Barny) Whitman

Prokaryotes are the dominant form of life on earth. They are so diverse that it is misleading to give them a common name, being really what is left over after naming the familiar plants, animals, fungi and protists. Their systematics is one of the great challenges of modern biology.

Research in my laboratory tries to integrate many approaches to understanding the nature of free-living prokaryotes. We believe that studying the ecology, systematics, physiology, and biochemistry together provide the best opportunity for understanding. Together with many wonderful collaborators, our laboratory has published more than 200 papers on prokaryotic biology. Our studies have been wide ranging, including the genetics and carbon metabolism of the methane-producing archaeon *Methanococcus*, the sulfur metabolism of the marine alphaproteobacterium *Ruegeria*, and the impact of agriculture on soil bacterial communities.

Systematics has been a central part of our work for more than thirty years. We developed one of the most popular methods for determination of the mol % G+C [Mesbah et al. 1989. Int J Sys Bacteriol 39:159-167]. We helped describe more than twenty new species. From 1986-2001, I was Secretary of the ICSB Subcommittee on the Taxonomy of Methanogenic Bacteria and coauthored its Minimal Standards. From 1995-2001, I was an Associate Editor of the International Journal of Systematic Bacteriology. In 2006, I joined the Bergey's Manual Trust and became its Supervising Editor until very recently. From 2014-2020, I served as Treasurer and member of the Executive Board of the International Committee on Systematics of Prokaryotes.

From these experiences, I have gained a deep appreciation of the importance of systematics and nomenclature in biology. Even though I have read the Code many times, I find that I am still learning more and discovering nuances. I hope that by serving on the Judicial Commission, I can gain a more complete understanding. Lastly, I consider the JC and the ICSP service organizations whose major responsibility is to facilitate research in prokaryotic biology. If I am elected to the JC, I hope to serve with this philosophy.

Conflict of Interest statement: I hereby declare no conflicts of interest.