LIST OF INVITED TALKS – MICHAEL WAGNER

2021

239. 15.12.2021. "Understanding nitrifying microbes, the gatekeepers of the nitrogen cycle". On-line. International Forum on Advanced Environmental Sciences and Technology (iFAST) Seminar Series. University of Oklahoma, USA.

238. 07.11.2021. "Nitrifiers in wastewater treatment - new players, new physiologies, new interactions and new opportunities". On-line. Water Desalination and Reuse Center Fall Seminar Series. King Abdullah University of Science and Technology (KAUST). Saudi Arabia.

237. 03.03.2021. **"**New single cell tools for functional analysis of microbiomes". On-line. Lecture Series & Workshops 2019-2021 From Single Organisms to Systems Ecology and Evolution. Luxembourg Centre for Systems Biomedicine. University of Luxembourg, Luxembourg.

236. 22.06.2021. "Nitrifying microbes and their multiple roles in global change". World Microbe Forum of the ASM and FEMS.

2020

235. 01.12.2020. "25 years of research on nitrifying microbes and still continually surprised". On-line. Symposium to celebrate the 20th Anniversary at Microbiology, Radboud University, Nijmegen, NL.

234. 08.03.2020. "Nitrifying Microbes - Gatekeepers of the nitrogen Cycle: New players, new physiologies, new interactions". On-line. Hans-Günter Schlegel lecture of the Association for General and Applied Microbiology (VAAM), Leipzig, Germany.

2019

233. 07.11.2019. "Microbial ecology of the nitrogen cycle and its implications for environmental health". International conference on Frontier Sciences. Celebration of 70 years of the Chinese Academy of Sciences. Beijing, China.

232. 11.09.2019. "Nitrification 2.0. Where do we go from here?" *Keynote*. 6th international conference on nitrification and related processes. ICON6. Could not participate due to sickness. Given by Chris Sedlacek and myself via video. Xiamen, China.

231. 24.06.2019. "Raman-Based Single Cell Isotope Probing and Genomics: New Ways to Study the Function of Microbiome Members". Ramanfest. 7th International Conference on Advanced Applied Raman Spectroscopy. Oxford, UK.

230. 08.06.2019. " Die unsichtbaren Herrscher der Erde: Mikroorganismen und ihre Bedeutung für Mensch und Umwelt" Wissenschaft für Alle. Event der Österreichischen Akademie der Wissenschaften im Theater Lofer, Lofer, Austria.

229. 22.05.2019. "Is predicting function from (meta-)omics data possible?". *Evening keynote lecture*. The 21st Genomic Standards Consortium Meeting. Vienna, Austria.

228. 17.04.2019. **"**Single cell tools for functional analyses of microbes offer new perspectives for microbiome and environmental microbiology research". 2019 *Keynote*. Meeting of the Microbiological Society of Korea (MSK). Jeju Island, South Korea.

227. 08.04.2019. “My road to Aalborg” *Inauguration talk* for distinguished professorship at the Aalborg University, Denmark.

226. 06.03.2019. “Characterizing the microbiome - challenges and future perspectives”. *Keynote* at the Microbiome Definition Workshop of the EU-funded MicrobiomeSupport Consortium. Tulln, Austria.

2018

225. 23.11.2018. “The gut-brain axis”. 20th meeting of the Austrian Society of Neuropsychopharmacology and Biological Psychiatry. Vienna. Austria.

224. 26.10.2018. **“**New single cell techniques for functional analyses of microbiomes**”.** EMBO member’s meeting 2018. Heidelberg, Germany.

223. 10.10.2018. “Single cell tools for functional analyses of microbes offer new perspectives for microbiome and environmental microbiology research” Oxford University, UK.

222. 19.09.2018. “A new perspective on microbes formerly known as ammonia- and nitrite-oxidizers”. 23rd European Nitrogen Cycle Meeting. *Opening plenary lecture*. Alicante, Spain.

221. 16.08.2018. “25 years of functional analyses of microbes in their natural environment”. *Jim Tiedje Award Plenary Lecture*. ISME-17 meeting of the International Society for Microbial Ecology. Leipzig, Germany

220. 03.03.2018. New insights into N-cycle microbiology: Combining omics, chemical imaging, and physiology”. University of Queensland, Australia

219. 23.07.2018. “Nitrification: How new discoveries changed our perception of this key process in the global nitrogen cycle”. Australian Institute of Marine Science (AIMS). Townsville, Australia

218. 10.04.2018. “Microbiomes: State of the knowledge and perspectives”. Meeting of the Bavarian Academy of Sciences. Munich, Germany.

2017

217. 13.12.2017. “Unexpected functional traits of ammonia-oxidizing *Thaumarchaea*” GdR *Archaea* meeting: From environmental biodiversity to fundamental cellular processes. Lyon, France

216. 06.12.2017. “Die Welt in unserem Inneren: Die geheime Macht des Mikrobioms“. Christmas Lecture; Department of Laboratory Medicine, Medical University of Vienna.

215. 27.11.2017. “Where sequencing ends and (single cell) physiology begins“. Aalborg University, Villum Foundation Celebration Lecture, Denmark.

214. 26.10.2017. **“**Unexpected features of complete nitrifiers (Comammox)“. University of East Anglia (UEA), School of Environmental Sciences, Norwich. UK

213. 23.10.2017. "Functional microbiome analysis with single cell resolution“**.** CeMMinar. Research Center for Molecular Medicine of the Austrian Academy of Sciences (CeMM), Vienna, Austria.

212. 20.10.2017. “Functional analyses and targeted single cell genomics of microbes by Raman microspectroscopy“. Workshop on FTIR Spectroscopy in Microbiological and Medical Diagnostics. Robert Koch-Institute, Berlin, Germany.

211. 29.08.2017. „A new perspective on microbes formerly known as ammonia- and nitrite-oxidizers“. International Workshop on Marine Geomicrobiology 2017. Sandbjerg Manor, Denmark

210. 14.08.2017. “It’s the singer not the song: How the comammox discovery changes our perception of nitrification“. Aalborg University, Denmark.

2016

209. 14.11.2016. Nitrification revisited with single cell tools**.** Annual Congress of the Danish Microbiological society (DMS). *Plenary talk*. Copenhagen, Denmark.

208. 12.10.2016. Nitrification 2.0: The discovery of Comammox, cyanate-degrading nitrifiers, and reciprocal feeding. Biozentrum Klein Flottbek. University of Hamburg. Germany.

207. 04.09.2016. Nitrification revisited: The discovery of Comammox, cyanate-degrading nitrifiers and reciprocal feeding“. IWA Microbial Ecology in Water Engineering & Biofilms joint specialist conference. *Plenary talk.* Copenhagen, Denmark.

206. 22.08.2016. “Things you can do with heavy water: Microcolony mini-metagenomics of active nitrifiers”. 16th International Symposium on Microbial Ecology (ISME 16). Talk in a session on Genomics and ecophysiology of single microbial cells that I also convened. Montreal, Canada.

205. 01.08.2016. “Nitrification 2.0: Growth on Cyanate and Complete Nitrification by One Organism“. Gordon Research Conference on the Molecular Basis of Microbial One-Carbon Metabolism. Waterville Valley, NH USA.

204. 24.06.2016. “Microbes and the global nitrogen cycle: new players, new pathways, and unexpected interactions“. Austrian Academy of Sciences. Meeting of the Division of Mathematics and the Natural Sciences. Vienna. Austria.

203. 23.05.2016**. “**Tracking the Activity of Microbes in the Environment and in Hosts Using Raman Microspectroscopy- and NanoSIMS-based Single Cell Isotope Probing Techniques“. Institute of Hydrochemistry. Technische Universität München, Munich, Germany.

202. 21.03.2016. **“**Tracking the activity of gut microbes using single cell isotope probing techniques“. Group Seminar of Sarkis Mazmanian Lab. Caltech, Pasadena USA.

201. 15.03.2016. "Nitrification 2.0: Growth on cyanate and the discovery of Comammox“. Occidental College, Los Angeles, California, USA.

200. 10.03.2016. **“**Tracking the activity of microbes in the environment and in hosts using single cell isotope probing techniques“. Micro-Mornings at the Center of Environmental Microbial Interactions. Caltech, Pasadena, USA.

199. 12.02.2016. “Tracking the activity of microbes in the environment and in hosts using single cell isotope probing techniques**“** California State University, Northridge, USA.

198. 25.01.2016. **“**Nitrification revisited with single cell tools“. Division of Geological and Planetary Sciences Seminar. Caltech, Pasadena, USA.

2015

197. 17.12.2015 “Nitrification revisited: The discovery of Comammox, cyanate- degrading nitrifiers, and reciprocal feeding“. Exploring Diversity of Life Workshop. Hosted by Global Viral and DOE's Joint Genome Institute. Pacifica, Ca., USA.

196. 29.11.2015. **"**Nitrification revisited: The discovery of Comammox, cyanate- degrading nitrifiers, and reciprocal feeding**".** Keynote lecture at the Ecology of Soil Microorganisms 2015 meeting in Prague, Czech. *Plenary talk.*

195. 21.08.2015. "Are environmental microbiologists simplistic? Towards an understanding of the actual metabolic versatility of nitrifiers". Summer Seminar of the Department of Biotechnology, Chemistry, and Environmental Engineering, Aalborg University, Denmark.

194. 13.08.2015. "Nitrification 2.0: Growth on cyanate and the discovery of Comammox". Center for Microbial Communities. Aalborg University, Denmark

193. 16.07.2015. "Let's sequence functionally important microbes: Single cell stable isotope sorting by Raman microspectroscopy". Gordon Research Conference on Applied and Environmental Microbiology. *Keynote talk* Mount Holyoke, USA.

192. 01.07.2015. "Nitrifiers revisited: Unexpected physiologies and interactions". 4th International Conference on Nitrification (and Related Processes) - ICoN4. *Keynote lecture*. Edmonton, Alberta, Canada.

191. 01.06.2015. "Nitrification revisited with single cell tools: Unexpected physiologies and interactions of ammonia-oxidizing microbes" 115. General Meeting of the American Society of Microbiology (ASM). *Plenary lecture*. New Orleans, USA.

190. 02.03.2015. "Foraging on the host: In vivo physiological studies of microbes in the human gut and in sponges". Lecture series of the Alfred Krupp Wissenschaftskolleg. Greifswald, Germany.

2014

189. 19.11.2014. "Tracking the activity of microbes in the environment and in hosts using single cell isotope probing techniques". Closing plenary lecture. Joint conference PROMISE and BacFood Net. Persistent lifestyles of food-borne pathogens and its consequence. AGES. Vienna, Austria.

188. 26.10.2014. " From meta-omics to function of individual microbes: Single cell physiology in environmental microbiology and host-microbiome research". 2014 Annual Meeting on Microbial Ecology. Microbial Ecology Committee, Ecological Society of China. Beijing, China.

187. 25.10.2014. " From meta-omics to function of individual microbes: Single cell physiology in environmental microbiology and host-microbiome research". Tsinghua University. Beijing, China.

186. 24.10.2014. " From meta-omics to function of individual microbes: Single cell physiology in environmental microbiology*". Einstein Professorship Lecture*. Nanjing Institute of Geography and Limnology. Nanjing, China.

185. 21.10.2014. "Single cell isotope probing via Raman microspectroscopy and NanoSIMS: New ways for functional analyses and targeted sorting of microbes in environmental and medical samples". Qingdao Institute for Bioenergy and Bioprocess Technology, China.

184. 15.07.2014. "Functional analyses of microbial cells in complex systems with single cell resolution". Symposium of the Graduate School Biological Sciences Konstanz, Germany.

183. 24.04.2014. "Functional analyses of microbes by Raman-based single cell stable isotope probing and sorting". Spring meeting of the Infrared & Raman Discussion Group (IRDG) at the TU Vienna. Vienna, Austria.

182. 11.4.2014. "Molecular Microbial Ecology is Coming of Age: From Inventory Lists To Functional Analyses". Lecture in the framework of the presentation of a honorary doctorate of the University of Aalborg to me. Aalborg, Denmark.

181. 14.02.2014. "Single cell isotope probing via Raman microspectroscopy: a new way for functional analyses of microbes in environmental and medical samples". Symposium on Advanced Single Cell Biotechnology. Kroto Research Institute. University of Sheffield, UK.

180. 31.01.2014. “Deciphering host-microbe interactions by single cell stable isotope probing” Institut Pasteur, France.

179. 30.01.2014. “A new perspective on *Thaumarchaeota*: More than ammonia oxidizers”. Department of Microbiology. Université d’Orsay, France.

2013

178. 08.12.2013. “Single cell isotope probing via Raman microspectroscopy: A new way for functional analyses of microbes in environmental and medical samples”. Institut für Photonische Technologien. Jena, Germany.

177. 26.11.2013. “Measuring the Function of Microbial Cells in Environmental and Medical Samples by Single Cell Stable Isotope Probing”. Microbial Diversity for Science and Industry Meeting of the Belgium Society for Microbiology (BSM); Brussels, Belgium.

176. 03.09.2013. “From (meta)omics to function: Physiological analyses of *Thaumarchaeota”*. *Plenary talk* at the 3rd International Conference on Nitrification (ICoN3), Tokyo, Japan.

175. 02.09.2013. “How to become a N-cycle researcher – a personal perspective“. *Plenary talk* at the young scientist workshop at the 3rd International Conference on Nitrification (ICoN3), Tokyo, Japan.

174. 23.08.2013. “Single cell functional analyses of gut microbiota” University of Aarhus, Denmark.

173. 21.08.2013. “From meta-omics to function of individual microbes: Single cell physiology in environmental microbiology and host-microbiome research“. Talk at the Opening Event of the Center for Microbial Communities at the University of Aalborg, Denmark.

172. 15.08.2013. “New trends in functional analyses of single microbial cells”. University of Aalborg. Denmark.

171. 13.08.2013. “An introduction to Raman-microspectroscopy in microbial ecology“. University of Aalborg. Denmark.

170. 06.05.2013. “Single cell stable isotope probing for investigating host-microbe interactions”. Biozentrum Basel. Basel, Switzerland.

169. 22.01.2013. “The Nitrifiers Revisited - New Members, New Physiologies, and New Evolutionary Links”. 2nd Water Research Conference. Singapore.

2012

168. 05.10.2012. “From Meta-Omics to Function of Individual Microbes: Single Cell Physiology in Environmental Microbiology and Host-Microbiome Research”. Ceremonial Lecture in the framework of the opening of the Copenhagen Microbiology Center (CMC), Copenhagen, Denmark.

167. 24.09.2012. “NanoSIMS-basierte hochauflösende Element- und Isotopenanalyse: Ein neuer Ansatz zum funktionellen Verständnis von Mikroorganismen”. Hauptvortrag auf der 17. Arbeitstagung für angewandte Oberflächenanalytik (AOFA 17). Soest, Germany.

166. 21.08.2012. “You are what you eat but not always what omics predicts: On the importance of single cell ecophysiology of microbes”. *Plenary talk* at the ISME 14 meeting in Copenhagen, Denmark.

2011

165. 22.11.2011. "Deciphering the Functions and Interactions of Microbes in their Environment with Single Cell Resolution". Eidgenössische Technische Hochschule (ETH) Zürich, Switzerland.

164. 07.07.2011. "Who eats what in sponges: Pyrosequencing and NanoSIMS analyses of microbial sponge symbionts". Microbial Interactions in Marine Systems (MIMAS)-Symposium, Greifswald, Germany.

163. 04.07.2011. "From Model Organisms to the Wilderness: New insights into the Evolution and Metabolic Repertoire of Nitrifiers". 2nd International Conference on Nitrification, 16th European N cycle meeting (Joint ICoN2/16th ENC Meeting). Nijmegen, Netherlands.

162. 28.06.2011. "Live and let die: Raman and NanoSIMS-based ecophysiological analyses of microbes". 4th Congress of European Microbiologists FEMS 2011. Geneva, Switzerland.

161. 21.06.2011. "rRNA Content of Microbial Cells, Detection Limits of FISH and Signal Amplification Strategies", 1st Bremen FISH camp. Max-Planck-Institute for Marine Microbiology, Bremen, Germany.

160. 20.06.2011. "Raman-FISH: Combining Chemical Imaging with In situ Identification of Microbes" 1st Bremen FISH camp. Max-Planck-Institute for Marine Microbiology, Bremen, Germany.

159. 20.05.2011. "Die unsichtbaren Herrscher der Erde: Im Labor nicht anzüchtbare Mikroorganismen und ihre Bedeutung für Mensch und Umwelt". Rotary Club Wien, Vienna, Austria.

158. 19.05.2011. Speziesdefinitionen und -konzepte der Mikrobiologie: "Von Einheitsgrößen zur Evolutionstheorie. Natural History Museum Vienna, Austria.

157. 28.04.2011. Our Earth, the planet of uncultured bacteria: An expedition to functionally characterize novel microbes with major environmental and medical importance. General Assembly of the Hungarian Society for Microbiology, Budapest, Hungary.

156. 13.04.2011. Raman microspectroscopy and NanoSIMS as new tools for analyzing the physiology of microbes within their hosts. FEMS-Leopoldina Meeting on „Emerging Topics in Microbial Pathogenesis“, Würzburg, Germany.

155. 05.04.2011. New Nitrifiers: Surprising diversity and unexpected physiological properties. *Plenary talk.* Annual Conference of the Association for General and Applied Microbiology (VAAM), Karlsruhe, Germany.

154. 21.03.2011. Looking inside: Deciphering the physiological activity of microbes within hosts by Raman microspectroscopy and NanoSIMS. Helmholtz Center Munich, Germany.

153. 26.01.2011. Looking inside: Deciphering the physiological activity of microbes within hosts by isotope labelling and single cell tools. Max von Pettenkofer Institute, Munich, Germany.

2010

152. 01.12.2010. From Meta-Omics to Ecophysiology: Raman and NanoSIMS-based direct Observations of the Function of Individual Microbial Cells. "Small things, big ideas" - joint meeting of the New Zealand Microbiological Society and NZ Society for Biochemistry & Molecular Biology. Auckland, New Zealand.

151. 21.10.2010. Unsichtbare Vielfalt - Millionen unerforschte Mikroorganismen beeinflussen Mensch und Umwelt. Biodiversity day at the Natural History Museum Vienna, Austria.

150. 17.09.2010. Discovery and Characterization of Novel Nitrifiers. Enzymology and ecology of the nitrogen cycle meeting of the Biochemical Society, Birmingham, UK.

149. 27.08.2010. Discovery and Characterization of New Nitrifiers on a Single Cell Level. 13th International Symposium on Micorbial Ecology (ISME 13), Seattle, USA.

148. 24.06.2010. Nitrification revisited: New players and new physiologies. 69th Annual Assembly of the Swiss Society for Microbiology. ETH Zürich, Switzerland.

147. 24.05.2010. Phylogenetic and Ecophysiological Diversity among Ammonia-oxidizing *Thaumarchaeota*. “*Crenarchaeota*: Reevaluation of the Evolution, Physiology, and Cell Biology of an Archaeal Kingdom” ASM General Meeting 110th; San Diego, USA.

146. 11.03.2010. "Die unsichtbaren Herrscher der Erde: Mikroorganismen und ihre Bedeutung für Mensch und Umwelt" Austrian Academy of Sciences. Vienna, Austria.

2009

145. 27.11.2009. “Raman Microspectroscopy and NanoSIMS to Study the Function of Uncultured Microbes in the Environment and the Human Body”. Technische Universität Wien, Austria.

144. 14.10.2009. "New Single Cell tools to investigate the physiology of obligate intracellular bacteria". ETH Zürich. Switzerland.

143. 18.07.2009. “Unexplored Key Players in Nitrification”. Microbial Diversity Summer Course of the Marine Biological Laboratory (MBL); Woods Hole, USA.

142. 17.07.2009. “Single Cell Ecophysiology”. Lecture at the Microbial Diversity Sumer Course of the Marine Biological Laboratory (MBL); Woods Hole, USA.

141. 13.07.2009. "Obligate Endosymbionts Go Astray: Extracellular Activity of Environmental Chlamydiae Revealed by Single Cell Raman Spectroscopy". Gordon Conference on Applied & Environmental Microbiology: From Single Cells to the Environment. Mount Holyoke, USA.

140. 08.07.2009. “Exploring Hidden Key Players in Nitrification” 1st International Conference on Nitrification. Louisville, USA.

139. 15.06.2009. "Unexplored Key Players in Nitrification”. *Opening lecture* at the 10th International Symposium on Bacterial Genetics and Ecology (BAGECO 10). Uppsala, Sweden.

138. 18.05.2009. “Raman-FISH to Decipher the Interactions of Intracellular Bacteria and their Hosts” 109th General Meeting of the American Society of Microbiology (ASM), Philadelphia, USA.

137. 09.05.2009. "Microbial Life in Engineered Systems: From the Black Box to Microbial Systems Biology". Swiss Federal Institute of Aquatic Science & Technology (Eawag). Zürich, Switzerland.

136. 09.04.2009. “New Nitrifiers” International Symposium on the “Discovery of impossible microbes with global implications in the biogeochemical cycles of nitrogen and methane”. Nijmegen University, Netherlands.

135. 06.04.2009. “Isotope Raman Microspectroscopy and NanoSIMS to Investigate the Metabolism of Intracellular Bacteria”. Metabolism Meets Virulence. International Symposium on Metabolism and Bacterial Virulence. Hohenkammer, Germany.

134. 26.03.2009. "Ancient Invadors and the Evolution of Intracellular Life". International Revolution Research Symposium. Würzburg, Germany.

133. 17.03.2009. "Sulfate-Reduction in Acidic Wetlands: Hunting the Key Players of a Process with Increasing Importance for the Global Climate". EMBO-FEMS Workshop on Microbial-Sulfur Metabolism. Tomar, Portugal.

132. 20.01.2009. “Caught in the Act: Characterization of Microbial Key Players in Activated Sludge”. ISME-IWA Colloquium on the Engineering of Microbial Communities. Singapur.

2008

131. 23.09.2008. "Our Earth, the planet of uncultured bacteria", Life Sciences 2008 Meeting; Technische Universität Graz, Graz, Austria.

130. 22.08.2008. “Raman-FISH for Analysing Who Eats What Where and When”. The 12th International Symposium on Microbial Ecology. Cairns, Australia.

129. 17.07.2008 “Diversity and Ecophysiology of Microorganisms within Sponges” Gordon Research Conference on Marine Microbes. Barga, Italy.

128. 26.06.2008. "Metagenomics Meets Ecophysiology: A New Level in Understanding Microbial Communities", Oak Ridge National Laboratories, Oak Ridge, USA.

127. 25.06.2008. “Our Earth, the Planet of Uncultured Bacteria: An Expedition to Characterize Novel Microbes with Major Environmental and Medical Importance”, University of Tennessee, Knoxville, USA.

126. 02.06.2008. “Metagenomics Meets Engineering: Deciphering the Biology of Uncultured Bacterial Key Players in WWTPs” Leading Edge Technology Conference 2008 of the International Water Association, Zürich. Switzerland.

125. 09.04.2008. “Metagenomics and Ecophysiology of New N-Cycle Microbes”. University of Hamburg, Deutschland.

124. 01.04.2008. “Microbial Ecology Meets Infection Biology: Environmental Chlamydiae and the Evolution of Intracellular Life". Frontiers in Infectious Disease Research, Symposium, University of Würzburg, Germany.

2007

123. 18.10.2007. „Our Earth, the planet of uncultured bacteria: An expedition to characterize novel microbes with major environmental and medical importance” Peking University - The University of Vienna Science Day. China.

122. 04.10.2007. “Environmental Chlamydiae: Ancient Invadors of Early Eukaryotes” FEMS Satellite symposia “Life Inside Cells” at the 59. Jahrestagung der Deutschen Gesellschaft für Hygiene und Mikrobiologie (DGHM). Göttingen, Germany.

121. 13.09.2007. “Deciphering the evolutionary links between *Chlamydiae* and their disparate free-living relatives” 10th International Colloquium on Endocytobiology and Symbiosis. Gmunden, Austria.

120. 08.07.2007. “Single Cell Stable Isotope Probing with FISH-Raman Spectroscopy for Deciphering the Ecophysiology of Uncultured Bacteria” 32nd FEBS Congress “Molecular Machines” Vienna, Austria.

119. 20.04.2007. “Metagenomics meets evolutionary biology: new insights into the Planctomycetes-Verrucomicrobium-Chlamydiae superphylum” 3rd Annual meeting Ecogenomics Consortium; Amsterdam, Netherlands.

118. 16.04.2007. “RAMAN-FISH and isotope arrays: New approaches for linking processes with microbial communities” European Geosciences Union; General Assembly 2007, Vienna, Austria.

117. 02.04.2007. “Decoding the evolutionary links in the *Planctomycetes-Verrucomicrobium-Chlamydiae* superphylum” Annual Conference of the (German) Association for General and Applied Microbiology (VAAM); Osnabrück, Germany.

116. 14.03.2007. “Our Earth, the planet of uncultured bacteria: An expedition to characterize novel microbes with major environmental and medical importance” Cardiff Plenary Lecture Series. Cardiff School of Biosciences; Cardiff University, UK.

115. 08.03.2007. “The nature of microbial species: Implications for diversity research in microbial ecology” EuroDiversity workshop of the European Science Foundation. Lunz am See, Austria.

2006

114. 15.12.2006. "Exploring the hidden powers on planet earth: Metagenomic analyses of microbial communities." Lecture Series "Exploring Genomes" of the Vienna Biocenter. Vienna, Austria.

113. 26.10.2006. "The evolutionary links between chlamydiae and anaerobic ammonium oxidizers: A metagenomic approach". 2006 James M. Craig Memorial Seminar. Oregon State University. Corvallis, USA.

112. 25.10.2006. "Microbes: The hidden powers on planet earth." 2006 James M. Craig Memorial Lecture. Oregon State University. Corvallis, USA.

111. 06.10.2006. „Exploring the Unexpected: A Filamentous Methanotroph and Hyperthermophilic Ammonia Oxidizers“. Workshop of the SFB395. Marburg, Germany.

110. 13.09.2006. „Who you are and what you do: Imaging complex microbial communities“. 159th Meeting of the Society for General Microbiology. University of York, UK.

109. 28.08.2006. “Exploring the unseen Majority on Planet Earth: genomics and Functional Genomics of Uncultured Bacteria” 4th GEN-AU Summer School Litschau 2006, Austria.

108. 21.08.2006. “Exploring the Unexpected: Multicellular methanotrophs and hyperthermophilic nitrifiers” ISME-11 Symposium. Vienna, Austria.

107. 19.07.2006. “Exploring the Unseen Majority on Planet Earth: Metagenomics and Functional Analyses of Uncultured Bacteria” Bioinformatisches Kolloquium der TU und LMU München. Munich, Germany.

106. 18.07.2006. “Exploring the Invisible: A Parallel Universe of Bacteria” ESOF 2006, Munich, Germany.

105. 07.06.2006. “The evolutionary links between intracellular pathogens and anaerobic ammonium oxidizers: A metagenomic approach.” 2nd FEMS Congress of European Microbiologists. Madrid, Spain.

104. 30.05.2006. “Exploring the unexpected: Novel chlamydiae in the environment and in humans” 30. Jahrestagung der ÖGHMP. Linz, Austria.

103. 08.04.2006. “Environmental Chlamydiae and the evolution of intracellular pathogens” Leopoldina Symposium “Life Strategies of Microorganisms in the Environment and in Host Organisms” Bremen, Germany.

102. 22.03.2006. „Genomics and Post-genomics of Uncultured Key Players: from novel N-cycle bacteria to recently discovered environmental chlamydiae“. Genomes to Systems Conference 2006. Manchester, UK.

101. 07.02.2006. “Exploiting metagenomics for understanding the biology of environmental chlamydia and uncultured N-cycle bacteria”. Keystone Symposium on Microbial Community Genomics in Animals and in the Environment. Tahoe City, USA.

2005

100. 12.11.2005. “Mikrobielle Ökologie und ihre medizinische Bedeutung”. Symposium der Österreichischen Gesellschaft für Hygiene, Mikrobiologie und Präventivmedizin „200 Jahre Lehrfach Hygiene an der Universität Wien“. Wien, Austria.

99. 06.10.2005. “The community level: Physiology and Interactions of Prokaryotes in the Wilderness”. International Workshop “Development and control of functional biodiversity at micro- and macro-scales”. GSF-National Research Centre for Environment and Health, Neuherberg/Munich, Germany.

98. 12.09.2005. Novel approaches for study of diversity and function of microbial communities. 157th Meeting of the Society for General Microbiology. Keele University. Keele, UK.

97. 09.06.2005. “Phylochips and Isotope Arrays: Testing structure and Function of Microbial Communities”. 105th General Meeting of the American Society of Microbiology. Atlanta, USA.

96. 08.06.2005. “FISH & Chips: Characterization and Quantification of Polymicrobial Communities. 105th General Meeting of the American Society of Microbiology. Atlanta, USA.

95. 07.06.2005. “Characterizing uncultured microbial key players of the nitrogen cycle: From identification to environmental genomics and ecophysiology”. 105th General Meeting of the American Society of Microbiology. Atlanta, USA.

94. 27.05.2005. “New tools for identification and ecophysiological characterization of uncultured bacteria on a single-cell level” Third International Conference on Analysis of Microbial Cells at the Single-Cell Level. Hotel Panhans, Semmering, Austria.

93. 23.04.2005. “The community level: Characterizing Microbes in the Wilderness”. International Workshop “Vistas for Microbial Ecology and Environmental Biotechnology”. The Biodiesign Institute. Arizona State University. Phoenix, USA.

92. 12.04.2005. “Characterizing the Uncultured: From biogeochemical cycles to novel amoebal endosymbionts”. Mikrobiologisches Kolloquium der Universität Würzburg, Germany.

91. 25.02.2005. “Characterizing uncultured prokaryotes: From biogeochemical cycles to infection ecology” Special Guest Lecture at the 12th Vienna Bio Center Recess. Schloss Krumbach, Austria.

90. 28.01.2005. Characterizing the Uncultured: From Biogeochemical Cycles to Infection Ecology. Institut für Pflanzenbiologie. Universität Zürich, Switzerland.

2004

89. 11.11.2004. Characterizing the Uncultured: From Biogeochemical Cycles to Infection Ecology. University of Wisconsin, Madison, USA.

88. 05.11.2004. Detection and quantification of unculturable bacteria COST Action 920, Quantification of microbes by molecular tools. University for Veterinary Medicine, Vienna, Austria.

87. 26.08.2004. New approaches for linking structure with function. 10th International Symposium on Microbial Ecology ISME-10. Microbial Planet: Sub-surface to space. Cancun, Mexico.

86. 26.05.2004. Die unsichtbare Mehrheit: Bislang nicht kultivierbare Mikroorganismen und ihre Bedeutung in Umwelt und Medizin. 29. Jahrestagung der ÖGHMP. Bad Ischl, Austria.

85. 19.04.2004. Phylogenetic and Functional Microarrays - Great Tools with Significant Limitations 1st SCOPE meeting on Microbial Environmental Genomics; Wageningen, Netherlands.

84. 22.03.2004. Diversity, ecophysiology and environmental genomics of S- and N-cycle bacteria in natural and engineered systems. Mini-Symposium: Microbial ecology: From ecosystem functioning to biotechnology application. University of Applied Life Sciences. Vienna, Austria.

83. 18.03.2004. Nicht-kultivierte Mikroorganismen und ihre Bedeutung in Umwelt und Medizin. Wissenschaftliche Sitzung der ÖGHMP. Vienna, Austria.

82. 22.01.2004. Tackling diversity and ecophysiology of N-Cycle bacteria: New molecular approaches and their limitations. EU 5th Framework IcoN Symposium. Ghent, Belgium.

2003

81. 01.12.2003. New approaches for linking microbial community composition and function in terrestrial ecosystems. Institut für Bodenkunde und Standortslehre. Fachgebiet Bodenbiologie. Universität Hohenheim. Stuttgart, Germany.

80. 02.11.2003. New methods to infer community composition, architecture and ecophysiology of complex microbial biofilms. ASM Biofilm Conference. Victoria, Canada.

79. 20.10.2003. Trends in Molecular Microbial Ecology: From Microbial Community structure to ecophysiology and environmental genomics. Veterinärmedizinische Universität Wien, Institut für Tierzucht und Genetik, Vienna, Austria.

78. 06.10.2003. The environmental *Chlamydia* genome project: Revealing the evolution of pathogenicity of *Chlamydia*. European Conference on Prokaryotic Genomes. Göttingen, Germany.

77. 15.09.2003. Aktuelle Forschungstrends in der mikrobiellen Ökologie: Von der „black box“ zur hochauflösenden Struktur-Funktionsanalyse komplexer mikrobieller Lebensgemeinschaften. Institut für Biotechnologie, Technische Universität Graz, Austria.

76. 12.06.2003. Diversity, ecophysiology and environmental genomics of *Nitrospira*-like nitrite oxidizers and Anammox. Metagenomics 2003. Darmstadt, Germany.

75. 20.05.2003. Combined use of fluorescent probes, isotope-labeled substrates, and microarrays for understanding ecophysiology. Division N lecture. American Society for Microbiology. 103rd General Meeting. Wahington, USA.

74. 07.05.2003. New methods to infer composition and ecophysiology of complex microbial communities. 3èmes Rencontres des Microbiologistes de l'INRA. Dourdan, France.

73. 19.02.2003. Molecular methods for linking bacterial community structure with ecophysiology. FEMS Workshop: Assessing the Variability in Aquatic Microbial populations: Facts and Fiction. Mondsee, Austria.

2002

72. 21.11.2002. New perspectives in Molecular Microbial Ecology: From Community Composition to Environmental Genomics and Ecophysiology. University of Bayreuth, Germany.

71. 16.10.2002. New perspectives in Molecular Microbial Ecology: From Community Composition to Environmental Genomics and Ecophysiology. Austrian Research Centre Seibersdorf, Austria.

70. 07.10.2002 Uncultured Bacteria: Key Players in the Environment and Potential New Emerging Pathogens. Jahrestagung der DGHM in Heidelberg, Germany.

69. 31.07.2002. Microbiology of wastewater treatment. IUMS; Xth International Congress of Bacteriology and Applied Microbiology. Paris, France.

68. 24.07.2002. *In situ* characterization and genomics of intracellular symbionts of protists. Leopoldina Symposium: Parasitism, Commensalism, Symbiosis – Common Themes, Different Outcome. Würzburg, Germany.

67. 01.07.2002. Künftige Entwicklungen des Nachweises von Mikroorganismen im Lebensmittelbereich – von der Gensonde zum DNA-Chip. Kurs U39C-3. Molekularbiologische Nachweismethoden für pathogene Mikroorganismen in Lebensmitteln. Bayerisches Landesamt für Gesundheit und Lebensmittelsicherheit, Dienststelle Oberschleißheim.

66. 16.06.2002. New perspectives in molecular microbial ecology: From community composition to environmental genomics and ecophysiology. 7th Symposium on Bacterial Genetics and Ecology (BAGECO). Bergen, Norway.

65. 05.04.2002. *In situ* analysis of identity, activity and function of bacteria in environmental and clinical samples. Identification of noncultured bacteria in clinical and environmental setting. INSERM workshop #135. La Roche-Posay, France.

64. 03.04.2002. Discovery and *in situ* characterization of uncultured but biotechnologically or medically important microorganisms. Genoscope, Evry, France.

63. 22.02.2002. Functional strain differences between the three *L. monocytogenes* lineages – implications from infection studies with mammalian cell lines and protozoa of the genus *Acanthamoeba.* Symposium „Genes for therapy and prevention of disease" des Forschungsverbundes Grundlagen Gentechnischer Verfahren Kloster Banz.

2001

62. 15.09.2001. Interactions between free living amoebae and their obligate bacterial endosymbionts: Phylogenetic, ecological, and clinical aspects. Kolloquium des DFG-Schwerpunktprogramms „Ökologie bakterieller Krankheitserreger" im Rahmen des Berliner Wissenschaftssommers. Berlin.

61. 12.09.2001. Molecular microbial ecology of nitrogen cycling in freshwater and wastewater. Biochemical processes and cycling of elements in the environment. 15th International symposium on environmental biogeochemistry (ISEB 15). Wroclaw, Poland.

60. 28.08.2001. Molecular tools to investigate the *in situ* physiology of uncultured microorganisms. ISME 9, Ninth International Conference on Microbial Ecology, Amsterdam, Netherlands.

59. 27.08.2001. The links between microbial community composition, function and stability in wastewater treatment plants. ISME 9, Ninth International Conference on Microbial Ecology, Amsterdam, Netherlands.

58. 29.05.2001. Molecular microbial ecology. Research Center for Milk and Food Weihenstephan, Germany.

57. 21.05.2001. Bacterial endocytobionts of free living amoebae: Diversity and interactions. 1st joint workshop of the EAWAG and the Microbial Ecology Group. EAWAG, Dübendorf. Schweiz.

56. 15.05.2001. Bakterielle Endosymbionten von freilebenden Amöben: Diversität und Interaktionen. Abteilung Zoologie, Universität Stuttgart.

55. 03.05.2001. The links between microbial community structure, function and stability in wastewater treatment plants. COST 624 WG4 meeting on „Microbial tools: application in wastewater treatment processes“ Lisbon, Portugal.

54. 30.04.2001. Molekulare Funktionsanalyse von Mikroorganismen. Bayerische Akademie der Wissenschaften, Kommission für Ökologie, Rundgespräch zum Thema: Bedeutung der Mikroorganismen für die Umwelt. München, Germany.

53. 19.04.2001. Design and application of oligonucleotide arrays to investigate composition and function of complex microbial communities. Copenhagen. Meeting on „ Application of DNA Microarrays in Microbiology“ of the Danish Society of Microbiology. Dänemark.

52. 14.03.2001. Molecular microbial ecology: the links between community composition, function, and stability. Genoscope, Evry, Frankreich.

51. 05.02.2001. Molecular microbial ecology of nitrification and sulfate-reduction: the links between community composition, function, and stability. Max-Planck Institut für terrestrische Mikrobiologie, Marburg, Germany.

50. 27.01.2001. Populationsstruktur, Funktion und Stabilität natürlicher mikrobieller Lebensgemeinschaften. Universität Wien. Vienna, Austria.

2000

49. 11.12.2000. Molecular microbial ecology – Identification and functional characterization of yet uncultured bacteria as demonstrated for novel bacterial endocytobionts of free living amoebae. Max-Planck-Institut für Infektionsbiologie, Berlin. Berlin, Germany.

48. 24.10.2000. The links between microbial community composition, function and stability – from waste water treatment to endocytobionts of free living amoeba. University of Queensland, Brisbane, Australien.

47. 25.05.2000. „Probing activity and abundance of microorganisms by combined microautoradiography and whole cell hybridization“ 100TH General Meeting of the American Society for Microbiology, Los Angeles, USA.

46. 23.05.2000. Molecular microbial ecology. Washington State Department of Health. Public Health Laboratories. Seattle, USA.

45. 11.04.2000. „The links between microbial community composition and function“, Fourth International Symposium on Environmental Biotechnology, Noordwijkerhout, Netherlands.

44. 15.03.2000. „The links between microbial community composition and function“, 1. Gemeinsamer Kongress der DGHM, ÖGHMP und VAAM, Microbiology 2000, München, Germany.

43. 06.03.2000. „What are they doing there? Structure-function analyses in microbial ecology“. Abteilung für Medizinische Mikrobiologie & Hygiene, Universitätsklinikum Ulm, Germany.

1999

42. 28.10.1999. „Tackling the population structure and function of microorganisms within their environments: lessons from molecular microbial ecology“; Institut für Mikrobiologie und Genetik; Technische Universität Darmstadt, Germany.

41. 20.09.1999. „Molecular Microbial Ecology – tackling the unseen majority on planet earth“; Conference Scientia Europaea N° 4, Strasbourg, France.

40. 24.06.1999. „Neue Methoden zur *in situ* Identifizierung und Funktionsanalyse von Bakterien in ihrer natürlichen Umgebung“; Institut für medizinische Mikrobiologie; Universität Münster, Germany.

39. 04.06.1999. „Tools for enriched and mixed culture characterization – molecular probes“; COST 624 Optimal Managment of Wastewater Systems workshop, Rom, Italy.

38. 16.04.1999. „What are they doing here? *In situ* analysis of functional properties of bacteria within complex environments“143rd meeting of the Society for General Microbiology, Edinburgh, Scotland.

37**.** 6.03.1999. „*In situ* analyses of the structure and function of microbial communities responsible for nitrogen removal in activated sludge and biofilms“; The first Arab International Conference and Exhibition on Environmental Biotechnology, Abu Dhabi, United Arabic Emirates.

1998

36. 25.11.1998. „*In situ* identification of microorganisms – new developments“; Conference on characterization of bacteria and their activity in mixed systems; University of Aalborg; Denmark.

35. 10.11.1998. „Combining nucleic acid techniques with microautoradiography and cultivation to characterize the microbial community structure, spatial organization and function in waste water treatment plants“; International SFB411 workshop on Biofilms in aerobic wastewater treatment: An interdisciplinary approach; Garching, Germany.

34. 23.10.1998. „*In situ* analysis of functional properties of bacterial communities“; Infotag der DECHEMA New Approaches to exploit Microbial Diversity, Frankfurt am Main, Germany.

33. 12.10.1998. „New insights in the microbial population structure of biological nitrogen removal plants: *Nitrosococcus mobilis*, *Nitrospira*-like bacteria and *Azoarcus* sp. as dominant populations“; New Advances in Biological Nitrogen and Phosphorus Removal for Municipal or Industrial Wastewaters, INRA, Narbonne, France.

32. 27.09.1998. „*In situ* identification of *Listeria monocytogenes* on a strain specific level – implications on virulence“; FORGEN-Symposium Genes for Therapy and Prevention of Disease, Kloster Banz, Staffelstein, Germany.

31. 08.09.1998. „Combined molecular and conventional analysis of nitrifying and denitrifying bacterial diversity in activated sludge“. Körber Symposium on Molecular and Microsensor Studies of Microbial Communities; Bremen, Germany.

30. 02.09.1998. „*In situ* Funktionsanalyse“; PCR-Workshop der Tiefbau Berufsgenossenschaft, München, Germany.

29. 21.07.1998. „*In situ* Nachweis von rRNS und mRNS zur Untersuchung von obligat und fakultativ intrazellulären Bakterien“; Biozentrum der Universität Würzburg, Germany.

28. 24.06.1998. „*In situ* Analyse der Zusammensetzung, Dynamik und Funktion von Bakteriengemeinschaften in kommunalen und industriellen Kläranlagen mit Hilfe von Gensonden“; Informationstag der Firma EnviroConsult zur Behandlung von Prozeßwässern aus der Faulschlammentwässerung, München, Germany.

27. 27.04.1998. „Sulfite reductase as a marker for phylogenetic and ecological studies of sulfate-reducing prokaryotes“; Max-Planck Institut für terrestrische Mikrobiologie Marburg, Germany.

26. 16.03.1998. „Biomass characterization: State of the art“; Modelling and Microbiology of Activated Sludge Processes, Kollekolle, Denmark.

25. 11.03.1998. „Polyphasic approach to analyze the natural diversity of nitrifying and denitrifying bacteria in activated sludge and biofilms“ COE Symposium on Microbial Community and Functions in Wastewater treatment Processes. Tokyo, Japan.

24. 29.01.1998. „*In situ* Nachweis von rRNS und mRNS zur Struktur- und Funktionsanalyse komplexer mikrobieller Lebensgemeinschaften: Von den Grundlagen zur Anwendung in Medizin und Umweltschutz“; Universität Würzburg, Germany.

23. 07.01.1998. „*In situ* Nachweis von rRNS und mRNS zur Struktur- und Funktionsanalyse komplexer mikrobieller Lebensgemeinschaften: Von den Grundlagen zur Anwendung in Medizin und Umweltschutz“; Universität Dresden, Germany.

1997

22. 09.10.1997. „*In situ* Bestimmung von zur Fadenbildung befähigten Belebtschlammbakterien zur frühzeitigen Beurteilung von Blähschlamm- und Schwimmschlammentwicklung“; 52. Fachtagung des Bayerischen Landesamtes für Wasserwirtschaft zum Thema „Neueste Entwicklungen in der *in situ*-Charakterisierung mikrobieller Biozönosen in Abwasser, Oberflächengewässern, Grund- und Trinkwasser, München, Germany.

21. 9.10.1997. „*In situ* –Charakterisierung von nitrifizierendem Belebtschlamm am Beispiel einer Anlage der Tierkörperbeseitigungsindustrie“ 52. Fachtagung des Bayerischen Landesamtes für Wasserwirtschaft zum Thema „Neueste Entwicklungen in der *in situ*-Charakterisierung mikrobieller Biozönosen in Abwasser, Oberflächengewässern, Grund- und Trinkwasser, München, Germany.

20. 09.10.1997. „*In situ* Nachweis von Bakterien, die zur erhöhten biologischen P-Elimination beitragen“; 52. Fachtagung des Bayerischen Landesamtes für Wasserwirtschaft zum Thema „Neueste Entwicklungen in der *in situ*-Charakterisierung mikrobieller Biozönosen in Abwasser, Oberflächengewässern, Grund- und Trinkwasser, München, Germany.

19. 09.10.1997. „*In situ* Nachweis von Bakterien, die zur erhöhten biologischen P-Elimination beitragen“; 52. Fachtagung des Bayerischen Landesamtes für Wasserwirtschaft zum Thema „Neueste Entwicklungen in der *in situ*-Charakterisierung mikrobieller Biozönosen in Abwasser, Oberflächengewässern, Grund- und Trinkwasser, München, Germany.

18. 15.07.1997. „Einsatz von Gensonden in der Abfallforschung“; Kolloquium Wassergüte- und Abfallwirtschaft des Lehrstuhls für Wassergüte und Abfallwirtschaft; TU München, Germany.

17. 18.06.1997. „Identifizierung von Bakterien in Umweltproben mit Hilfe von fluoreszenzmarkierten Gensonden“; Seminar Biochemische Phytopathologie, Lehrstuhl für Phytopathologie der TU München, Freising, Germany.

16. 11.06.1997. „The use of gene probes for the analysis of the structure, dynamics and function of microbial communities in sewage treatment“; Lyonnaise des Eaux, Paris Le Pecq, France.

15. 29.04.1997. „Use of gene probes to monitor structure and function of complex microbial communities in sewage treatment“; Europäisches Seminar über die Behandlung von Abfällen; Narbonne; France.

14. 19.04.1997. „Polyphasic approach to analyze the natural diversity of ammonia oxidizing bacteria“; Second Körber Meeting, Prag, Czech Republic.

13. 14.04.1997. „*In situ* analysis of the structure, dynamics and function of bacterial communities in biofilms“; International Conference on Biofilms in Aquatic Systems, University of Warwick, England.

1996

12. 12.12.1996. „Phylogenetische und ökologische Untersuchungen sulfatreduzierender Bakterien anhand vergleichender Sequenzanalysen der Gene der dissimilatorischen Sulfitreduktase“; Universität Bonn, Germany.

11. 29.11.1996. „Sulfite reductase as a marker for phylogenetic and ecological studies of sulfate-reducing prokaryotes“; University of Aarhus; Denmark.

10. 27.11.1996. „Sulfite reductase as a marker for phylogenetic and ecological studies of sulfate-reducing prokaryotes“; Max-Planck Institut für marine Mikrobiologie, Bremen, Germany.

9. 19.11.1996. „Biomass characterization by gene probes“; COST 682 Meeting; Bologna, Italy.

8. 31.01.1996. *In situ* hybridization techniques for determining microbial community structures and dynamics in activated sludge“; Northwestern University, Evanston, USA.

7. 29.01.1996. „*In situ* hybridization techniques for determining microbial community structures in activated sludge“; University of Illinois; Urbana-Champaign, USA.

1995

6. 22.06.1995. „Application of fluorescently labeled rRNA-targeted oligonucleotide probes to activated sludge“; Workshop Integrated Environmental Bioprocess Design der European Science Foundation; Obernai, France.

1994

5. 12.10.1994. „FISH for analyzing the structure and dynamics of microbial communities in activated sludge“; Netherlands Institute of Ecology, AC Nieuwersluis; Netherlands.

4. 05.10.1994. „Die Analyse der räumlichen Struktur der Belebtschlammflocke“; Workshop mikrobielle Ökologie des Abwassers; Fachgruppe „Wasser/Abwasser“ in der VAAM; Universität Stuttgart, Germany.

3. 29.09.1994. „*In-Situ*-Erkennung verschiedener Fadenorganismen in Belebtschlamm mit Hilfe von fluoreszenz-markierten Oligonukleotidsonden; Tagung der ATV-Arbeitsgruppe 2.6.1. München, Germany.

2. 24.05.1994. „Einsatz von Gensonden zur Analyse der Mikrobengemeinschaften in Belebtschlammanlagen“; Hydrobiologisches Kolloquium; Institut für Hydrobiologie; TU Dresden, Germany.

1993

1. 02.12.1993. „*In situ* Nachweis der untergeordneten Rolle von *Acinetobacter* in Kläranlagen mit biologisch erhöhter P-Elimination“; 7. Karlsruher Flockungstage; Institut für Siedlungswasserwirtschaft, Universität Karlsruhe, Germany.