# CV – Andreas Schramm

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## Education

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| December 1995 | Diplom Biology (MSc), Technical University Munich, Germany |
| December 1998 | Dr. rer. nat. (PhD) Microbiology, University of Bremen, Germany |
| April 2007 | Habilitation, University of Bayreuth, Germany |

## Employment

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| from 2020 | Vice Head of the DNRF Center of Excellence for Electromicrobiology, AU |
| from 2012 | Professor, Section for Microbiology, Dept. of Biology, Aarhus University, DK |
| 2004-2011 | Associate Professor, Dept. Biological Sciences, Microbiology, Aarhus University, DK |
| 2002-2003 | Assistant Professor, Dept. Ecological Microbiology, University of Bayreuth, Germany |
| 2000-2001 | Visiting Scholar, Department of Civil and Environmental Engineering, University of Washington, Seattle, WA, USA |
| 1999-2000 | Postdoc, Department of Ecological Microbiology, University of Bayreuth, Germany |

**Periods of Leave:** 01.01.-30.06.1999 (paternal leave)

## Research Focus

Microbial ecophysiology and evolution, especially of microbes involved in environmental element cycling and in microbe-microbe and microbe-host interactions; method development in Molecular Microbial Ecology. Current research:

- ***Electromicrobiology:*** evolution, metabolism, and micro-scale interactions of electrically conductive cable bacteria and their associated microbial communities
- ***Microbial symbiosis:*** function and evolution of invertebrate-bacteria symbioses; secondary metabolites and genome evolution of symbionts; chemical microenvironments in animals.

## Academic Awards, Honors, and Related Professional Activities

Visiting Research Professor at Georgia Institute of Technology, Atlanta, GA, USA (Feb-May 2024)
Visiting Professor at the University of Vienna, Austria (Nov/Dec 2023)
Visiting Professor at Massachusetts Institute of Technology, Cambridge, MA, USA (Feb-July 2014)
>40 invited lectures at international conferences and institutional seminars
Regular Reviewer for the Research Councils in UK, Ireland, Israel, the USA, Austria, and Germany
Review Editor for *Frontiers in Microbiology*
Editorial Board member for *FEMS Microbiol. Ecol*., and *Syst. Appl. Microbiol.*
Regular PhD committee member at Universities of Copenhagen, Aalborg, Bremen, and Vienna
Participation in the Danish Galathea3 expedition (2007)
Young Investigator Grant of the Danish Strategic Research Council (2005)
Otto Hahn Award of the Max Planck Society, Germany (1998)

**Management experience**

2019-2013 Organizing and Scientific Committee Member of the *Electromicrobiology 2019*, *2021*, and *2023* conferences in Aarhus, DK

2012-2020 Head of the Next-Generation DNA Sequencing Core Facility at the Section for Microbiology, Department of Bioscience, AU

2009-2017 Head of the Section for Microbiology, Department of Bioscience, Aarhus University, DK

2009-2011 Member of Management Advisory Board, Research Committee, PR & Information Committee, and Cooperation Council of the Department of Biological Sciences, AU

2007 Head of the Organizing Committee for the 6th International Workshop on *Innovative Techniques In Microbial Ecology*

**Selected Major Grants (> 1 mio DKK, past 10 years)**

2023: Danish Research Council - FNU, Research Project 2: *"Cellular ultrastructure of Asgard archaea, the putative missing link in the evolution from prokaryotes to eukaryotes"* (6 mio. kr., Co-PI with Kasper U. Kjeldsen)

2021: NNF Project Grant in Plant Science, Agriculture & Food Biotechnology: "*AgriAnts: sustainable agriculture using ants against plant diseases*" (3 mio DKK, Co-PI with J. Offenberg)

2021: Danish Research Council - Green Transition Grant: "*Resource efficiency, environmental impact and consumer acceptance: Paving the way for Black soldier fly (Hermetia illucens) in the feed and food industry*" (6.2 mio DKK, Co-PI with J.G. Sørensen & J. Aschemann-Witzel)

2017: DNRF "*Center for Electromicrobiology*" (56 mio DKK, Co-PI and vice-head with L.P. Nielsen)

2016: NNF Interdisciplinary Synergy Grant, "*Social Spiders as Source for Novel Antimicrobial Drugs*" (15 mio DKK, 4-PI project with T. Bilde, T. Vosegaard, M. Lalk)

2012: FNU, "*Beneficial Bacterial Symbionts of Earthworms: Functional Basis for the Association*" (2.1 mio DKK)

since 2001 Principal Investigator for >20 research projects

**Teaching & Supervision Experience**

Undergraduate and graduate courses (lectures, seminars & laboratory courses) in Cell Biology, General Microbiology, Microbial Ecology, and Molecular Microbiology.

1999-2024: supervision of 22 postdocs, 37 PhD students, 53 master students, and 78 bachelor/project students; currently 4 postdocs, 4 PhD students, and 1 MSc student.

**International Collaboration**

Prof. Julea Butt, University of East Anglia, UK

Prof. Natalie Elia, University of the Negev, Ber-Sheva, Israel

Prof. Joel Kostka, Georgia Institute of Technology, Atlanta, GA, USA

Prof. Dr. Tillmann Lueders, University of Bayreuth, Germany

Prof. Dr. Michael Wagner, University of Vienna, Austria

**Publication Summary (1996-2024; see ORCID 0000-0002-7614-9616 for full list)**

161 research articles in international, peer-reviewed journals (4 Nature, 4 PNAS); of these 10 first-author, 66 last/corresponding author publications.

5 book chapters, 1 patent, >200 conference abstracts, 2 monographs, 4 popular science articles.

**Citation report (1996-2024):** 10,021 citations; *h*-index: 52 (Scopus, assessed 19 April 2024)

## Peer-Reviewed Publications

***2024***

161. Schlafer, S., K.K. Johnsen, I. Kjærbølling, M.R. Jørgensen, **A. Schramm**, R.L. Meyer, and M.R. Jørgensen. 2024. The efficacy and safety of an enzyme-containing lozenge for dental biofilm control – A randomized controlled pilot trial. Journal of Dentistry, in press. https://doi.org/10.1016/j.jdent.2024.105107

160. Plum-Jensen, L.E., **A. Schramm***, and I.P.G. Marshall. 2024. First Single-strain Enrichments of *Electrothrix* Cable Bacteria, Description of *E. aestuarii* sp. nov. and *E. rattekaaiensis* sp. nov., and Proposal of a Cable Bacteria Taxonomy following the Rules of the SeqCode. Syst. Appl. Microbiol. 47: 126487, https://doi.org/10.1016/j.syapm.2024.126487

159. Del Rey, Y.C., **A. Schramm**, R.L. Meyer, M.B. Lund, S. Schlafer. 2024. Combined pH ratiometry and fluorescence lectin binding analysis (pH-FLBA) for microscopy-based analyses of biofilm pH and matrix carbohydrates. Appl. Environ. Microbiol. 90: e02007-23. doi: 10.1128/aem.02007-23

***2023***

158. Rose, C., M.B. Lund, **A. Schramm**, T. Bilde, and J. Bechsgaard. 2023. Does ecological drift explain variation in microbiome composition among groups in a social host species? Journal of Evolutionary Biology 36: 1684–1694. https://doi.org/10.1111/jeb.14228

157. Chua, J.Q.I., T.E.K. Christensen, J. Palle, N.K. Wittig, T.A. Grünewald, J. Garrevoet, K.M. Spiers, H. Castillo-Michel, **A. Schramm**, W.L. Chien, R.M. Sobota, H. Birkedal, A. Miserez. 2023. Biomineralization of Mantis Shrimp Dactyl Club during Development: Apatite Formation and Brominated Organic Components. Acta Biomaterialia 170: 479-495. https://doi.org/10.1016/j.actbio.2023.08.054

156. Geelhoed, J., C.A. Thorup, J.J. Bjerg, L. Schreiber, L.P. Nielsen, **A. Schramm**, F.J.R. Meysman, and I.G.P. Marshall. 2023. Indications for a genetic basis for big bacteria and description of the giant cable bacterium *Candidatus* Electrothrix gigas sp. nov. Microbiology Spectrum 11(5): e0053823. doi: 10.1128/spectrum.00538-23.

155. Kristensen, M., M.B. Lund, **A. Schramm**, E.F. Lau, S. Schlafer. 2023. Determinants of microscale pH in in situ grown dental biofilms. Journal of Dental Research 102(12): 1348-1355. https://doi.org/10.1177/00220345231190563

154. Eme, L., D. Tamarit, E.F. Caceres, C.W. Stairs, V. De Anda, M.E. Schön, K.W. Seitz, N. Dombrowski, W.H. Lewis, F. Homa, J.H. Saw, J. Lombard, T. Nunoura, W.-J. Li, Z.-S. Hua, L.-X. Chen, J.F. Banfield, E. St John, A.-L. Reysenbach, M.B. Stott, **A. Schramm**, K.U. Kjeldsen, A.P. Teske, B.J. Baker, and T.J.G. Ettema. 2023. Inference and reconstruction of the heimdallarchaeial ancestry of eukaryotes. Nature 618: 992–999. https://doi.org/10.1038/s41586-023-06186-2

153. Rose, C., M.B. Lund, A.M. Søgård, M.M. Busck, J. Bechsgaard, **A. Schramm,** and T. Bilde. 2023. Social transmission of bacterial symbionts homogenizes the microbiome within and across generations of group-living spiders. ISME Communications, 3, 60. https://doi.org/10.1038/s43705-023-00256-2

152. Hink, L., A. Holzinger, T. Sandfeld, A.R. Weig, **A. Schramm**, H. Feldhaar, M.A. Horn. 2023. Effects of microplastic ingestion on hydrogen production and microbiomes in the gut of the terrestrial isopod *Porcellio scaber*. Environ. Microbiol. https://doi.org/10.1111/1462-2920.16386 (preprint: bioRxiv, https://doi.org/10.1101/2022.06.22.497054)

151. Panah, F.M., K.D. Nielsen, G.L. Simpson, A. Schönherz, **A. Schramm**, C. Lauridsen, T. S. Nielsen, O. Højberg, M. Fredborg, S. Purup, and N. Canibe. 2023. A westernized diet changed the colonic bacterial composition and metabolite concentration in a dextran sulfate sodium pig model for ulcerative colitis. Front. Microbiol.14, 1018242. doi: 10.3389/fmicb.2023.1018242.

150. Lustermans, J.J.M., J.J. Bjerg, L.D. Burdorf, L.P. Nielsen, **A. Schramm**, and I.G.P. Marshall. 2023. Persistent flocks of diverse motile bacteria in long-term incubations of electron-conducting cable bacteria, *Candidatus* Electronema aureum. Front. Microbiol. 14, 1008293. https://doi.org/10.3389/fmicb.2023.1008293

149. Sereika, M., F. Petriglieri, T.B.N. Jensen, A. Sannikov, M. Hoppe, P.H. Nielsen, I.P.G. Marshall, **A. Schramm**, M. Albertsen. 2023. Closed genomes uncover a saltwater species of *Candidatus* Electronema and shed new light on the boundary between marine and freshwater cable bacteria. ISMEJ, 17: 561–569: https://doi.org/10.1038/s41396-023-01372-6

148. Bjerg, J.J., J.J.M. Lustermans, I.P.G. Marshall, A.J. Mueller, S. Brokjær, C.A. Thorup, P. Tataru, M. Schmid, M. Wagner, L.P. Nielsen and **A. Schramm**. 2023. Cable bacteria with electric connection to oxygen attract flocks of diverse bacteria. Nature Communications 14, 1614. https://doi.org/10.1038/s41467-023-37272-810.

***2022***

147. Aagaard, A., S. Liu, T. Tregenza, M.B. Lund, **A. Schramm**, K.J.F. Verhoeven, J. Bechsgaard and T. Bilde. 2022. Adapting to climate with limited genetic diversity: DNA methylation and microbiome variation among populations of the social spider *Stegodyphus dumicola*. Molecular Ecology 31: 5765–5783. https://doi.org/10.1111/mec.16696.

146. Lammers, A., S. Nazipi, H. Zweers, T. Bilde, **A. Schramm**, P. Garbeva, and M. Lalk. 2022. Antimicrobial Volatiles emitted by Members of the Nest Microbiome of Social Spiders. FEMS Microbiol. Letters 369(1), fnac088. https://doi.org/10.1093/femsle/fnac088

145. Dige, I., P.N. Tawakoli, Y.C. del Rey, M.B. Lund, **A. Schramm**, and S. Schlafer. 2022. Fluorescence lectin binding analysis of carbohydrate components in dental biofilms grown in situ in the presence or absence of sucrose. Molecular Oral Microbiology 37(5): 196-205. https://doi.org/10.1111/omi.12384

144. Stief, P., C. Schauberger, M.B. Lund, A. Greve, R.M.M. Abed, M.A.A. Al-Najjar, K. Attard, S. Bonaglia, J.S. Deutzmann, B. Franco-Cisterna, E. García-Robledo, M. Holtappels, U. John, A. Maciute, M.J. Magee, R. Pors, T. Santl-Temkiv, A. Scherwass, D.S. Sevilgen, D. de Beer, R.N. Glud, **A. Schramm**, and A. Kamp. 2022. Global occurrence of intracellular nitrate storage by diatoms implies major impact on aquatic nitrogen cycling. Comm. Earth Environ: https://doi.org/10.1038/s43247-022-00485-8.

143. Andersen, F., K. Pedersen, D.W. Juhl, T. Mygind, P. Chopin, E.B. Svenningsen, T. Poulsen, M.B. Lund, **A. Schramm**, C. Gotfredsen, and T. Tørring. 2022. Triculamin: an unusual lasso peptide with potent anti-mycobacterial activity. Journal of Natural Products 85 (6): 1514–1521 https://doi.org/10.1021/acs.jnatprod.2c00065.

142. Sachs, C., D. Kanaparthi, S. Kublik, A. Szalay, M. Schloter, L.R. Damgaard, **A. Schramm**, and T. Lueders. 2022. Tracing long-distance electron transfer and cable bacteria in freshwater sediments by agar pillar gradient columns. FEMS Microbiol. Ecol. 98(5): fiac042. https://doi.org/10.1093/femsec/fiac042

141. Kuliński, K., Rehder, G., Asmala, E., Bartosova, A., Carstensen, J., Gustafsson, B., Hall, P. O. J., Humborg, C., Jilbert, T., Jürgens, K., Meier, M., Müller-Karulis, B., Naumann, M., Olesen, J. E., Savchuk, O., **Schramm, A**., Slomp, C. P., Sofiev, M., Sobek, A., Szymczycha, B., and Undeman, E. 2022. Baltic Earth Assessment Report on the biogeochemistry of the Baltic Sea. Earth Syst. Dynam.13: 633–685. https://doi.org/10.5194/esd-13-633-2022

140. Sandfeld, T., K.G. Malmos, C.B. Nielsen, M.B. Lund, A. Aagaard, J. Bechsgaard, M. Wurster, M. Lalk, M. Johannsen, T. Vosegaard, T. Bilde, and **A. Schramm**. 2022. Metabolite profiling of the social spider Stegodyphus dumicola along a climate gradient. Front. Ecol. Evol. 10:841490. doi: 10.3389/fevo.2022.841490.

139. Busck, M.M., M.B. Lund, T. Bird, J. Bechsgaard, T. Bilde, and **A. Schramm**. 2022. Temporal and spatial microbiome dynamics across natural populations of the social spider *Stegodyphus dumicola*. FEMS Microbiol. Ecol. 98(2): fiac015. https://doi.org/10.1093/femsec/fiac015

138. Rose, C., **A. Schramm**, J. Irish, T. Bilde, and T.L. Bird. 2022. Host plant availability and nest-site selection of the social spider *Stegodyphus dumicola* Pocock, 1898 (Eresidae). Insects 13(1), 30; https://doi.org/10.3390/insects13010030

137. Avcı, B., J. Brandt, D. Nachmias, N. Elia, M. Albertsen, T.J.G. Ettema, **A. Schramm***, K.U. Kjeldsen. 2022. Spatial separation of ribosomes and DNA in Asgard archaeal cells. The ISME Journal, 16: 606–610. doi: 10.1038/s41396-021-01098-3

136. Marzocchi, U., C. Thorup, A.-S. Dam, **A. Schramm**, and N. Risgaard-Petersen. 2022. Dissimilatory nitrate reduction by a freshwater cable bacterium. The ISME Journal 16: 50–57. doi: https://doi.org/10.1038/s41396-021-01048-z

***2021***

135. Boesen, T., L.P. Nielsen, and **A. Schramm**. 2021. Pili for nanowires. Nature Microbiology 6: 1347–1348. doi: 10.1038/s41564-021-00990-0

134. Fruergaard, S., M.B. Lund, **A. Schramm**, T. Vosegaard, and T. Bilde. 2021. The myth of antibiotic spider silk. iScience 24 (10), 103125. https://doi.org/10.1016/j.isci.2021.103125

133. Davies, L.R., V. Loeschcke, M.F. Schou, **A. Schramm**, and T.N. Kristensen. 2021. The importance of environmental microbes for *Drosophila melanogaster* during seasonal macronutrient variability. Scientific Reports 11:18850. doi: 10.1038/s41598-021-98119-0

132. Lustermans, J.J.M., J.J. Bjerg, **A. Schramm***, and I.P.G. Marshall. 2021. *Phyllobacterium calauticae* sp. nov. isolated from a microaerophilic veil transversed by cable bacteria in freshwater sediment. Antonie van Leeuwenhoek 114(11): 1877-1887.

131. Lammers, A., H. Zweers, T. Sandfeld, T. Bilde, P. Garbeva, **A. Schramm,** and M. Lalk. 2021. Antimicrobial Compounds in the Volatilome of Social Spider Communities. Front. Microbiol. 12: 700693. doi: 10.3389/fmicb.2021.700693

130. Thorup, C., C. Petro, A. Bøggild, T.S. Ebsen, S. Brokjær, L.P. Nielsen, **A. Schramm***, and J.J. Bjerg. 2021. How to grow your cable bacteria: Establishment of a stable single-strain culture in sediment and proposal of *Candidatus* Electronema aureum GS. Syst. Appl. Microbiol. 44 (5), 126236. doi: 10.1016/j.syapm.2021.126236.

129. Nazipi, S., C.L. Ehlberg, M.M. Busck, M.B. Lund, T. Bilde, and **A. Schramm**. 2021. The bacterial and fungal nest microbiomes in populations of the social spider Stegodyphus dumicola. Syst. Appl. Microbiol. 44 (4), 126222. doi: https://doi.org/10.1016/j.syapm.2021.126222

128. Scholz, V V., B. C. Martin, R. Meyer, **A. Schramm**, M. W. Fraser, L. P. Nielsen, G. A. Kendrick, N. Risgaard-Petersen, L. Burdorf and I.P.G. Marshall. 2021. Cable bacteria at oxygen-releasing roots of aquatic plants: a widespread and diverse plant-microbe association. New Phytologist, doi: https://doi.org/10.1111/nph.17415

127. Nazipi, S., S.G. Vangkilde-Pedersen, M.M. Busck, D.K. Lund, I.P.G. Marshall, T. Bilde, M.B. Lund, and **A. Schramm.** 2021. An antimicrobial *Staphylococcus sciuri* with broad temperature and salt spectrum isolated from the surface of the African social spider, *Stegodyphus dumicola*. Antonie van Leeuwenhoek 114(3): 325-335. doi: 10.1007/s10482-021-01526-6

126. Scilipoti, S., K. Koren, N. Risgaard-Petersen, **A. Schramm**, and L.P. Nielsen. 2021. Oxygen consumption of individual cable bacteria. Science Advances 7, eabe1870. doi: 10.1126/sciadv.abe1870

***2020***

125. Busck, M.M., V. Settepani, J. Bechsgaard, M.B. Lund, T. Bilde, and **A. Schramm**. 2020. Microbiomes and Specific Symbionts of Social Spiders: Compositional Patterns in Host Species, Populations, and Nests. Front. Microbiol. 11:1845. doi: 10.3389/fmicb.2020.01845

124. Sandfeld, T., U. Marzocchi, C. Petro, **A. Schramm**, and N. Risgaard-Petersen. 2020. Electrogenic sulfide oxidation mediated by cable bacteria stimulates sulfate reduction in freshwater sediments. The ISME Journal 14: 1233–1246.

***2019***

123. Kjeldsen K.U., L. Schreiber, C.A. Thorup, T. Boesen, J.T. Bjerg, T. Yang, M.S. Dueholm, S. Larsen, N. Risgaard-Petersen, M. Nierychlo, M. Schmid, A. Bøggild, J. van de Vossenberg, J.S. Geelhoed, F.J.R. Meysman, M. Wagner, P.H. Nielsen, L.P. Nielsen, and **A. Schramm**. 2019. On the Evolution and Physiology of Cable Bacteria. PNAS 116 (38): 19116–19125.

122. Nielsen, S.S.F., S. Weiss, S. Nazipi, I.P.G. Marshall, T. Bilde, and **A. Schramm**. 2019. Draft genome sequence of *Bacillus subtilis* SB-14, an antimicrobially active isolate from Namibian social spiders (*Stegodyphus dumicola*). Microbiol Resour Announc 8: e00156-19. https://doi.org/10.1128/MRA.00156-19

121. Petro, C., B. Zäncker, P. Starnawski, L.M. Jochum, T.G. Ferdelman, B.B. Jørgensen, H. Røy, K.U. Kjeldsen, and **A. Schramm**. 2019. Marine Deep Biosphere Microbial Communities Assemble in Near-Surface Sediments in Aarhus Bay. Front. Microbiol. 10:758. doi: 10.3389/fmicb.2019.00758

120. Petro, C., L.M. Jochum, L. Schreiber, I.P.G. Marshall, **A. Schramm**, and K.U. Kjeldsen. 2019. Single-cell amplified genomes of two uncultivated members of the deltaproteobacterial SEEP-SRB1 clade, isolated from marine sediment. Marine Genomics 46: 66-69. https://doi.org/10.1016/j.margen.2019.01.004

119. Yao, S., S. Lyu, Y. An, J. Lu, C. Gjermansen, and **A. Schramm**. 2019. Impact of microalgae-bacteria symbiosis on microalgal growth and biofuel production. J. Appl. Microbiol. 126(2): 359-368. doi: 10.1111/jam.14095

***2018***

118. Jochum, L.M., L. Schreiber, I.P.G. Marshall, B.B. Jørgensen, **A. Schramm**, and K.U. Kjeldsen. 2018. Single-cell genomics reveals a diverse metabolic potential of uncultivated *Desulfatiglans*-related Deltaproteobacteria widely distributed in marine sediment. Front. Microbiol. 9: 2038. doi: 10.3389/fmicb.2018.02038

117. Marzocchi, U., S. Bonaglia, S. van de Velde, P.O.J. Hall, **A. Schramm**, N. Risgaard-Petersen, and F.J.R. Meysman. 2018. Transient bottom water oxygenation creates a niche for cable bacteria in long-term anoxic sediments of the Eastern Gotland basin. Environ. Microbiol. 20(8): 3031–3041. doi: 10.1111/1462-2920.14349

116. Kamp, A., C. Petro, H. Røy, S. Nielsen, P. Carvalho, P. Stief, and **A. Schramm**. 2018. Intracellular nitrate in sediments of an oxygen-deficient marine basin is linked to pelagic diatoms. FEMS Microbiol. Ecol. 94(8): fiy122 doi: https://doi.org/10.1093/femsec/fiy122

115. Gong, X., E. Garcia-Robledo, M.B. Lund, P. Lehner, S.M. Borisov, I. Klimant, N.P. Revsbech, and **A. Schramm.** 2018. Gene expression of terminal oxidases in two marine bacterial strains exposed to nanomolar oxygen concentrations. FEMS Microbiol. Ecol. 94 (6): fiy072

114. Lund, M.B., M. Mogensen, I.P.G. Marshall, M. Albertsen, F. Viana, and **A. Schramm.** 2018. Genomic insights into the *Agromyces*-like symbiont of earthworms and its distribution among host species. FEMS Microbiol. Ecol. 94 (6): fiy068, https://doi.org/10.1093/femsec/fiy068

113. Bjerg, J.T., H.T.S. Boschker, S. Larsen, D. Berry, M. Schmid, D. Millo, P. Tataru, F.J. R. Meysman, M. Wagner, L.P. Nielsen, and **A. Schramm**. 2018. Long distance electron transport in individual cable bacteria. PNAS 115 (22): 5786-5791. doi: https://doi.org/10.1073/pnas.1800367115

112. Vanthournout, B., M.M. Busck, J. Bechsgaard, F. Hendrickx, **A. Schramm**, and T. Bilde. 2018. Male spiders control offspring sex ratio through greater production of female-determining sperm. Proc. R. Soc. B 20172887. http://dx.doi.org/10.1098/rspb.2017.2887

111. Viana, F., L.C. Paz, K. Methling, C.F. Damgaard, M. Lalk, **A. Schramm**, and M.B. Lund. 2018. Differential effects of multiple nephridial symbionts on maturation and reproduction of the earthworm *Eisenia andrei*. FEMS Microbiol. Ecol. 94 (2): fix178. https://doi.org/10.1093/femsec/fix178

***2017***

110. Jochum, L.M., X. Chen, M.A. Lever, A. Loy, B.B. Jørgensen, **A. Schramm**, and K.U. Kjeldsen. 2017. Depth distribution and assembly of sulfate-reducing microbial communities in marine sediments of Aarhus Bay. Appl. Environ. Microbiol. 83 (23): e01547-17. https://doi.org/10.1128/AEM.01547-17.

109. Thorup, C.A., **A. Schramm**, A. Findlay, K. Finster, and L. Schreiber. 2017. Growth of the Deltaproteobacterium *Desulfurivibrio alkaliphilus* by sulfide oxidation with nitrate involving a sulfite reductase-dependent sulfide oxidation pathway. mBio 8:e00671-17. doi: https://doi.org/10.1128/mBio.00671-17.

108. Tawakoli, P.N., T.R. Neu, M.M. Busck, U. Kuhlicke, **A. Schramm**, T. Attin, D.B. Wiedemeier, and S. Schlafer. 2017. Visualizing the Dental Biofilm Matrix by Means of Fluorescence Lectin-Binding Analysis. J.Oral Microbiol 9:1,1345581. doi: 10.1080/20002297.2017.1345581

107. Marshall, I.P.G., P. Starnawski, C. Cupit, E.F. Cáceres, T.J.G. Ettema, **A. Schramm**, K.U. Kjeldsen. 2017. The novel bacterial phylum Calditrichaeota is diverse, widespread and abundant in marine sediments and has the capacity to degrade detrital proteins. Environ. Microbiol. Reports 9(4): 397–403. doi: 10.1111/1758-2229.12544

106. Petro, C., P. Starnawski, **A. Schramm***, and K.U. Kjeldsen. 2017. Microbial community assembly in marine sediments. Aquat. Microb. Ecol. 79: 177-195. doi: https://doi.org/10.3354/ame01826

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