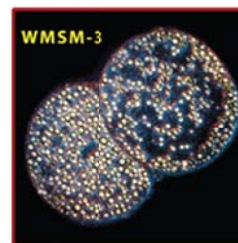


Programme

EMBO Workshop on Microbial Sulfur Metabolism Noordwijkerhout, The Netherlands



Sunday April 15, 2012

16.00 – 18.00	REGISTRATION
18.00 – 20.00	DINNER
20.00 – 20.10	Welcome
20.10 – 21.00	Keynote lecture James Farquhar (<i>University of Maryland, USA</i>) The evolution and future of the Earth's sulfur cycle
21.00 – 23.00	Ice-breaker

Monday April 16, 2012

Session 1 – *Geochemistry and evolution*

Chairman: Jan Kuever

09.00 – 09.30	Invited lecture Timothy Ferdelman (<i>MPI for Marine Microbiology, Germany</i>) Biogeochemistry of sulfur in marine sediments: known knowns, known unknowns and unknown unknowns
09.30 – 09.50	David Johnston (<i>Harvard University, USA</i>) Interrogating the mechanisms controlling sulfur isotope fractionation during sulfate reduction
09.50 – 10.10	William Leavitt (<i>Harvard University, USA</i>) The sulfur isotope fractionation of dissimilatory sulfite reductase (Dsr)
10.10 – 10.30	Aubrey Zerkle (<i>University of New Castle, UK</i>) S isotope investigation of sulfur cycling in the sulfidic Frassassi cave system: A case study of chemotrophic sulfide oxidation in the environment
10.30 – 11.00	COFFEE / TEA BREAK – room Asamblea
11.00 – 11.30	Invited lecture Alexander Loy (<i>University of Vienna, Austria</i>) Ecology of sulfate-reducing microorganisms in wetlands – fame-less actors in carbon cycling and climate change
11.30 – 11.50	Esther Velasco (<i>VU University Amsterdam, The Netherlands</i>) Extreme microbial sulphur isotope fractionation in a Mars analogue environment at Rio Tinto, SW Spain
11.50 – 12.10	Merja Itävaara (<i>VTT Espoo, Finland</i>) Diversity of sulphate reducing bacteria in deep earth crust aquifers of Fennoscandian Shield
12.10 – 12.30	Shuangjiang Liu (<i>Institute of Microbiology, Chinese Academy, Beijing, China</i>) <i>Acidithiobacillus caldus</i> : a physiological story starts at its genome
12.30 – 14.00	LUNCH

Monday April 16, 2012

Session 2 – Physiology, biochemistry and genomics of sulfur bacteria

Chairman: Inês Cardoso Pereira

14.00 – 14.30	Invited lecture Christiane Dahl (<i>University of Bonn, Germany</i>) Genomic, proteomic and transcriptomic insights into oxidative sulfur metabolism in the purple sulfur bacterium <i>Allochromatium vinosum</i>
14.30 – 14.50	Rizlan Bernier-Latmani (<i>EPFL Lausanne, Switzerland</i>) Mechanism of sulfate reduction in the Gram-positive bacterium <i>Desulfotomaculum reducens</i>
14.50 – 15.10	Inês Cardoso Pereira (<i>University Lisboa, Portugal</i>) Role of the QmoABC and DsrMKJOP membrane complexes in sulfate reduction
15.10 – 15.30	Kai Finster (<i>Aarhus University, Denmark</i>) The pathway of sulfur disproportionation deduced from genomic and physiological data
15.30 – 16.00	COFFEE / TEA BREAK – room Assembleia
16.00 – 16.30	Invited lecture Donald Bryant (<i>Penn State University, USA</i>) The phylum <i>Chlorobi</i> : unexpected diversity among green chlorophototrophic bacteria revealed by genomic, metagenomic, and metatranscriptomic analyses
16.30 – 16.50	Ulrike Kappler (<i>University of Queensland, St. Lucia, Australia</i>) Maintaining a comfortable lifestyle – integration of methylotrophy, heterotrophy and sulfur oxidation in the soil bacterium <i>Starkeya novella</i>
16.50 – 17.10	Arnulf Kletzin (<i>TU Darmstadt, Germany</i>) Sulfur oxygenase reductases from mesophilic <i>Halothiobacillus</i> and thermoacidophilic <i>Acidianus</i> : Properties and implications for the reaction mechanism
17.10 – 17.30	Oliver Klimmek (<i>Institute of Microbiology & Genetics, Darmstadt, Germany</i>) A sulfur harvesting complex mediates sulfur transfer to polysulfide reductase in <i>Wolinella succinogenes</i>
18.00 – 20.00	DINNER
20.00 – 22.00	POSTER SESSION WITH DRINKS – room Assembleia

Tuesday April 17, 2012

Session 3 – Sulfur bacteria and their niches

Chairman: Gerard Muyzer

09.00 – 09.30	Invited lecture Jörg Overmann (<i>DSMZ-Braunschweig, Germany</i>) Molecular determinants of bacterial symbiosis in phototrophic consortia
09.30 – 09.50	Nicola Storelli (<i>UNIGE, Bellinzona, Switzerland</i>) Proteomic analysis of the purple sulfur bacterium candidatus "Thiodictyon syntrophicum" sp. nov. strain Cad16 from Lake Cadago
09.50 – 10.10	Petra Pjevac (<i>Max-Planck Institute for Marine Microbiology, Bremen, Germany</i>) Colonization and oxidation of elemental sulfur by uncultured <i>Epsilonproteobacteria</i> in marine benthic habitats
10.10 – 10.30	Anne Schwedt (<i>Max-Planck Institute for Marine Microbiology, Bremen, Germany</i>) Sulfur reduction as a survival strategy of <i>Beggiatoa</i> sp.
10.30 – 11.00	COFFEE / TEA BREAK – room Asambleia
11.00 – 11.30	Invited lecture Hendrik Schäfer (<i>University of Warwick Coventry, UK</i>) Functional diversity of (volatile) organosulfur compound degrading microorganisms in terrestrial and marine environments
11.30 – 11.50	Tomas Llorens-Mares (<i>Spanish Council for Research (CSIC), Blanes, Spain</i>) A taxonomic and functional view on the sulphur cycle of euxinic continental waters through metagenomics and 16S rRNA gene tag sequencing
11.50 – 12.10	Verena Salman (<i>Max-Planck Institute for Marine Microbiology, Bremen, Germany</i>) Long-awaited phylogenetic examination of giant sulfur bacteria revealed unexpected diversity and peculiar 16S rRNA genes
12.10 – 12.30	Brendan Headd (<i>University of Tennessee, USA</i>) Uncovering evidence for niche partitioning among sulfur-oxidizing bacteria in the same environment
12.30 – 14.00	LUNCH

Session 4 – Novel sulfur biotransformations

Chairman: Albert Janssen

14.00 – 14.30	Invited lecture Dimitry Sorokin (<i>Winogradsky Institute Moscow, Russian Academy of Sciences, Russia</i>) Natronophilic sulfidogens in soda lakes
14.30 – 14.50	Marjan Smeulders (<i>Radboud University Nijmegen, The Netherlands</i>) Carbon disulfide conversion by an acidothermophilic archaeon: evolution of a new enzyme
14.50 – 15.10	Jana Milucka (<i>Max-Planck Institute for Marine Microbiology, Bremen, Germany</i>) Novel bacterial disulfide disproportionation under anaerobic conditions
15.10 – 15.30	Sabine Lehmann (<i>University of Konstanz, Germany</i>) SoeABC, a novel sulfite dehydrogenase in the Roseobacters?
15.30 – 18.00	POSTER SESSION WITH DRINKS – room Asambleia
18.00	Departure by bus to Rotterdam
19.00 – 23.00	CONFERENCE DINNER

Wednesday April 18, 2012

Session 5 – Biotechnology of sulfur bacteria

Chairman: Piet Lens

09.00 – 09.30	Invited lecture Mark Dopson (<i>Linnaeus University, Kalmar, Sweden</i>) Towards green mining: exploiting pshychrotolerant acidophiles in bioremediation of inorganic sulfur compounds
09.30 – 09.50	Irene Sánchez-Andrea (<i>Autonomous University of Madrid, Spain</i>) Enrichment and isolation of sulfate-reducing bacteria from Rio Tinto sediments growing at pH4
09.50 – 10.10	Tessa van den Brand (<i>KWR Watercycle Research Institute, Nieuwegein, The Netherlands</i>) Biological sulphate reduction from saline wastewater at low temperature
10.10 – 10.30	Peer Timmers (<i>Wageningen University, The Netherlands</i>) Novel high-pressure membrane-capsule bioreactor for the enrichment of anaerobic methanotrophs
10.30 – 11.00	COFFEE / TEA BREAK – room Asamblea
11.00 – 11.30	Henk Dijkman (<i>Paques BV, Balk, The Netherlands</i>) Twenty years of experience using the biological sulphur cycle for industrial water and gas treatment
11.30 – 11.50	Lucian Staicu (<i>UNESCO-IHE, Delft, The Netherlands</i>) Biorecovery of selenium from industrial wastewaters
11.50 – 12.10	Marco de Graaff (<i>Wetsus, Leeuwarden, The Netherlands</i>) Biological treatment of sulfidic spent caustics under halo-alkaline conditions using soda lake bacteria
12.10 – 12.30	Florence Marty (<i>Delft University of Technology, Delft, The Netherlands</i>) Sulfur cycle bacteria dominate marine harbor structures with past evidence of Accelerated Low Water Corrosion
12.30 – 14.00	LUNCH

Session 6 – Microbial interactions and symbiosis

Chairman: Fons Stams

14.00 – 14.30	Invited lecture Dave Stahl (<i>University of Washington, USA</i>) Adaptive evolution of a <i>Desulfovibrio</i> –Methanogen mutualism
14.30 – 14.50	Marie Thérèse Giudici-Orticoni (<i>CNRS, Marseille, France</i>) Metabolic coupling between <i>Desulfovibrio</i> and <i>Clostridium</i> through physical interaction
14.50 – 15.20	Invited lecture Nicole Dubilier (<i>Max-Planck Institute for Marine Microbiology, Bremen, Germany</i>) Metagenomics and metaproteomics of chemoautotrophic sulfur-oxidizing symbionts
15.20 – 16.10	Keynote lecture Gerrit Voordouw (<i>University of Calgary, Canada</i>) Fundamental and applied aspects of the sulfur cycle: from <i>Desulfovibrio</i> to oil fields
16.10 – 16.30	COFFEE / TEA BREAK – Lounge
16.30	Departure

