

SCIENTIFIC PROGRAMME

Thursday May 27th

08.30 Registration

09.30 Opening lecture: Adam Driks

Loyola University Medical Center, Maywood, IL, US

The role of order (but not too much order) in the assembly and properties of the Bacillus spore coat

10.30 Coffee break

11.00 Session 1: Endospore structure

11.00 - 11.20 Assunta Pelosi (Federico II University, Naples, Italy)

CotE mediates CotC-CotU interaction during spore coat formation in B. subtilis

11.20 - 11.40 Daniela Krajčiková (Slovak Academy of Sciences, Bratislava, Slovakia)

Protein-protein interactions among the spore coat morphogenetic proteins of B. subtilis

11.40 - 12.00 Peter T. McKenney (New York University, New York City, NY, US)

The B. subtilis spore coat is composed of at least four distinct layers

12.00 - 12.20 Stella Planchon (INRA, Université d'Avignon, Avignon, France)

Spore coat protein composition is modified by the sporulation temperature

12.20 - 12.40 Per A. Bullough (University of Sheffield, Sheffield, UK)

Exploring the alpha helical structure of the exosporium and sublayers of spores of the Bacillus cereus family by electron crystallography

12.40 - 13.00 Simon M. Cutting (Royal Holloway University of London, Egham, UK)

Endospores of Clostridium difficile

13.00 Lunch

14.00 Poster Session

16.00 Session 2: Developmental processes 1

16.00 - 16.20 Leendert W. Hamoen (Newcastle University, Newcastle, UK)

Membrane potential is required for localization of cell division proteins in bacteria

16.20 - 16.40 Anthony J. Wilkinson (University of York, York, UK)

The structure and interactions of the pp2c domain of the septum localizing and cell fate determining phosphatase SpoIIE

16.40 - 17.00 Melissa DeFrancesco (Public Health Research Institute, Newark, NJ, US)

MecA dampens developmental transitions by distinct mechanisms

- 17.00 - 17.20 Wilfried J.J. Meijer (Centro de Biología Molecular, Madrid, Spain)
Functional analyses of Bacillus pumilus plasmid p576 mediating inhibition of sporulation
- 17.20 Coffee break and poster discussion**
- 17.50 Session 3: Developmental processes 2**
- 17.50 - 18.10 Stanislava Rešetárová (Slovak Academy of Sciences, Bratislava, Slovakia)
Function and structure of Bacillus subtilis SpoIIS toxin-antitoxin system
- 18.10 - 18.30 Sara Salvetti (Università di Pisa, Italy)
Genome-wide transcriptional profiling and phenotype analysis of Bacillus cereus during swarming
- 18.30 - 18.50 Emilia Ghelardi (Università di Pisa, Italy)
Influence of surfactin and swrA on surface motility and differentiation of swarmer cells by Bacillus subtilis
- 18.50 - 19.10 Vicki Colledge (University of York, York, UK)
Structure and Organisation of SinR, the Master Regulator of Biofilm Formation

Friday May 28th

- 09.00 Session 4: Gene Expression**
- 09.00 - 09.20 Agnes Fouet (Pasteur Institute, Paris, France)
Full expression of Bacillus anthracis toxin gene in the presence of bicarbonate requires a 2.7 kb-long atxA mRNA that contains a terminator structure
- 09.20 - 09.40 Lillian Reiter (University of Oslo, Norway)
Large spore proteins with repeated domains in Bacillus cereus group strains: function unknown – yet important?
- 09.40 - 10.00 Imke de Jong (University of Groningen, Haren The Netherland)
Heterochronic phosphorelay gene expression as a source of heterogeneity in Bacillus subtilis spore formation
- 10.00 - 10.20 Elias Dahlsten (University of Helsinki, Finland)
An essential two-component system CBO0365/CBO0366 in cold tolerance of group I (proteolytic) Clostridium botulinum ATCC 3502
- 10.20 - 10.40 Philippe Schmitt (INRA, Avignon, France)
Glutamate, arginine and lysine improve acid tolerance and pH homeostasis in B. cereus
- 10.40 Coffee break and poster discussion**

11.10 Session 5: Germination

- 11.10 - 11.30 Anne Moir (University of Sheffield, Sheffield, UK)
Mutagenesis of alanine spore germination receptor (GerA) subunits in B. subtilis
- 11.30 - 11.50 J. C. Velásquez Guzman (University of Groningen, Haren The Netherland)
Characterization of germination activator proteins from Bacillus spores
- 11.50 - 12.10 Graham Christie (University of Cambridge, UK)
Functional analysis of cortex-lytic enzymes involved in germination of Bacillus megaterium spores
- 12.10 - 12.30 David A. Burns (University of Nottingham, UK)
Understanding the mechanisms of Clostridium difficile spore germination
- 12.30 - 12.50 Martin D. Webb (Institute of Food Research, Norwich, UK)
Can enhancement in germination of non-proteolytic Clostridium botulinum spores at increased spore number be attributed to interaction between the spores?
- 12.50 - 13.10 Alex Ter Beek (University of Amsterdam, The Netherland)
Modelling of heterogeneity in Bacillus subtilis spore germination and outgrowth

13.10 Lunch

14.30 Poster Session

16.00 Tour

20.00 Dinner

Saturday May 29th

09.00 Session 6: Applications of spores

- 09.00 - 09.15 Remko Kort (TNO, The Netherland)
Novel fluorescence-based method for real-time detection of viable spores
- 09.15 - 09.30 Genia Lücking (Technische Universitat Munchen, Germany)
Characterization of heat resistant spore formers in food
- 09.30 - 09.45 Pilar Junier (Ecole Polytechnique Federale de Lausanne, Switzerland)
U(VI) reduction by spores of Desulfotomaculum reducens MI-1
- 09.45 - 10.00 Elena Della Vecchia (Ecole Polytechnique Federale de Lausanne, Switzerland)
U(VI) reduction by spores of Clostridium acetobutylicum
- 10.00 - 10.15 Ynte de Vries (FrieslandCampina, Deventer, The Netherland)
Application of spores as probiotics in foods: an industry perspective
- 10.15 - 10.30 Sebastien Potot (DSM Nutritional Products, Basel, Switzerland)
Bacillus subtilis spore display of recombinant proteins using a coat associated enzyme as carrier

10.30 Coffee break and poster discussion

11.00 Session 7: Diversity of *Bacilli*

11.00 - 11.15 Enrica D'Apuzzo (Federico II University, Naples, Italy)

A quorum sensing mechanism controls carotenoid synthesis in Bacillus pumilus

11.15 - 11.30 Ines Mandic-Mulec (University of Ljubljana, Slovenia)

Genetic and phenotypic diversity of Bacillus subtilis microscale isolates

11.30 - 11.45 Peter Kampfer (University of Giessen, Germany)

The future of the taxonomy of the family Bacillaceae – some thoughts on a polyphasic versus a genomic approach

12.00 Session 8: Streptomyces

12.00 - 12.15 Delin Xu (University of Paris-Sud, France)

The over-expression of a Novel Transcriptional Regulator of the TetR family Represses Sporulation as well as Antibiotic production in Streptomyces coelicolor

12.15 - 12.30 Christopher Franco (Flinders University, Adelaide, Australia)

Optimisation of sporulation of endophytic actinomycetes in submerged culture and their biocontrol activity

12.30 - 12.45 Karel Mikulik (Academy of Sciences of Czech Republic, Prague, Czech Republic)

Protein phosphorylation during development of Streptomyces

12.45 - 13.00 Jan Bobek (Academy of Sciences of Czech Republic, Prague, Czech Republic)

Molecular mechanisms launching germination in Streptomyces coelicolor

13.00 Lunch