

Pre-Registration

Saturday, June 13, 2009

3:00 p.m. – 6:00 p.m.

Registration

Sunday, June 14, 2009

9:00 – 12:00 p.m.

Monday, June 15, 2009

8:00 – 12:00 p.m.



Breakfast will be served Monday through Thursday, 7:30 – 8:30 a.m.

Sunday, June 14, 2009 – Afternoon – Kon Tiki Ballroom

2:00 **Welcome remarks – James A. Hoch**

Pathogenesis I

CHAIR: James Hoch

- 2:15 – 3:00 **Keynote Lecture: Surface and envelope proteins of *Staphylococcus aureus*, their requirements for abscess formation, persistence in host tissues and protective immunity.** Olaf Schneewind, University of Chicago, Chicago, Illinois, USA
- 3:00 – 3:15 **T1... RNA-dependent membrane remodeling by multiple peptide resistance factors**
Michael Ibbá, The Ohio State University, Columbus, Ohio, USA
- 3:15 – 3:30 **T2... A bicarbonate ABC transporter essential to *Bacillus anthracis* virulence.** Adam C. Wilson, The Scripps Research Institute, La Jolla, California, USA
- 3:30 – 3:45 **T3... Role of serine/threonine kinases in the virulence of *Staphylococcus aureus*.** Jean-Philippe Didier, Institute of Biology and Chemistry of Proteins, Lyon, France
- 3:45 – 4:00 **T4... Phosphorylation at threonine prevents promoter binding of the two-component response regulator CovR in Group B Streptococcus** Lakshmi Rajagopal, University of Washington School of Medicine and Seattle Children's Hospital Research Institute, Seattle, Washington, USA
- 4:00 – 4:30 **Coffee Break**

CHAIR: Steven Leppla

- 4:30 – 4:45 **T5... The Convergence of Metabolic and Virulence Regulatory Networks in the Group A Streptococcus.** Kevin S. Mclver, University of Maryland, College Park, Maryland, USA
- 4:45 – 5:00 **T6... CcpA-Independent Catabolite Repression in *Streptococcus mutans*.** Lin Zeng, College of Dentistry, University of Florida, Gainesville, Florida, USA
- 5:00 – 5:15 **T7... Control of expression of the master virulence regulator AtxA in *Bacillus anthracis***
Inga Jende, The Scripps Research Institute, La Jolla, California, USA
- 5:15 – 5:30 **T8... *Streptococcus pyogenes* *mefE* contributes to invasive disease and biofilm formation *in vivo*.** Melody N. Neely, Wayne State University School of Medicine, Detroit, Michigan, USA
- 5:30 – 5:45 **T9... Factors impacting Group B Streptococcal vaginal colonization and interactions with native microbiota.** Tamsin R. Sheen, San Diego State University, San Diego, California, USA
- 5:45 – 6:00 **T10... Center for Structural Genomics of Infectious Diseases.** W. F. Anderson, Northwestern University Feinberg School of Medicine, Chicago, IL, USA
- 7:00 **Welcome Reception – William D. Evans Sternwheeler**
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Monday, June 15, 2009 – Morning

Regulation I

CHAIR: Michael Ibba

- 8:30 – 8:45 **T11...** **Message passing: Protein structure assembly from sequence data for two component signaling proteins.** Hendrik Szurmant, The Scripps Research Institute, La Jolla, California, USA
- 8:45 – 9:00 **T12...** **The roles of the YycFG(WalKR)and PhoPR two component systems in cell wall metabolism in *Bacillus subtilis*.** Paola Bisicchia, Smurfit Institute of Genetics, Trinity College Dublin, Dublin, Ireland.
- 9:00 – 9:15 **T13...** **The WalKR (YycGF) Essential Signal Transduction Pathway and Pathogenesis of *Staphylococcus aureus*.** Tarek Msadek, Biology of Gram-positive Pathogens, Institut Pasteur, Paris, France
- 9:15 – 9:30 **T14...** **New regulatory targets of the *Bacillus subtilis* BY-kinase PtkA.** Carsten Jers, Center for Systems Microbiology, Technical University of Denmark, Kgs. Lyngby, Denmark
- 9:30 – 9:45 **T15...** **Molecular characterization of *Staphylococcus aureus* CapA/CapB tyrosine-kinases.** Christophe Grangeasse, Institut de Biologie et Chimie des Protéines, CNRS, University of Lyon, Lyon, France
- 9:45 – 10:00 **T16...** **Involvement of essential two-component regulatory system YhcSR in the modulation of nitrate metabolism in *Staphylococcus aureus*.** Yinduo Ji, University of Minnesota, Saint Paul, Minnesota, USA
- 10:00 – 10:30 **Coffee Break**

CHAIR: Gordon Churchward

- 10:30 – 10:45 **T17...** **Control of the histidine kinase/phosphatase activities of a membrane-associated thermosensor from *Bacillus subtilis*.** Diego de Mendoza, IBR-CONICET, National University of Rosario, Rosario, Argentina
- 10:45 – 11:00 **T18...** **The Lsd Detoxification Module: Lantibiotic Sensing in *Bacillus subtilis*.** Thorsten Mascher, Karlsruhe Institute of Technology, Karlsruhe, Germany
- 11:00 – 11:15 **T19...** **A novel hybrid kinase is essential for activating the σ^B -mediated stress response of *Bacillus cereus*.** Mark de Been, Wageningen University and Research Centre, Wageningen, The Netherlands
- 11:15 – 11:30 **T20...** ***Bacillus subtilis* ECF σ factors control both antibiotic resistance and production.** John D. Helmann, Cornell University, Ithaca, New York, USA
- 11:30 – 11:45 **T21...** **Site-1 and beyond: Analysis of ECF sigma factor regulation through regulated intramembrane proteolysis in *Bacillus subtilis*.** Thomas Wiegert, Institute of Genetics, University of Bayreuth, Bayreuth, Germany
- 11:45 – 12:00 **T22...** **Molecular mechanism of lipid biosynthesis regulation by FapR in *Staphylococcus aureus*.** Daniela Albanesi, IBR-CONICET, National University of Rosario, Rosario, Argentina.
- 12:15 – 1:15 **Lunch – Beach North**
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Monday, June 15, 2009 – Afternoon

Cell Division/Cell Structure/Mobile Elements

CHAIR: Kevin McIver

- 2:00 – 2:15 **T23...** **Unraveling *Bacillus subtilis* L-forms division.** Patricia Domínguez-Cuevas, Centre for Bacterial Cell Biology, Institute for Cell and Molecular Biosciences, Newcastle University, Newcastle upon-Tyne, United Kingdom
- 2:15 – 2:30 **T24...** **Filament formation in ovococci.** Daniel Pérez-Nuñez, Laboratoire de Génétique Microbienne, Institut National de Recherche Agronomique, Cedex, France
- 2:30 – 2:45 **T25...** **Lipid binding of DivIVA suggests a general mechanism for protein localization at curved membranes.** Leendert W. Hamoen, Newcastle University, Newcastle upon Tyne, United Kingdom
- 2:45 – 3:00 **T26...** **Post-translational regulation and structure-function analysis of the SOS-induced cell division inhibitor YneA from *Bacillus subtilis*.** Allison Mo, Stanford University, Stanford, California, USA
- 3:00 – 3:15 **T27...** **Involvement of G3P acyltransferase, PlsX, in the cell division machinery.** Hirofumi Yoshikawa, Tokyo University of Agriculture, Tokyo, Japan
- 3:15 – 3:30 **T28...** **Phylogenetic Analysis Reveals Many Uncharacterized Actin-like Proteins in Bacteria: Regulated Polymerization, Dynamic Instability, and Treadmilling in *Bacillus subtilis* Alp7A.** Alan I. Derman, University of California San Diego, La Jolla, California, USA
- 3:30 – 3:45 **T29...** **The actin-like MreB cytoskeleton organizes viral DNA replication in bacteria.** Daniel Muñoz-Espín, Instituto de Biología Molecular “Eladio Viñuela” (CSIC), Centro de Biología Molecular “Severo Ochoa” (CSIC-UAM), Universidad Autónoma de Madrid, Madrid, Spain
- 3:45 – 4:00 **T30...** **Conjugative plasmid transfer in Gram-positive bacteria: molecular clues and monitoring tools.** Elisabeth Grohmann, Technical University Berlin, Berlin, Germany
- 4:00 – 4:30 **Coffee Break**

Secretion

CHAIR: Paul Sullam

- 4:30 – 4:45 **T31...** **The Live Cell Secretome Array of *Bacillus subtilis*.** E.L. Denham, University Medical Center Groningen and University of Groningen, Groningen, The Netherlands
- 4:45 – 5:00 **T32...** **Characterization of *Streptococcus gordonii* SecA2 as a paralogue of SecA.** Barbara A. Bensing, Veterans Affairs Medical Center and the University of California, San Francisco, California, USA
- 5:00 – 5:15 **T33...** **Specificity in protein translocation via the Twin-arginine translocation pathway of *Bacillus subtilis*.** Robyn Eijlander, Groningen Biomolecular Sciences and Biotechnology Institute, University of Groningen, Groningen, The Netherlands
- 5:15 – 5:30 **T34...** **Substrate specificity of the *Bacillus anthracis* accessory protein translocase.** Colin R. Harwood, Institute for Cell and Molecular Biosciences, Medical School, Newcastle University, Newcastle upon Tyne, United Kingdom
- 5:30 – 7:30 **Poster Session I – Aviary Ballroom**
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Tuesday, June 16, 2009 – Morning

Metabolism

CHAIR: John Helmann

- 8:30 – 8:45 **T35...** **Strigent control of the carbon-metabolic network in *Bacillus subtilis*.** Yasutaro Fujita, Fukuyama University, Fukuyama, Japan
- 8:45 – 9:00 **T36...** **Uncovering transcriptional control linked to branched-chain amino acid biosynthesis in *Bacillus subtilis*.** Shaun R. Brinsmade, Tufts University School of Medicine, Boston, Massachusetts, USA
- 9:00 – 9:15 **T37...** **Novel functions for glycolytic enzymes: A RNA degradation complex in *Bacillus subtilis*.** Jörg Stülke, University of Göttingen, Göttingen, Germany
- 9:15 – 9:30 **T38...** **Ligand recognition by the energy-sensor domain of CcpN.** Nathalie Declerck, Centre de Biochimie Structurale, Montpellier, France
- 9:30 – 9:45 **T39...** **The anaerobic formation of acetoin regulated by the transcriptional regulator AlsR – part of pH homeostasis in *Bacillus subtilis*.** Elisabeth Härtig, Technische Universität Braunschweig, Mikrobiologie, Braunschweig, Germany
- 9:45 – 10:00 **T40...** **Purine metabolism and its control in *Lactococcus lactis*.** Jan Martinussen, Center for Systems Microbiology, DTU- Systems Biology, Technical University of Denmark, Matematiktorvet, Denmark
- 10:00 – 10:15 **T41...** **ECF transporters – a novel class of modular vitamin-uptake systems in prokaryotes.** Dmitry A. Rodionov, Burnham Institute for Medical Research, La Jolla, California, USA
- 10:15 – 10:30 **T42...** **Comparative Studies on the Structure and Functional Properties of a Redox-sensing Repressor.** Claes von Wachenfeldt, Lund University, Lund, Sweden
- 10:30 – 11:00 **Coffee Break**

Industrial Applications

CHAIR: Eugenio Ferrari

- 11:00 – 11:15 **T43...** **Bacillithiol, a novel antioxidant thiol produced in Firmicutes.** Gerald L. Newton, University of California San Diego, La Jolla, California, USA
- 11:15 – 11:30 **T44...** ***Bacillus subtilis* spore display of recombinant proteins using a coat associated enzyme as carrier.** Sébastien Potot, DSM Nutritional Products Ltd., Biotechnology R&D, Basel, Switzerland
- 11:30 – 11:45 **T45...** **mRNA stabilizing elements for enhancing vitamin production in *Bacillus subtilis*.** Zoltán Prágai, DSM Nutritional Products Ltd., Centre for Process R&D, Basel, Switzerland
- 11:45 – 12:00 **T46...** **A functional-genomics fermentation platform to identify and optimize health-impact properties of *Lactobacillus plantarum*.** Michiel Wels, TIFN/NIZO Food Research, The Netherlands
- 12:00 – 12:15 **T47...** **Genome-scale comparative analysis of the predicted secretomes of 25 sequenced lactic acid bacteria.** Roland Siezen, Radboud University Nijmegen Medical Centre, The Netherlands
- 12:15 – 12:30 **T48...** **2',3',4'-Trihydroxy-2-phenylacetophenone derivatives, a novel and potent class of anti-Gram-positive antibacterial agents.** Ken-ichi Yoshida, Kobe University, Kobe, Japan
- 12:45 – 1:45 **Lunch – Beach North**
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Tuesday, June 16, 2009 – Afternoon

Regulation II

CHAIR: Josef Deutscher

- 2:00 – 2:15 **T49...** **RNase Y, a novel endoribonuclease affects S-adenosylmethionine dependent riboswitch turnover and global mRNA stability in *Bacillus subtilis*.** Harald Putzer, Institut de Biologie Physico-Chimique, France
- 2:15 – 2:30 **T50...** **The structure of RNA polymerase in complex with the essential transcription elongation factor NusA.** Peter J. Lewis, University of Newcastle, Callaghan, Australia
- 2:30 – 2:45 **T51...** **Role and activation of the stressosome in the general stress response of *B. subtilis*.** Richard J. Lewis, Institute for Cell and Molecular Biosciences, Newcastle University, United Kingdom
- 2:45– 3:00 **T52...** **The Spx paralogue MgsR of *Bacillus subtilis* is subject to complex transcriptional and post-translational control mechanisms.** Alexander Reder, Ernst-Moritz-Arndt-University, Greifswald, Germany
- 3:00 – 3:15 **T53...** **New insights into the regulation of the CtsR-activity in *Bacillus subtilis*.** Alexander Elsholz, Ernst-Moritz-Arndt University, Greifswald, Germany
- 3:15 –3:30 **T54...** **A Novel Interaction Partner for HPr of the *Bacillus subtilis* Phosphotransferase System: Histidine-Phosphorylated HPr Stimulates the Transcriptional Activator YesS.** Sandrine Poncet, Laboratoire de Microbiologie et Génétique Moléculaire, INRA-AgroParisTech-CNRS, Thiverval-Grignon, France
- 3:30 – 4:00 **Coffee Break**

CHAIR: Lars Hederstedt

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- 4:00 – 4:15 **T55...** **Deciphering complex regulatory networks in response to thiol-reactive electrophiles in *Bacillus subtilis*.** Haike Antelmann, Institute for Microbiology, Greifswald, Germany
- 4:15 – 4:30 **T56...** **Role of Zur-regulated zinc mobilization by ribosomal protein displacement.** Scott E. Gabriel, Cornell University, Ithaca, New York, USA
- 4:30 – 4:45 **T57...** **Determinants of gene expression regulation by transcription initiating nucleoside triphosphates in *Bacillus subtilis*.** Libor Krásný, Academy of Sciences of the Czech Republic, Prague, Czech Republic
- 4:45 – 5:00 **T58...** **Adaptive Mutagenesis: The Role of Transcription in the Kinetics of the Evolutionary Process.** Ronald E. Yasbin, University of Nevada, Las Vegas, Las Vegas, Nevada, USA
- 5:00 – 5:15 **T59...** **When the force is not with you - the highly adapted proton-coupling strategies of an alkaliphilic *Bacillus*.** Terry A. Krulwich, Mount Sinai School of Medicine, New York, New York, USA
- 5:15 – 5:30 **T60...** **The single flagellar stator that supports use of both H⁺ and Na⁺ for motility in an alkaliphilic *Bacillus* is changed to single-coupling by mutation and dual ion use is conferred on two *Bacillus subtilis* motors.** Masahiro Ito, Graduate School of Life Sciences, Toyo University, Gunma, Japan
- 5:30 – 7:30 **Poster Session II – Aviary Ballroom**
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Wednesday, June 17, 2009 – Morning

Pathogenesis II

CHAIR: Olaf Schneewind

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- 8:30 – 9:00 **T61...** **Vaccinology and the search of the “Holy Grail”.** Guido Grandi, Novartis vaccines and Diagnostics, Siena, Italy
- 9:00 – 9:15 **T62...** **Assembly of pili on the surface of bacilli.** Jonathan M. Budzik, University of Chicago, Chicago, Illinois, USA
- 9:15 – 9:30 **T63...** **Biogenesis of T3 pili of *Streptococcus pyogenes*: The Cpa adhesin is at the pilus tip.** Bernard R. Quigley, Emory University, Atlanta, Georgia, USA
- 9:30 – 9:45 **T64...** **Role of Shr Domains in Hemoglobin Utilization and Virulence.** Zehava Eichenbaum, Georgia State University, Atlanta, Georgia, USA
- 9:45 – 10:00 **T65...** ***Streptococcus mitis* phage-encoded adhesins mediate attachment to α 2-8 linked sialic acid residues on platelet membrane gangliosides.** Jennifer Mitchell, San Francisco Veterans Affairs Medical Center and the University of California, San Francisco, California, USA
- 10:00 – 10:30 **Coffee Break**

Enterococci

CHAIR: Michael Gilmore

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- 10:30 – 10:45 **T66...** **Comparative genome analysis of *Enterococcus faecalis* isolates.** Kelli Palmer, Schepens Eye Research Institute and Harvard Medical School, Boston, Massachusetts, USA
- 10:45 – 11:00 **T67...** **EbrB, a transcriptional regulator encoded on the *E. faecium* Pathogenicity island (PAI), is involved in regulation of expression of PAI encoded genes, including the Enterococcal Surface Protein Gene (*esp*) and at least 15 other chromosomally encoded genes.** Janetta Top, University Medical Center Utrecht, The Netherlands
- 11:00 – 11:15 **T68...** **Determinants of intrinsic antimicrobial resistance in *Enterococcus faecalis*.** Christopher J. Kristich, Medical College of Wisconsin, Milwaukee, Wisconsin, USA
- 11:15 – 11:30 **T69...** **Role of fratricide in *Enterococcus faecalis* biofilm development.** Lynn E. Hancock, Kansas State University, Manhattan, Kansas, USA
- 11:30 – 11:45 **T70...** **Regulation of ethanolamine utilization in *Enterococcus faecalis*.** Kris Ann Baker, The Scripps Research Institute, La Jolla, California, USA
- 11:45 – 12:00 **T71...** **Characterization of EbrA: a novel regulator of biofilm formation in *Enterococcus faecalis*.** Katie Ballering, University of Minnesota, Minneapolis, Minnesota, USA
- 12:15 – 1:15 **Lunch – Beach North**
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Wednesday, June 17, 2009 – Afternoon

Development

CHAIR: Charlie Moran

- 2:30 – 2:45 **T72...** ***In vivo* functional analysis of a major sporulation kinase in *Bacillus subtilis*.** Masaya Fujita, University of Houston, Houston, Texas, USA
- 2:45 – 3:00 **T73...** **Positive and Negative Control of Sporulation Initiation in *Clostridium acetobutylicum* by orphan kinases.** Michael Young, Institute of Biological, Environmental and Rural Sciences, Aberystwyth University, Ceredigion, United Kingdom
- 3:00 – 3:15 **T74...** **Strict compartmentalization of σ^E activity in the mother cell is not essential for sporulation of *Bacillus subtilis*, although σ^E normally enforces compartmentalization of its own activity.** Vasant K. Chary, Temple University School of Medicine, Philadelphia, Pennsylvania, USA
- 3:15 – 3:30 **T75...** **SpoIIIE is required for separation of daughter cell membranes during *Bacillus subtilis* sporulation.** Tinya Fleming, University of California San Diego, La Jolla, California, USA
- 3:30 – 4:00 **Coffee Break**

CHAIR: Patrick Piggot

- 4:00 – 4:15 **T76...** **SpoVD in *Bacillus subtilis* is a substrate for the membrane-bound thiol-disulfide oxidoreductase StoA.** Lars Hederstedt, Lund University, Lund, Sweden
- 4:15 – 4:30 **T77...** **The locations of proteins within the *Bacillus subtilis* and *Bacillus anthracis* spore coats.** Adam Driks, Loyola University Medical Center, Maywood, Illinois, USA
- 4:30 – 4:45 **T78...** **Protein cross-linking and site-specific labeling by a *Bacillus subtilis* spore coat transglutaminase.** Catarina G. Fernandes, Instituto de Tecnologia Química e Biológica, Universidade Nova de Lisboa, Oeiras, Portugal
- 4:45 – 5:00 **T79...** **Biofilm formation by *Streptococcus pyogenes*: a role for the streptococcal regulator of virulence (Srv) and streptococcal cysteine protease (SpeB).** Sean D. Reid, Wake Forest University School of Medicine, Winston-Salem, North Carolina, USA
- 5:00 – 5:15 **T80...** **Abh, a novel activator of biofilm formation by *Bacillus subtilis*.** Ewan Murray, College of Life Sciences, University of Dundee, UK
- 6:30 – 7:30 **Reception – Beach North**
- 7:30 – 9:30 **Banquet – Kon Tiki Ballroom**
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Thursday, June 18, 2009 – Morning

Genomics/Proteomics

CHAIR: Gerhard Gottschalk

- 8:30 – 8:45 **T81...** **Pleomorphism and survival of Gram-positive bacteria on “dry” surface-air interfaces.** Jan Maarten van Dijk, University Medical Center Groningen and University of Groningen, Groningen, The Netherlands
- 8:45 – 9:00 **T82...** **The Transcriptionally Active Regions in the Genome of *Bacillus subtilis*.** Simon Rasmussen, Center for Biological Sequence analysis, Technical University of Denmark, Kgs. Lyngby, Denmark
- 9:00 – 9:15 **T83...** **The Genome of a Gut Strain of *Bacillus subtilis*.** Ghislain Schyngs, DSM Nutritional Products Ltd., Kaiseraugst, Switzerland
- 9:15 – 9:30 **T84...** **Genomic features of plant-associated *Bacillus amyloliquefaciens* linked with plant growth promotion and biocontrol.** Rainer Borriss, Institute of Biology, Humboldt University Berlin, Berlin, Germany
- 9:30 – 9:45 **T85...** **Comparative genomics of commensal and clinical isolates of *Streptococcus salivarius*.** Pierre Renault, Génétique Microbienne, Jouy en Josas, France
- 9:45 – 10:00 **T86...** **Novel virulence plasmids in *Clostridium botulinum*.** Eric A. Johnson, University of Wisconsin, Madison, Wisconsin, USA
- 10:00 – 10:30 **Coffee Break**

CHAIR: Ghislain Schyngs

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- 10:30 – 10:45 **T87...** **Structure and Complexity of the *Bacillus anthracis* Transcriptome.** Karla D. Passalacqua, School of Biology, Georgia Institute of Technology, Atlanta, Georgia, USA
- 10:45 – 11:00 **T88...** **Functional genomics of the multi-resistant nosocomial pathogen *Enterococcus faecium*.** Willem van Schaik, University Medical Center Utrecht, Utrecht, The Netherlands
- 11:00 – 11:15 **T89...** **Comprehensive Characterization of the Secretome of Methicillin-Resistant *Staphylococcus aureus* COL by Two Dimensional Liquid Chromatography and Mass Spectrometry.** Shobha Ravipaty, Indiana University, Bloomington, Indiana, USA
- 11:15 – 11:30 **T90...** **Comparative proteomic analysis of virulent and avirulent strains of *Listeria monocytogenes*.** Janet R. Donaldson, Mississippi State University, Mississippi, USA
- 11:30 – 11:45 **T91...** **MtsR is a metal-dependent global regulator in GAS that controls the expression of important virulence genes and metabolic functions.** Chadia Toukoki, Georgia State University, Atlanta, Georgia, USA
- 11:45 – 12:00 **T92...** **The protein interactome of *Streptococcus pneumoniae* and its phage.** Seesandra V. Rajagopala, J Craig Venter Institute, Rockville, Maryland, USA
- 12:00 – 12:15 **Closing Remarks**
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