



PROGRAMME

# 19<sup>th</sup>

INTERNATIONAL CONFERENCE §

## Bacilli & Gram-Positive Bacteria

11-15 JUNE 2017

*Berlin*



WWW.BACILLUS-2017.DE

# ORGANISATION AND IMPRINT

## Venue

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## Date

11–15 June 2017

## Conference website

[www.bacillus-2017.de](http://www.bacillus-2017.de)



## Conference chair

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## Conference organisation

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14.45–15.00	<b>Opening</b>
Room	Lecture hall
	President's welcome J. Stölke (Göttingen/DE)
15.00–17.00	<b>Sporulation</b>
Room	Lecture hall
Chair	S. Ben-Yehuda (Jerusalem/IL)
15.00 KL 01	Stochasticity and cell-fate determination during sporulation in <i>Bacillus subtilis</i> R. Losick (Cambridge, CA/US)
15.30 OP 01	Phenotypic memory links entry and exit from dormancy by a spore quantity-quality tradeoff in <i>Bacillus subtilis</i> <u>A. Mutlu</u> (Marburg, Heidelberg/DE), M. Ziesack (Heidelberg/DE) S. Trauth, I. Bischofs (Marburg, Heidelberg/DE)
15.45 OP 02	Inferring the <i>Bacillus subtilis</i> global gene regulation network <u>P. Eichenberger</u> , M. Arrieta-Ortiz, B. Shuster, C. Hafemeister, H. Chen A. Parikh, R. Bonneau (New York, NY/US)
16.00 OP 03	Structures of SpolIE reveal a regulatory switch shared across the PPC2 Phosphatase family and extending to the proteasomal proteases N. Bradshaw (Cambridge, CA/US), V. Levdkov (York/GB), C. Zimanyi R. Gaudet (Cambridge, CA/US), <u>A. Wilkinson</u> (York/GB) R. Losick (Cambridge, CA/US)
16.15 OP 04	Polar segregation of the chromosome origins during sporulation in <i>Bacillus subtilis</i> <u>D. Roberts</u> , L. J. Wu, J. Errington (Newcastle upon Tyne/GB)
16.30 OP 05	Functional analysis of GerAA subunit of <i>Bacillus subtilis</i> GerA germination receptor <u>A. Grela</u> , I. Jamrozek, A. Iwanicki, K. Hinc, M. Obuchowski (Gdansk/PL)
16.45 OP 06	Defining the metabolic landscape of the <i>Bacillus subtilis</i> sporangium <u>E. Riley</u> , J. Lopez-Garrido, K. Khanna, R. Liu, E. Villa K. Pogliano (La Jolla, CA/US)
17.00–19.00	<b>Get-together within the industrial exhibition</b>

## SCIENTIFIC PROGRAMME | MONDAY, 12 JUNE

- 08.30–10.15 Cell biology I  
Room Lecture hall  
Chair D.-J. Scheffers (Groningen/NL)
- 08.30 Identification of a unique cell cycle regulator in *Streptococcus pneumoniae* by en masse GFP localization and CRISPRi phenotyping  
**KL 02** J. W. Veening (Lausanne/CH)
- 09.00 An essential *Staphylococcus aureus* cell division protein regulates both FtsZ assembly and disassembly  
**OP 07** P. Eswara (Tampa, FL/US), J. Camberg (Kingston, NY/US)  
K. Thompson (Washington, D.C., WA/US)  
K. Ramamurthi (Bethesda, MD/US)
- 09.15 Acquisition of phage sensitivity by bacteria through exchange of phage receptors  
**OP 08** E. Tzipilevich (Jerusalem/IL)
- 09.30 Evidence for different rates in the mechanisms of recombination in Pneumoccal biofilms  
**OP 09** L. Cowley (Boston, MA/US), F. C. Petersen, R. Junges (Oslo/NO)  
W. P. Hanage (Boston, MA/US), D. A. Morrison (Chicago, IL/US)
- 09.45 Clostridial min system – possible mechanism of functioning during cell division and sporulation  
**OP 10** N. Labajova, E. Krascsenitsova, R. Valencikova, I. Barak (Bratislava/SK)
- 10.00 Lysis induced by membrane depolarisation is caused by MreB-linked mis-regulation of key autolysins in *Bacillus subtilis*  
**OP 11** K. Seistrup, H. Strahl (Newcastle upon Tyne/GB)
- 10.15–10.45 Coffee break within the industrial exhibition

10.45–12.15	Biotechnology
Room	Lecture hall
Chair	O. Kuipers (Groningen/NL)
10.45 KL 03	CRISPR-Cas9 – a bacterial immune system repurposed as a transformative genome engineering technology <u>E. Charpentier</u> (Berlin, Braunschweig, Hanover/DE; Umeå/SE)
11.15 OP 12	CRISPR-Cas9 mediated engineering of industrially relevant <i>Bacillus subtilis</i> strains <u>M. Price</u> , R. Cruz, F. Escalettes, S. Rosser (Edinburgh/GB)
11.30 OP 13	Less is more – towards development of a genome-reduced <i>Bacillus</i> as cell factory for vaccine production <u>R. Aguilar Suarez</u> (Groningen/NL), J. Stülke (Göttingen/DE) J. M. van Dijl (Groningen/NL)
11.45 OP 14	Methanol-based production $\gamma$ -aminobutyric acid in <i>Bacillus methanolicus</i> MGA3 <u>M. Irla</u> , I. Nærdaal (Trondheim/NO), L. Paul (Bielefeld/DE) T. M. B. Heggeset, V. Wendisch, T. Brautaset (Trondheim/NO)
12.00 OP 15	A comparative study of native and heterologous enzyme production in <i>Bacillus subtilis</i> <u>R. Cruz</u> , C. Sauer, C. Harwood (Newcastle upon Tyne/GB) T. van Rij (Delft/NL)
12.30–14.00	Lunch break within the industrial exhibition

## SCIENTIFIC PROGRAMME | MONDAY, 12 JUNE

- 14.00–15.45 New technologies, systems and synthetic biology  
Room Lecture hall  
Chair F. Commichau (Göttingen/DE)
- 14.00 High throughput phenotyping in *Bacillus subtilis*  
**KL 04** C. Gross (San Francisco, CA/US)
- 14.30 Large scale identification of evolutionary mechanism that facilitate protein-protein interactions  
**OP 16** C. P. Zschiedrich (Pomona, CA/US), M. Weigt (Paris/FR)  
H. Szurmajt (Pomona, CA/US)
- 14.45 Construction of a minimal divisome reveals robustness of cell division  
**OP 17** L. Hamoen (Amsterdam/NL)
- 15.00 Tailoring *Bacillus subtilis*-derived chassis for biotechnology applications  
**OP 18** E. Dervyn, A.-G. Planson (Jouy-en-Josas/FR), K. Tanaka  
K.-I. Yoshida (Kobe/JP), P. Noirot (Argonne, IL/US)  
M. Jules (Jouy-en-Josas/FR)
- 15.15 Abrupt glucose depletion in *Lactococcus lactis* is resulting in an immediate translational stop due to an extreme depletion of the GTP pool  
**OP 19** J. Martinussen (Lyngby/DK), A. Breuner (Bagsværd/DK)  
D. Frees (Copenhagen/DK), P. Varmanen (Helsinki/FI), K. Hammer  
M. Kilstrup (Lyngby/DK)
- 15.30 Adaptive laboratory evolution of *Corynebacterium glutamicum* towards higher growth rates on glucose minimal medium  
**OP 20** E. Pfeifer, C. Gätgens, T. Polen, J. Frunzke (Jülich/DE)
- 15.45–16.15 Coffee break within the industrial exhibition

## SCIENTIFIC PROGRAMME | MONDAY, 12 JUNE

16.15–17.30	Cell biology II
Room	Lecture hall
Chair	S. Aymerich (Jouy-en-Josas/FR)
16.15 OP 21	Peptidoglycan N-deacetylation is jointly controlled by PgdA, PBP A1 and GpsB in <i>Listeria monocytogenes</i> J. Rismundo (Wernigerode/DE), London/GB) S. Wamp (Wernigerode/DE), C. Aldridge W. Vollmer (Newcastle upon Tyne/GB), <u>S. Halbedel</u> (Wernigerode/DE)
16.30 OP 22	Exploring the relationship between penicillin binding proteins and the cell cycle regulator, GpsB R. Lewis (Newcastle/GB)
16.45 OP 23	Bacillus subtilis chromosomes are segregated in a directed diffusion-like manner, likely based on entropic forces, and are condensed by several SMC condensation centres per cell half, as revealed through single molecule tracking N. El Najjar, S. Schibany, F. Schmidt, D. Geisel, P. Lenz B. Eckhardt (Marburg/DE), L. Kleine Borgmann (Luxembourg/LU) M. Ulbrich (Freiburg/DE), <u>P. L. Graumann</u> (Marburg/DE)
17.00 OP 24	Cis-acting rDNA act as a loading site for Smc-ScpAB during nucleoid separation in <i>Bacillus subtilis</i> <u>K. Yano</u> , H. Niki (Mishima, Shizuoka/JP)
17.15 OP 25	A dynamin-like protein involved in bacterial cell membrane surveillance under environmental stress L. Guo, <u>M. Bramkamp</u> (Planegg-Martinsried/DE)
17.30–19.30	Poster session I
Room	“Bernhard von Langenbeck” and foyer (1 <sup>st</sup> floor)
Topics	Sporulation Cell biology Biotechnology New technologies, toolboxes and systems for the community, systems and synthetic biology Others

## SCIENTIFIC PROGRAMME | TUESDAY, 13 JUNE

08.30–10.15	Signal transduction
Room	Lecture hall
Chair	I. Mijakovic (Göteborg/SE)
08.30 OP 26	Understanding the activation mechanism of the histidine kinase BceS <u>A. Koh, S. Gebhard</u> (Bath/GB)
08.45 OP 27	Monitoring transcriptional adaptation in live <i>Bacillus subtilis</i> cells using two-photon fluorescence fluctuation microscopy N. Declerck (Montpellier/FR)
09.00 OP 28	Cyclic di-AMP controls potassium homeostasis in <i>Bacillus subtilis</i> <u>J. Gundlach, C. Herzberg, F. Commichau, J. Stölke</u> (Göttingen/DE)
09.15 OP 29	Structural insights into streptococcal competence regulation by the cell-to-cell communication system ComRS A. Talagas (Orsay/FR), L. Fontaine, L. Ledesma-Garcia J. Mignolet (Louvain-La-Neuve/BE), I. Li de la Sierra-Gallay, N. Lazar M. Aumont-Nicaise (Orsay/FR), M. Federle G. Prehna (Chicago, IL/US), <u>S. Nessler</u> (Orsay/FR)
09.30 OP 30	Ubiquitous rewiring of transcriptional control in streptococci: lesson from competence and predation coupling in <i>Streptococcus salivarius</i> <u>J. Mignolet, L. Fontaine, P. Hols</u> (Louvain-La-Neuve/BE)
09.45 OP 31	RsiV is a bacterial receptor for lysozyme A. Castro, L. Lewerke, <u>C. Ellermeier</u> (Iowa City, IA/US)
10.00 OP 32	DNA sensing in <i>Bacillus subtilis</i> P. Tohidifar, H. Walukiewicz, G. Ordal, <u>C. Rao</u> (Urbana, IL/US)
10.15–10.45	Coffee break within the industrial exhibition

## SCIENTIFIC PROGRAMME | TUESDAY, 13 JUNE

### 10.45–12.15 RNA biology

Room Lecture hall

Chair C. Wolz (Tübingen/DE)

- 10.45 Several regulatory RNAs in *Staphylococcus aureus* link stress responses, metabolism and virulence factor synthesis  
**KL 05** P. Romby (Strasbourg/FR)

- 11.15 A widespread riboswitch class regulates guanidine metabolism in bacteria  
**OP 33** R. Attilio, M. Sherlock, J. Nelson, R. Breaker (New Haven, CT/US)

- 11.30 Towards the *in vivo* RNA interactome of the Gram-positive model organism *Bacillus subtilis*  
**OP 34** A. Callan-Siddat, J. McKeown, T. Guest, H. Hall, A. Millard  
C. Constantinidou, E. Denham (Coventry/GB)

- 11.45 The Torpedo effect in *Bacillus subtilis* – RNase J1 resolves stalled transcription complexes  
**OP 35** M. Šiková, J. Wiedermannová, M. Převorovský, I. Barvík  
P. Sudzinová, O. Benada, H. Šanderová (Prague/CZ)  
C. Condon (Paris/FR), L. Krásný (Prague/CZ)

- 12.00 Rae1/YacP, a new endoribonuclease involved in ribosome-dependent mRNA decay in *Bacillus subtilis*  
**OP 36** C. Condon, M. Leroy, J. Piton, L. Gilet, O. Pellegrini, C. Proux  
J.-Y. Coppée, S. Figaro (Paris/FR)

- 12.30–14.00 Lunch break within the industrial exhibition

14.00–15.45	<b>Metabolism</b>
Room	Lecture hall
Chair	L. Hederstedt (Lund/SE)
14.00 OP 37	A devil in disguise – a metabolic enzyme converts a transcriptional activator into a repressor <u>M. Dormeyer</u> , S. Lentes (Göttingen/DE), R. Heermann (Munich/DE) F. Commichau (Göttingen/DE)
14.15 OP 38	Mapping of chance and necessity in protein sequence evolution in complex bacterial environments <u>L. Noda-Garcia</u> , E. Korenblum, A. Elazar, A. Aharoni, S. Fleishman D. Tawfik (Rehovot/IL)
14.30 OP 39	Making and breaking the wall – a systems approach to cell wall homeostasis in <i>Bacillus subtilis</i> G. Fritz (Marburg/DE)
14.45 OP 40	Turnover and recycling of the peptidoglycan-teichoic acid complex of the Gram-positive cell wall S. Unsleber, M. Mühleck, I. Hottmann, R. Kluj, M. Borisova <u>C. Mayer</u> (Tübingen/DE)
15.00 OP 41	We are what we eat – identifying a regulatory crosstalk between central carbon metabolism and cell division in bacteria A. Bottomley, R. Mann (Sydney/AU), A. Sonenshein (Boston, MA/US) L. Monahan, L. Harry (Sydney/AU)
15.15 OP 42	Glucosaminidase-DNA interaction affects the peptidoglycan hydrolytic activity of glucosaminidase <u>I. Grilo</u> , A. M. Ludovice (Monte de Caparica/PT) H. de Lencastre (Oeiras/PT; New York, NY/US) R. G. Sobral (Monte de Caparica/PT)
15.30 OP 43	Purification and characterization of ferredoxin-NADPH oxidoreductase parologue YcgT in Gram-positive bacterium <i>Bacillus subtilis</i> <u>D. Seo</u> (Kanazawa, Ishikawa/JP), M. Kitashima K. Inoue (Hirastuka, Kanagawa/JP) H. Komori (Takamatsu, Kagawa/JP)
15.45–16.15	Coffee break within the industrial exhibition

## SCIENTIFIC PROGRAMME | TUESDAY, 13 JUNE

16.15–17.30	Lifestyles I – stress
Room	Lecture hall
Chair	S. Gebhard (Bath/GB)
16.15 KL 06	Regulation of stress response and homeostasis by (p) ppGpp in <i>Bacillus subtilis</i> J. Wang (Madison, WI/US)
16.45 OP 44	Structural and functional insights into the (p) ppGpp response of <i>Bacillus subtilis</i> G. Bange (Marburg/DE)
17.00 OP 45	The association of metal homeostasis and (p) ppGpp regulation in the pathophysiology of <i>Enterococcus faecalis</i> J. A. Lemos (Gainesville, TX/US), A. O. Gaca (Boston, MA/US) <u>C. Colomer Winter</u> (Gainesville, TX/US)
17.15 OP 46	New insights into the general stress response of <i>Bacillus subtilis</i> – the SigB modulon <u>A. Reder</u> , U. Mäder, U. Gerth, M. Hecker, U. Völker (Greifswald/DE)
17.30–19.30	Poster session II
Room	“Bernhard von Langenbeck” and foyer (1 <sup>st</sup> floor)
Topics	Signal transduction RNA biology Metabolism Lifestyle selection and stress adaptation Pathogenic bacilli – the <i>Bacillus cereus/anthracis/thuringiensis</i> group Pathogenicity and toxicity/fighting infection Interactions of Bacilli with other organisms

## SCIENTIFIC PROGRAMME | WEDNESDAY, 14 JUNE

### 08.30–10.15 Lifestyles II – biofilm

Room Lecture hall

Chair I. Bischofs (Marburg, Heidelberg/DE)

08.30 Kin discrimination foretells *Bacillus subtilis* lifestyles

**OP 47** P. Stefanic, B. Kraigher, R. Kostanjšek, I. Mandic-Mulec (Ljubljana/SI)

08.45 Heterogeneity and biofilm morphology in *Clostridium perfringens*

**OP 48** N. Obana, N. Nomura (Tsukuba/JP)

09.00 Bifunctionality of a biofilm matrix protein controlled by redox state

**OP 49** S. Arnaouteli (Dundee/GB), M. Schor, C. MacPhee (Edinburgh/GB)

N. Stanley-Wall (Dundee/GB)

09.15 Collapse of genetic division of labor and evolution of autonomy in pellicle biofilms

**OP 50** A. Dragos, H. Kiesewalter (Jena/DE), G. Maróti, B. Bálint (Szeged/HU)  
C. Falcon Garcia, O. Lieleg (Munich/DE), Á. T. Kovács (Jena/DE)

09.30 Small but essential – the activator protein RemA links biofilm formation and osmostress responses in *Bacillus subtilis*

**OP 51** T. Hoffmann (Marburg/DE), J. Winkelmann  
D. B. Kearns (Bloomington, IN/US), E. Bremer (Marburg/DE)

09.45 Swarmer cells lead, multiply and generate a trail of quiescent descendants

**OP 52** H. Putzer, L. Hamouche, S. Laalami, A. Daerr, B. Hollande, S. Seror  
K. Hamze (Paris/FR)

10.00 Biofilm and bacillibactin are essential to iron homeostasis in *Bacillus subtilis*

**OP 53** P. Beauregard, A. Rizzi, J.-P. Bellenger, S. Roy  
L. Haroune (Sherbrooke/CA)

10.15–10.45 Coffee break within the industrial exhibition

## SCIENTIFIC PROGRAMME | WEDNESDAY, 14 JUNE

10.45–12.15	DNA replication and recombination/interactions with other organisms
Room	Lecture hall
Chair	K. Devine (Dublin/IE)
10.45 OP 54	Suppression of DNA replication overinitiation through lowered levels of the replicative helicase, DnaC <u>M. Anderson, A. Grossman</u> (Cambridge, CA/US)
11.00 OP 55	Bacillus subtilis MutS modulates non-polar recombination between divergent DNA sequences <u>J. Alonso, B. Carrasco, E. Serrano</u> (Madrid/ES)
11.15 OP 56	Antibiotic stimulation of a Bacillus subtilis motile response <u>P. Straight, Y. Liu</u> (College Station, TX/US)
11.30 OP 57	Remodelling of the Bacillus subtilis cytoplasm spatial organization for efficient bacteriophage SPP1 multiplication <u>A. Labarde, L. Jakutyte</u> (Gif-sur-Yvette/FR), S. Ayora (Madrid/ES) R. Carballido-Lopez (Jouy-en-Josas/FR), P. Tavares (Gif-sur-Yvette/FR)
11.45 OP 58	Molecular insights in conjugative resistance transfer among Gram-positive pathogens <u>E. Grohmann</u> (Berlin/DE), I. Probst (Freiburg/DE), V. Kohler C. Fercher (Graz/AT), N. Goessweiner-Mohr (Hamburg/DE) G. Koraimann, W. Keller (Graz/AT)
12.00 OP 59	A bacteriocin from epidemic Listeria strains alters the host intestinal microbiota to favor infection J. J. Quereda-Torres, O. Dussurget, M.-A. Nahori, A. Ghozlane S. Volant, M.-A. Dillies, B. Regnault, S. Kennedy, P. Cossart <u>J. Pizarro-Cerda</u> (Paris/FR)
12.30–14.00	Lunch break within the industrial exhibition

## SCIENTIFIC PROGRAMME | WEDNESDAY, 14 JUNE

14.00–15.45	The cereus group
Room	Lecture hall
Chair	T. Koehler (Houston, TX/US)
14.00 OP 81	Quorum sensing coordinates virulence, necrotrophism and sporulation in <i>Bacillus thuringiensis</i> <u>L. Slamti, D. Lereclus (Jouy-en-Josas/FR)</u>
14.15 OP 82	The putative drug efflux systems of the <i>Bacillus cereus</i> group A.-B. Kolstø (Oslo/NO), K. Hassan (Sydney/AU), A. Fagerlund (Ås/NO) S. Finke (Oslo/NO), L. Elbourne (Sydney/AU), O. A. Økstad (Oslo/NO) I. Paulsen (Sydney/AU)
14.30 OP 60	The influence of the PEP-PTS on virulence gene expression in <i>Bacillus anthracis</i> <u>N. Bier, T. Hammerstrom, T. Koehler (Houston, TX/US)</u>
14.45 OP 61	Hanks-kinases dependent phosphorylation of <i>Bacillus cereus</i> global gene regulator CodY deeply impacts physiology and virulence <u>S. Poncet, L. Lorain, C. Buisson, C. Lemy (Jouy-en-Josas/FR)</u> <u>I. Mijakovic (Göteborg/SE), D. Lereclus (Jouy-en-Josas/FR)</u>
15.00 OP 62	Food bacteria interplay – concerted action of extrinsic and extrinsic factors gearing toxin synthesis in emetic <i>Bacillus cereus</i> <u>M. Ehling-Schulz, M. Kranzler (Vienna/AT), G. Lücking (Freising/DE)</u> <u>K. Stollewerk (Vienna/AT), K. Rouzeau-Szynalski (Lausanne/CH)</u> <u>M. Sulyok (Vienna/AT), T. Stark (Freising/DE)</u> <u>E. Frenzel (Vienna/AT; Groningen/NL)</u>
15.15 OP 63	Analysis of the molecular machinery implicated in multicellularity in <i>Bacillus cereus</i> <u>J. Caro-Astorga, E. Frenzel, A. De Vicente Moreno, O. Kuipers</u> <u>D. F. Romero Hinojosa (Malaga/ES)</u>
15.30 OP 64	Structural and mechanistic basis for the O-acetylation of secondary cell wall polysaccharide required for the proper assembly of cell walls in the <i>Bacillus cereus</i> group of human pathogens <u>D. Sychantha (Guelph/CA), D. Little (Toronto/CA), R. Chapman</u> <u>G.-J. Boons (Athens, GA/US), L. Howell (Toronto/CA)</u> <u>A. Clarke (Guelph/CA)</u>

## SCIENTIFIC PROGRAMME | WEDNESDAY, 14 JUNE

14.00–15.45	SubtiWiki workshop   Part 1
Room	“Bernhard von Langenbeck” (1 <sup>st</sup> floor)
	How to get most out of SubtiWiki B. Zhu (Göttingen/DE)
15.45–16.15	Coffee break within the industrial exhibition
16.15–17.30	Pathogenicity/fighting infection
Room	Lecture hall
Chair	N. Freitag (Chicago, IL/US)
16.15 OP 65	Bacteriophage mobility and pathogenesis in <i>Staphylococcus aureus</i> O. Poupel, G. Kénanian, M. Moyat, G. Jouvon, S. Dubrac <u>T. Msadek</u> (Paris/FR)
16.30 OP 66	Real-time imaging of the bacillithiol redox potential in the human pathogen <i>Staphylococcus aureus</i> using a genetically encoded bacilliaredoxin-fused redox biosensor <u>V. L. Vu</u> (Berlin/DE), M. Harms, M. Müller (Greifswald/DE) T. T. H. Nguyen (Berlin/DE), C. J. Hamilton (Norwich/GB) F. Hochgräfe, J. Pané-Farré (Greifswald/DE) H. Antelmann (Berlin/DE)
16.45 OP 67	A structural comparison of <i>Listeria monocytogenes</i> secretion chaperones PrsA1 and PrsA2 reveals molecular features required for virulence <u>L. Cahoon</u> , N. Freitag (Chicago, IL/US)
17.00 OP 68	Structural and genetic basis for activation and repression of the virulence activator PrfA in <i>Listeria monocytogenes</i> <u>J. Johansson</u> , S. Hansen, M. Hall, M. Kulén, M. Lindgren C. Grundström, C. Andersson, J. AD Good, S. K Krishnan, J. Wall A. Begum, U. H Sauer, F. Almqvist, E. A Sauer-Eriksson (Umeå/SE)
17.15 OP 69	Integration of host and bacterial signals controls group A streptococcal bacteriocins production to establish dominance in the fascial niche <u>E. Hanski</u> (Singapore/SG; Jerusalem/IL), B. Herzog Y. Kaufman (Jerusalem/IL), M. Ravins, D. Biswas, P. Ambalavanan S. Chen (Singapore/SG)

## SCIENTIFIC PROGRAMME | WEDNESDAY, 14 JUNE

16.15–17.30 SubtiWiki workshop | Part 2  
Room "Bernhard von Langenbeck" (1<sup>st</sup> floor)

How to get most out of SubtiWiki  
B. Zhu (Göttingen/DE)

19.00–23.00 Conference dinner  
(please refer to page 8)

Get your **FREE sample** at the Zymo Research **Booth No. 1**



# ZymoBIOMICS

A Comprehensive Solution for Microbiomics and Metagenomics



08.30–10.15	Lifestyles III
Room	Lecture hall
Chair	U. Mäder (Greifswald/DE)
08.30 OP 70	Type I toxin-antitoxin systems from <i>Bacillus subtilis</i> S. Brantl (Jena/DE)
08.45 OP 71	Distinct PhoPR-mediated responses to phosphate limitation in <i>Bacillus subtilis</i> subspecies <i>subtilis</i> and <i>spizizenii</i> stem from differences in their anionic polymer composition and metabolism <u>M. Prunty, D. Noone, K. Devine (Dublin/IE)</u>
09.00 OP 72	Curbing protein synthesis is important for the concerted heat shock response of <i>Bacillus subtilis</i> <u>H. Schäfer</u> (Hanover/DE), N. Moliere (Hanover, Berlin/DE) A. Heinz (Berlin/DE), M. Voß, <u>K. Turgay</u> (Hanover/DE)
09.15 OP 73	Three's company – cannibalism toxins and the corresponding envelope stress responses in <i>Bacillus subtilis</i> P. Popp (Dresden/DE), C. Höfler (Munich/DE), <u>T. Mascher</u> (Dresden/DE)
09.30 OP 74	Induction of the Spx regulon under cell wall stress requires both an ECF sigma factor and an anti-adaptor protein <u>D. Rojas, J. Helmann</u> (Ithaca, NY/US)
09.45 OP 75	Rho-controlled pervasive transcription in regulation of <i>Bacillus subtilis</i> cells development <u>E. Bidnenko, V. Bidnenko, P. Nicolas</u> (Jouy-en-Josas/FR) A. Grylak-Mielnicka (Warsaw/PL), Jouy-en-Josas/FR), O. Delumeau S. Auger, A. Aucouturier, C. Guerin, F. Repoila (Jouy-en-Josas/FR) J. Bardowski (Warsaw/PL), S. Aymerich (Jouy-en-Josas/FR)
10.00 OP 76	Bet-hedging strategies in <i>Bacillus subtilis</i> <u>A. J. Grimbergen, J. Siebring, O. Kuipers</u> (Groningen/NL)
10.15–10.45	Coffee break within the industrial exhibition

## SCIENTIFIC PROGRAMME | THURSDAY, 15 JUNE

- 10.45–12.15    **Organizers' favorites**  
Room              Lecture hall  
Chair              C. Harwood (Newcastle upon Tyne/GB)
- Award ceremony  
M. D. Rasmussen (Bagsvaerd/DK) and J. Stölke (Göttingen/DE)
- 10.45              Lipid rafts – from structural and functional characterization to  
**KL 07**              biotechnological application  
D. Lopez (Madrid/ES)
- 11.15              *Geobacillus kaustophilus* Crh is independent of glucose catabolite  
**OP 77**              repression but represses inositol catabolic genes  
K.-I. Yoshida, K. Tanaka, S. Ishikawa (Kobe/JP)
- 11.30              Mutual specificity of cysteine desulfurases and sulfur acceptors in  
**OP 78**              *Bacillus subtilis*  
P. Dos Santos (Winston-Salem, NC/US)
- 11.45              D-ala metabolism in *Bacillus subtilis*  
**OP 79**              R. Daniel (Newcastle/GB), K. Sidiq (Newcastle/GB; Sulaimani/IQ)  
M. Chow (Newcastle/GB)
- 12.00              The phosphoryl transfer to EIIA-deficient specific transporters of the  
**OP 80**              phosphoenolpyruvate-dependent phosphotransferase system (PTS) in  
*Bacillus subtilis*  
K. Morabbi Heravi, J. Altenbuchner (Stuttgart/DE)
- 12.30–14.00        Lunch break within the industrial exhibition

## POSTER SESSION I | MONDAY, 12 JUNE

### Sporulation

#### P 01

Kurthia species pluralis – a missing link in the evolution of the cell envelope and sporulation program in Firmicutes

S. Filippidou (Neuchatel/CH), T. Junier (Neuchatel, Lausanne/CH)

D. Poppleton (Paris/FR), T. Wunderlin (Zurich/CH), N. Jeanneret

I. Palmieri (Neuchatel/CH), J. Blom (Giessen/DE), S. Johnson

P. Chain (Los Alamos, NM/US), S. Gribaldo (Paris/FR)

E. Tocheva (Montreal/CA), P. Junier (Neuchatel/CH)

#### P 02

Asymmetric cell division during sporulation in *Bacillus subtilis*

I. Barak, K. Muchova, Z. Chromikova (Bratislava/SK), A. Wilkinson

A. Wollman (York/GB), N. Bradshaw (Cambridge, CA/US), M. Leake (York/GB)

#### P 03

Role of morphogenic protein RodZ in *Bacillus subtilis* cell division

K. Muchova, Z. Chromikova, R. Valencikova (Bratislava/SK)

N. Bradshaw (Cambridge, CA/US), A. Wilkinson (York/GB), I. Barak (Bratislava/SK)

#### P 04

How do *Bacillus subtilis* spores resist to ultra-high vacuum?

M. Cortesao, R. Moeller (Cologne/DE)

#### P 05

Biofilm formation affects the spore characteristics of Paenibacillus species

K. Hiroko (Tsukuba/JP), Y. Kana (Haga-Gun/JP), O. Nozomu (Tsukuba/JP)

K. Hiromi, Y. Seizou, N. Satoshi (Haga-Gun/JP), N. Nobuhiko (Tsukuba/JP)

#### P 06

An analysis of spore adhesion properties in *Bacillus subtilis* and related species

B. Shuster, P. Eichenberger (New York, NY/US)

#### P 07

Recent progress in investigation of protein interactions within the *Bacillus subtilis* spore coat

D. Krajíková, I. Barak (Bratislava/SK)

**P 08**

Developing an in silico model of GerA spore germination receptor  
I. Jamrozek, R. Kazmierkiewicz, M. Obuchowski (Gdansk/PL)

**P 09**

Clostridium taeniosporum spore appendage proteins and genes  
J. Walker, A. Blinkova, J. Cambridge, H. Tucker (Austin, TX/US)  
B. West (Austin, TX, Miami, FL/US), E. Gines-Candelaria (Miami, FL/US)

**P 10**

Bacillus subtilis SPβ phage integrase-mediated site-specific recombination during sporulation  
K. Abe, T. Takamatsu, T. Sato (Tokyo/JP)

**P 11**

Assembly pathway and role of morphogenetic protein CotE in the assembly of  
Bacillus cereus spore exosporium  
C. Bressuire-Isoard (Avignon/FR), M. Serrano, W. Antunes (Oeiras/PT)  
F. Carlin (Avignon/FR), A. O. Henriques (Oeiras/PT), V. Broussolle (Avignon/FR)

**P 12**

Bacilysin is a small, fine-tuning effector of mother cell compartment-specific σE and  
σK regulons in Bacillus subtilis  
G. Özcengiz, A. Aras Taşkın, M. Demir, E. Tekin İşlerel, Ç. Yılmaz (Ankara/TR)  
Ö. İrigül Sönmez, A. Yazgan Karataş (İstanbul/TR)

**P 13**

A biofilm regulatory protein is involved in spore coat assembly in Bacillus subtilis  
M. Serrano, I. Portinha, A. Roque, A. O. Henriques (Oeiras/PT)

**P 14**

Mother cell-to-forespore signaling by pyruvate dehydrogenase during sporulation in  
Bacillus subtilis  
A. O. Henriques, P. Amaral, M. Serrano (Oeiras/PT), C. P. Moran Jr. (Atlanta, GA/US)

**P 15**

PdhD is a component of the inner layers of the Bacillus subtilis spore coat  
P. Amaral (Oeiras/PT), L. J. Mota (Caparica/PT), A. O. Henriques (Oeiras/PT)

## POSTER SESSION I | MONDAY, 12 JUNE

### Cell biology

#### P 16

The novel antibiotic rhodomyrtone traps membrane proteins in vesicles with increased fluidity

M. Wenzel (Amsterdam/NL), D. Saeloh, V. Tipmanee

S. P. Voravuthikunchai (Hat Yai/TH), L. Hamoen (Amsterdam/NL)

#### P 17

Identification and characterization of redox partners of the thiol-disulfide oxidoreductase SdbA in *Streptococcus gordonii*

N. Jalal, L. Davey, S. Halperin, S. Lee (Halifax/CA)

#### P 18

Genome-wide screen for the identification of novel factors required for the production and glycosylation of lipoteichoic acid in *Listeria monocytogenes*

J. Rismundo, M. G. Percy, A. Gründling (London/GB)

#### P 19

Exploration of the impact of protein acylation in elongation factor Tu in *Bacillus subtilis*

S. Kosono (Tokyo, Wako, Saitama/JP), S. Suzuki, N. Kondo, M. Nishiyama (Tokyo/JP)

#### P 20

*Bacillus subtilis* MinD regulates cell division via a dynamic interaction with the septum

L. Bohorquez (Amsterdam/NL), H. Strahl (Newcastle upon Tyne/GB)

L. Hamoen (Amsterdam/NL)

#### P 21

Uptake of fluorescently labelled DNA by *Bacillus subtilis* during transformation

M. Boonstra, N. Vesel, O. Kuipers (Groningen/NL)

#### P 22

Clostridial expression of germination-related serine proteases which activate the germination-specific cortex hydrolase, SleC, of *Clostridium perfringens* S40 spores

R. Moriyama, S. Miyata, S. Sawairi, H. Isobe (Kasugai/JP), M. Moriyama (Okazaki/JP)

#### P 23

Finding the mid-cell in Clostridia – mechanism of Min system positioning

E. Krascenitsova, R. Valencikova, N. Labajova, I. Barak (Bratislava/SK)

P 24

Deregulation of bacterial cell division by antibiotic acyldepsipeptides

C. Mayer, N. Silber, H. Brötz-Oesterhelt, P. Sass (Tübingen/DE)

P 25

Mutations in a pneumococcal sigma factor activator, ComW, alter competence

N. Inniss, G. Prehna, D. A. Morrison (Chicago, IL/US)

P 26

Construction of *Bacillus* minimal divisome reveals the robustness of the cell division process

I. Celik (Palo Alto, CA/US, Newcastle/GB), T. Saaki, M. Wenzel (Amsterdam/NL)

S. Syvertsson (Newcastle/GB), T. Morimoto (Ikoma/JP), L. Hamoen (Amsterdam/NL)

P 27

A specific oligopeptide transporter mediates quorum-sensing regulation of the extracellular xylanase gene in *geobacillus stearothermophilus*

S. Shulami (Haifa/IL), A. Sonenshein (Boston, MA/US), S. Lansky

G. Shoham (Jerusalem/IL), Y. Shoham (Haifa/IL)

P 28

Mutagenesis sheds light on *Bacillus subtilis* MreB critical residues and potential functions

A. de San Eustaquio-Campillo, C. Cornilleau, C. Billiaudeau, R. Carballido-Lopez

A. Chastanet (Jouy-en-Josas/FR)

P 29

Antibiotic Bacillomycin D regulates biofilm development through the iron acquisition

X. Zhihui (Nanjing/CN)

P 30

The histone-like protein HupA binds to DNA and associates with the nucleoid in *Clostridium difficile*

A. Paiva, A. Friggen, R. Douwes, L. Qin, R. Dame, W. K. Smits (Leiden/NL)

P 31

Cyclic di-GMP-dependent activation of EPS synthesis in *Bacillus subtilis* involves co-localization of synthetases and of effector proteins

P. Bedrunka, P. L. Graumann (Marburg/DE)

## **POSTER SESSION I | MONDAY, 12 JUNE**

### **P 32**

Biological function of glucolipids in *Bacillus subtilis*

S. Matsuoka, T. Seki, K. Matsumoto, H. Hara (Saitama/JP)

### **P 33**

Interspecies nutrient extraction and toxin delivery between bacteria

O. Stempler, A. Baidya, S. Bhattacharya, S. Ben-Yehuda (Jerusalem/IL)

### **P 34**

Unraveling the biological role of a new protein exclusive to prokaryotes that localizes in bacterial functional membrane microdomains

L. Kricks, D. Lopez (Madrid/ES)

### **P 35**

Characterisation of a LysM-containing protein involved in cell division and in the virulence of *Enterococcus faecium*

M. Cacaci (Caen/FR; Roma/IT), C. Giraud (Caen/FR), C. Martini, T. Riccardo, V. Palmieri M. Sanguinetti (Roma/IT), A. Benachour, C. Muller-Pujol, A. Hartke (Caen/FR) F. Bugli (Roma/IT)

### **P 36**

Functional characterization of TasA and TapA in the formation of the amyloid fiber of *Bacillus subtilis*

J. Camara Almirón (Malaga/ES), B. Morel, F. Conejero Lara (Granada/ES) D. F. Romero Hinojosa (Malaga/ES)

### **P 37**

Electron transfer from *Enterococcus faecalis* cells to electrodes

G. Pankratiova, L. Gorton, L. Hedstedt (Lund/SE)

### **P 38**

Deciphering the role of a novel cell division factor in *Bacillus subtilis*

P. Eswara, R. Brzozowski (Tampa, FL/US)

**Biotechnology**

**P 41**

Towards the absolute quantification of the membrane proteome of *Bacillus subtilis*  
M. Antelo, C. Hirschfeld, T. Sura, J. Bartel, A. Otto, D. Becher (Greifswald/DE)

**P 42**

An approach to produce L-gluconate in *Bacillus subtilis*  
N. Kusumi, T. Shimizu (Tsukuba/JP), K.-I. Yoshida (Kobe/JP), A. Nakamura (Tsukuba/JP)

**P 43**

Genetic and functional analysis of a novel *Bacillus licheniformis* restriction  
modification system  
C. Muth, F. Huff, F. Meinhardt (Münster/DE)

**P 44**

Development and characterization of novel chimeric endolysin with broad  
antibacterial activity against methicillin-resistant *Staphylococcus aureus*  
H. Haddad Kashani (Kashan/IR)

**P 45**

Functional large-scale production of a thermostable *Rodothermus marinus* cellulase  
by heterologous secretion from *Streptomyces lividans*  
M. Soliman, S. Karamanou, S. Ólafsdóttir, S. Joan, K. Simoens, K. Tsolis, A. Portaliou  
L. Van Mellaert, E. E. Guðmundsdóttir, G. O. Hreggvidsson, J. Anné, K. Bernaerts  
O. Fridjonsson, H., A. Economou (Leuven/BE)

**P 46**

Study of the specificity of the *Bacillus*' extracytoplasmic chaperone PrsA  
A. Quesada-Ganuza, P. F. Halllin (Bagsværd/DK), M. Kilstrup (Lyngby/DK)  
M. D. Rasmussen, A. K. Nielsen (Bagsværd/DK)

**P 47**

Glycosylation and subsequent malonylation of isoflavonoids in *E. coli* – strain  
development, production and insights into future metabolic perspectives  
N. Koirala (Kathmandu/NP), J. K. Sohng (Asan/KR)

**P 48**

Examination of LLO-expressing *Bacillus subtilis* potential to elicit immune response  
against mycobacterial Ag85B protein in mice  
K. Roeske, R. Stachowiak, J. Bielecki (Warsaw/PL)

## POSTER SESSION I | MONDAY, 12 JUNE

### P 49

Intramembrane protease RasP boosts protein production in *Bacillus*

J. Neef (Groningen/NL), C. Bongiorni (Palo Alto, CA/US)

V. Goosens (Groningen/NL; London/GB), B. Schmidt (Palo Alto, CA/US)

J. M. van Dijl (Groningen/NL)

### P 50

A two-plasmid inducible CRISPR/Cas9 genetic tool for genome edition in *Clostridium acetobutylicum*

F. Wasels (Rueil Malmaison/FR), F. Collas (Wageningen/NL)

J. Jean-Marie (Rueil Malmaison/FR), A. Lopez-Contreras (Wageningen/NL)

N. Lopes Ferreira (Rueil Malmaison/FR)

### P 51

Thermophilic cell factories for efficient conversion of brown algae biomass to high-value chemicals

S. Hakvåg, I. M. Aasen, I. Nærdal, I. Sandbakken, T. M. B. Heggeset

T. Brautaset (Trondheim/NO)

### P 52

Antagonism of *Bacillus amyloliquefaciens* against *Botrytis cinerea*

W. Overkamp, A. Hunting, S. de Weert (Berkel en Rodenrijs/NL)

### P 53

Genome-inspired analysis of the substrate spectrum of the facultative methylotroph *Bacillus methanolicus*

M. Gil Lopez (Bielefeld/DE), M. Irla (Trondheim/NO), L. Fernandes de Brito

V. Wendisch (Bielefeld/DE)

### P 54

Poly- $\gamma$ -glutamic acid ( $\gamma$ PGA) production by *Bacillus subtilis* in minimum medium

O. Chumsakul (Kyoto/JP), K. Masuda, T. Morimoto, Y. Kageyama, K. Ozaki

H. Hagihara (Haga/JP), K. Tanaka, K.-i. Yoshida, S. Ishikawa (Kobe/JP)

### P 55

Prophages of *Bacillus pumilus* – genome content and phage activities

S. Volland, S. Dietrich, H. Liesegang (Göttingen/DE)

### P 56

Cost-competitive  $\gamma$ -PGA production from low costs feedstock using an engineered *Bacillus subtilis* lab strain

L. Longanesi, S. Grandi, M. Faè, C. Calvio (Pavia/IT)

**P 57**

Lipid raft engineering in *Bacillus subtilis* to optimize the production of novel antibiotics

A. van Tilburg (Groningen/NL)

**P 58**

“Killing them softly” ... challenges in the *Bacillus subtilis* spore inactivation by plasma sterilization

M. Raguse, F. Fuchs (Cologne/DE), M. Fiebrandt, K. Stapelmann  
P. Awakowicz (Bochum/DE), K. Madela, M. Laue (Berlin/DE), R. Moeller (Cologne/DE)

**P 59**

Establishment of a microbial platform for drop-in biofuel production

F. Nadler, J. Kabisch (Darmstadt/DE)

**P 60**

The *Bacillus subtilis* Signal Recognition Particle (SRP) – a re-evaluation

C. Harwood, I. Ismail, S. Pohl (Newcastle upon Tyne/GB)

**P 61**

Engineering microbes with an automated organism engineering foundry

A. Tucker (Boston, MA/US)

**P 62**

Activity-independent screening of secreted proteins using split GFP

A. Knapp (Jülich/DE), M. Rippahn (Jülich, Munich/DE), K. Volkenborn (Jülich/DE)

P. Skoczinski (Jülich/DE; Groningen/NL), L. Kuschmierz, K.-E. Jaeger (Jülich/DE)

**P 63**

Optimization of xylanase and swollenin secretion by *Bacillus subtilis* for biomass breakdown

K. Volkenborn, A. Knapp (Jülich/DE), C. Cürten (Jülich, Aachen/DE)

S. Schaffart (Aachen/DE), N. Anders (Jülich, Aachen/DE)

A. Spiess (Jülich, Aachen, Braunschweig/DE), K.-E. Jaeger (Jülich/DE)

**P 64**

Metabolic engineering of *Bacillus subtilis* for enhanced Poly-γ-glutamate production

B. Halmeschlag, L. M. Blank (Aachen/DE)

**P 65**

Construction of a vector system for expression and rapid purification of secretory proteins in *Bacillus subtilis*

J. Heinrich, F. Drescher, T. Wiegert (Zittau/DE)

## **POSTER SESSION I | MONDAY, 12 JUNE**

**P 66**

Production of the antibiotic roseoflavin with *Bacillus subtilis*

R. Mora Lugo (Mannheim/DE)

**P 67**

Developing lactic acid bacteria for the conversion of brown macroalgae into green chemicals and fuels

E. F. Bosma, A. Toftgaard Nielsen (Kgs. Lyngby/DK)

**P 69**

Modification of branched amino acid pathways and its effect on surfactin production in *Bacillus subtilis*

D. Dhali, F. Coutte (Villeneuve d'Ascq/FR), A. Arguelles-Arias (Gembloix/BE)

S. Auger, V. Bidnenko (Jouy-en-Josas/FR), M. Lalk (Greifswald/DE)

J. Niehren (Villeneuve d'Ascq/FR), J. De Souza (Greifswald/DE)

C. Versari (Villeneuve d'Ascq/FR), P. Jacques (Gembloix/BE; Villeneuve d'Ascq/FR)

New technologies, toolboxes and systems for the community, systems and synthetic biology

P 71

Efficient genome editing of a facultative thermophile using mesophilic spCas9  
I. Mougios (Wageningen/NL)

P 72

Extreme diversity and phenotypic plasticity of the *Bacillus* species *pluralis* in sediment communities of the Cuatro Cienegas Basin, Mexico  
G. Olmedo-Alvarez (Irapuato/MX)

P 73

Dynamics and stability in a synthetic multispecies *Bacillus* species *pluralis* community  
B. Aguilar-Salinas, G. Olmedo-Alvarez (Irapuato/MX)

P 74

MiniBacillus – progress and drawbacks on the way to a genome-minimized *Bacillus subtilis* cell  
D. Reuß (Göttingen/DE), U. Mäder (Greifswald/DE), J. Altenbuchner (Stuttgart/DE)  
T. Ischebeck, A. Klewing, F. Commichau (Göttingen/DE), U. Völker (Greifswald/DE)  
J. Stülke (Göttingen/DE)

P 75

Self-sensing constrains the density-dependent response of bacterial quorum-sensing systems  
T. Bareia, S. Pollak, A. Eldar (Tel Aviv/IL)

P 76

Stochastic gene expression pulsing drives spatial patterns in *Bacillus subtilis* biofilms  
E. Nadezhin, N. Murphy, J. Locke (Cambridge/GB)

P 77

Expanding the genetic toolbox for *Bacillus subtilis* the *Bacillus BioBrickBox* 2.0 and a SEVA-based fully modular vector suite for integrative vectors  
P. Popp, J. Radeck, T. Mascher (Dresden/DE)

P 78

Evaluation of strain-specific quantitative PCR for detecting *Bacillus* species strains in swine faeces  
K. Bjerre, A. Al-bayasli, D. Sandvang, R. Cernat, R. Neves, P. Derkx  
B. Nielsen (Hoersholm/DK)

## POSTER SESSION I | MONDAY, 12 JUNE

P 79

A new-generation of *Bacillus subtilis* cell factory for producing scyllo-inositol  
K. Tanaka, S. Takenaka, S. Ishikawa, K.-i. Yoshida (Kobe/JP)

P 80

Phenotypic and genotypic screening for antibiotic susceptibility in lactic acid bacteria used in cheese production  
P. Lüdin, N. Shani, U. von Ah, M. Chollet (Bern/CH)

P 81

SubtiWiki 3.0, the integrated and robust database for *Bacillus subtilis*  
B. Zhu, J. Stölke (Göttingen/DE)

P 82

Toolbox of genetic parts for controlled gene expression in *Geobacillus thermoglucosidans*  
I. Pogrebnyakov, T. Jensen, K. Falkenberg, S. Redl, C. Jendresen A. Nielsen (Kgs. Lyngby/DK)

P 83

SMTanner – a software for the quantitative analysis of single molecule tracking data  
T. C. Rösch, L. M. Oviedo, G. Fritz, P. L. Graumann (Marburg/DE)

P 84

Deconvolution of luminescence cross-talk in microplate reader analyses  
M. Mauri, S. Vecchione, G. Fritz (Marburg/DE)

P 85

Production of 3-hydroxypropionic acid from glycerol by metabolically engineered *Bacillus subtilis*  
A. Kalantari, T. Chen, B. Ji, I. Mijakovic (Göteborg/SE)

P 86

Visualizing the process of engulfment in *Bacillus subtilis* using Cryo-Electron Tomography  
K. Khanna, J. Lopez-Garrido, K. Pogliano, E. Villa (La Jolla, CA/US)

P 87

Functionalization of a *Staphylococcus aureus* autolysin for matrix conjugation in a bifunctional biosensor  
I. Grilo (Monte de Caparica/PT), P. Almeida (Lisbon/PT), M. Miragaia (Oeiras/PT) R. Sobral (Monte de Caparica/PT)

### P 88

Synthetic and systems biology for cost-competitive  $\gamma$ -PGA production  
E. Rama, M. Cavaletti, I. Massaiu, P. Tartaglione, L. Pasotti, P. Magni  
C. Calvio (Pavia/IT)

### P 89

Construction and analysis of two genome-scale deletion libraries for *Bacillus subtilis*  
B.-M. Koo (San Francisco, CA/US), G. Kritikos (Heidelberg/DE)  
J. Farelli (Boston, MA/US), H. Todor, K. Tong (San Francisco, CA/US)  
H. Kimsey, I. Wapinski (Boston, MA/US), M. Galardini (Cambridge/GB)  
A. Cabal, J. Peters (San Francisco, CA/US), A.-B. Hachmann, D. Rudner  
K. Allen (Boston, MA/US), A. Typas (Heidelberg/DE), C. Gross (San Francisco, CA/US)

### P 90

AureoWiki – the repository of the *Staphylococcus aureus* research and annotation community  
H. Mehlau, J. Bernhardt, J. Pané-Farré (Greifswald/DE), S. Fuchs (Wernigerode/DE)  
S. Michalik, K. Surmann, S. Weiβ (Greifswald/DE), L. Backert, A. Hennig, A. Herbig  
K. Nieselt (Tübingen/DE), M. Hecker, K. Riedel, U. Völker, U. Mäder (Greifswald/DE)

### P 91

BacStream – a database to document the construction of *Bacillus subtilis* strains  
T. Kordaß, S. Trauth (Marburg, Heidelberg/DE), J.-B. Kordaß (Karlsruhe/DE)  
I. Bischofs (Marburg, Heidelberg/DE)

### P 92

The creation of a synthetic methylotrophic *Bacillus subtilis* for the sustainable production of high value chemicals  
L. Dijkshoorn (Groningen/NL)

## **POSTER SESSION I | MONDAY, 12 JUNE**

### **Others**

#### **P 93**

Synthesis, biological evaluation and molecular modeling study of some new methoxylated 2-benzylthio-quinazoline-4(3H)-ones as nonclassical antifolates  
S. Al-Rashood (Riyadh/SA)

#### **P 94**

Dynamic comparative secretome analysis of *Bacillus subtilis* standard strain and its bacilysin-deleted mutant

E. Tekin İşlerel, G. Özçengiz (Ankara/TR)

#### **P 95**

Condensin- and replication-mediated bacterial chromosome folding and origin condensation revealed by Hi-C and super-resolution imaging

M. Marbouth (Paris/FR), A. Le Gall, D. Cattoni (Montpellier/FR), A. Cournac (Paris/FR)  
A. Koh (Newcastle/GB), J.-B. Fiche (Montpellier/FR), J. Mozziconacci (Paris/FR)  
H. Murray (Newcastle/GB), R. Koszul (Paris/FR), M. Nollmann (Montpellier/FR)

#### **P 96**

Biofilm formation and sporulation of *Bacillus subtilis* under simulated microgravity

F. Fuchs (Cologne/DE), G. Holland, K. Madela (Berlin/DE), C. Falcon Garcia (Munich/DE)  
M. Laue (Berlin/DE), O. Lieleg (Munich/DE), R. Hemmersbach, R. Möller (Cologne/DE)

#### **P 97**

Antarctic intertidal macroalgae harbour diverse Gram-positive bacteria with biotechnological potential

S. Leiva, P. Alvarado (Valdivia/CL), Y. Huang, J. Wang (Beijing/CN), I. Garrido  
R. Alvarado (Valdivia/CL)

#### **P 98**

Innate immune responses to improve anti-carbohydrate vaccines against bacterial pneumonia

P. Kaplonek (Potsdam, Berlin/DE), F. Bröcker, A. Calow (Potsdam/DE), L. Yao  
L. E. Sander (Berlin/DE), P. H. Seeberger (Potsdam, Berlin/DE)

#### **P 99**

In vitro activity of vancomycin combined with Daptomycin against VRE Strains  
G. Aktas (Istanbul/TR)

## P 100

Xanthomonas citri MinC oscillates from pole to pole to ensure proper cell division and shape

D.-J. Scheffers (Groningen/NL), H. Ferreira (Rio Claro/BR), A. Lorenzoni (Groningen/NL)  
G. Dantas (Rio Claro/BR), T. Bergsma (Groningen/NL)

## P 101

Metagenomic studies of Gram-positive bacteria potentially contributing to silk degradation of historical velvet textiles from the Palace at Wilanów

I. Brzozowska, D. Izak, A. Laudy, U. Zielenkiewicz (Warsaw/PL)

## P 102

σI from Bacillus subtilis – its regulon and properties in transcription initiation

O. Ramaniuk, M. Převorovský, J. Pospíšil, O. Benada, L. Krásný (Prague/CZ)

## P 103

Improving of selection efficiency of counter-selection marker (PheS) for genetic manipulations in Bacillus species

M. Kharchenko, M. Babaeva, N. Zakataeva (Moscow/RU)

## P 104

Fibronectin and Staphylococcus aureus invasion into host cells – one glycoprotein, two different functions

S. Niemann, J. Eble (Münster/DE), B. Löfller (Jena/DE), H. Van de Vyver  
G. Peters (Münster/DE)

## P 105

Comparative analysis of Clostridium butyricum and Clostridium neonatale strains isolated from neonates fecal samples

S. Schönherr-Hellec, G. Klein, J. Delannoy, L. Ferraris, I. Friedel (Paris/FR)  
J.-C. Rozé (Nantes/FR), M.-J. Butel, J. Aires (Paris/FR)

## P 106

Structure of the Bacillus subtilis hibernating 100S ribosome reveals the basis for 70S dimerization

B. Beckert (Munich, Hamburg/DE), H. Schäfer (Hanover/DE), W. Steinchen  
G. Bange (Marburg/DE), K. Turgay, D. Wilson (Hamburg/DE)

## P 107

Hypersensitivity and fitness disadvantage caused by Quorum Sensing sensor kinase gene over expression

T. Danevčič (Ljubljana/SI), A. Dragos (Ljubljana/SI; Jena/DE), M. Špacapan, P. Stefanic  
I. Dogsa (Ljubljana/SI), Á. T. Kovács (Jena/DE), I. Mandic-Mulec (Ljubljana/SI)

## **POSTER SESSION I | MONDAY, 12 JUNE**

### **P 108**

Construction of chimeric lysogenic phages integrated at distinct target (attB) sites in *Bacillus subtilis*

S. Suzuki, H. Suzuki, K. Abe, T. Sato (Tokyo/JP)

### **P 109**

Anticlostridial properties of *Lactobacillus* strains of cheese origin and reference strain

C. Bulut Albayrak (Aydin/TR), B. Öztürk (İzmir/TR), Z. Güley (Antalya/TR)

Ş. Harsa (İzmir/TR)

### **P 110**

Kin discrimination drives surface exclusion during swarming

B. Kraigher, P. Stefanic, M. Stampar, T. Stosicki, I. Dogsa, B. Jeric Kokelj

I. Mandic-Mulec (Ljubljana/SI)

### **P 111**

Amoxicillin cause an oxidative stress in *Enterococcus faecalis*

L. Leger, A. Budin-Verneuil, A. Hartke, A. Benachour, N. Verneuil (Caen/FR)

### **P 112**

Study of analysis methods to monitor sporulation during fermentation of *Bacillus subtilis* to produce endospores

F. Hannemann, A. Albin, J. Bader, S. Prowe, M. Senz, S. Dounia (Berlin/DE)

R. Moeller (Berlin, Cologne/DE)

### **P 113**

Analysis of prophage PBSX induction in *Bacillus subtilis*

T. Yamamoto, N. Nomura (Tsukuba/JP)

### **P 114**

Two-component systems in *Streptococcus salivarius* – signal transduction controlling natural competence

F. V. Capelle, E. Guerard, J. Mahillon, J. Mignolet, P. Hols (Louvain-La-Neuve/BE)

### **P 115**

National BioResource Project (NBRP) *Bacillus subtilis* and *Escherichia coli* – no resources, no researches

K. Yano, S. Nozaki, S. Okamoto, K. Aoki, H. Niki (Mishima, Shizuoka/JP)

## POSTER SESSION II | TUESDAY, 13 JUNE

### Signal transduction

#### P 116

A close-up look at the working of the two-component system LiaSR of *Bacillus subtilis*  
D. Golemi-Kotra, S. Jani (Toronto/CA)

#### P 117

Cyclic di-AMP – a sporulation specific second messenger in *Streptomyces* development  
A. Latoscha, S. Lindenberg, N. Tschowri (Berlin/DE)

#### P 118

Domain-swapping application to the study of the CroR regulon, a response regulator involved in antibiotic resistance and virulence in *Enterococcus faecalis*  
C. Muller, A. Rincé (Caen/FR)

#### P 119

Deciphering the regulation of hemolysis in *Streptococcus anginosus*  
R. Bauer, B. Spellerberg, S. Mauerer (Ulm/DE)

#### P 120

Characterization of the pspA-ydjGHI operon in *Bacillus subtilis*  
L. Bewersdorf (Dresden/DE), D. te Winkel, M. Bramkamp (Planegg-Martinsried/DE)  
D. Wolf (Dresden/DE)

#### P 121

The ApeRS two-component system of *Bacillus subtilis* responds exclusively to antimicrobial peptides of eukaryotic origin  
K. Sievers, A. Adam (Dresden/DE), M. Rahnamaeian (Giessen/DE), H. O. Gutzeit  
D. Wolf (Dresden/DE)

#### P 122

It takes two to tango – ABC transporter transcription regulation by YvfTU and DesKR two component systems  
P. Fernandez, L. Porrini, D. Albanesi, D. de Mendoza, M. C. Mansilla (Rosario/AR)

#### P 123

*Staphylococcus aureus* regulatory RNAs driving fitness upon antibiotic exposure  
W. Liu, C. Morvan, T. N. Le Lam, P. Bouloc (Orsay/FR)

**P 124**

Peptide based quorum sensing is modulated by exoprotease dependent negative feedback in *Bacillus subtilis* floating biofilms

M. Špacapan, T. Danevčič, I. Mandic-Mulec (Ljubljana/SI)

**P 126**

Towards an understanding of the signalling between the permease BceB and histidine kinase BceS in the resistance module BceRS-BceAB in *Bacillus subtilis*

M. Gibbon, S. Gebhard (Bath/GB)

**P 127**

Molecular basis of pheromone selectivity by the competence activator ComR in streptococci

L. Ledesma-Garcia, A. J. Guzmán (Louvain-La-Neuve/BE), A. Talagas, J. Thuillier  
S. Nessler (Gif-sur-Yvette Cedex/FR), P. Soumillion, P. Hols (Louvain-La-Neuve/BE)

**P 128**

Essentiality of WalRK for growth in *Bacillus subtilis* and its role under heat stress

H. Takada, N. Osaka, M. Su'etsugu, H. Yoshikawa (Tokyo/JP)

**P 129**

An investigation of *Bacillus subtilis* cells with altered cell wall anionic content and composition

D. Noone, E. Botella, S. Krogh Devine (Dublin/IE), J. Sassine  
W. Vollmer (Newcastle upon Tyne/GB), K. Devine (Dublin/IE)

**P 130**

Phosphorylation of the replication controller YabA highlight a role in the regulation of *bacillus* developmental processes

T. Garcia Garcia, M. Ventroux, V. Bidnenko, S. Santos (Jouy-en-Josas/FR)

A. Derouiche, I. Mijakovic (Göteborg/SE)

M.-F. Noirot-Gros (Jouy-en-Josas/FR; Lemont, IL/US), S. Poncet (Jouy-en-Josas/FR)

**P 131**

Analysis of regulation mechanisms of SigM with its cognate anti-sigma factor, YhdL and YhdK, in *Bacillus subtilis*

K. Asai (Tokyo/JP)

**P 132**

Peptide signaling controls expression of a novel biosynthetic gene cluster in the cariogenic bacterium *Streptococcus mutans*

G. Szewczyk, M. Federle (Chicago, IL/US)

## POSTER SESSION II | TUESDAY, 13 JUNE

### RNA biology

#### P 133

New insights in the small RNAs mechanisms involved in virulence of the nosocomial pathogen *Enterococcus faecalis*

M. Salze, C. Muller, B. Bernay, A. Rincé (Caen/FR)

#### P 134

Loss of the transcription elongation factor GreA counteracts the cold sensitive phenotype of a *Bacillus subtilis rny* mutant strain

K. Gunka, M. Benda, J. Stölke (Göttingen/DE)

#### P 135

Competition assays and deep sequencing help determine sRNA-related phenotypes in *Bacillus subtilis*

J. McKeown, E. Denham (Coventry/GB)

#### P 136

Up to five endonucleolytic cleavages, a long-range 5"/3"-UTR interaction and translation initiation govern the degradation of the *hbs* mRNA in *Bacillus subtilis*

F. Braun, S. Durand, C. Condon (Paris/FR)

#### P 137

Competition between terminator and antiterminator RNA hairpins – a single molecule FRET study

S. Ait-Bara, C. Clerté, E. Margeat, N. Declerck (Montpellier/FR)

#### P 138

RoxS Small RNA stabilizes *yfIS* mRNA by blocking RNase J1 5'-3' activity in *Bacillus subtilis*

S. Durand, F. Braun (Paris/FR), A.-C. Helfer, P. Romby (Strasbourg/FR)

C. Condon (Paris/FR)

#### P 139

HeLD, a novel transcription factor from *Bacillus subtilis*, and its role in the cell

P. Sudzínová, M. Převorovský (Prague/CZ), T. Koval' (Vestec/CZ), O. Benada (Prague/CZ)

J. Dohnálek (Vestec/CZ), L. Krásný (Prague/CZ)

#### P 140

Influence of major-groove DNA modifications on prokaryotic transcription

M. Janoušková, Z. Vaníková, F. Nici, S. Boháčová, M. Hocek, L. Krásný (Prague/CZ)

**P 141**

Comprehensive transcriptome analysis of *Paenibacillus riograndensis* SBR5 and functional characterization of a TPP riboswitch

L. Fernandes de Brito (Bielefeld/DE), M. Irla (Trondheim/NO)

V. Wendisch (Bielefeld/DE)

**P 142**

Ms1 sRNA regulates gene expression in mycobacteria during stationary phase of growth

M. Šiková, M. Janoušková, J. Pospíšil, P. Páleníková, M. Hradilová, D. Vítovská

H. Šanderová, M. Převorovský, J. Hnilicová, L. Krásný (Prague/CZ)

**P 143**

New biological roles of NAD – detection and identification of 5'NAD modified RNAs in *Staphylococcus aureus*

H. G. Morales Filloy, G. Nuebel, Z. Yaqing (Heidelberg/DE)

**P 145**

NAD captureSeq reveals NAD-capped RNA in *Bacillus subtilis*

J. Frindert, G. Nübel, Y. Zhang, A. Jäschke (Heidelberg/DE)

**P 146**

Transcriptome-wide targets of RNase III in *Streptococcus pyogenes*

A.-L. Lécrivain (Berlin/DE; Umeå/SE), A. Le Rhun (Berlin, Braunschweig/DE; Umeå/SE)

J. Reimegård (Uppsala/SE), L. Broglia (Berlin, Braunschweig/DE)

E. Charpentier (Berlin, Braunschweig, Hanover/DE; Umeå/SE)

**P 147**

Towards the development of a high-throughput method for riboswitch discovery and ligand identification

A. Escalera Maurer, A. Le Rhun

E. Charpentier (Berlin, Braunschweig, Hanover/DE; Umeå/SE)

## POSTER SESSION II | TUESDAY, 13 JUNE

### Metabolism

#### P 148

Niacin-mediated gene expression and role of NiaR as a transcriptional repressor of niaX, nadC and pnuC in *Streptococcus pneumoniae*

M. Afzal (Faisalabad/PK), S. Shafeeq (Stockholm/SE)

O. Kuipers (Stockholm/SE; Groningen/NL)

#### P 149

An essential factor for high Mg<sup>2+</sup> tolerance of *Staphylococcus aureus*

J. Armitano, P. Redder, T. Emilie, L. Patrick (Geneve/CH)

#### P 150

Adaptation of *Bacillus subtilis* to life at extreme potassium limitation

C. Herzberg, J. Gundlach, J. Stölke (Göttingen/DE)

#### P 151

Boosting bioprocess performance by using the right yeast extract

K. Bekers, M. van de Werf (Hamburg/DE)

#### P 152

The melibiose utilization system of *Bacillus subtilis* and its regulation by MsmR

H. Watzlawick, K. Morabbi Heravi, J. Altenbuchner (Stuttgart/DE)

#### P 153

Actinobacterium that uses glutathione to metabolize styrene

T. Heine, J. Zimmerling, A. Ballmann, S. B. Kleeberg, A. Scholtissek

M. Oelschlägel (Freiberg/DE), C. Rückert, J. Kalinowski (Bielefeld/DE)

A. Poetsch (Bochum/DE), D. Tischler (Freiberg/DE)

#### P 154

Flavin metabolism plays a role in iron reduction by *Clostridium acetobutylicum*

C. List, K. Lederballe Meibom, R. Bernier-Latmani (Lausanne/CH)

#### P 155

Production of Squalene in *Bacillus subtilis*

Y. Song, Z. Guan, R. van Merkerk, W. J. Quax (Groningen/NL)

#### P 156

Increase of protein production by perturbing global N- and C-regulatory networks in *Bacillus subtilis*

H. Cao, J. Villatoro-Hernandez, E. Frenzel, O. Kuipers (Groningen/NL)

**P 157**

Bipartite metabolism of *Listeria monocytogenes* and *Francisella tularensis*  
F. Chen (Garching/DE), T. Fuchs (Jena/DE), K. Heuner (Berlin/DE)  
W. Goebel (Munich/DE), W. Eisenreich (Garching/DE)

**P 158**

Metabolic adaptation of *Bacillus subtilis* by a *clpP* mutation  
D. Schultz, R. Schlueter, U. Gerth, M. Lalk (Greifswald/DE)

**P 159**

Growth dynamics, acetate consumption and lactate racemization in cheese by the late blowing-causing agent *Clostridium tyrobutyricum*  
E. Arias-Roth (Bern/CH), M. Storari (Konolfingen/CH), H. Berthoud  
M. Chollet (Bern/CH)

**P 160**

Sporulating *Bacillus subtilis* catabolizes valine via propanoyl-CoA and methylcitric acid  
G. Rowe, S. Milot, E. Déziel, J. Perreault (Laval, Quebec/CA)

**P 162**

A new  $\mu$ -protein might be involved in the regulation of the glyoxylic acid shunt in *Bacillus licheniformis*  
D. Kostner, W. Liebl, A. Ehrenreich (Freising/DE)

**P 163**

The phosphorylation independent functions of *cpgA* are essential in *Bacillus subtilis* for the growth on substrates of glycolytic and pentose phosphate pathways  
A. Sachla, J. Helmann (Ithaca, NY/US)

**P 164**

Adaptation of *Propionibacterium freudenreichii* to long-term survival under gradual nutritional shortage  
H. Falentin (Rennes/FR), F. Figueira Aburjaile (Belo Horizonte/BR), M. Rohmer  
H. Parrinello (Montpellier/FR), M.-B. Maillard, E. Beaucher, G. Henry, A. Nicolas  
M.-N. Madec, A. Thierry, S. Parayre, S.-M. Deutsch (Rennes/FR)  
M. Cocaign-Bousquet (Toulouse/FR), A. Miyoshi, V. Azevedo  
Y. Le Loir (Belo Horizonte/BR)

**P 243**

Mutations from a new perspective – time-resolved visualization of genomic alterations at the level of *Bacillus subtilis* single cells  
M. Dormeyer, A. Grünberger, D. Kohlmeyer, L. Stannek  
F. Commichau (Göttingen/DE)

## POSTER SESSION II | TUESDAY, 13 JUNE

### Lifestyle selection and stress adaptation

#### P 165

Uncovering the regulatory circuits of the glycine betaine synthesizing pathway in *Bacillus subtilis*

B. Warmbold, S. Ronzheimer, M. Fischer, E. Bremer (Marburg/DE)

#### P 166

From substrate specificity to promiscuity – molecular analysis of hybrid ABC transporters for osmoprotectants

L. Teichmann, C. Chen, T. Hoffmann (Marburg/DE), S. Smits

L. Schmitt (Düsseldorf/DE), E. Bremer (Marburg/DE)

#### P 168

Protein S-bacillithiolation functions in thiol-protection and redox regulation of the glyceraldehyde-3-phosphate dehydrogenase Gap in *Staphylococcus aureus* under hypochlorite stress

M. Imber, N. T. T. Huyen, A. J. Pietrzyk-Brzezinska, V. V. Loi, M. Hillion (Berlin/DE)

J. Bernhardt (Greifswald/DE), L. Thärichen, K. Kolsek (Heidelberg/DE)

M. Saleh (Berlin/DE), L. Adrian (Leipzig/DE), F. Gräter (Heidelberg/DE), M. Wahl

H. Antelmann (Berlin/DE)

#### P 169

Heterogeneous response of *Bacillus subtilis* to mild salt stress

L. P. Morawska, R. G. J. Detert Oude Weme, E. Frenzel, M. Dirkzwager (Groningen/NL)

T. Hoffmann, E. Bremer (Marburg/DE), O. P. Kuipers (Groningen/NL)

#### P 170

Capsular polysaccharide phase variation affects colony morphology and biofilm formation by *Lactobacillus plantarum*

Y. Ehashi, I. Kawashima, N. Obana (Tsukuba/JP), H. Kubota (Haga-Gun/JP)

T. Kiyokawa (Tsukuba/JP), S. Yashiro, S. Nagai (Haga-Gun/JP), N. Nomura (Tsukuba/JP)

#### P 171

A small heat shock protein involved in the stress response of *Bacillus subtilis*

I. Hantke, R. Kramer, K. Turgay (Hanover/DE)

#### P 172

In *Bacillus subtilis*, the Gcn5-related Acetyltransferase SatA (Formerly YyaR) detoxifies Streptothrinic via Acetylation

R. Burckhardt, J. Escalante-Semerena (Athens, GA/US)

**P 173**

Nanoparticles and *Bacillus subtilis* – reciprocal effects

C. Lelong, E. Eymard-Vernain (Grenoble Cedex/FR), G. Sarret (Grenoble/FR)

**P 174**

Targeted proteolysis of *Bacillus subtilis* MgsR and the role of McsB arginine kinase

L. Lilge, A. Reder (Greifswald/DE), F. Tippmann (Heidelberg/DE), M. Hecker, U. Völker  
U. Gerth (Greifswald/DE)

**P 175**

Selection for lysozyme resistant lactococci leads to antibiotic resistance and correlates with high SpxB expression

G. Buist (Groningen/NL), C. Bulbarela-Sampieri, P. Veiga, C. Péchoux, P. Courtin  
S. Furlan, P. Quénée, E. Guédon (Jouy-en-Josas/FR), O. P. Kuipers (Groningen/NL)  
J. Kok (Groningen/NP), M.-P. Chapot-Chartier, S. Kulakauskas (Jouy-en-Josas/FR)

**P 176**

The role of phenotypic heterogeneity in the evolution of drug resistance in *Bacillus subtilis*

M. Yüksel, J. Power, T. Volkmann, B. Maier (Cologne/DE)

**P 177**

Transcriptome responses of *Streptococcus mutans* to H<sub>2</sub>O<sub>2</sub> – identification of novel antioxidant pathways regulated by Spx

J. Kajfasz, T. Ganguly, E. Hardin, J. Abrances, J. A. Lemos (Gainesville, TX/US)

**P 178**

Cell-cell interconnections in dilute bacterial suspension of *Bacillus subtilis*

I. Dogsa, S. Sretenovic, B. Stojkovic, R. Kostanjšek, I. Poberaj, D. Stopar (Ljubljana/SI)

**P 179**

Chromate tolerance and reduction of environmental *Bacillus* species isolates

D. Čučak (Novi Sad/RS), Z. Chromikova (Bratislava/SK), A. Pavlović

D. Radnović (Novi Sad/RS), R. Bernier-Latmani (Lausanne/CH), I. Barak (Bratislava/SK)

**P 180**

Chromium impact on a cultivable soil bacterial community

D. Čučak, A. Pavlović (Novi Sad/RS), Z. Chromikova (Bratislava/SK)

R. Bernier-Latmani (Lausanne/CH), I. Barak (Bratislava/SK), D. Radnović (Novi Sad/RS)

## POSTER SESSION II | TUESDAY, 13 JUNE

### P 181

The consequences of mutational loss of carotenoids in alkaliphilic *Bacillus pseudofirmus* OF4

D. Hicks (New York, NY/US), A. LaFountain, H. Frank (Storrs, CO/US), A. Jereen O. Fackelmayer, T. A. Krulwich (New York, NY/US)

### P 182

Single cell sigma factor dynamics in *Bacillus subtilis*

C. Schwall, B. Martins, C. Villava, V. Kusmartsev, T. Wang, J. Locke (Cambridge/GB)

### P 183

Abortive infection of the temperate phage SP $\beta$  of *Bacillus subtilis* caused by the integrative and conjugative element ICEBs1

C. Johnson, M. Harden, A. Grossman (Cambridge, CA/US)

### P 184

Fur directly activates transcription of the *Bacillus subtilis* Iron Efflux Pump, PfeT

A. Pinochet Barros (Ithaca, NY/US)

### P 185

Survival of *Staphylococcus aureus* under dry conditions – possible involvement of esp genes

V. Gor, A. Takemura, L. Maudsdotter, M. Kazuya (Tsukuba/JP)

### P 186

Sucrose induces extracellular DNA release in *Streptococcus mutans* biofilms

S. Inoue (Tsukuba, Shinjuku/JP), T. Inaba, N. Obama, Y. Yawata (Tsukuba/JP)

H. Senpuku (Shinjuku/JP), N. Nomura (Tsukuba/JP)

### P 187

Characterization of two staphylococcal proteins essential for survival upon cell wall damage

R. Portela, A. M. Ludovice, J. S. Dias, R. G. Sobral (Monte de Caparica/PT)

### P 188

Aging of *Bacillus subtilis* colony enforces the evolution of non-differentiating mutants

R. Hashuel, S. Ben-Yehuda (Jerusalem/IL)

### P 189

*Listeria monocytogenes* σH activates the expression of competence genes and is essential for intracellular growth

V. Medrano Romero, K. Morikawa (Tsukuba/JP)

**P 190**

SRP1 – a dual function sRNA encoded peptide modulates moonlighting activity of *Bacillus subtilis* GapA

M. Gimpel (Berlin, Jena/DE), S. Brantl (Jena/DE)

**P 191**

Cellulosome producing bacteria uses alternative σ factors to regulate their primary cellulosomal scaffoldin gene

L. Ortiz de Ora (Tel Aviv/IL), I. Muñoz-Gutiérrez (Rehovot/IL), I. Borovok (Tel Aviv/IL)  
E. A. Bayer (Rehovot/IL), Y. Shoham (Haifa/IL), R. Lamed (Tel Aviv/IL)

**P 192**

Analysis of the multiple alternative σ factors of *Clostridium thermocellum* in a heterologous *Bacillus subtilis* host system

I. Muñoz-Gutiérrez (Rehovot/IL), L. Ortiz de Ora (Tel Aviv/IL), E. A. Bayer (Rehovot/IL)  
Y. Shoham (Haifa/IL), I. Borovok, R. Lamed (Tel Aviv/IL)

**P 193**

Regulation of opuB expression in *Bacillus subtilis* involves a SigB-dependent antisense RNA

H. Rath (Greifswald/DE), T. Hoffmann, M. Thüring (Marburg/DE), A. Reder  
L. Steil (Greifswald/DE), E. Bremer (Marburg/DE), U. Völker, U. Mäder (Greifswald/DE)

**P 194**

Novel stress response system in *Staphylococcus* species *pluralis*

A. Madry, M. Kosecka, A. Buda, K. Gawron, E. Bonar, K. Lazarz-Bartyzel

M. Chomyszyn-Gajewska, B. Wladyka (Krakow/PL)

J. Potempa (Krakow/PL; Louisville, KY/US), J. Miedzobrodzki, M. Bukowski (Krakow/PL)

**P 195**

Structural analysis of the adaptor protein YjbH in complex with the transcription factor Spx

C. von Wachenfeldt, Y. Al-Eryani, D. Logan, W. Awad (Lund/SE)

**P 196**

Inter-species interactions in oral cavity – Friends or foes?

J. Treerat, J. Merritt, J. Kreth (Portland, OR/US)

## POSTER SESSION II | TUESDAY, 13 JUNE

### Pathogenic bacilli – the *Bacillus cereus*/*anthracis*/*thuringiensis* group

#### P 197

Expression of *Bacillus thuringiensis israelensis* toxin genes in *Bacillus subtilis* for tiger mosquito control

E. Ursino, G. Barbieri, P. Gabrieli, G. Fiorentino, S. Mamberti, G. Gasperi A. Albertini (Pavia/IT)

#### P 198

An improved model for the *Bacillus cereus* non-hemolytic enterotoxin (Nhe) mode-of-action

A. Didier, R. Dietrich, R. Benz, E. Märtlbauer (Oberschleißheim/DE)

#### P 199

*Bacillus cereus* group members in plant derived foods – species and toxinogenic potential

H. Frentzel, K. Juraschek, B. Kraushaar, G. Krause, H. Wichmann-Schauer (Berlin/DE)

#### P 200

The toxic potential of enteropathogenic *Bacillus cereus* strains is influenced by food components

N. Jessberger, C. DaRiol, E. Märtlbauer (Oberschleißheim/DE)

#### P 201

Virulence of emerging *Bacillus cereus* biovar *anthracis* is determined by toxins and two types of capsules

S. Klee, S. Dupke (Berlin/DE), C. Brézillon (Paris/FR), F. Leendertz (Berlin/DE)

M. Mock (Paris/FR), R. Grunow (Berlin/DE), P. Goossens (Paris/FR)

#### P 202

Paralogous PRD-Containing virulence regulators in *Bacillus anthracis* – overlapping regulons and protein-protein interactions

M. Raynor, J. H. Roh (Houston, TX/US), S. Widen, T. Wood (Galveston, TX/US)

T. Koehler (Houston, TX/US)

#### P 203

CesCD, putative ABC efflux pump essential for cereulide synthesis

A. Gacek-Matthews (Vienna/AT), A. Rütschle, G. Lücking

S. Scherer (Freising/DE), M. Ehling-Schulz (Vienna/AT)

### P 204

Bacillus thuringiensis and Bacillus weihenstephanensis inhibit Verticillium species  
J. Hollensteiner, F. Wemheuer, R. Harting, G. Braus, R. Daniel  
H. Liesegang (Göttingen/DE)

### P 205

Plasmidial tectiviruses infecting the *Bacillus cereus* group – Friends or foes?  
A. Gillis, J. Mahillon (Louvain-la-Neuve/BE)

### P 206

CpcR, a novel cellular differentiation regulator in *Bacillus thuringiensis*  
L. Slamti (Jouy-en-Josas/FR), L. Ma (Beijing/CN), C. Lemy (Jouy-en-Josas/FR), S. Guo  
J. Zhang, F. Song (Beijing/CN), D. Lereclus (Jouy-en-Josas/FR)

### P 207

Presence of genes encoding for classical *Bacillus cereus* stricto sensu virulence factors in *Bacillus cereus* and *Bacillus thuringiensis* isolated from diseased insect larvae

A. Vivoni, J. Quintanilha Chaves (Rio de Janeiro/BR)

### P 208

The CodY-activated clhAB2 operon is required for proper cell size and chain length in *Bacillus cereus* ATCC 14579  
E. Huillet (Jouy-en-josas/FR)

### P 210

*Bacillus thuringiensis* BspA is a collagen binding adhesin affecting multiple biofilm-related phenotypes  
S. Finke, A. Fagerlund, V. Krogstad, M. Zhang, V. Smith, O. A. Økstad (Oslo/NO)

## POSTER SESSION II | TUESDAY, 13 JUNE

### Pathogenicity and toxicity/fighting infection

#### P 212

Antimicrobial peptide cWFW kills by combining lipid phase separation with autolysis

K. Scheinpflug (Berlin/DE), M. Wenzel (Amsterdam/NL), O. Krylova (Berlin/DE)

J. E. Bandow (Bochum/DE), M. Dathe (Berlin/DE), H. Strahl (Newcastle upon Tyne/GB)

#### P 213

Functional roles of surface adhesive molecules as FnBP in survival and pathogenesis of *Mycobacterium tuberculosis*

P. Agnihotri, L. S. Meena (New Delhi/IN)

#### P 214

Vital aspects of GTPases in survival and pathogenesis of *Mycobacterium tuberculosis*

Shivanghi, L. S. Meena (New Delhi/IN)

#### P 216

The role of the novel hypochlorite-specific redox sensor HypS in *Mycobacterium smegmatis*

K. Klaper, M. Hillion, M. Rossius (Berlin/DE), S. Gola (Madrid/ES)

H. Antelmann (Berlin/DE)

#### P 217

A bifurcated response to pheromone signaling affecting the cell surface and secretion of toxins in *Streptococcus pyogenes*

R. Wilkening, A. Gogos, J. C. Jimenez, J. Chang, M. Federle (Chicago, IL/US)

#### P 218

Inhibition of the transcription termination factor Rho by bicyclomycin affects expression of SaeSR-dependent virulence factor genes in *Staphylococcus aureus*

A. Nagel, S. Michalik (Greifswald/DE), P. Nicolas (Jouy-en-Josas/FR)

M. Debarbouille (Paris/FR), C. Guerin (Jouy-en-Josas/FR), M. Depke (Greifswald/DE)

T. Hertlein (Würzburg/DE), A. Hiron (Paris/FR), M. Gesell Salazar

J. Pané-Farré (Greifswald/DE), M. van der Kooi-Pol (Groningen/NL)

P. Bessières (Jouy-en-Josas/FR), K. Ohlsen (Würzburg/DE), M. Hecker (Greifswald/DE)

T. Msadek (Paris/FR), J. M. van Dijl (Groningen/NL), U. Völker

U. Mäder (Greifswald/DE)

#### P 219

Study of the regulation of β-lactam resistance in *Enterococcus hirae*

A. Raymackers, M. Maréchal, O. Verlaine, A. Amoroso, B. Joris (Liège/BE)

**P 220**

Differential epitope recognition in the immunodominant staphylococcal antigen A of *Staphylococcus aureus* by IgGs from mice and men

D. G. A. M. Koedijk, F. Romero Pastrana, H. Hoekstra (Groningen/NL)

S. van den Berg (Rotterdam/NL), J. W. Back (Lelystad/NL), C. Kerstholt

R. Prins (Groningen/NL), I. A. J. M. Bakker-Woudenberg (Rotterdam/NL)

J. M. van Dijl, G. Buist (Groningen/NL)

**P 221**

A human monoclonal antibody that specifically binds and inhibits the staphylococcal complement inhibitor protein SCIN

H. Hoekstra, F. Romero Pastrana, H. P. J. Bonarius (Groningen/NL)

K. P. M. van Kessel (Utrecht/NL), G. S. Elsinga, N. Kooi, H. Groen, J. M. van Dijl

G. Buist (Groningen/NL)

**P 222**

*Staphylococcus aureus* escapes killing from extracellular histones through activated plasminogen

G. Nobile, P. Speziale, G. Pietrocola (Pavia/IT)

**P 223**

*Bacillus subtilis* reporter strains for the identification of new antibacterial compounds

K. Wex, A. Berscheid, H. Brötz-Oesterhelt (Tübingen/DE)

**P 224**

Insights into heterogeneity and regulation of capsular biosynthesis gene expression in *Staphylococcus aureus* by redefining the promoter architecture

D. Keinhörster, S. E. George, C. Weidenmaier, C. Wolz (Tübingen/DE)

**P 225**

Bile stress response in *Listeria monocytogenes*

V. Guariglia, R. Orsi, M. Wiedmann, K. Boor (Ithaca, NY/US)

**P 226**

The glyceraldehyde-3-phosphate dehydrogenase GapDH of *Corynebacterium diphtheriae* is redox-controlled by protein S-mycothiolation under oxidative stress

M. Imber, M. Hillion (Berlin/DE), B. Pedre (Brussels/BE), J. Bernhardt (Greifswald/DE)

M. Saleh (Berlin, Greifswald/DE), L. Vu van (Berlin/DE), S. Maaß

D. Becher (Greifswald/DE), L. A. Rosado (Brussels/BE), L. Adrian (Leipzig/DE)

C. Weise (Berlin/DE), R. Hell, M. Wirtz (Heidelberg/DE), J. Messens (Brussels/BE)

H. Antelmann (Berlin/DE)

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### P 227

Urinary catheters alter the bladder environment by inducing the release of the host protein fibrinogen to promote Methicillin-resistant *Staphylococcus aureus* pathogenesis

J. Walker, A. Flores-Mireles, H. Schreiber, C. Pinkner, M. Caparon

S. Hultgren (St. Louis, MO/US)

### P 228

A molecular bed and breakfast in enterococcal pathogenesis and intervention strategies

A. Flores-Mireles, J. Walker, M. Caparon, S. Hultgren (St. Louis, MO/US)

### P 229

Production, purification and kinetic characterization of a soluble form of *Enterococcus hirae* PBP4

Y. El Fattahi (Liège/BE)

### P 230

Propofol sedation exacerbates kidney pathology and dissemination of bacteria during *Staphylococcus aureus* bloodstream infections

L. Visvabharathy, N. Freitag (Chicago, IL/US)

### P 231

O-polysaccharide disruption enhances antigen delivery and facilitates evasion of pre-existing host immunity in a *Salmonella* vector

J. H. Lee (Iksan/KR)

### P 232

Interactions between *Staphylococcus aureus* and skin corneocytes in atopic dermatitis

O. Fleury, A. Towell, M. McAleer (Dublin/IE), C. Feuillie

C. Formosa-Dague (Louvain-La-Neuve/BE), E. Sansevere, A. Robinson (Jackson, MS/US)

P. Fallon, T. Foster (Dublin/IE), Y. Dufrêne (Louvain-La-Neuve/BE), A. Irvine

J. Geoghegan (Dublin/IE)

### P 233

O-Acetylation of the serine rich repeat glycoprotein GspB is coordinated with accessory Sec transport, and is essential for protein function

R. Seepersaud (San Francisco, CA/US), D. Sychantha (Guelph/CA)

B. Bensing (San Francisco, CA/US), A. Clarke (Guelph/CA)

P. Sullam (San Francisco, CA/US)

**P 234**

The small histidine-containing phosphocarrier protein Hpr affects glucose metabolism and virulence in *Staphylococcus aureus*

A.-C. Brausch, E. Kirch, R. Gaupp, M. Bischoff (Homburg (Saar)/DE)

**Interactions of Bacilli with other organisms**

**P 235**

Evolution of *Bacillus subtilis* in the presence of the black mold fungus *Aspergillus niger*

A. Richter, F. Blei, Surabhi, J. Schwitalla, V. Ramaswamhi (Jena/DE)

G. Maróti (Szeged/HU), B. Balint (Morahalom/HU), M. Arentshorst

A. F. J. Ram, C. A. M. van den Hondel (Leiden/NL), Á. T. Kovács (Jena/DE)

**P 236**

Lysinibacillus fusiformis M5 induces increased complexity in *Bacillus subtilis* 168 colony biofilms via hypoxanthine

R. Gallegos-Monterrosa, S. Kankel, S. Götze, R. Barnett, P. Stallforth

Á. T. Kovács (Jena/DE)

**P 237**

Endophytic determinants of *Bacillus mycoides* identified by transcriptomics

Y. Yi, J. Spoelder, O. Kuipers (Groningen/NL)

**P 238**

The potential of phylogenetically related paenibacilli as biocontrol organisms to tackle hairy roots disease caused by rhizogenic agrobacteria

L. Bosmans (Sint-Katelijne-Waver/BE), R. Moerkens (Hoogstraten/BE)

B. Van Calenberge, S. Van Kerckhove (Sint-Katelijne-Waver/BE)

R. De Mot (Heverlee/BE), J. Raaijmakers (Wageningen/NL), B. Lievens

H. Rediers (Sint-Katelijne-Waver/BE)

**P 240**

Decreasing acidification time in fermented milk by adding *Bacillus* species

M. Cantor, K. Bjerre, T. Janzen, G. Oeregaard, P. Derkx (Hoersholm/DK)

**P 241**

Methods to monitoring in continuous time mode the impact of antimicrobial agents on bacteria and biofilms formation process

T. Mdzinarashvili, I. Papukashvili, E. Lomadze, M. Khvedelidze (Tbilisi/GE)

**P 242**

Plant surfaces as vehicles of *Bacillus cereus* responsible of human food poisoning

M. L. Antequera-Gomez (Malaga/ES), A. de Vicente Moreno, D. Romero (Malaga/ES)