

# Program

(Note: The time slots shown in this program correspond to the US Eastern time zone)



## Time zone reference guide:

Los Angeles, USA 6:45am	Chicago, USA 8:45am	<b>Washington DC, USA</b> <b>9:45am</b>	Brasilia, Brazil 10:45am	London, UK 2:45pm
Berlin, Germany 3:45pm	New Delhi, India 7:15pm	Beijing, China 9:45pm	Tokyo, Japan 10:45pm	Canberra, Australia 11:45pm

## Required software:

Install "Zoom Client for Meetings" from this link: <https://zoom.us/download> prior to the day of the meeting to avoid any delay due to technical difficulties. For best experience use wired internet connection instead of Wi-Fi. The meeting links will be sent through email at a later time. Please **do not** share the links with anyone or post on social media.

## Presentations and related information:

We have allocated 25 min for presentations - 17 min for data sharing and 8 min for questions. All 40 presentations will be judged by at least 3 Subtillery committee members and the top 3 presenters will be recognized with an **Outstanding Presentation Award**.

Please note, only the audio and video of presenters, moderators, and host(s) of a given session will be allowed to maximize bandwidth and minimize interruptions. Questions can be asked by all attendees using a chat tool. As unpublished data are shared during presentations, the presentations will **not** be recorded. We request the attendees to practice proper ethical and scientific conduct and **refrain** from recording any part of the meeting. We reserve the right to remove any participant for suspicious activity and/or for not following the guidelines.

## Scientific Advisory Committee:

- Matthew Cabeen  
(Oklahoma State University, USA)
- Emma Denham  
(University of Bath, UK)
- Javier Lopez-Garrido  
(Max Planck Inst. for Evol. Biology, Germany)
- Amy Camp  
(Mount Holyoke College, USA)
- Seamus Holden  
(Newcastle University, UK)
- Shonna McBride  
(Emory University, USA)

## Organizer:

- Prahathees Eswara  
(University of South Florida, USA)

For more information and updates visit: <http://www.bit.ly/subtillery>.

## June 8, 2020 (Monday)

### DIVISION, GROWTH, AND CELL SURFACES

09:45 - 10:00 Meeting set up and opening remarks

**Moderator: Seamus Holden | Question Narrator: Margarita Bernal-Cabas**

10:00 - 10:25 **#01 The role of FtsZ treadmilling in *Bacillus subtilis* cell division**  
Kevin Whitley | Postdoctoral Fellow | Seamus Holden Lab | Newcastle University | UK

10:25 - 10:50 **#02 Structural insights of FtsZ-MinC interaction in *Bacillus subtilis***  
Luciana Elena de Souza Fraga Machado | Postdoctoral Fellow | Frederico Gueiros-Filho Lab | University of São Paulo | Brazil

10:50 - 11:15 **#03 Surface expansion and biomass growth are robustly coupled through cell-envelope synthesis**  
Yuki Kitahara | PhD Student | Sven van Teeffelen Lab | Pasteur Institute | France

11:15 - 11:40 **#04 Flotillin mediated membrane fluidity controls peptidoglycan synthesis and MreB movement**  
Aleksandra Zielinska | Postdoctoral Fellow | Dirk-Jan Scheffers Lab | University of Groningen | Netherlands

11:40 - 11:50 Break

**Moderator: Javier Lopez-Garrido | Question Narrator: Eammon Riley**

11:50 - 12:15 **#05 The bacterial cytoskeleton spatially confines functional membrane microdomains**  
Rabea Wagner | PhD Student | Daniel Lopez Lab | Spanish National Center for Biotechnology | Spain

12:15 - 12:40 **#06 Control of membrane lipid homeostasis in Gram-positive bacteria**  
Daniela Albanesi | Senior Scientist | Diego de Mendoza Lab | Institute of Molecular and Cellular Biology of Rosario | Argentina

12:40 - 13:05 **#07 The S-layer is a load-bearing component of the *B. anthracis* cell envelope**  
Antonella Fioravanti | Postdoctoral Fellow | Han Remaut Lab | Vrije Universiteit Brussel - Flanders Interuniversity Institute for Biotechnology | Belgium

13:05 - 13:30 **#08 How to tile a (cell) wall: the *C. difficile*'s S-layer**  
Paola Lanzoni-Mangutchi | PhD Student | Paula Salgado Lab | Newcastle University | UK

## June 9, 2020 (Tuesday)

### SPORULATION, GERMINATION, AND APPLICATION OF SPORES

09:45 - 10:00 Meeting set up

**Moderator: Shonna McBride | Question Narrator: Kevin Whitley**

10:00 - 10:25 **#09 Spo0A becomes a mother cell-specific transcription factor to control forespore engulfment in *Bacillus subtilis***

Anuradha Marathe | PhD Student | Masaya Fujita Lab | University of Houston | USA

10:25 - 10:50 **#10 Probing the molecular mechanisms of sporulation initiation in *Clostridioides difficile***

Michael DiCandia | PhD Student | Shonna McBride Lab | Emory University | USA

10:50 - 11:15 **#11 Metabolic differentiation and intercellular nurturing underpin *Bacillus subtilis* spore formation**

Eammon Riley | Postdoctoral Fellow | Kit Pogliano Lab | Univ. of California, San Diego | USA

11:15 - 11:40 **#12 Mechanism of inhibition of an intramembrane metalloprotease involved in endospore formation**

Sandra Olenic | PhD Student | Lee Kroos Lab | Michigan State University | USA

11:40 - 11:50 Break

**Moderator: Prahathees Eswara | Question Narrator: Sarah Yannarell**

11:50 - 12:15 **#13 Developmental checkpoint that monitors morphogenesis of a bacterial cell surface**

Thomas Delerue | Postdoctoral Fellow | Kumaran Ramamurthi Lab | National Institutes of Health | USA

12:15 - 12:40 **#14 Investigation of the *C. difficile* small acid soluble proteins reveals a novel function for spore formation**

Hailee Nerber | PhD Student | Joe Sorg Lab | Texas A&M University | USA

12:40 - 13:05 **#15 Allosteric regulation of an amidase required for *Clostridioides difficile* spore germination**

Carolina Alves Feliciano | Postdoctoral Fellow | Aimee Shen Lab | Tufts University | USA

13:05 - 13:30 **#16 The temperature of growth modulates the efficiency of the spore-display system in *Bacillus subtilis***

Claudia Petrillo | PhD Student | Ezio Ricca Lab | University of Naples "Federico II" | Italy

## June 10, 2020 (Wednesday)

### PROTEIN SECRETION, STRESS RESPONSE, AND ANTIBIOTIC RESISTANCE

09:45 - 10:00 Meeting set up

**Moderator: Matthew Cabeen | Question Narrator: Heidi Arjes**

10:00 - 10:25 **#17 New insights into the physiological implications of Tat-dependent protein secretion in *Bacillus***  
Margarita Bernal-Cabas | PhD Student | Jan Maarten van Dijl Lab | University of Groningen | Netherlands

10:25 - 10:50 **#18 Donor-delivered cell wall hydrolases facilitate nanotube penetration into recipient bacteria**  
Amit Baidya | Postdoctoral Fellow | Sigal Ben-Yehuda Lab | The Hebrew University of Jerusalem | Israel

10:50 - 11:15 **#19 Mg(II) homeostasis during the adaptation to osmotic stress**  
Brian Wendel | Postdoctoral Fellow | John Helmann Lab | Cornell University | USA

11:15 - 11:40 **#20 Preadaptation of *Bacillus subtilis* to mild osmotic stress contributes to increased antibiotic resistance**  
Luiza Morawska | PhD Student | Oscar Kuipers Lab | University of Groningen | Netherlands

11:40 - 11:50 Break

**Moderator: Emma Denham | Question Narrator: Simone Pellicciari**

11:50 - 12:15 **#21 The interaction between PbpP and Beta-lactams is required for the activation of SigP, an extracytoplasmic function sigma factor**  
Kelsie Nauta | PhD Student | Craig Ellermeier Lab | University of Iowa | USA

12:15 - 12:40 **#22 Factors involved in activating *Bacillus anthracis* HitRS signaling in response to envelope damage**  
Hualiang Pi | Postdoctoral Fellow | Eric Skaar Lab | Vanderbilt University | USA

12:40 - 13:05 **#23 Stress sensing in *B. subtilis*: functional analysis of the putative N-terminal sensor region of the RsbR protein**  
Rabindra Khadka | PhD Student | Matthew Cabeen Lab | Oklahoma State University | USA

13:05 - 13:30 **#24 Broad and efficient genetic code expansion in *B. subtilis***  
Devon Stork | PhD Student | Ethan Garner Lab | Harvard University | USA

## June 11, 2020 (Thursday)

### STRESS RESPONSE, NUCLEOTIDE SIGNALING, DNA BIOLOGY, AND COMMUNITY RESOURCES

09:45 - 10:00 Meeting set up

**Moderator: Prahathees Eswara | Question Narrator: Michael DiCandia**

10:00 - 10:25 **#25 How membrane potential dissipation leads to ROS**  
Biwen Wang | PhD Student | Leendert Hamoen Lab | Univ. of Amsterdam | Netherlands

10:25 - 10:50 **#26 Biosurfactant-mediated membrane depolarization maintains viability during oxygen depletion**  
Heidi Arjes | Postdoctoral Fellow | KC Huang Lab | Stanford University | USA

10:50 - 11:15 **#27 (p)ppGpp directly regulates translation initiation during entry into quiescence**  
Simon Diez | PhD Student | Jonathan Dworkin Lab | Columbia University | USA

11:15 - 11:40 **#28 Systemic characterization of pppGpp, ppGpp and pGpp targets in *Bacillus* reveals NahA converts (p)ppGpp to pGpp to regulate alarmone composition and signaling**  
Jin Yang | PhD Student | Jade Wang Lab | University of Wisconsin - Madison | USA

11:40 - 11:50 Break

**Moderator: Javier Lopez-Garrido | Question Narrator: Antonella Fioravanti**

11:50 - 12:15 **#29 A rendezvous of two second messengers: a novel function for c-di-AMP**  
Larissa Krüger | PhD Student | Jörg Stülke Lab | University of Göttingen | Germany

12:15 - 12:40 **#30 The role of N6-methyladenosine in *Bacillus subtilis* physiology**  
Nicolas Fernandez | Postdoctoral Fellow | Lyle Simmons Lab | University of Michigan | USA

12:40 - 13:05 **#31 The DnaA-trio is a broadly conserved bacterial chromosome origin element required for DnaA**  
Simone Pellicciari | Postdoctoral Fellow | Heath Murray Lab | Newcastle University | UK

13:05 - 13:30 **#32 New functionalities in SubtiWiki**  
Tiago Pedreira | PhD Student | Jörg Stülke Lab | University of Göttingen | Germany

## June 12, 2020 (Friday)

### RNA BIOLOGY, ECOLOGY, AND BIOFILMS

09:45 - 10:00 Meeting set up

**Moderator: Emma Denham | Question Narrator: Rabindra Khadka**

10:00 - 10:25 **#33 Plasmid-encoded small regulatory RNAs regulate chromosome gene expression in *Bacillus anthracis***  
Ileana Corsi | PhD Student | Theresa Koehler Lab | University of Texas Health Science Center in Houston | USA

10:25 - 10:50 **#34 Processive antitermination of antibiotic synthesis genes**  
Amr Elghondakly | PhD Student | Wade Winkler Lab | University of Maryland | USA

10:50 - 11:15 **#35 Role of the orphan ribonuclease KapD in *Bacillus subtilis* spore development**  
Anastasia Tolcan | PhD Student | Ciarán Condon Lab | Institut de Biologie Physico-Chimique (CNRS, Université de Paris) | France

11:15 - 11:40 **#36 Cellular localisation and stress-induced clustering of *Bacillus subtilis* RNA degradosome**  
James Grimshaw | PhD Student | Henrik Strahl Lab | Newcastle University | UK

11:40 - 11:50 Break

**Moderator: Matthew Cabeen | Question Narrator: Luciana Machado**

11:50 - 12:15 **#37 The Y complex contributes to metabolic heterogeneity via carbon catabolite repression to ensure *Bacillus subtilis* population survival**  
Alicyn Reverdy | PhD Student | Yunrong Chai Lab | Northeastern University | USA

12:15 - 12:40 **#38 Small, but mighty: the ecology of *B. subtilis* secondary metabolites**  
Heiko Kiesevalter | PhD Student | Ákos Kovács Lab | Technical Univ. of Denmark | Denmark

12:40 - 13:05 **#39 Extensive multi-tasking within *Bacillus subtilis* biofilms**  
Sarah Yannarell | PhD Student | Elizabeth Shank Lab | University of North Carolina at Chapel Hill/University of Massachusetts | USA

13:05 - 13:30 **#40 The contribution of the amyloid protein TasA to *Bacillus* physiology and fitness in the phylloplane**  
Jesús Cámara-Almirón | PhD Student | Diego Romero Lab | University of Malaga | Spain

13:30 - 13:45 Closing remarks and announcement of outstanding presentation award winners