Programme for the 11th European Spores Conference
Downing College, Cambridge 8th – 10th April 2025

Tuesday 8th		
10:00 -	*Registration* *Posters available to view*	*Grace Howard Room*
12:00 – 12:50	*Lunch*	*Grace Howard Room*
12:50 – 13:00	*Welcome & Introduction*	*Howard Theatre*
Session 1 **Chair:** TBA		*Howard Theatre*
13:00 – 13:30	Gertjan Kramer *University of Amsterdam, The Netherlands*	Spore analysis by multi-omics in five species reveals the common and unique aspects of molecular building plans for bacterial spores
13.30 – 13:50	Corinna Schwarz *Max Planck Institute for Evolutionary Biology, Germany*	Cannibalism promotes sporulation loss in *Bacillus subtilis*
13:50 – 14:10	Víctor Freire *University of Zaragoza-CITA, Spain*	Sporulation of *Bacillus subtilis* 168 at high salinity increases wet heat resistance and impairs germination due to coat modifications
14:10 – 14:30	Fernando Ramirez-Guadiana *Harvard Medical School, USA*	A comparative analysis of spore formation in *Bacillus subtilis* and *Bacillus anthracis*
14:30 – 15:00	Christopher Rodrigues *University of Warwick, UK*	Uncovering the role of SpoIIIL in cell-cell signalling during the intermediate stages of *Bacillus subtilis* sporulation
15:00 – 15:30	*Coffee & Cake;* *Posters*	*Grace Howard Room*
Session 2 **Chair:** TBA		*Howard Theatre*
15:30 – 16:00	Peter Setlow *UConn Health, USA*	Bacterial spore resistance to wet heat – a long running story with surprises still appearing
16:00 – 16:20	Rebecca Caldbeck *University of Cambridge, UK*	Unravelling ethylene oxide-based *Bacillus* spp. spore inactivation
16:20 – 16:40	Dmitry Malyshev *Umeå University, Sweden*	Boosting the killing power of bleach through pH optimization
16:40 – 17:10	Flash Poster presentations	
17:10 – 17:30	Abram Aertson KU Leuven, Belgium	Trade-offs in the evolvability of endospore properties
17:30 – 17:50	Daniel Zommick *Valent BioSciences, USA*	Trends in regulation and adoption of spore forming bacteria as biopesticides
17:50 – 18:10	Julia Manetsberger *Universidad de Jaén, Spain*	*Bacillus* spp. as a source of biocontrol agents for major phytopathogens in sustainable olive agriculture
18:10 – 18:30	Flash Poster presentations	
18:30 – 20:00	*Drinks Reception*	*Peterhouse Hall*

Wednesday 9th		
08:00 -	*Breakfast*	*Hall*
08:30 – 09:00	*Tea & Coffee*	*Grace Howard Room*
Session 3		*Howard Theatre*

Chair: TBA		
09:00 – 09:20	Kaoutar Hafdane *INRAE, University of Brest, France*	Impact of temperature and pH dynamics on the sporulation of *Bacillus subtilis* BSB1
09:20 – 09:40	Tina Beck Hansen *The National Food Institute (DTU Food), Denmark*	New predictive growth model for *Bacillus cereus s.l.* from *panC*-groups II, IV, V and VI in cook-chilled starchy foods
09:40 – 10:00	Alexandra Rahmani *INRAE, University of Brest, France*	Acetic acid stress induces resistance and growth adaptation of *Bacillus weihenstephanensis* KBAB4
10:00 – 10:20	Fanling Li *Huazhong Agricultural University, China*	The MazEF toxin-antitoxin system enhances spore coat permeability for rapid germination in hosts
10:20 – 10:50	Yong-Qing Li *East Carolina University, USA*	Modeling heterogeneity, commitment and memory of bacterial spore germination
10:50 – 11.20	*Coffee & Pastries; Posters*	*Grace Howard Room*
Session 4 **Chair:** TBA		
11:20 – 12:00	David Rudner *Harvard Medical School, USA*	Cooperativity within and between germinant receptors
12.00 – 12.20	Rosa Heydenreich *ETH Zurich, Switzerland*	New thoughts on spore germination in the presence of peptidoglycan fragments
12.20 – 12:40	Pooja Gupta *University of York, UK*	Bioenergetic metabolism restarts alongside germinant sensing and hydration in spore germination
12:40 – 13:00	Anne Williams *University of Sheffield, UK*	Insights into spore germination: Lessons from live spore imaging in *Clostridium sporogenes*
13:00 – 14:00	*Lunch & Posters*	*Grace Howard Room*
Session 5 **Chair:** TBA		*Howard Theatre*
14:00 – 14:30	Mike Sleutel *VIB-VUB Center for Structural Biology, Belgium*	Cryo-EM analysis of the *Bacillus thuringiensis* extrasporal matrix identifies F-ENA as a widespread family of endospore appendages across Firmicutes
14:30 – 14:50	Juliana Nacita *University of Cambridge, UK*	Structural and mutational analysis of *Bacillus subtilis* CotB
14:50 – 15:10	Carmen Olivença *Universidade Nova de Lisboa, Portugal*	The SH3 domain mediates substrate engagement and the subcellular localization of the *Clostridiodes difficile* morphogenetic protease YabG
15:10 – 15:30	Marina De Stefano *Federico II University, Italy*	The *ydaJKLMN* operon mediates the adhesion properties of *Bacillus subtilis* spores
15:30 – 15:50	Imrich Barák *Slovak Academy of Sciences, Slovakia*	What's new with bacterial nanotubes
15:50 – 16:20	*Coffee and Cake; Posters*	*Grace Howard Room*
Session 6 **Chair:** TBA		
16:20 – 16:40	Monika Ehling-Schulz *University of Veterinary Medicine Vienna, Austria*	Persistence in Time: The hunt for *Bacillus anthracis* spores at a historic tannery site reveals genetic diversity thought extinct

16:40 – 17:00	Venkata Dwarampudi *Dstl Porton Down, UK*	Comparing the efficacy of vacuum technologies to traditional swabbing methods for sampling spores from complex surfaces
17:00 – 17:20	Jonas Segervald *Umeå University, Sweden*	Ultra-sensitive detection of bacterial spores via SERS
17:20 – 17:40	Rebecca Pearman *Northumbria University, UK*	Understanding *Bacillus* spore interactions with textiles
17:40 – 18:10	Marina Aspholm *Norwegian University of Life Sciences, Norway*	ENAs: The adhesive force behind *Bacillus cereus* spore persistence and biofilm strength
		Open Dinner

Thursday 10th		
08:00 -	*Breakfast*	*Hall*
08:30 – 09:00	*Tea & Coffee*	*Grace Howard Room*
Session 7 **Chair:** TBA		*Howard Theatre*
09:00 – 09:20	Xingchen Zhao *The National Food Institute, Technical University of Denmark*	*Bacillus cereus sensu lato*, a tricky problem for upgrading brewers' spent grain into solid-state fermented food
09:20 – 09:40	Anne Gleißle *University of Hohenheim, Germany*	Commercially non-sterile plant-based milk alternatives – heat stable endospore-formers – prevalence, inactivation and growth
09:40 – 10:00	Stefany Castaldi *University of Naples Federico II, Italy*	The triterpenoid *curcumene* mediates the relative hydrophilicity of *Bacillus subtilis* spores
10:00 – 10:20	Jared Heffron *Novonesis, VA, USA*	Endospore production on the industrial scale with Novonesis
10:20 – 10.50	Stanley Brul *University of Amsterdam, The Netherlands*	Microbiomes and spores; challenges ahead in health and disease
10:50 – 11:20	*Coffee & Pastries; Posters*	*Grace Howard Room*
Session 8 **Chair**: TBA		*Howard Theatre*
11:20 – 12:00	Rivka Isaacson *King's College London, UK*	Structure and function of MdfA, a novel ClpC adaptor for metabolic differentiation
12:00 – 12:20	Rebecca Schira *Max-Planck-Institute for Terrestrial Microbiology, Germany*	Passive but dynamic: quantifying bioelectric changes in single dormant spores responding to external pH and salts
12:20 – 12:40	Shreya Choudhary *Virginia Tech, Blacksburg, VA, USA*	A family of lipoproteins affecting *Bacillus subtilis* germination
12:40 – 13:00	Adriano Henriques *Universidade Nova de Lisboa, Portugal*	A YicC-like endoribonuclease delays sporulation via degradation of a sRNA in *Clostridioides difficile*
13:00 – 14:00	*Lunch & Posters*	*Grace Howard Room*
Session 9 **Chair:** TBA		*Howard Theatre*
14:00 – 14:30	Joseph Sorg *Texas A&M University, USA*	The impact of YabG mutations on *Clostridioides difficile* spore germination and processing of spore substrates

14:30 – 14:50	Marcel Shams-Eddin *Virginia Tech, Blacksburg, USA*	Characterization of membrane-associated proteolytic cleavages affecting spore germination in *Bacillus subtilis*
14:50 – 15:10	Alejandro Boscan *Max Planck Institute for Evolutionary Biology, Germany*	Spore alanine racemases modulate germination in structured environments
15:10 – 15:30	Max Kilian *Max Planck Institute for Terrestrial Microbiology, Germany*	Observing the latest stages of spore morphogenesis and sporulation failures in *Bacillus subtilis*
15:30 – 15:50	Patrick Eichenberger *New York University, USA*	A second look at neglected sporulation genes
15:50 – 16:20	*Coffee and Cake*	*Grace Howard Room*
Session 10 **Chair:** TBA		*Howard Theatre*
16:20 – 16:50	Véronique Broussolle *INRAE, Avignon Université, France*	Protein-protein interactions during exosporium formation: some keys to lock the spore
16:50 – 17:10	Li Xu *Huazhong Agricultural University, China*	*Bacillus thuringiensis*: How spore-associated crystal Cry21Aa is located inside the cap structure of the exosporium
17:10 – 17:30	Alexandra Cusmano *Cardiff University, UK*	Naturally occurring mutations in the protective antigen gene are unlikely to adversely affect its pore-forming ability
17:30 – 17:50	Adrià Sogues *VIB-VUB Center for Structural Biology, Belgium*	Endospore appendages link spores and toxins forming a biofilm matrix in *Bacillus thuringiensis*
17:50 – 18:10	Joshua Yarrow *University of Cambridge, UK*	Computational and combinatorial adventures within the spore-coat and the germinosome: from evolutionary couplings to predictive interactomics
18:10 – 18:20	*Poster and Oral Presentation prizes*	
19:00 – 19:30	*Pre-dinner Drinks Reception*	*West Lodge Garden*
19:30 – 21:00	*Conference Dinner*	*Hall*
21:00 -	*After dinner drinks*	*Howard Drawing Room*