



15th International Congress of Bacteriology & Applied Microbiology
15th International Congress of Mycology and Eukaryotic Microbiology
17th International Congress of Virology

IUMS 2017
SINGAPORE
International Union of
Microbiological Societies

PROGRAMME

15th International Congress of Bacteriology and Applied Microbiology 17 – 21 July 2017

17 July 2017, Monday		
Time	Room	Programme
08:30 – 09:30	<i>Sands Grand Ballroom I – L</i>	Opening Ceremony Guest of Honour: Mr Lawrence Wong Minister for National Development & Second Minister for Finance
09:30 – 10:00	<i>Sands Grand Ballroom foyer</i>	Welcome Reception
10:00 – 11:30	<i>Sands Grand Ballroom I – L</i>	Keynote Chair: Prof Yuan Kun Lee, President of IUMS Gut Microbiome: A New Target For Managing Human Health Speaker: Prof Liping Zhao, Rutgers, The State University of New Jersey; Shanghai Jiao Tong University, China (BAM) (30 Minutes) Understanding the Flagellum-driven Cell Motility in Trypanosomes by Cryo- Electron Tomography Speaker: Dr Cynthia He, National University of Singapore, Singapore (MEM) (30 Minutes) The Long and Winding Road from Poxvirus Tropism to Oncolytic Virotherapy Speaker: Prof Grant McFadden, Arizona State University, USA (VIR) (30 Minutes)
11:30 – 12:30	<i>Sands Grand Ballroom I – L</i>	ICTV plenary session Speaker: Andrew Davison, MRC-University of Glasgow Centre for Virus Research
11:30 – 13:00	<i>Sands Grand Ballroom foyer</i>	Lunch and Posters
13:00 – 14:30	<i>Sands Grand Ballroom I – L</i>	Bridging Session - Frontiers in Structural Microbiology Chair: Rafael Giraldo, CIB-CSIC, Spain (30 Minutes) The Third Genetic Code Speaker: Dr Eric Westhof, Université de Strasbourg, France (MEM) (45 Minutes)



17 July 2017, Monday		
Time	Room	Programme
		<p>The Lassa virus Glycoprotein – It Takes a Village Speaker: Prof Erica Ollmann Saphire, The Scripps Research Institute, USA (VIR) (45 Minutes)</p>
WORKSHOP SESSION 1		
14:30 – 16:00	Sands Grand Ballroom N	<p>Bacterial Metabolism 1</p> <p>Degradation of Petroleum-based Plastics by Polyester Hydrolases from Thermophilic Actinomycetes Speaker: Prof Wolfgang Zimmermann, University of Leipzig, Germany (30 Minutes)</p> <p>Chair: Prof Wolfgang Zimmermann, University of Leipzig, Germany</p> <p>Production of Rare Inositols: Conversion of Agricultural Wastes into Value Added Products Oral Presenter: Prof Ken-Ichi Yoshida (15 Minutes)</p> <p>Daidzein Reductase of EGGERTHELLA YY7918; Three-dimensional Structure Analysis Using SAXS Oral Presenter: Ms Yuika Kawada (15 Minutes)</p> <p>Physiological Role of NCGL1221 Mechanosensitive Channel in Corynebacterium glutamicum Oral Presenter: Prof Masaaki Wachi (15 Minutes)</p>
14:30 – 16:00	Sands Grand Ballroom M	<p>Antimicrobial Peptides and Antimicrobial Resistance Session Sponsor: Elsevier</p> <p>The Antibacterial Activity of Microcin E492, A Pore-forming Bacteriocin, is Modulated by Post-translational Modification, by Amyloid Formation and by a New Regulator Factor Controlled by Fur Speaker: Prof Rosalba Lagos, Universidad de Chile, Chile (30 Minutes)</p> <p>Chair: Prof Rosalba Lagos, Universidad de Chile, Chile</p> <p>Bacteria Persistence – and the Emergence of Antibiotic Resistance Oral Presenter: Arti Mishra (20 Minutes)</p> <p>Analysis of Antibiotic Resistant Gene Variation in Vibrio cholerae Isolated from Clinical Patients and Environmental Water in Kolkata from 2007 to 2014 Oral Presenter: Mr Daichi Morita (20 Minutes)</p>



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Time	Room	Programme
		<i>Novel Single Nucleotide Variations (SNVS) Found in Fluoroquinolone-Resistant Escherichia coli by Next Generation Sequencing Suggest A Potential Pathway For Drug Resistance through DNA Damage and the SOS Response System</i> Oral Presenter: Ms Arielle Kae Sulit (20 Minutes)
	Sands 5201 – 5202	Bacterial Secretion and Membranes Biosynthesis Bacterial Lipid Trafficking and Outer Membrane Homeostasis Speaker: Prof Shu Sin Chng, National University of Singapore, Singapore (30 Minutes) Chair: Prof Shu Sin Chng, National University of Singapore, Singapore <i>Outer Membrane Lipid Homeostasis via Retrograde Phospholipid Transport</i> Oral Presenter: Rahul Shrivastava (15 Minutes) <i>Towards Reconstituting Phospholipid Transport Important for the Maintenance of Outer Membrane Lipid Asymmetry in E. coli</i> Oral Presenter: Ms Bilge Ercan (15 Minutes) <i>Microbial Cation and Electron Outflow Across the Outer Membrane Promotes Fermentative ATP Formation</i> Oral Presenter: Prof Akihiro Okamoto (15 Minutes) <i>Occlusion of RcsF, An Envelope Stress Sensor by the Peptidoglycan-binding Domain of OmpA</i> Oral Presenter: Seung-Hyun Cho (15 Minutes)
16:00 – 16:30	Sands Grand Ballroom foyer	Coffee Break
WORKSHOP SESSION 2		
16:30 – 18:00	Sands Grand Ballroom N	Bacterial Metabolism 2 Regulation of Zinc Homeostasis by Versatile Zur from Actinobacteria Speaker: Prof Jung-Hye Roe, Seoul National University, South Korea (30 Minutes) <i>Mycobacterial Alternative Ribosomes Dictate Cell Morphology and Redox Homeostasis</i> Oral Presenter: Prof Sladjana Prusic (15 Minutes) <i>Transcriptome Profiles of Pseudomonas stutzeri NT-I in Response to Selenate, Selenite, and Elemental Selenium</i> Oral Presenter: Dr Masashi Kuroda (15 Minutes)



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Time	Room	Programme
	Sands 5201 – 5202	<p>Biorremediation</p> <p>Synthetic Lixiviant Biology: Sustainable Metallurgy For The Circular Economy Speaker: Dr Wen Shan Yew, National University of Singapore, Singapore (30 Minutes)</p> <p>Chair: Dr Wen Shan Yew, National University of Singapore, Singapore</p> <p>Isolation of Chromium (Vi)-Reducing Bacteria from Tannery Effluents and Evaluating Their Potential Use in the Bioremediation of Chromium-Rich Wastewater Oral Presenter: Prof Lian Zhou (15 Minutes)</p> <p>Abundance of Airborne and Phyllosphere Pyrene-Degrading Bacteria in the Urban Environment and the Role of Biosurfactant on Enhancing Pyrene Removal Oral Presenter: Dr Ekawan Luepromchai (15 Minutes)</p> <p>Phylogenomic, Molecular Signature and Eco-physiological Characterization of Arsenic-transforming, Hydrocarbon-metabolizing <i>Achromobacter</i> sp.: implications for as Bioremediation Oral Presenter: Balaram Mohapatra (15 Minutes)</p>
	Sands Grand Ballroom M	<p>Pathogens and Infections 1</p> <p>Mechanisms of Host-bacterial Interaction: The Battle for Iron Speaker: Prof Bindu Sukumaran, Duke-NUS, Singapore (30 Minutes)</p> <p>Chair: Prof Bindu Sukumaran, Duke-NUS, Singapore</p> <p>Acute Cystitis: An IL-1β-dependent Disorder Amenable to Immunotherapies Oral Presenter: Ms Caterina Cafaro (15 Minutes)</p> <p>Prevalence and Resistance of Gram-negative Bacteria in Patients in Neonatal Intensive Care Unit (NICU) During Hospitalisation Oral Presenter: Ms Polly Yap (15 Minutes)</p> <p>Population Heterogeneity of <i>Streptococcus pyogenes</i> Isolates from Patients with Necrotizing fasciitis, Pondicherry, India Oral Presenter: Mrs Tintu Abraham (15 Minutes)</p> <p>Electrogenic <i>Enterococcus faecalis</i> Biofilm: Elucidating the Mechanism of Ferric Iron Mediated Extracellular Electron Transfer Oral Presenter: Ling Ning Lam (15 Minutes)</p>



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	<i>Sands 5301 – 5302</i>	Bacterial Division and Morphogenesis The Life of E. coli in the Absence of the FtsZ Protein Speaker: Miguel Vicente, Consejo Superior de Investigaciones Científicas, Spain (30 Minutes) Chair: Miguel Vicente, Consejo Superior de Investigaciones Científicas, Spain Role of Amino Acid Biosynthesis in Suppressing the Thermosensitive Cell Division Mutant ZIPA1 of Escherichia coli Oral Presenter: Dr Daniel Vega (20 Minutes) Septal MreB-mediated Cell Widening in Longitudinally Dividing Rod-shaped Symbionts Oral Presenter: Nika Pende (20 Minutes) The Bacterial Cell Division Machinery is Built in Modules Oral Presenter: Bill Söderström (20 Minutes)
18:00 – 18:30	<i>Sands Grand Ballroom foyer</i>	Coffee Break
18:30 – 19:30	<i>Sands Grand Ballroom A – D</i>	Plenary – Rational Design of Vaccines Chair: Prof Dörte Becher, Institut für Mikrobiologie, Germany The Most Successful Pathogen on Earth: Tuberculosis Research from Bench to Bed and Back to Bench Speaker: Prof Stefan Kaufman, Max Plank, Germany (30 Minutes) From Reverse Vaccinology to Structural Vaccinology Speaker: Dr Mariagrazia Pizza, GlaxoSmithKline Biologicals, Italy (30 Minutes)
19:30 – 20:30	<i>Sands Grand Ballroom I – L</i>	Arima and Mudd Awards Ceremony Arima Award: Dr Fernando Baquero, Scientific Director, Ramón y Cajal University Hospital in Madrid, Spain (30 Minutes) Mudd Award: Science and Society: Infectious Diseases as an Example Speaker: Prof Jörg Hacker, President of the German National Academy of Sciences Leopoldina, Halle (Saale), Germany (30 Minutes)



18 July 2017, Tuesday

Time	Room	Programme
08:30 – 09:30	<i>Sands Grand Ballroom A – D</i>	Plenary – Bacterial Ecology Chair: Prof Carlos Pedrós-Alió, National Center for Biotechnology (CSIC) in Madrid, Spain Factors Affecting Cultivability of Microorganisms on Solidified Media Speaker: Prof Yochi Kamagata, National Institute of Advanced Industrial Science and Technology, Japan (30 Minutes) A Taxonomy for the Uncultured Speaker: Prof Ramón Roselló-Mora, IMEDEA, CSIC-UIB, Spain (30 Minutes)
09:30 – 10:00	<i>Sands Grand Ballroom foyer</i>	Coffee Break
10:00 – 11:00	<i>Sands Grand Ballroom A – D</i>	Plenary – Applied Microbiology Chair: Liz Harry, University of Technology Sydney, Australia How Environmental Bacteria Conquest New Chemical Landscapes and Some Take Home Lessons Speaker: Prof Victor de Lorenzo, Centro Nacional Biotecnología, CSIC, Spain (30 Minutes) CRISPR Technologies 2.0: Harnessing the Next Generation of CAS Nucleases for Genome Editing and Beyond Speaker: Prof Chase Beisel, North Carolina State University, USA (30 Minutes)
11:00 – 12:30	<i>Sands Grand Ballroom A – D</i>	Yakult Sponsored Lunch Symposium Gut Microbiota and Ulcerative Colitis Speaker: Prof Toshifumi Ohkusa, The Jikei University Kashiwa Hospital
11:00 – 13:00	<i>Sands Grand Ballroom foyer</i>	Lunch and Posters
	<i>Simpur Junior Ballroom, 4810B</i>	BAM Divisional Council Meeting
WORKSHOP SESSION 3		
13:00 – 14:30	<i>Sands Grand Ballroom N</i>	Applied Microbiology and Biotechnology 1 Enabling Microbial Cell Factories, Tools for Efficient Pathway Discovery, Assembly, and Integration Oral Presenter: Ee Lui Ang



18 July 2017, Tuesday

Time	Room	Programme
		<p>Chair: Ee Lui Ang, MERL, A*STAR, Singapore (15 Minutes)</p> <p><i>Biosynthesis of Zinc Oxide Phytase Nanocomposites – A Promising Strategy For Increased Thermostability and Antimicrobial Properties</i> Oral Presenter: Dr Sharrel Rebello (15 Minutes)</p> <p><i>Efficient Microbial Alginate Lyases for Alginate Depolymerization</i> Oral Presenter: Prof Tetsushi Mori (15 Minutes)</p> <p><i>A “Plug-N-Play” Modular Metabolic System for the Production of Apocarotenoids</i> Oral Presenter: Congqiang Zhang (15 Minutes)</p> <p><i>Green Biosynthesis of Gold Nanoparticles and Its Application: For Formation of Bioconjugate of Amylase</i> Oral Presenter: Yogini Mulay (15 Minutes)</p> <p><i>Application of a Photonic Crystal Based Biosensor for Development of Antibody and Bacteriophage Therapies for Antibiotic-Resistant Infections</i> Oral Presenter: Ekaterina Rostova (15 Minutes)</p>
	Sands Grand Ballroom M	<p>Pathogens and Infections 2</p> <p>Manipulation of the Host Ubiquitin System by Legionella Speaker: Dr Tomoko Kubori, Gifu University, Japan (30 Minutes)</p> <p>Chair: Dr Tomoko Kubori, Gifu University, Japan</p> <p><i>New Discovery of Peptidoglycan in the Obligate Intracellular Human Pathogen Orientia tsutsugamushi</i> Oral Presenter: Ms Suparat Giengkam (15 Minutes)</p> <p><i>Chlamydia pneumoniae Reprograms Host Lipid Metabolism via Adipocyte Fatty Acid-Binding Protein for Intracellular Growth in Murine Adipocytes</i> Oral Presenter: Ms Nirwana Fitriani Walenna (15 Minutes)</p> <p><i>Specific Attenuated Staphylococcus aureus is Colonized in the Skin of Adult Severe Atopic Dermatitis Patients</i> Oral Presenter: Ms Nagisa Okino (15 Minutes)</p> <p><i>Could Aberrant Cell Fusion Induced by Burkholderia be a Novel Danger Signal?</i> Oral Presenter: Ms Wei Kay Joanne Ku (15 Minutes)</p>
	Sands 5201 – 5202	<p>Environmental Microbiology 1</p>



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Time	Room	Programme
		<p>Experimental Mixed Species Biofilms: A Novel Approach for Evaluating Interactions at a Community Level Speaker: Prof Staffan Kjelleberg, Singapore Centre for Environmental Life Sciences Engineering, Nanyang Technological University, Singapore (30 Minutes)</p> <p>Chair: Prof Staffan Kjelleberg, Singapore Centre for Environmental Life Sciences Engineering, Nanyang Technological University, Singapore</p> <p>Effects of Bacterial Community Formed in the Root Zone on the Biomass Production of Duckweed, Lemna Minor Oral Presenter: Mr Hidehiro Ishizawa (15 Minutes)</p> <p>Mechanisms of Serratia marcescens Interactions with Human Pathogenic Fungi Oral Presenter: Nir Osherov (15 Minutes)</p> <p>Salmonella Contamination in Vegetables Due to Irrigation with Wastewater in Lahore Oral Presenter: Zafar Muhammad Shahjahan (15 Minutes)</p> <p>Pathogen Integration in Freshwater Biofilms: Invasion or Coexistence? Oral Presenter: Nandini Shome (15 Minutes)</p>
	Sands 5301 – 5302	<p>Alternatives to Antibiotics</p> <p>Honey: A Topical Solution for Drug-resistant Infections Speaker: Liz Harry, University of Technology Sydney, Australia (30 Minutes)</p> <p>Chair: Liz Harry, University of Technology Sydney, Australia</p> <p>IRF7 Inhibition to Prevent Tissue Damage During Bacterial Infection Oral Presenter: Mrs Ines Ambite (15 Minutes)</p> <p>Lactoferrin: More than a Natural Antimicrobial Protein Oral Presenter: Prof Eric Cox (15 Minutes)</p> <p>Mechanism of Action Studies of Bioengineered Peptides on Gram Negative Bacteria Oral Presenter Jun Jie Koh (15 Minutes)</p> <p>In Vitro Test for Bacterial Treatment Using Heterologously Expressed Bacteriophage Lambda Endolysin and Permeabilising Agents Oral Presenter: Charlotte Boucher (15 Minutes)</p>



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Time	Room	Programme
WORKSHOP SESSION 4		
14:30 – 16:00	<i>Sands Grand Ballroom N</i>	Bacteria Regulation, Evolution, and Gene Transfer New Insight into the Function of Bacterial Amyloids for sRNA Metabolism Speaker: Dr Veronique Arluison, University of Paris, France (30 Minutes) Chair: Dr Veronique Arluison, University of Paris, France Characterization of Crispr-Cas System in Staphylococcus Strains Revealed its Potential Role in Bacterial Evolution Oral Presenter: Dr Qiuchun Li (15 Minutes) Genetic Analysis of Salmonella enterica serovar Gallinarum Biovar Pullorum Based on Characterization and Evolution of Crispr Sequence Oral Presenter: Dr Xie Xiaolei (15 Minutes) Reversible Lysine Acetylation is Involved in DNA Replication Initiation by Regulating Activities of Initiator DNAA in Escherichia coli Oral Presenter: Ms Shuxian Li (15 Minutes)
	<i>Sands Grand Ballroom M</i>	Pathogens and Infections 3 Host-Microbe Interactions: Invasion and Evasion Speaker: Dr Koichi Kuwano, Kurume University School of Medicine, Japan (30 Minutes) Chair: Dr Koichi Kuwano, Kurume University School of Medicine, Japan Modification of Lipid A Structure and Immunological Activity by the Introduction of Foreign Fatty Acid Transferase Genes Oral Presenter: Prof Kazuyoshi Kawahara (15 Minutes) Nutritional Requirements of Klebsiella pneumoniae in the Gut Mucosa Oral Presenter: Ms Yi Han Tan (15 Minutes) Production of Extracellular Proteases of Bacteria which Inhabit Aquatic Environments Oral Presenter: Prof Eizo Takahashi (15 Minutes)
	<i>Sands 5201 – 5202</i>	Biofilm and Quorum Sensing Unraveling Autotransporter Interactions in Biofilms Speaker: Prof Mark Schembri, University of Queensland, Australia (30 Minutes)



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		<p>Chair: Prof Mark Schembri, University of Queensland, Australia</p> <p><i>Biosynthesis and Degradation of Dsf-Family Quorum Sensing Signals in Xanthomonas</i> Oral Presenter: Ms Lian Zhou (15 Minutes)</p> <p><i>Ahl Mediated Quorum Sensing Mediates Species Interactions in Multispecies Biofilms</i> Oral Presenter: Dr Sujatha Subramoni (15 Minutes)</p> <p><i>Mixed Species Biofilm Provides Associational Resistance to Predation by Protists</i> Oral Presenter: Prof Diane McDougald (15 Minutes)</p> <p><i>Antimicrobial, Anti-infective and Biofilm Inhibitory Activity of Nanoparticles and Peptide Conjugated Nanoparticles Against Multi-drug Resistant MRSA, Pseudomonas aeruginosa PA01 and Salmonella Typhimurium</i> Oral Presenter: Dr Jamuna Bai Aswathanarayan (15 Minutes)</p>
16:00 – 16:30	Sands Grand Ballroom foyer	Coffee Break
16:30 – 18:00	Sands Grand Ballroom I – L	<p>Bridging Session – Microbial Evolution and Diversity Chair: Prof Paul Young, The University of Queensland, Australia</p> <p>Genomics & The Making of Fungal Metabolic Diversity Speaker: Prof Antonis Rokas, Vanderbilt University, USA (MEM) (30 Minutes)</p> <p>Using Metagenomics to Redefining Virosphere and Disease Emergence Speaker: Prof Eddie Holmes, University of Sydney, Australia (VIR) (30 Minutes)</p>



19 July 2017, Wednesday

Time	Room	Programme
08:30 – 09:30	Sands Grand Ballroom A – D	Plenary – Transcription Regulation Chair: Dr Susan Gottesman, National Cancer Institute, USA Transforming Bacterial Gene Expression Speaker: Prof Irina Artsimovitch, Ohio State University, USA (30 Minutes) Multiple Regulatory Loops Around a Sigma-Antisigma System in Response to Oxidants and Antibiotics Speaker: Dr. Jung-Hye Roe, Seoul National University, South Korea (30 Minutes)
09:30 – 10:00	Sands Grand Ballroom foyer	Coffee Break
10:00 – 11:00	Sands Grand Ballroom A – D	Plenary – Cell Division and Morphogenesis Chair: Miguel Vicente, Consejo Superior de Investigaciones Cientificas, Spain Bacterial Cell Division: Why Keep it Simple When it Can Be Complicated? Speaker: Prof Tanneke den Blaauwen, Universiteti van Amsterdam, Netherlands (30 Minutes) Regulation of Bacterial Cell Wall Growth Speaker: Prof Waldemar Vollmer, Newcastle University, United Kingdom (30 Minutes)
11:00 – 13:00	Sands Grand Ballroom foyer	Lunch and Posters
WORKSHOP SESSION 5		
13:00 – 14:30	Sands Grand Ballroom N	Applied Microbiology and Biotechnology 2 Speaker: Prof Sang-Ki Rhee, Soon Chun Hyang University, Korea (30 Minutes) Chair: Prof Sang-Ki Rhee, Soon Chun Hyang University, Korea The Combinatorial Effects of Prebiotic Oligosaccharides and Probiotic Bifidobacteria on Immune Response and Intestinal Environment of Neonatal Mice Oral Presenter: Dr. Jin-Zhong Xiao (15 Minutes) Genomics of Phytate-degrading Lactic Acid Bacteria Isolated from Ogi and Kunun-zaki, African Traditional Fermented Food and Beverage Oral Presenter: Mrs Gbemisola Onipede (15 Minutes)



19 July 2017, Wednesday

Time	Room	Programme
		<p><i>Changes in Microbial Community Structure During Continuous Anaerobic Digestion of Spent Coffee Grounds with Ulva Biomass as Co-substrate</i> Oral Presenter: Dr Jaai Kim (15 Minutes)</p> <p><i>Trichoderma Species SG2: A Potential Organism for Production of Mixtures of Enzymes for Biomass Saccharification</i> Oral Presenter: Prof Benedict Okeke (15 Minutes)</p>
	<i>Sands Grand Ballroom M</i>	<p>Pathogens and Infections 4</p> <p>The Pathogenesis of <i>Enterococcus faecalis</i> Biofilm-Associated Infection Speaker: Kimberly Kline, Nanyang Technological University, Singapore (30 Minutes)</p> <p>Chair: Kimberly Kline, Nanyang Technological University, Singapore</p> <p><i>Glutathione-induced Bacterial Killing of C. elegans</i> Oral Presenter: Mr Daniel Lim (20 Minutes)</p> <p><i>Role of Monocytes and Macrophages in Klebsiella pneumoniae Induced Liver Abscess (KLA)</i> Oral Presenter: Ms Chu Han Hoh (20 Minutes)</p> <p><i>Neisseria gonorrhoeae Infection Causes Changes in Transcriptome of Human Epithelial Cells</i> Oral Presenter: Jagoda Płaczekiewicz (20 minutes)</p>
	<i>Sands 5301 – 5302</i>	<p>Mycobacterium and Tuberculosis</p> <p>Targeting Tuberculosis and Tissue Destruction Speaker: Dr Catherine Ong, National University Health System, Singapore (30 Minutes)</p> <p>Chair: Dr Catherine Ong, National University Health System, Singapore</p> <p><i>Reproducibility of Four Identification Methods of Antibiotic-Resistant Mycobacterium Tuberculosis Isolated from Displaced and Nondisplaced Iraqi Patients with Reference to Quantiferon</i> Oral Presenter: Prof Moheemid Mohammed (15 Minutes)</p> <p><i>NGS-Based Phylogenomic Analysis Supports Reclassification of All Species within the Mycobacterium Tuberculosis Complex as Mycobacterium Tuberculosis</i> Oral Presenter: Manzour Hazbon (15 Minutes)</p>



19 July 2017, Wednesday

Time	Room	Programme
		<p><i>High Sensitivity and Specificity of a Synthetic Mycobacterium Tuberculosis Curli Pili (MTP) Peptide for the Detection of Anti-MTP IgG Antibodies in Patients with Active Pulmonary Tuberculosis</i> Oral Presenter: Manormoney Pillay (15 Minutes)</p> <p><i>Immunoscreening of M. Tuberculosis F15/LAM4/KZN Secretome Library Against TB Patients' Sera and Identification of Latent-TB and Active-TB Specific Biomarkers</i> Oral Presenter: Thamsanqa Chiliza (15 Minutes)</p>
	Sands 5201 – 5202	<p>Microbiomes Session Sponsor: Procter & Gamble</p> <p>Host and Bacterial Factors Affecting Colonization and Pathogenesis of Klebsiella pneumoniae in Klebsiella Induced Liver Abscess Speaker: Prof Yunn Hwen Gan, National University of Singapore, Singapore (15 Minutes)</p> <p>Chair: Prof Yunn Hwen Gan, National University of Singapore, Singapore</p> <p><i>Capsular Polysaccharide Inhibits Adhesion of Bifidobacterium longum 105-A to Enterocyte-Like Caco-2 Cells and Phagocytosis by Macrophages</i> Oral Presenter: Dr Amin Tahoun (15 Minutes)</p> <p><i>High-Throughput Functional Metagenomics for Investigating the Host-Microbe Crosstalk in the Human Gut</i> Oral Presenter: Dr Gabrielle Potocki-Veronese (15 Minutes)</p> <p><i>Droplet-based Massively Parallel Whole Genome Amplification for Single-cell Microbiology</i> Oral Presenter: Prof Haruko Takeyama (15 Minutes)</p> <p><i>Delving the Expanded Microbiome of the Upper Airway in Health and Disease</i> Oral Presenter: Dr Seweryn Bialasiewicz (15 Minutes)</p> <p><i>Effects of Lactobacillus paracasei MCC1849 Supplementation on Symptoms of the Common Cold and Mood States in Healthy Adults: A Randomized, Double-blind, Placebo-controlled Trial</i> Oral Presenter: Dr Mai Murata (15 Minutes)</p>



19 July 2017, Wednesday

Time	Room	Programme
WORKSHOP SESSION 6		
14:30 – 16:00	<i>Sands Grand Ballroom M</i>	Bacterial Structures and Structural Microbiology Multiscale Approaches to Model Amyloid Disease in Bacteria Speaker: Dr Rafael Giraldo, CIB, CSIC, Spain (30 Minutes) Chair: Dr Rafael Giraldo, CIB, CSIC, Spain <i>Inhibition of Class C β-lactamases Through the Adenylation of the Nucleophilic Serine in the Active Site</i> Oral Presenter: Sun-Shin Cha (15 Minutes) <i>Structural and Kinetic Studies Reveal Substrate Recognition and Specificity of ErmB, a 23S rRNA Methyltransferase</i> Oral Presenter: Dr Boon Chong Goh (15 Minutes) <i>MmpI3 is the Inner Membrane Flippase of Trehalose Monomycolate in Mycobacteria</i> Oral Presenter: Ms Zhujun Xu (15 Minutes) <i>Characterization of an Extremely Halophilic Salinivibrio SP. SP9 Isolated from Saltpan, South Africa</i> Oral Presenter: Memory Tekere (15 Minutes)
	<i>Sands 5201 – 5202</i>	Models of Host-Pathogens Interactions Climate Change in Bacteria Speaker: Prof Christoph Tang, University of Oxford, United Kingdom (30 Minutes) Chair: Prof Christoph Tang, University of Oxford, United Kingdom <i>Novel Insights into the Pathogenesis of Pneumococcal Meningitis</i> Oral Presenter: Dr Marie Yang (15 Minutes) <i>Peptidyl Isomerase PrsA is Surface-associated on Streptococcus suis and Involved in Pyroptosis</i> Oral Presenter: Prof Weihuan Fang (15 Minutes) <i>Multi-Pronged Mechanisms of Yersinia Effector Protein YopO at Modulation of the Host Actin Cytoskeleton</i> Oral Presenter: Wei Lin Lee (15 Minutes) <i>Ferulic Acid, But Not All Hydroxycinnamic Acids, is a Novel T3SS Inducer of Ralstonia solanacearum and Could Promote its Infection Process on Host Plants</i> Oral Presenter: Yong Zhang (15 Minutes)



19 July 2017, Wednesday

Time	Room	Programme
	<i>Sands Grand Ballroom N</i>	Omics Technology for Bacterial Analysis and System Microbiology 1 Molecular Systems Biology of Complex Communities: Approaches to the Integrated Study of Composition and Function Speaker: Dr Rohan Williams, National University of Singapore, Singapore (30 Minutes) Chair: Dr Rohan Williams, National University of Singapore, Singapore Spatio-Temporal Metagenomic Analysis of Bacterial Community Response in Oil Impacted Warri River, Niger Delta, Nigeria Oral Presenter: Dr Joyce Idomeh (15 Minutes) A Novel Progressive Clustering Approach for Creating Ecological Networks Reveals the Structure of Microbial Communities at Different Scales Oral Presenter: Dr Javier Tamames (15 Minutes) Bifidobacteria as a Cell Factory for Biochemical Production Oral Presenter: Hend Altaib (15 Minutes) Metagenomic Insights into the Microbial Assemblages of Lake Kenyir, a Tropical Artificial Lake Ecosystem Oral Presenter: Dr Muhd Danish-Daniel (15 Minutes)
1600 – 1630	<i>Sands Grand Ballroom foyer</i>	Coffee Break
16:30 – 18:00	<i>Sands Grand Ballroom I – L</i>	Bridging Session – Microbes and Climate Change Chair: Prof Gustavo Goldman, Universidade de São Paulo, Brazil Bacteria and Climate Change Speaker: Prof Carlos Pedrós-Alió, National Center for Biotechnology (CSIC) in Madrid, Spain (BAM) (30 Minutes) Microbes and Climate Change Speaker: Prof Lynne Boddy, Cardiff School of Biosciences, United Kingdom (MEM) (30 Minutes) Dengue and Zika Transmission: Environmental and Human Interaction Speaker: Dr Lee Ching Ng, National Environment Agency, Singapore (VIR) (30 Minutes)



20 July 2017, Thursday

Time	Room	Programme
08:30 – 09:30	Sands Grand Ballroom A – D	<p>Plenary – Super Resolution Microscopy in Bacteria Chair: Prof Rosalba Lagos, Universidad de Chile, Chile</p> <p>Super-Resolution Imaging of Salmonella SPI-2 Regulation Speaker: Prof Linda Kenney, University of Illinois, USA (30 Minutes)</p> <p>Insight into the Dynamics and Function of the Bacterial Tubulin FtsZ in Cell Division and Morphogenesis Speaker: A/Prof Jie Xiao, Johns Hopkins University, USA (30 Minutes)</p>
09:30 – 10:00	Sands Grand Ballroom foyer	Coffee Break
10:00 – 11:00	Sands Grand Ballroom A – D	<p>Plenary – Modulating Microbiota Chair: Prof Yunn Hwen Gan, National University of Singapore, Singapore</p> <p>The Human Microbiome in Health and Disease Speaker: Dr Alex Mira, FISABIO, Valencia, Spain (30 Minutes)</p> <p>Human Diet, Ethnicity & Microbiota Association, Implications in Health & Disease Speaker: Prof Yuan Kun Lee, National University of Singapore, Singapore (30 Minutes)</p>
11:00 – 12:30	Sands Grand Ballroom A – D	<p>Yakult Sponsored Lunch Symposium</p> <p>The Unique Features of <i>Lactobacillus Casei</i> Strain Shirota Correlates with the Cell Wall Polysaccharides and Its Genes Speaker: Emi Yasuda, Yakult Central Institute</p>
11:00 – 13:00	Sands Grand Ballroom foyer	Lunch and Posters
		IUMS Council Handing over ceremony
WORKSHOP SESSION 7		
13:00 – 14:30	Sands 5201 – 5202	<p>Environmental Microbiology 2</p> <p>Genomics and Light-promoted Growth of Forty-seven Glacier Bacteria Reveal Proteorhodopin and Zeaxanthin in Light Energy Utilization Speaker: Prof Xiuzhu Dong, Institute of Microbiology, Chinese Academy of Science, China (30 Minutes)</p> <p>Chair: Prof Xiuzhu Dong, Institute of Microbiology, Chinese Academy of Science, China</p>



20 July 2017, Thursday

Time	Room	Programme
		<p>Development of a Rapid On-site Water Pathogen Detection Kit for Microbial Water Quality Monitoring Oral Presenter: Dr Joshua Teo (15 Minutes)</p> <p>Identification and Characterizations of the Estrogen Degradation <i>Pseudomonas putida</i> SJTE-1 Oral Presenter: Prof Rubing Liang (15 Minutes)</p> <p>Development of a Genetically Programed Vanillin-Sensing Bacterium for High Throughput Screening of Lignin-Degrading Enzyme Libraries Oral Presenter: Barindra Sana (15 Minutes)</p> <p>Identification of the Response Pathways of <i>Escherichia coli</i> and <i>Enterococcus faecalis</i> to Glyphosate and its Major Breakdown Product Aminomethyl Phosphonic Acid (AMPA) Oral Presenter: Arinze Okoli (15 Minutes)</p>
	Sands Grand Ballroom M	<p>Microbial Response and Adaption</p> <p>Temperature Sensing by Bacterial Membranes Speaker: Prof Diego de Mendoza, Universidad Nacional de Rosario, Argentina (30 Minutes)</p> <p>Chair: Prof Diego de Mendoza, Universidad Nacional de Rosario, Argentina</p> <p>Nitric oxide-mediated biofilm dispersal in <i>Pseudomonas aeruginosa</i> is inhibited by flavohemoglobin and enhanced by imidazole Oral Presenter: Ms Xinyi Zhu (15 Minutes)</p> <p>The Gobaal Regulator ArcA Modulates an Iron-dependent Anti-Protozoan Factor that Provides <i>Vibrio vulnificus</i> Resistance to Predation by Protozoa Oral Presenter: Ms Parisa Noorian (15 Minutes)</p> <p>Biogenesis of the <i>Staphylococcus aureus</i> Hibernating 100S Ribosome Oral Presenter: Prof M.-N. Frances Yap (15 Minutes)</p>
	Sands Grand Ballroom N	<p>Omics Technology For Bacterial Analysis and System Microbiology 2 Session sponsor: Procter & Gamble</p> <p>Quantitative Proteomics at a Global Scale – Methods and Applications in Bacterial Research Speaker: Prof Dörte Becher, University of Greifswald, Germany (30 Minutes)</p>



20 July 2017, Thursday

Time	Room	Programme
		Chair: Prof Dörte Becher, University of Greifswald, Germany <i>Use of Whole Genome Sequencing in the Active Management of a Group a Streptococcal Outbreak in a Large Singaporean Hospital</i> Oral Presenter: Dr Paola De Sessions (15 Minutes) <i>Integration of Multi-Omics Data of the Human Microbiome</i> Oral Presenter: Dr Anna Heintz-Buschart (15 Minutes) <i>Development of Novel Tools for High Definition Microbial Lipidomics</i> Oral Presenter: Prof Dr Xueli Guan (15 Minutes) <i>Synthetic Biology to Develop a New Biopesticide Shenqinmycin Based on the Secondary Metabolites of the Plant Growth Promoting Rhizobacterium Pseudomonas aeruginosa M18</i> Oral Presenter: Prof Ya-Wen He (15 Minutes)
	Sands 5301 – 5302	E coli pathogenesis Molecular Avenue to Colisepticemia Speaker: Prof Eliora Ron, Tel Aviv University, Israel (30 Minutes) Chair: Prof Eliora Ron, Tel Aviv University, Israel <i>The Food Contaminant Deoxynivalenol Exacerbates the Genotoxicity of Gut Microbiota</i> Oral Presenter: Prof. Dr Eric Oswald (15 Minutes) <i>Adaptation of Adherent-invasive E. coli to Gut Environment: Impact on Flagella Expression and Bacterial Virulence</i> Oral Presenter: Gwladys Sevrin (15 Minutes)
WORKSHOP SESSION 8		
14:30 – 16:00	Sands 5201 – 5202	Microbial Ecology Speaker: Prof Yochi Kamagata, National Institute of Advanced Industrial Science and Technology, Japan (30 Minutes) Chair: Prof Yochi Kamagata, National Institute of Advanced Industrial Science and Technology, Japan <i>Microbial Ecology in Hydrocarbon-contaminated Coastal Environments</i> Oral Presenter: Prof Robert Duran (15 Minutes)



20 July 2017, Thursday

Time	Room	Programme
		<p>What is Next for the MIRRI Infrastructure After its Preparatory Phase? Oral Presenter: Dr Raquel Hurtado-Ortiz (15 Minutes)</p> <p>From Community Assembly, Traits and Functional Trade-offs to Life Strategies in Sludge Bioreactors Under Varying Disturbances Oral Presenter: Mr Ezequiel Santillan (15 Minutes)</p> <p>Seasonal Distribution and Activity of Ammonia-Oxidizing Archaea in the South Atlantic Bight Oral Presenter: Dr Qian Liu (15 Minutes)</p>
	Sands Grand Ballroom M	<p>Probiotic and Microbiome Session Sponsors: Danone Nutricia & Kemlin Chair: Prof Yuan Kun Lee, National University of Singapore, Singapore</p> <p>Modulation of the Human Microbiome using Novel Tools: Bacteriocins and Bacteriophage Speaker: Prof Paul Ross, University College Cork, Ireland (20 Minutes)</p> <p>Changing Dietary Habits is Changing Asians Gut Microbiota Speaker: Prof Jiro Nakayama, Kyushu University, Japan (20 Minutes)</p> <p>Bifidobacterium in the Gut, New Findings from Ecologic and Genomic Investigations Speaker: Dr Xiao Jin-Zhong, Morinaga Milk Industry (20 Minutes)</p> <p>A Synbiotic Mixture of scGOS/lcFOS and Bifidobacterium breve M-16V is able to Restore the Delayed Colonization by Bifidobacterium Observed in Caesarean-section Delivered Infants Speaker: Prof Christophe Lay, Danone (20 Minutes)</p>
	Sands Grand Ballroom N	<p>Applied Microbiology and Biotechnology 3</p> <p>Modern Genetics to Study Antibiotic Resistance in Real Pathogens Speaker: Swaine Chen, National University of Singapore, Singapore (15 Minutes)</p> <p>Chair: Swaine Chen, National University of Singapore, Singapore</p> <p>Direct Characterization of Hydrolytic Activities of Spoiling Bacteria in Food Oral Presenter: Professor Sophie Jan (15 Minutes)</p>



20 July 2017, Thursday

Time	Room	Programme
		<p>Comparison of a Rapid Molecular Method with Culture for Identification of Group B Streptococcus; Pitfalls of the Current Gold Standards Oral Presenter: Hossein Salimnia (15 Minutes)</p> <p>A Novel Drug Compound Inhibits Virulence in Pseudomonas Aeruginosa Oral Presenter: Mr Leon Tan (15 Minutes)</p> <p>Production of Non-volatile Flavour Compounds During Fermentation of Cassava by Selected Lactic Acid Bacteria Oral Presenter: Abosede Oyeyemi Fawole (15 Minutes)</p> <p>Fast Antibiotic Susceptibility Testing Using Nanomechanical Sensors Oral Presenter: Petar Stupar (15 Minutes)</p>
	Sands 5301 – 5302	<p>Global Regulation and Signalling</p> <p>C-di-AMP signalling in Staphylococcus aureus Speaker: Prof Angelika Grundling, Imperial College of London, United Kingdom (30 Minutes)</p> <p>Chair: Prof Angelika Grundling, Imperial College of London, United Kingdom</p> <p>Spatial and Temporal Mapping of C-Di-Gmp During Pseudomonas aeruginosa and Mixed Species Biofilm Development and Dispersal Oral Presenter: Prof Scott Rice (15 Minutes)</p> <p>Characterization of the Medium- and Long-Chain n-Alkanes Degrading Pseudomonas aeruginosa Strain SJTD-1 and its iTRAQ-Based Quantitative Proteomic Analysis Oral Presenter: Prof Rubing Liang (15 Minutes)</p> <p>SsrB as a Driver of Lifestyle Changes in Salmonellae Oral Presenter: Dr Stuti Desai (15 Minutes)</p> <p>The Role of Acetylation in Regulating Phop Activity Oral Presenter: Prof Yufeng Yao (15 Minutes)</p>
16:00 – 16:30	Sands Grand Ballroom foyer	Coffee Break
16:30 – 18:00	Sands Grand Ballroom I – L	Bridging Session – Immunity and Immune Evasion Chair: Prof Eliora Ron, Tel Aviv University, Israel



15th International Congress of Bacteriology & Applied Microbiology
15th International Congress of Mycology and Eukaryotic Microbiology
17th International Congress of Virology

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20 July 2017, Thursday

Time	Room	Programme
		New Vaccines and Their Role in Fighting Antimicrobial Resistance Speaker: Dr Rino Rappuoli, GlaxoSmithKline Biologicals, Italy (BAM) (30 Minutes)
		Exploiting Innate Recognition of B-Glucans in Fungal Vaccine Development Speaker: Prof Stuart Levitz, University of Massachusetts, USA (MEM) (30 Minutes)
		Interplay of Multiple Infections with the Immune System Speaker: Dr Tiffany Reese, UT Southwestern Medical Center, USA (VIR) (30 Minutes)



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21 July 2017, Friday		
Time	Room	Programme
08:30 – 09:30	<i>Sands Grand Ballroom A – D</i>	Plenary – Pathogens and Interactions with the Host Chair: Dr Tomoko Kubori, Gifu University, Japan The Continuous Fight Against Tuberculosis Speaker: Prof Brigitte Gicquel, Institute Pasteur, France Exploiting Pseudomonas aeruginosa L-Form Lifestyle Transitions Speaker: Prof Cynthia Whitchurch, University of Technology, Sydney (30 Minutes)
09:30 – 10:00	<i>Sands Grand Ballroom foyer</i>	Coffee Break
10:00 – 11:00	<i>Sands Grand Ballroom A – D</i>	Plenary – Regulation by sRNAs Chair: Dr Veronique Arluison, University of Paris, France RNA Chaperone Hfq Regulation of Mutagenesis in E. coli Speaker: Dr Susan Gottesman, National Cancer Institute, USA (30 Minutes) Pseudomonas aeruginosa Utilizes Small Regulatory RNAs to Control Virulence Gene Expression Speaker: Prof Stephen Lory, Harvard Medical School, USA (30 Minutes)
11:00 – 12:00	<i>Sands Grand Ballroom I – L</i>	Closing Ceremony