

Poster Session I – Abstract Titles

Wednesday, June 21st, 2017

Presenters to be by their posters:

Odd number posters from 12:45 – 1:45 PM ** **Even number** posters from 1:45 – 2:45 PM

Applied & Environmental Microbiology

AEM 001

Identification and Characterization of a Thermostable Cellulase-producing *Streptomyces* species. Mobolaji ADEGBOYE, University of Waterloo, K. MA¹, O.O. BABALOLA², ¹University of Waterloo, ²North-West University

AEM 002

Thermolabile Alkaline phosphatase (ALP); a proficient thermolabile activity MRLBA1alp from psychrotolerant *Pseudomonas* sp.MRLBA1 from Passu glacier in Pakistan. Bashir AHMAD, International Islamic University Islamabad Pakistan, BASHIR AHMAD¹, FARIHA HASAN², AAMER SHAH², SAFIA AHMED², ARIF MAHMUD², ¹International Islamic University, Islamabad, Pakistan, ²Quaid-i-Azam University, Islamabad, Pakistan

AEM 003

Isolation and Characterization of a Psychrotrophic *Arthrobacter stickyus* sp. nov. from Deep ice of Hopper Glacier of Pakistan. Bashir AHMAD, International Islamic University Islamabad Pakistan, BASHIR AHMAD¹, FARIHA HASAN², IMRAN JAVED³, ISHTIAQ ALI², AAMER SHAH², ¹International Islamic University, Islamabad, Pakistan, ² Quaid-i-Azam, Islamabad, Pakistan, ³AMS Laboratories Pty Ltd Sydney, Australia

AEM 004

Cypermethrin: Abundantly used Pesticide Alters Soil Enzymatic Properties and Microbial Diversity. Maliha AHMED, Quaid-i-Azam University, Islamabad, Pakistan, NAEEM ALI¹, ¹Quaid-i-Azam University, Islamabad, Pakistan

AEM 005

Diversity and antibiotic resistance factors of *Staphylococcus* species in raw meat and dairy products. Olayinka Ayobami AIYEGORO, Agricultural Research Council, South Africa, JN MOYANE¹, AIO JIDEANI², ¹Agricultural Research Council, South Africa, ²University of Venda, South Africa

AEM 006

Characterization of antibiotic resistance plasmids extracted from waste water treatment plants reveals the diversity of mobile elements carrying ciprofloxacin and meropenem resistance genes. Adeyinka AJAYI, University of Regina, K NEUDORF¹, R JAMIESON¹, L TRUELSTRUP-HANSEN¹, C YOST², ¹Dalhousie University, ²University of Regina

AEM 007

Selecting Plant Growth-Promoting Rhizobacteria for phytoremediation of petroleum-hydrocarbons contaminated soils. Fahad ALOTAIBI, Université de Montréal, C-Y. LAY¹, M. HIJRI¹, M. ST-ARNAUD¹,
¹Université de Montréal

AEM 008

Studying the Efficacy of Phytochemical Combination to Combat Drug Resistant Candidal Biofilm and Septicaemia. Mukherjee ANIRBAN, GURUDAS COLLEGE, DR RAYCHAUDHURI¹, ¹TRIPURA UNIVERSITY

AEM 009

Does the use of agricultural fungicides propagate triazole-resistant *A. fumigatus* in Hamilton's hospitals? Eta ASHU, McMaster University, G.Y KIM¹, P ROY-GAYOS¹, K DONG¹, A FORSYTHE¹, V GIGLIO¹, D YAMAMURA¹, J XU¹, ¹McMaster University

AEM 010

Comparative Metagenomics of Algal Blooms and Non-Algal Sites in Ontario Freshwater Lakes. Rachelle ATRACHE, McMaster University, AP PASCHOS¹, MP PALMER², PN NAPHTALI¹, RSG GUPTA¹, HES SCHELLHORN¹, ¹McMaster University, ²Ministry of the Environment and Climate Change

AEM 011

Bloat-associated shifts in the composition of rumen microbiota and mycobiota of cattle grazing on alfalfa pastures. Elnaz AZAD, University of Manitoba, H. DERAKHSHANI¹, R. FORSTER², S. ACHARYA², T.A. MCALLISTER², E. KHAFIPOUR¹, ¹University of Manitoba, ²Lethbridge Research Centre

AEM 012

Amphyta: Bringing Microbial Ecology to the Cloud. Lee BERGSTRAND, Thompson Rivers University, M. J. MCINNES¹, J. D. VAN HAMME¹, ¹Thompson Rivers University

AEM 013

Diversity and antimicrobial activities of bacteria isolated from three marine sponges and their biotechnological potential. Fehmida BIBI, King Abdulaziz University, Jeddah, Saudi Arabia, M YASIR¹, S.A ALVI¹, M.I NASEER¹, A.A.M AL-SOFYANI¹, E.I AZHAR¹, ¹King Abdulaziz University, Jeddah, Saudi Arabia

AEM 014

Isolation, diversity and high antagonistic potential of mangroves associated bacteria and Actinobacteria from Saudi Arabia. Fehmida BIBI, King Abdulaziz University, Jeddah, Saudi Arabia, M YASIR¹, S.A ALVI¹, A.A.K AL-GHAMDI¹, M.I NASEER¹, E.I AZHAR¹, ¹King Abdulaziz University, Jeddah, Saudi Arabia

AEM 015

Functional Metagenomic Screening of Hospital Biofilms for Antimicrobial Activities against Multidrug-Resistant Bacteria. Anissa BRAHAMI, INRS-Institut Armand Frappier, ED DÉZIEL ERIC¹, AC CASTONGUAY ANNIE¹, ¹INRS-Institut Armand Frappier

AEM 016

Soil factors influence archaeal ammonia oxidizers but not methanotrophs in arctic polar desert soils. Martin BRUMMELL, University of Waterloo, S ROBERT¹, L BODROSSY¹, G ABELL¹, S SICILIANO¹,
¹University of Saskatchewan

AEM 018

Monitoring Survivability of Porcine Epidemic Diarrhea virus (PEDv) Following Surface Application of PEDv-Positive Manure to the Soil. Zhangbin CAI, University of Manitoba, S. SEPEHRI¹, J. CARNEY², M. FYNN³, M. TENUTA¹, E. KHAFIPOUR¹, ¹University of Manitoba, ²Manitoba Livestock Manure Management Initiative, ³Manitoba Pork Council

AEM 019

Monitoring Survivability of Porcine Deltacoronavirus (PDCoV) in Earthen Manure Storages co-infected with Porcine Epidemic Diarrhea Virus (PEDv). Zhangbin CAI, University of Manitoba, S. SEPEHRI¹, H.M. TUN¹, E. KHAFIPOUR¹, ¹University of Manitoba

AEM 020

Drivers behind the selection of core fish gut microbiome. Subba Rao CHAGANTI, University of Windsor, DD HEATH¹, X HE¹, M ZIAB¹, D SANGHERA¹, ¹University of Windsor

AEM 021

Importance of iron acquisition systems in *Salmonella enterica* serovars Typhimurium and enteritidis from chicken. Samuel CHEKABAB, Agriculture and Agri-Food Canada, Food Research and Development Centre, X YIN¹, MA REHMAN¹, M. S DIARRA¹, ¹Agriculture and Agri-Food Canada, Food Research and Development Centre

AEM 022

The Impact of Water Quality on the Root-Associated Microbial Communities of Wetland Plants. Lindsey CLAIRMONT, Wilfrid Laurier University, A CORISTINE¹, R SLAWSON¹, ¹Wilfrid Laurier University

AEM 023

Exploring the cellulolytic microbial diversity across municipal waste sites via a paired metagenomic and culture-based approach. Rebecca CO, University of Waterloo, R. CO¹, A.M. COLLINS², L.A. HUG¹,
¹University of Waterloo, ²University of Technology, Jamaica

AEM 025

When in Drought: the Root Microbiome under Water Stress. Fitzpatrick CONNOR, University of Toronto Mississauga, J COPELAND¹, DS GUTTMAN¹, PM KOTANEN², P WANG¹, MTJ JOHNSON²,
¹University of Toronto, ²University of Toronto Mississauga

AEM 026

Relationships Between Factors Influencing Biofilm Formation and Pathogen Retention in Complex Rhizosphere Microbial Communities. Aaron CORISTINE, Wilfrid Laurier University, R.M. SLAWSON¹,
¹Wilfrid Laurier University

AEM 028

Félix d'Hérelle Reference Center for Bacterial Viruses. Felix CROTEAU, Université de Laval, D.M. TREMBLAY¹, S. MOINEAU¹, ¹Université de Laval

AEM 029

Antibacterial effects of Cranberry Extract and Vanillic Acid against *Clostridium perfringens* and its toxins. Quail DAS, Agriculture and Agri-Food Canada, D SAEED¹, K TALLY¹, MS DIARRA¹, ¹Agriculture and Agri-Food Canada

AEM 030

Preventing Foodborne Disease - High School Students' Food Handling Behaviours Following a Food Safety Intervention. Ken DIPLOCK, University of Waterloo, S.T. LEATHERDALE¹, A JONES-BITTON², S.E. MAJOWICZ¹, ¹University of Waterloo, ²University of Guelph

AEM 032

EcoBiomics: a new Federal Government Project to investigate Applications of Metagenomics for Characterizing Changes to Soil Health and Water Quality across Canada. Thomas EDGE, Environment Canada, D BAIRD¹, G BILODEAU², N GAGNE³, C GREER⁴, J LAWRENCE¹, G NEWTON⁵, A SEGUIN⁶, J MACKLIN⁵, ¹Environment Canada, ²Canadian Food Inspection Agency, ³Fisheries and Oceans Canada, ⁴National Research Council of Canada, ⁵Agriculture and Agri-Food Canada, ⁶Natural Resources Canada

AEM 033

Optimization of genomic DNA extraction from MX-80 bentonite clay for microbial community analysis. Katja ENGEL, University of Waterloo, P. KEECH¹, J. MCKELVIE², J.D. NEUFELD³, ¹Nuclear Waste Management Organization of Canada, ²Canadian Institute for Advanced Research, ³University of Waterloo

AEM 034

Modified ITS7 primer enhances oomycete richness detection and the amplification of economically important taxa. Ahmad ESMAEILI TAHERI, Red Deer College, S. CHATTERTON¹, B. D. GOSSEN⁰, D. L. MCLAREN², ¹Agriculture and Agri-Food Canada, Lethbridge Research Centre, ²Agriculture and Agri-Food Canada, Brandon Research Centre

AEM 035

Identity and Over-Wintering Survival of Root Rot Pathogens from Field Pea Residues on the Canadian Prairies. Ahmad ESMAEILI TAHERI, Red Deer College, S. CHATTERTON¹, B. D. GOSSEN⁰, D. L. MCLAREN², ¹Agriculture and Agri-Food Canada, Lethbridge Research Centre, ²Agriculture and Agri-Food Canada, Brandon Research Centre

AEM 036

U-Richness of the 5'-end of STb mRNA affects its Secretion. Kinkar EYAD, Laurentian University, MAZEN SALEH¹, ¹Laurentian University

AEM 037

A Specialized BacA Protein is required for *Sinorhizobiummeliloti* to establish an effective N₂-fixing symbiosis with Medicago. Turlough FINAN, McMaster University, G DICENZO¹, M ZAMANI¹, H LUDWIG¹, ¹McMaster University

AEM 038

Enumeration of *E. coli* O157:H7 from ready-to-eat meat and other meat products by direct plating. Jennifer FISCHER-JENSSEN, University of Guelph, C LEON-VELARDE¹, P MARTOS¹, A GAO¹, ¹University of Guelph

AEM 039

Enumeration of *Salmonella* from ready-to-eat meat and other meat products by direct plating. Jennifer FISCHER-JENSSEN, University of Guelph, C LEON-VELARDE¹, P MARTOS¹, A GAO¹, ¹University of Guelph

AEM 041

Portrait of Lactic Acid Bacteria in Milk Associated with the Use of Silage in Dairy Cow Feeding. Méridie GAGNON, Université de Laval, A.J. KENNANG¹, G. LAPOINTE², Y.P. CHOUINARD¹, D. ROY¹, ¹Université de Laval, ²University of Guelph

AEM 042

Identification of Food-Borne Pathogens Using Matrix-Assisted Laser Desorption/Ionization Time of Flight Mass Spectrometry (MALDI TOF MS). Anli GAO, University of Guelph, J. FISCHER-JENSSEN¹, C. COOPER¹, S. CHEN¹, D. SLAVIC¹, P. MARTOS¹, ¹University of Guelph

AEM 043

PhageTerm : A Fast and User-friendly Software to Determine Bacteriophage Termini and Packaging Mode Using Randomly Fragmented NGS Data. Julian GARNEAU, Université de Sherbrooke, F. DEPARDIEU¹, L.C. FORTIER², D. BIKARD¹, M. MONOT¹, ¹Institut Pasteur de Paris, ²Université de Sherbrooke

AEM 044

Evaluating Plant Growth-Promoting Properties and Biofilm Production under Water Stress Conditions with Rhizobacteria Associated with a Hyper-seasonal Savanna. Thomas GEM, The University of the West Indies, C. ST. MARTIN¹, J.R MILLER¹, ¹The University of the West Indies

Infection & Immunity

II 001

Performance Evaluation and Effectiveness of Rapid Syphilis Assays used in Pakistan: A Cost Effective Alternate Testing Strategy. Bashir AHMAD, International Islamic University Islamabad Pakistan, BA AHMAD¹, AR REHMAN¹, UW WAHEED², HAZ ZAHEER², ¹International Islamic University, Islamabad, Pakistan, ²Shaheed Zulfiqar Ali Bhutto Medical University, Islamabad, Pakistan

II 002

Identification of Farr Binding Site Responsible for Auto-Repression and Efflux-Mediated Resistance to Antimicrobial Fatty Acids. Heba ALNASERI, University of Western Ontario, MJ MCGAVIN¹,
¹University of Western Ontario

II 003

Bacteriophages drive the transfer of resistance genes in *Staphylococcus aureus* strains. Ahlam ALSAADI, University of Copenhagen, HI HANNE INGMER¹, JH JAKOB KRAUSE HAABER¹,
¹University of Copenhagen

II 004

Study of the role of IcsB virulence protein in vacuolar escape of *Shigella flexneri* through identification of potential host protein binding partners. Ashwag ALZHRANI, University of Ottawa, SW WAN¹, FX CAMPBELL-VALOIS¹,
¹University of Ottawa

II 005

Engineering Bio-Inspired Nanoscale Surfaces to Control Bacterial Adhesion and Biofilm Formation. Dalal ASKER, University of Toronto, T.S. AWAD¹, B.D. HATTON¹,
¹University of Toronto

II 006

Enzyme immobilization on biomaterial surfaces for prevention of *Pseudomonas aeruginosa* biofilms. Dalal ASKER, University of Toronto, T.S. AWAD¹, P. BAKER², P.L. HOWELL², B.D. HATTON¹,
¹University of Toronto, ²Hospital for Sick Children

II 007

Synergistic Effect of Surface Finish and Functionalization Against Cells Adherence And Biofilm Formation on Food Contact Surfaces. Tarek AWAD, University of Toronto, D. ASKER¹, B.D. HATTON¹,
¹University of Toronto

II 008

Enhancement of the Effectiveness of a Novel Disinfectant Product for the Food Industry. Tarek AWAD, University of Toronto, D. ASKER¹, B.D. HATTON¹,
¹University of Toronto

II 009

The 'Red Complex': The Development and Treatment of Oral Biofilms Involved in Periodontitis. Christopher BARTLETT, Wilfrid Laurier University, R SLAWSON¹, M SUITS¹, G HORSMAN¹, J WEADGE¹,
¹Wilfrid Laurier University

II 010

An acetyltransferase effector of *Pseudomonas syringae* promotes interactions between two families of immunity-related kinases in the model plant host, *Arabidopsis thaliana*. D. Patrick BASTEDO, University of Toronto, DS GUTTMAN¹, D DESVEAUX¹,
¹University of Toronto

II 011

Enterohemorrhagic *Escherichia coli* Modulates Expression of the Major Flagellar Subunit Protein, FliC, in Response to Culture Conditions. Sarah BIRSTONAS, Ryerson University, D. B. FOSTER¹,
¹Ryerson University

II 012

Genomic comparison of invasive versus non-invasive *Actinobacillus* spp. Adina BUJOLD, University of Guelph, R LIU¹, A SHURE¹, AM KROPINSKI¹, JI MACINNES¹, ¹University of Guelph

II 013

***Shigella* Type Three Secretion System reloaded.** François-Xavier CAMPBELL-VALOIS, University of Ottawa, A ALZHRANI¹, N SILUÉ¹, E MARCANTONIO¹, S WAN¹, L PINAUD⁰, P SCHNUPF², G NIGROO, ET ARENA³, ¹University of Ottawa, ²Institut Imagine, ³Morgridge Institute for Research

II 014

Functional genomic analysis of echinocandin resistance in *Candida albicans*. Tavia CAPLAN, University of Toronto, EJ POLVI¹, N ROBBINS¹, LE COWEN¹, ¹University of Toronto

II 015

Determination of *Escherichia coli* fitness genes in urine as a predictor for essentiality in the establishment of a urinary tract infection. Lindsey CARFRAE, McMaster University, C.M. MACNAIR¹, S.F. FRENCH¹, E.B BROWN¹, ¹McMaster University

II 016

The involvement of the alternative sigma factors of *Corynebacterium pseudotuberculosis* in the response to oxidative stress and infection. Thiago Luiz de Paula CASTRO, Federal University of Minas Gerais, N. SEYFFERT¹, B.S.R. LUZ², A.V. SANTOS¹, A. SILVA¹, L.G.C. PACHECO³, V. AZEVEDO², ¹Federal University of Para, ²Federal University of Minas Gerais, ³Federal University of Bahia

II 018

Effects of High Fat and Dietary Fiber on Obesity-Associated Immune Biomarkers and Gut Microbiome Community Structure in Sprague Dawley Rats. Sandra CLARKE, University of Ontario Institute of Technology, S.P.J. BROOKS¹, J. GREEN¹, M. KALMOKOFF², G.D. INGLIS³, J.M. GREEN-JOHNSON⁴, ¹Health Canada, ²Agriculture and Agri-Food Canada, ³Agriculture and Agri-Food Canada, Lethbridge Research Centre, ⁴University of Ontario Institute of Technology

II 019

Characterizing the interaction between *Pseudomonas aeruginosa* and *Brassica napus*. Jamie COOK, Dalhousie University, Z. CHENG¹, ¹Dalhousie University

II 020

Avian reovirus-induced innate immunity and potential use as biotherapeutics in poultry disease outbreaks. Juan CORREDOR, University of Guelph, E NAGY¹, ¹University of Guelph

II 021

Fur inactivation is more critical for *Salmonella typhi* fitness and virulence than Typhimurium. France DAIGLE, Université de Montréal, JM LECLERC¹, CM DOZOIS², ¹Université de Montréal, ²INRS-Institut Armand Frappier

II 022

The Impact of Bovine Major Histocompatibility Complex (Bola) Gene Polymorphism on the Composition and Dynamics of Bovine Milk Microbiota During Early Lactation. Hooman DERAKHSHANI, University of Manitoba, J.C. PLAIZIER¹, E. KHAFIPOUR¹, ¹University of Manitoba

II 024

Inactivation of the Pst (Phosphate Specific Transport) system deregulates the c-di-GMP pathway decreasing expression of Type 1 fimbriae in Uropathogenic *Escherichia coli*. Charles DOZOIS, INRS-Institut Armand Frappier, S CRÉPIN¹, G PORCHERON¹, S HOULE¹, J HAREL², ¹INRS-Institut Armand Frappier, ²Université de Montréal, Sainte-Hyacinthe

II 025

Dissecting the Morphogenetic Circuitry of *Candida albicans* in Response to Phagocytosis by Macrophages. Kwamaa DUAH, University of Toronto, T O'MEARA¹, L COWEN¹, ¹University of Toronto

II 028

The Multicopper Oxidase of *Mycobacterium tuberculosis* (MmcO) Exhibits Ferroxidase Activity and Scavenges Reactive Oxygen Species in Activated THP-1 Cells. Mazen SALEH, Laurentian University, A KINKAR¹, E KINKAR¹, ¹Laurentian University

Molecular Genetics & Cellular Microbiology

MGCM 001

Characterization of Putative Bile Acid Degrading Enzymes in the Bacteria *Comamonastestosteroni* KF1. Rebecca AGGETT, University of Guelph, K MANERA¹, S SEAH¹, ¹University of Guelph

MGCM 002

The Identification of *E. Coli* Host Genes that Influence the Bacteriophage Lambda (A) T4rii Exclusion (Rex) Phenotype. Hibah ALATTAS, University of Waterloo, R.A. SLAVCEV¹, ¹University of Waterloo

MGCM 003

Electron Microscopy Reveals Activity of SPR741 at the Cell Envelope of *Escherichia coli*. Erin ANDERSON, University of Guelph, N CONTRONEO¹, TR JR PARR¹, T LISTER¹, CM KHURSIGARA², ¹Spero Therapeutics Inc., ²University of Guelph

MGCM 004

Oxidation Susceptibility of Cysteine Residue(s) in a Hyperthermophilic Zn-containing Alcohol Dehydrogenase. Navin ASOKUMAR, University of Waterloo, L HAO¹, K MA¹, ¹University of Waterloo

MGCM 005

Cell Envelope Protein Interaction Map in *Escherichia Coli*. Mohan BABU, University of Regina, T MORAES¹, J PARKINSON¹, A EMILI¹, ¹University of Toronto

MGCM 006

Novel Mutation of FtsA bypasses the Essential Requirement for FtsK during Bacterial Cell Division in *Escherichia coli*. Alison BEREZUK, University of Guelph, C.M. KHURSIGARA¹, ¹University of Guelph

MGCM 007

Using RNA-based Genetic Regulation in *Methylobacterium extorquens*. Emilie BOUTET, Armand-Frappier Institute - INRS, FW WADE¹, RI IMANE¹, JP PERREAULT¹, ¹Armand-Frappier Institute – INRS

MGCM 008

Mathematical Modelling and Analysis of the CcaS/CcaROptogenetic System. Nathan BRANIFF, University of Waterloo, BP INGALLS¹, ¹University of Waterloo

MGCM 009

Structure-Function Characterization of BcsG; A Protein Involved in Cellulose Biosynthesis. Thomas BRENNER, Wilfrid Laurier University, C NOTTE¹, JT WEADGE¹, ¹Wilfrid Laurier University

MGCM 010

Development of *Sinorhizobium meliloti* as a surrogate-host for cloning of genome-scale DNA. Stephanie BRUMWELL, University of Western Ontario, A. MATYSIAKIEWICZ¹, M.R. MACLEOD², D.R. EDGELL³, T.C. CHARLES¹, T.M. FINAN², B.J. KARAS³, ¹University of Waterloo, ²McMaster University, ³University of Western Ontario

MGCM 011

Characterization of the two plasmid-encoded ribitol catabolic gene systems of *Rhizobium leguminosarum* bv. *viciae* strain VF39SM. Deborah BUHLERS, University of Calgary, M.L. HYNES¹, ¹University of Calgary

MGCM 012

Characterization of O-Acetyltransferase WssI: Role in Bacterial Cellulose Acetylation of *Achromobacterium suavis* and *Pseudomonas fluorescens*. Alysha BURNETT, Wilfrid Laurier University, E WILSON¹, D SYCHANATHA², A.J. CLARKE², J.T. WEADGE¹, ¹Wilfrid Laurier University, ²University of Guelph

MGCM 014

Implication of Hfq Protein in the Biofilm Formation and the Colonization of Plant Roots in *Bacillus subtilis*. Jessica CARRIER, Université de Sherbrooke, V CHARRON-LAMOUREUX¹, PB BEAUREGARD¹, ¹Université de Sherbrooke

MGCM 015

The Fitness Cost of Plasmid Carriage in Clinical Isolates of *Escherichia coli*. Amanda CARROLL, Carleton University

MGCM 016

Characterizing the biofilm matrix of an epidemic strain of *Pseudomonas aeruginosa* and understanding the effect of antibiotic exposure on overall structure and composition. Kirsten CHULI, University of Guelph, CM KHURSIGARA¹, ¹University of Guelph

MGCM 017

Inhibition of Membrane-Bound Lytic Transglycosylases A and F by Membrane-Bound Lysozyme Inhibitor of C-Type Lysozyme. Joseph CIUFO, University of Guelph, CV VANDENENDE¹, AJC CLARKE¹, ¹University of Guelph

MGCM 018

Multiple genetic loci are associated with serotype diversity among the *Klebsiella pneumoniae* galactan O-antigens. Bradley CLARKE, University of Guelph, J. BUTLER¹, O.G. OVCHINNIKOVA¹, S. KELLY¹, M. WILLIAMSON¹, R. SWEENEY², T.L. LOWARY², C. WHITFIELD¹, ¹University of Guelph, ²University of Alberta

MGCM 020

Understanding the chaplins - functional amyloids in *Streptomyces venezuelae*. David CRISANTE, McMaster University

MGCM 021

Activation of a Cryptic Glycopeptide Antibiotic-Related Biosynthetic Gene Cluster. Elizabeth CULP, McMaster University, N WAGLECHNER¹, GD WRIGHT¹, ¹McMaster University

MGCM 022

***Sinorhizobium meliloti* PHB cycle mutants display altered metabolite profile in nitrogen limited media.** Maya D'ALESSIO, University of Waterloo, M QUATTROCIOCCI¹, M AUCOIN¹, TC CHARLES¹, ¹University of Waterloo

MGCM 023

Comparative metabolic analysis of *Komagataeibacter* spp. grown in different carbon sources. Sierra DARGAN, University of Ontario Institute of Technology, A.J VARLEY¹, J.L STRAP¹, ¹University of Ontario Institute of Technology

MGCM 024

Primed spacer acquisition and loss in *Legionella pneumophila* type I-F CRISPR-Cas. Shayna DEECKER, University of Toronto, A.W. ENSMINGER¹, ¹University of Toronto

MGCM 025

Identification of Essential Cytoplasmic Interaction Partners of Cell Division Protein FtsK in *Escherichia coli*. Mitchele DEMELO, University of Guelph, AMB BEREZUK¹, CMK KHURSIGARA¹, ¹University of Guelph

MGCM 026

Broth versus Surface-Grown Cells: Differential Regulation of RsmY/Z Small RNAs in *Pseudomonas aeruginosa* by the Gac/HptB System. Eric DÉZIEL, INRS-Institut Armand Frappier, F. JEAN-PIERRE¹, J. TREMBLAY¹, ¹INRS-Institut Armand Frappier

MGCM 028

Mutation of Classical PorinPhoE results in attenuated virulence of *Serratiamarcescens*. Alexander DIAMANDAS, University of Manitoba, A. MOYA-TORRES¹, A.K. BRASSINGA¹, ¹University of Manitoba

MGCM 030

***Salmonella* Genomic Island 1 (SGI1) Reshapes the Mating Apparatus of IncC Conjugative Plasmids to Promote Self-Propagation.** Romain DURAND, Université de Sherbrooke, N CARRARO¹, N RIVARD¹, C ANQUETIL¹, C BARRETTE¹, M HUMBERT¹, V BURRUS¹, ¹Université de Sherbrooke

MGCM 031

Characterization of the Putative 1,2-glucosyltransferase, WapB, in *P. aeruginosa*. Lana EL OSTA, University of Guelph, J LAM¹, M KIMBER¹, ¹University of Guelph

MGCM 032

Chemical-Chemical Combinations Under Nutrient Limitation Identify Unique Intracellular Interactions. Sara EL ZAHED, McMaster University, E.D. BROWN¹, ¹McMaster University

MGCM 033

Building a turbidostat to analyze gut microbiota succession in infants. Lucas FLETT, McMaster University

MGCM 034

A Unique Clinical Isolate of *P. aeruginosa* can Reduce Total Biofilm Biomass when Co-Cultured with Pre-Established Prairie Epidemic Strain Biofilms. Nicole GARNIER, University of Guelph, AJ PARK¹, MD PARKINS², CM KHURSIGARA¹, ¹University of Guelph, ²University of Calgary

MGCM 035

Expression and characterization of a novel hydratase-aldolase complex within the cholesterol degradation pathway of *Mycobacterium tuberculosis*. Stephanie GILBERT, University of Guelph, L. HOOD¹, S. LAM¹, A. STENHOUSE¹, S. SEAH¹, ¹University of Guelph

Forum on Microbiology Education (FOME)

FOME 001

Teaching Graduate Students to Teach, Jason McAlister and Brett Gilley University of British Columbia

Poster Session II – Abstract Titles

Thursday, June 22nd, 2017

Presenters to be by their posters:

Odd number posters from 12:45 – 1:45 PM ** Even number posters from 1:45 – 2:45 PM

Applied & Environmental Microbiology

AEM 045

Spatial-Temporal Dynamics of Algal Virus Genotypes in Hamilton Harbour. Nikhil GEORGE, University of Toronto Mississauga, S.M. SHORT¹, ¹University of Toronto Mississauga

AEM 046

Applying Compositional Data Analysis Methods to characterize the Metatranscriptome and Metabolome of the Vaginal Microbiota. Greg GLOOR, University of Western Ontario, J.M MACKLAIM¹, A. MCMILLAN¹, M. SUMARAH², G. REID¹, ¹University of Western Ontario, ²Agriculture and Agri-Food Canada

AEM 047

Design of a User - Friendly Tool to Study Amino Acids Changes in Conserved Proteins During the Symbionts Evolution. Juan GUERRA, INRS-Institut Armand Frappier, B. DIFFO¹, F. VEYRIER¹, ¹INRS-Institut Armand Frappier

AEM 048

Time-Series Clustering of Marker Genes Reveals Ecological Dynamics. Michael HALL, Dalhousie University, R.G. BEIKO¹, ¹Dalhousie University

AEM 049

Emergence of cyanobacteria in a large macrophyte-dominated lake. Tyler HARROW-LYLE, University of Ontario Institute of Technology, A.E KIRKWOOD¹, ¹University of Ontario Institute of Technology

AEM 050

Regulation of metabolism and symbiosis by the pentose phosphate pathway in *Sinorhizobium meliloti*. Justin HAWKINS, University of Manitoba, I.J. ORESNIK¹, ¹University of Manitoba

AEM 051

Mn-Induced Cellular Disturbance in Yeast Model Connects Protein Biosynthesis to Mntoxicity. Raul HERNANDEZ, Federal University of São Paulo, H MOTESHAREIE¹, D BURNSIDE¹, A GOLSHANI¹, ¹Carleton University

AEM 052

Evaluation of a Sugarcorn Feedstock for the Production of Succinic Acid. Tiffany HINBEST, University of Guelph, R N NICOL¹, D Y YOUNG¹, D H HOOKER¹, L M MCNEA¹, A M MARGARITIS², M M MORRISON³, L R REID³, B G GILROYED¹, ¹University of Guelph, ²University of Western Ontario, ³Agriculture and Agri-Food Canada

AEM 053

Photosynthetic Complexes and Photoinduced Electron Transfer in Aerobically and Anaerobically Grown Cells of *Charonimicrobiumambiphotosyntheticum*, Strain EG17. Elizabeth HUGHES, University of Manitoba, J ALRIC¹, V YURKOV², ¹Cadarache, St. Paul-Lez-Durance, France, ²University of Manitoba

AEM 054

Technology Transfer – Advancing Phomamacrostoma through the Product Development Chain to a Commercial Bioherbicide for Broadleaved Weed Control in Turf and Agriculture. Russell HYNES, K.L. BAILEY¹, M. HUBBARD¹, N. TYLER¹, D. RAMLAL², J.-A. DERBY¹, D. HUPKA¹, ¹, ²Agriculture and Agri-Food, Winnipeg, MB

AEM 056

Identification of Ammonia Oxidizing Bacteria and Ammonia Oxidizing Archaea Populations in Different Activated Sludge Systems of an Municipal Wastewater Treatment Plant. Golam ISLAM, Ryerson University, K GILBRIDE¹, ¹Ryerson University

AEM 057

Phenolic contents and *in vitro* antibacterial activities of pigmented potato extracts against *Clostridium perfringens*. Md. Rashedul ISLAM, Guelph Research and Development Centre, Agriculture and Agri-Food Canada, E.R. MASTIN WOOD¹, A.M. MURPHY², H.H. TAI², M.S. DIARRA¹, ¹Guelph Research and Development Centre, Agriculture and Agri-Food Canada, ²Fredericton Research and Development Centre, Agriculture and Agri-Food Canada

AEM 058

Effects of Cranberry Pomace on Gut Bacteria and Growth Performance of Organic Broiler Chicken. Md. Rashedul ISLAM, Guelph Research and Development Centre, Agriculture and Agri-Food Canada, X. YIN¹, D. GODFREY², S. ORBAN², K. ROSS², P. DELAQUIS², M.S. DIARRA¹, ¹Guelph Research and Development Centre, Agriculture and Agri-Food Canada, ²Summerland Research and Development Centre, Agriculture and Agri-Food Canada

AEM 059

Identification of Second Site Suppressor Mutations to Transketolase (tkt2) Mutation in *Sinorhizobiummeliloti* 1021. Sabjjeet KAUR, University of Manitoba, J. HAWKINS¹, I.J. ORESNIK¹, ¹University of Manitoba

AEM 060

The plant pathogen *Streptomyces scabies* possesses the ability to Degradehydroxycinnamates, Components of the Aromatic Fraction of Potato Suberin. Mario KHALIL, Université de Sherbrooke, CAROLE BEAULIEU¹, ¹Université de Sherbrooke

AEM 061

The impact of *Saccharomyces cerevisiae* fermentation products on the dynamics of rumen microbiota of dairy cows during subacute ruminal acidosis (SARA) challenge. Hamidreza KHALOUEI, University of Manitoba, H DERAKHSHANI¹, J GUO¹, P AZEVEDO¹, I YOON², M SCOTT², JC PLAIZIER¹, E KHAFIPOUR¹, ¹University of Manitoba, ²Diamond V, Cedar Rapids, IA, USA

AEM 062

Monitoring status of microbial contamination among health functional foods distributed to markets in Republic of Korea. Younju KIM, Hazardous Substances Analysis Division, Gyeongin Regional Office of Food and Drug Safety, Republic of Korea, C. WON¹, H. HWANG¹, E. KANG¹, M. KIM¹, Y. CHO¹, M. BAE¹, Y. KIM¹, D. SEO¹, M. KIM¹, C. CHOI¹, C. LIM¹, S. CHOI¹, ¹Hazardous Substances Analysis Division, Gyeongin Regional Office of Food and Drug Safety, Republic of Korea

AEM 063

Sources and Dynamics of Surface-Water Fecal Contamination across an agro-urban landscape. Andrea KIRKWOOD, University of Ontario Institute of Technology, KE DUNFIELD¹, ¹University of Guelph

AEM 064

Potential “microbial offenders” of Concern to Barrier Integrity in Deep Geological Repositories. Darren KORBER, University of Saskatchewan, AA GRIGORYAN¹, DR JALIQUE¹, S STROES-GASCOYNE¹, GM WOLFAARDT², P KEECH³, J MCKELVIE⁴, ¹University of Saskatchewan, ²Ryerson University and Stellenbosch University, ³Nuclear Waste Management Organization, ⁴Canadian Institute for Advanced Research

AEM 065

Enhancing Bio-Available Sulfur in Agricultural Soil Through Sulfur Oxidation by *Bacillus amyloliquifaciens* and *Delftiaacidovorans*. Darren KORBER, University of Saskatchewan, N WITHANA GAMAGE¹, AA GRIGORYAN¹, ¹University of Saskatchewan

AEM 066

Small molecule anti-phage defense mechanisms in Actinomycetes. Sarah KRONHEIM, University of Toronto, M DANIEL-IVAD¹, R DUAN¹, A WONG¹, I MANTEL¹, J.R. NODWELL¹, K.L. MAXWELL¹, ¹University of Toronto

AEM 067

A c-di-GMP Metabolizing Gene, BCAL1069, Regulates Motility of *Burkholderiacenocepacia* in response to Arginine and Glutamate. Brijesh KUMAR, University of Manitoba, J L SORENSEN¹, S T CARDONA¹, ¹University of Manitoba

AEM 069

Seasonal Enumeration of the Phototrophic Bacterial Community in Lake Winnipeg’s South Basin. Steven KUZYK, University of Manitoba, X MA¹, V YURKOV¹, ¹University of Manitoba

AEM 070

Microscale and Molecular Assessment of cerium oxide nanoparticles effects on a complex aquatic biofilm community. John LAWRENCE, Environment Canada, A PAULE¹, GDW SWERHONE², J ROY², JJ DYNES³, DR KORBER⁴, ¹Global Institute for Water Security, ²Environment Canada, ³Canadian Light Source, ⁴University of Saskatchewan

AEM 071

Comparative microscale analysis of the effects of nanocrystalline cellulose on the structure and function of river biofilm communities. John LAWRENCE, Environment Canada, GDW SWERHONE¹, J ROY¹, A PAULE², DR KORBER³, ¹Environment Canada, ²Global Institute for Water Security, ³University of Saskatchewan

AEM 073

Global proteome analysis of *Lactococcus lactis* MG1363 and bacteriophage p2 during Infection as a means to Predict Protein Function. Marie-Laurence LEMAY, Université de Laval, A.O. OTTO¹, S.M. MAAß¹, D.B. BECHER¹, S.M. MOINEAU², ¹University of Greifswald, ²Université de Laval

AEM 074

Synthesis of Polyhydroxyalkanoates (PHAs) from vegetable oils and free fatty acids by wild-type and mutant strains of *Pseudomonas chlororaphis*. David LEVIN, University of Manitoba, PK SHARMA¹, RI MUNIR¹, T DE KIEVET¹, ¹University of Manitoba

AEM 075

Enhanced Recovery of Microbiome Diversity Using Droplet Digital PCR for Sequencing Library Preparation of Metabarcoding. Peng LIU, Agriculture and Agri-Food Canada, Eastern Cereal and Oilseed Research Center, W. CHEN¹, M. CLOUTIER¹, E. TOPP², L. PHILLIPS³, C. DRURY³, D. LAPEN¹, G. WILKES¹, J. CHAPADOS¹, I. KHAN¹, ¹Agriculture and Agri-Food Canada, Ottawa Research and Development Centre, Ottawa, ON K1A 0C6, Canada, ²Agriculture and Agri-Food Canada, London Research and Development Centre, London, ON, N5V 4T3 Canada, ³Agriculture and Agri-Food Canada, Harrow Research and Development Centre, Harrow, ON, N0R 1G0 Canada

AEM 076

Protein Domain-Based Comparative Metagenomics of Human Gut Communities. Briallen LOBB, University of Waterloo, G. MORENO-HAGELSIEB¹, A.C. DOXEY², ¹Wilfrid Laurier University, ²University of Waterloo

AEM 077

Sulfate-Reducing Metabolisms in Fracture Waters from the Deep Terrestrial Biosphere - a Most Probable Number Investigation. Garnet LOLLAR, University of Toronto, J. TELLING¹, K. VOGLESONGER², O. WARR³, B. SHERWOOD LOLLAR³, ¹, ²Northeastern Illinois University, ³University of Toronto

AEM 078

Microbial Production of Vitamin B₁₂ in Soil. Xinda LU, University of Waterloo, K.R. HEAL¹, A.E. INGALLS¹, A.C. DOXEY², J.D. NEUFELD², ¹University of Washington, ²University of Waterloo

AEM 079

Genome-scale Analyses of Plant-Associated Bacteria and their Biotechnological Potentials. Rhea Amor LUMACTUD, University of Toronto at Scarborough, P DÖRR DE QUADROS¹, RR FULTHORPE¹,
¹University of Toronto at Scarborough

AEM 080

Metagenom-1: linking microbiome to eco-industrial function through *in silico* and metagenomic exploration of microbial dark matter and taxonomic blind spots. Michael LYNCH, University of Waterloo, AC DOXEY¹, J CHENG¹, TC CHARLES¹, ¹University of Waterloo

AEM 081

Development of an advanced genetic toolbox to enable genome scale engineering in *Sinorhizobium meliloti*. Michael MACLEOD, McMaster University, SL BRUMWELL¹, BJ KARAS¹, DREDGELL¹, A MATYSIAKIEWICZ², TC CHARLES², M ZAMAN³, TM FINAN³, ¹University of Western Ontario, ²University of Waterloo, ³McMaster University

AEM 082

Regulation of Sulfonamide antibiotic biodegradation by *Microbacterium* sp. Strain C448. Tonya MALCOLM, University of Western Ontario, E TOPP¹, J RENAUD¹, ¹Agriculture and Agri-Food Canada

AEM 083

Genomic Data Mining Reveals Missing Links in Botulinum Neurotoxin Evolution. Michael MANSFIELD, University of Waterloo, AC DOXEY¹, ¹University of Waterloo

AEM 084

Plant Beneficial Traits of Bacterial Endophytes. Evan MAYER, University of Toronto at Scarborough, RL LUMACTUD¹, ¹University of Toronto at Scarborough

AEM 085

Impact of Low Power Microwave Irradiation on the Structure and Functions of Biological Systems at Constant Bulk Temperature. Sina MAZINANI, Brock University, T TONY YAN¹, JA JEFFERY A. STUART¹, ¹Brock University

AEM 086

Inhibition of *Pseudogymnoascus destructans*, the causative agent of white-nose syndrome, by environmental microorganisms. Robyn MCARTHUR, Thompson Rivers University, S. GHOSH¹, N. CHEEPHAM¹, ¹Thompson Rivers University

AEM 087

End-to-end Metaproteomics: Advances in sample processing and mass spectrometry bioinformatics for environmental microbiology. James Scott MCCAIN, Dalhousie University, C KACHUK¹, EM BERTRAND¹, ¹Dalhousie University

AEM 089

Detection of Enteric Viruses in Source Water to Inform Drinking Water Management Nicole MCLELLAN, University of Guelph, C LOFRANCO¹, C BRINOVCAR¹, H LEE¹, M HABASH¹, ¹University of Guelph

AEM 148

The plant lifecycle: seeds-microbiome interactions from the semosphere to the spermosphere. Vladimir VUJANOVIC, University of Saskatchewan, J.J. GERMIDA¹, ¹University of Saskatchewan

Infection & Immunity

II 026

Understanding The Adaptation of Crohn's Disease-Associated *Escherichia coli* to The Host Environment. Wael ELHENAWY, McMaster University, C TSAI¹, A COMYN¹, BK COOMBES¹, ¹McMaster University

II 027

Neuro-immune interactions in health and disease: Vasoactive Intestinal Peptide Promotes Th17 Immune Responses Thereby Protecting Against *Citrobacter rodentium* Infection. YU, HONGBING, BC Children's Hospital, X. WU¹, H. YANG¹, E.S. BOSMAN¹, F.A. GRAEF¹, L. S. CERLIBERTO¹, C. MA¹, A. FOTOVATI¹, G.S. REID¹, J.A. WASCHECK², B. A. VALLANCE¹, K. JACOBSON¹
¹BC Children's Hospital, ²University of California

II 029

CcpA- and LacD.1-Mediated Regulation of Bacteriocins in Group A *Streptococcus*. Lana ESTAFANOS, University of Western Ontario, B.D. ARMSTRONG¹, J.K. MCCORMICK¹, ¹University of Western Ontario

II 031

Quantitative Proteomics of the Host-Pathogen Interplay during *Salmonella typhimurium* Infection. Jennifer GEDDES-MCALISTER, Max Planck Institute of Biochemistry, F MEISSNER¹, ¹Max Planck Institute of Biochemistry

II 032

Strategy to Elucidate Mechanisms of Action of the Anti-*Clostridium difficile* Activity of Selected Probiotics. Sathursha GUNARATNAM, INRS-Institut Armand Frappier, P. PAQUETTE¹, M. COUTU¹, M. GÉLINAS¹, M. GROS¹, M. FRAPPIER¹, J. AUCLAIR¹, M. MILLETTE¹, M. LACROIX², ¹Bio-K Plus International Inc, ²INRS-Institut Armand Frappier

II 033

Functional relationships of RND efflux pumps in *Staphylococcus aureus*. Jamie HALUCHA, University of Western Ontario, H. ALNARSERI¹, M.J. MCGAVIN¹, ¹University of Western Ontario

II 034

Engineering non-adhesive, anti-biofilm surfaces for medical devices. Benjamin HATTON, University of Toronto, D. ASKER¹, N. LAVIELLE¹, ¹University of Toronto

II 035

Evaluation of the antimicrobial and antioxidant activities of extracts from *Campanula involucreta* and *Nepetamenthoides* growing in Iran. Fariba HESHMATI AFSHAR, Tabriz University of Medical Sciences, DR HALAJNEZHAD¹, DR ASGHARIAN¹, MRS KHABIRI¹, ¹Tabriz University of Medical Sciences

II 037

Multi-species *Brachyspira* communities in clinical cases of swine mucohaemorrhagic diarrhea revealed by deep sequencing of NADH oxidase (nox) genes. Janet HILL, University of Saskatchewan, L.A. JOHNSON¹, C. FERNANDO¹, ¹University of Saskatchewan

II 038

The Role of the Hyaluronic Acid Capsule and M18 Protein in *Streptococcus pyogenes* Colonization and Disease. Jacklyn HURST, University of Western Ontario, K.J. KASPER¹, J.K. MCCORMICK¹, ¹University of Western Ontario

II 039

Identifying and characterizing azole potentiators against emerging drug-resistant fungal pathogens. Kali IYER, University of Toronto, L.E. BROWN¹, L.E. COWEN², ¹Boston University, ²University of Toronto

II 040

Transcriptional analysis of the effects of the *L. rhamnosus* R0011 secretome on human THP-1 monocyte differentiation. Michael JEFFREY, University of Ontario Institute of Technology, C MACPHERSON¹, O MATHIEU¹, T.A. TOMPKINS¹, J.M. GREEN-JOHNSON², ¹Lallemand Health Solutions Inc., Montreal, Quebec, ²University of Ontario Institute of Technology

II 041

Investigating the link between ILV metabolism and virulence in *Staphylococcus aureus*. Julie KAISER, University of Western Ontario

II 042

Streptococcal superantigens are functionally redundant for the activation of T cells. Katherine KASPER, University of Western Ontario, A. T. WAKABAYASHI¹, J. J. ZEPPA¹, J. K. MCCORMICK¹, ¹University of Western Ontario

II 043

Denosumab, a Monoclonal Antibody to Receptor Activator of Nuclear Factor-Kappa B Ligand, Modulates the Gut Microbiome Dysbiosis in the Context of Experimental Colitis. Azin KHAFIPOUR, University of Manitoba, H DERAKHSHANI¹, M F RABBI¹, E KHAFIPOUR¹, JE GHIA¹, ¹University of Manitoba

II 044

A high-throughput drug screen coupled with haploinsufficiency profiling identifies novel antifungal compounds with activity against *Candida albicans* and *Candida auris*. Sang Hu KIM, University of Toronto, H WANG¹, T ROEMER¹, N ROBBINS², L. E. COWEN², ¹Merck & Co., ²University of Toronto

II 045

Investigating the genome-wide interactions of outer membrane biosynthetic genes. Kristina KLOBUCAR, McMaster University, J.P. CÔTÉ¹, S. FRENCH¹, E.D. BROWN¹, ¹McMaster University

II 047

Validation of Pea-Protein Alginate Capsules as a Delivery System for Probiotic Bacteria in a Mouse Model of *Citrobacter rodentium*-Induced Colitis. Darren KORBER, University of Saskatchewan, N VARANKOVICH¹, AA GRIGORYAN¹, K BROWN², GD INGLIS², RRE UWIERA³, MT NICKERSON¹, ¹University of Saskatchewan, ²Agriculture and Agri-Food Canada, Lethbridge Research Centre, ³University of Alberta

II 048

CopB Confers Community Acquired Methicillin-Resistant *Staphylococcus aureus* Strain USA300 Increased Resistance to Bactericidal Levels of Copper. Holly LAAKSO, University of Western Ontario, JR SHELDON¹, DE HEINRICHS², ¹Vanderbilt University School of Medicine, ²University of Western Ontario

II 051

Investigating the ability of *Lactobacillus* sp. to reduce *Candida albicans*-induced immunopathology. Jessie MACALPINE, University of Toronto, T.R. O'MEARA¹, L.E. COWEN¹, ¹University of Toronto

II 054

Maternal and Early Life Factors influencing the Human Milk Microbiota in the CHILD Cohort. Shirin MOOSSAVI, University of Manitoba, E. KHAFIPOUR¹, S. SEPEHRI¹, B. ROBERTSON², L. BODE², A. B. BECKER¹, P. J. MANDHANE³, P. SUBBARAO⁴, S. E. TURVEY⁵, D. L. LEFEBVRE⁶, M. R. SEARS⁶, CHILD STUDY INVESTIGATORS⁶, M. B. AZAD¹, ¹University of Manitoba, ²University of California San Diego, ³University of Alberta, ⁴University of Toronto, ⁵University of British Columbia, ⁶McMaster University

II 074

The *Aspergillus fumigatus* Sialidase Contributes to Virulence in a Mouse Model of Invasive Aspergillosis. Elizabeth STEVES, Simon Fraser University, J.R. NESBIT¹, S. MANKU¹, A. CAIT², J. MOHR², M. HUGHES², J. CHOY¹, A. BENNET¹, M. MOORE¹, ¹Simon Fraser University, ²University of British Columbia

Molecular Genetics & Cellular Microbiology

MGCM 036

Using proteomics to uncover mechanisms of antimicrobial resistance in *Pseudomonas aeruginosa*. Mara GOODYEAR, University of Guelph, N GARNIER¹, CM KHURSIGARA¹, ¹University of Guelph

MGCM 037

Development of a Low-Cost SYBR Green Buffer System for qPCR. Talita GRAZIANO, University of Campinas - Piracicaba Dental School, F. JOIA¹, J.F. HOFLING¹, R.O. MATTOS-GRANNER¹, R.N. STIPP¹, ¹University of Campinas - Piracicaba Dental School

MGCM 038

Co-regulation of the Cpx Signal Transduction System by Members of the RcsPhosphorelay in *Escherichia coli*. Samantha GUITARD, University of Alberta, TL RAIVIO¹, ¹University of Alberta

MGCM 039

Effects of epistatic interactions on antimicrobial resistance in *Escherichia coli*. Bryn HAZLETT, Carleton University

MGCM 040

Genetic Engineering and Genomics of the Methanotroph, *Methylosinus trichosporium*, for the Production of mcl-PHA Bioplastic from Methane. John HEIL, University of Waterloo, A MATYSIAKIEWICZ¹, TC CHARLES¹, MDJ LYNCH¹, J CHENG¹, ¹University of Waterloo

MGCM 041

Regulation of Plasmid Transfer and Transfer Gene Expression in *Rhizobium Leguminosarum* Bv. *Viciae* VF39SM. Nandun Wathugala, University of Calgary, HGAKM Hemananda¹, M.F. Hynes¹, ¹University of Calgary

MGCM 042

Perturbation of insect behaviour and development by *Streptomyces*. Louis HO, University of Toronto, J CUSARANO¹, A BURNS², K ILLADI², A TROJEK², P ROY², C SMIBERT², G BOULIANNE², F HUNTER¹, JR NODWELL², ¹Brock University, ²University of Toronto

MGCM 044

Genotypic and phenotypic analysis of tow model “isogenic” strains of *Cryptococcus neoformans*. Wenjing HUA, McMaster University

MGCM 045

A Third Polysaccharide Co-Polymerase Protein in *Pseudomonas aeruginosa* Serotype O13 Produces Exceptionally Long O-antigen Chains. Steven HUSZCZYNSKI, University of Guelph, C COUMOUNDOUROS¹, P PHAM¹, VL TAYLOR², JS LAM¹, ¹University of Guelph, ²University of Toronto

MGCM 047

A RelE-like toxin-antitoxin system in *Rhizobium leguminosarum*. Kelsey Williamson, University of Calgary, MF Hynes¹, ¹University of Calgary

MGCM 048

Predictive modelling of a batch filter mating process. Brian INGALLS, University of Waterloo, A MALWADE¹, A NGUYEN¹, P SADAT-MOUSA VI¹, ¹University of Waterloo

MGCM 049

Characterization of genes involved in diketopiperazine production by *Pseudomonas aeruginosa*. Nicole JERVIS, University of Calgary, N.M. MEHINA¹, K. CRAIN¹, J. HARRISON¹, D.G. STOREY¹, ¹University of Calgary

MGCM 050

Inhibition and structural characterization of peptidoglycan O-acetyltransferase A from *Staphylococcus aureus*. Carys JONES, University of Guelph, D SYCHANATHA¹, A.J. CLARKE¹, ¹University of Guelph

MGCM 051

Identifying the Genes Involved in the Biofilm Stimulation Response in *Pseudomonas aeruginosa* to sub-lethal antimicrobials. Sawyer KARABELAS-PITTMAN, McMaster University, MRMR RANIERI¹, MR RUDOLPH¹, HH HARVEY¹, LLB BURROWS¹, ¹McMaster University

MGCM 052

Discovery and characterization of putative non-coding RNAs regulating methylases. Smail KATIA, INRS-Institut Armand Frappier, N.M.R. MOHAMMAD REZA NAGHDI¹, D.A. AURÉLIE DEVINCK¹, P.J. JONATHAN PERREAULT¹, ¹INRS-Institut Armand Frappier

MGCM 053

Determining the sites of interaction between the *Rhizobium leguminosarum* ABC protein RhaT and the sugar kinase RhaK. Derek KIM, University of Manitoba, I.J. ORESNIK¹, ¹University of Manitoba

MGCM 054

Acetone Produced as a Fermentation End-Product by the Hyperthermophilic Archaeon *Hyperthermus butylicus*. Sarah KIM, University of Waterloo, C TSE¹, K MA¹, ¹University of Waterloo

MGCM 055

Investigations into the Regulation of the AdeFGH efflux pump in *Acinetobacter baumannii*. Vanessa KORNELSEN, University of Manitoba, RAKESH PATIDAR¹, AYUSH KUMAR¹, ¹University of Manitoba

MGCM 056

Mutation-Based Conformational Analysis of a New S-Adenosylmethionine Riboswitch Structure in *Burkholderia thailandensis*. Vesta KORNIAKOVA, INRS-Institut Armand Frappier, B. SELLAMUTHU¹, X. YANG¹, F. KHALFAOUTI¹, R.M. NAGHDI¹, J. PERREAULT¹, ¹INRS-Institut Armand Frappier

MGCM 057

Development of a Single Nucleotide Variant (SNV)-based subtyping scheme for the highly clonal *Salmonella* serovar Heidelberg. Geneviève LABBÉ, Public Health Agency of Canada, J. ROBERTSON¹, J.H.E. NASH¹, K. ZIEBELL¹, C.R. LAING¹, P. MABON¹, J.M. MACKINNON¹, E. GIANG¹, M. RANKIN¹, L.K. LEE¹, J. MOFFAT¹, R.P. JOHNSON¹, ¹Public Health Agency of Canada

MGCM 058

The Role and Regulation of Rif1 in DNA Replication and DNA Damage Response in *Saccharomyces cerevisiae*. ARASATI, University of Waterloo, BPD DUNCKER¹, ¹University of Waterloo

MGCM 059

Fem Operon is a New Target of the T3SS Master Activator ExsA in *Pseudomonas aeruginosa*. Yanqi LI, University of Manitoba, S BADR¹, A.Y. BHAGIRATH¹, K DUAN¹, ¹University of Manitoba

MGCM 060

De novo assembly and analysis of a putative non-pathogenic *Pseudomonas syringae* genome using the Oxford Nanopore MinION sequencing system. Janet LORV, University of Waterloo, B.J. MCCONKEY¹, ¹University of Waterloo

MGCM 061

Genome sequencing of a *Lactobacillus* isolate from Iran with putative anti-fungal properties. Mark LUBBERTS, University of Waterloo, Z.A. KHARAZIAN¹, G.S. JOUZANI², B.J. MCCONKEY¹,
¹University of Waterloo, ²Agricultural Biotechnology Research Institute of Iran (ABRII), Karaj, Iran

MGCM 062

The role of RkpZ and its homologs in *Sinorhizobiummeliloti* capsule synthesis. Alannah MACDONALD, University of Guelph, O.G. OVCHINNIKOVA¹, B.S. HUANG², L. DOYLE¹, T.L. LOWARY², C. WHITFIELD¹, ¹University of Guelph, ²University of Alberta

MGCM 063

Functional role of the terminal methyl group on the lipopolysaccharide O antigen of *Escherichia coli* O9a. Evan MANN, University of Guelph, BR CLARKE¹, C WHITFIELD¹, ¹University of Guelph

MGCM 064

Identification of the Cpxa Sensing Domain Conformational States Important for Signaling within the Cpx Envelope Stress Response System in *Escherichia coli*. Rodrigo MARGAIN QUEVEDO, University of Alberta, TR RAIVIO¹, ¹University of Alberta

MGCM 065

Methanobactin Production in *Sinorhizobiummeliloti*. Aleksandra MATYSIAKIEWICZ, University of Waterloo, T.C. CHARLES¹, S.L. BRUMWELL², B.J. KARAS², M.R. MACLEOD³, T.M. FINAN³,
¹University of Waterloo, ²University of Western Ontario, ³McMaster University

MGCM 066

The Effect of Biological Properties and Sequencer Performance on *de novo* Assembly of Microbial Genomes. Breanne MCAMMOND, Thompson Rivers University, S THIJS¹, P GKOREZIS², K MA³, JD VAN HAMME⁴, ¹Centre for Environmental Sciences, Hasselt University, Belgium, ²PSMT bvba, Belgium, ³University of Waterloo, ⁴Thompson Rivers University

MGCM 067

Antisense RNAs versus mRNA structure: unexpected factors influencing gene regulation in bacteria. Matthew MOODY, McMaster University, C PHAM¹, MA ELLIOT¹, ¹McMaster University

MGCM 068

Does an Epidemic and Transmissible Cystic Fibrosis Strain of *Pseudomonas aeruginosa* Employ the Type Six Secretion System in Strain Replacement? Jenny NGUYEN, University of Calgary, J. DUONG¹, M.D. PARKINS¹, D.G. STOREY¹, ¹University of Calgary

MGCM 069

Genetics of Directed Mutation of an Innate Immunity Gene in the Fungus, *Neurosporacrassa*. Ghazaleh NOURPARVAR, Carleton University, M.L.S. SMITH¹, ¹Carleton University

MGCM 070

Description and Characterization of Gene Deletions and Insertions that Allowed Cell-Shape Transition in *Simonsiella muelleri*. Sammy NYONGESA, INRS-Institut Armand Frappier, F.V FREDERIC VEYRIER¹, J.G JUAN GUERRA¹, B.D BRYAN DIFFO¹, ¹INRS-Institut Armand Frappier

Poster Session III – Abstract Titles

Friday, June 23rd, 2017

Presenters to be by their posters:

Odd number posters from **12:45 – 1:45 PM** ** **Even number** posters from **1:45 – 2:45 PM**

Applied & Environmental Microbiology

AEM 090

Detection of *E. coli*/ Total coliforms and Antibiotic Resistance Genes in Drinking Water Collected from Three First Nations Communities in Manitoba. Ruidong MI, University of Manitoba, FZ FRANCIS ZVOMUYA¹, EK EHSAN KHAFIPOUR¹, AK AYUSH KUMAR¹, AF ANNEMIEKE FARENHORST¹,
¹University of Manitoba

AEM 091

Alginate- and Cellulose-Deconstructing efficacies of Bacteria Isolated from Decomposed Sargassum Piles. Bidyut MOHAPATRA, The University of the West Indies, Cave Hill Campus, Barbados

AEM 092

Bacteriological profile of water in augmented care units in a tertiary care hospital in India. Mahajan MONIKA, Post Graduate Institute of Medical Education and Research, PR RAY¹, SP PRAKASH¹, MB BISWAL¹, ¹Post Graduate Institute of Medical Education and Research

AEM 093

Data-Driven Discovery of Small Molecules from the Human Microbiota. Walaa MOUSA, McMaster University, NA MAGARVEY¹, RZ ZVANYCH¹, DL LIU¹, NM MERWIN¹, BA ATHAR¹, MS SKINNIDER¹, MC CANNON¹, CD DEJOING¹, MR RANIERI¹, XL LI¹, ¹McMaster University

AEM 094

PckR is a Direct Transcriptional Regulator of Central Carbon Metabolic Genes in *Sinorhizobium meliloti*. Zahed MUHAMMED, McMaster University, GC DICENZO¹, TM FINAN¹,
¹McMaster University

AEM 096

Screening and Preliminary Characterization of Novel Antibacterial Compounds produced by fungi. Sehar NURPURI, University of Manitoba, S. SHAHHAT¹, A. KUMAR¹, G. HAUSNER¹, ¹University of Manitoba

AEM 097

Carbon Mineralization in a Peatland Undergoing Reclamation: Potential Implications of oil sands Process-Affected Water on Microbial Processes and Ecosystem Function. Felix NWAISHI, University of Waterloo, V DATÉ¹, R.M. PETRONE¹, M.L. MACRAE¹, M. STRACK¹, J.S. PRICE¹, R. ANDERSEN²,
¹University of Waterloo, ²Environmental Research Institute, Thurso Scotland

AEM 098

Development of new Bio-Pesticides based on Live Bacterial Cells and their Metabolites against the Phytopathogenic Bacterium *Xanthomonas perforans*. Snizhana OLISHEVSKA, Armand-Frappier Institute - INRS, A. NICKZAD¹, C. RESTIERI¹, E. DÉZIEL¹, ¹Armand-Frappier Institute - INRS

AEM 099

Regulation of Rhizobactin Production by Carbon Sources in *Sinorhizobium meliloti*. Patricia Ann ORDONEZ, University of Manitoba, J.P. HAWKINS¹, I.J. ORESNIK¹, ¹University of Manitoba

AEM 100

Cellulase activity studies using cotton as cellulose substrate for an *Aspergillus niger* cellulase. Athanasios PASCHOS, Mohawk College of Applied Arts and Technology, H. DOMADIYA¹, K. SURUR¹, ¹Mohawk College of Applied Arts and Technology

AEM 101

Isolation and characterization of microbes from Canadian soil and lake samples capable of naphthalene biodegradation at low temperatures. Athanasios PASCHOS, Mohawk College of Applied Arts and Technology, H. DOMADIYA¹, S. KUBBA¹, ¹Mohawk College of Applied Arts and Technology

AEM 102

Biotechnological process studies for the improvement of bacterial hydrogen production. Athanasios PASCHOS, Mohawk College of Applied Arts and Technology, H. DOMADIYA¹, S. KUBBA¹, M. DENK²,
¹Mohawk College of Applied Arts and Technology, ²University of Guelph

AEM 103

Tillage uncouples microbial nutrient cycling during the early cropping season in an Australian vertisol. Lori PHILLIPS, Agriculture and Agri-Food Canada, P. MELE¹, R. ARMSTRONG¹, C. SCHEFE²,
¹Department of Economic Development, Jobs, Transport, and Resources, Victoria, Australia, ²Riverine Plains Inc. NSW, Australia

AEM 104

Going beyond the surface: Microbial interactions in deeper horizons influence greenhouse gas emissions in a sandy Ontario agricultural soil. Lori PHILLIPS, Agriculture and Agri-Food Canada, B. SEURADGE¹, D. REYNOLDS¹, X. YANG¹, C. DRURY¹, ¹Agriculture and Agri-Food Canada

AEM 105

The Tale of a Neglected Energy Source for Soil Microbial Communities. Sarah PICHE-CHOQUETTE, Armand-Frappier Institute - INRS, M. KHDHIRI¹, J. TREMBLAY², S.G. TRINGE³, P. CONSTANT¹,
¹Armand-Frappier Institute - INRS, ²National Research Council of Canada, ³DOE - Joint Genome Institute

AEM 106

A Tale of Two Nurdles: how Microbes respond to Plastic and Bioplastic in Coastal Waters. Lee PINNELL, Texas A&M University-Corpus Christi, JW TURNER¹, ¹Texas A&M University-Corpus Christi

AEM 107

Microbial Community Development in Artificial Soil Columns as Affected by Water Table Fluctuations. Geertje PRONK, University of Waterloo, A. MELLAGE¹, K. ENGEL¹, T. MILOJEVIC¹, C. SMEATON¹, F. REZANEZHAD¹, J.D. NEUFELD¹, P VAN CAPPELLEN¹, ¹University of Waterloo

AEM 109

Genomic and Phenotypic Analysis of Antimicrobial Resistant *Enterococcus* spp from Broiler Chicken Production. Muhammad REHMAN, Agriculture and Agri-Food Canada, Food Research and Development Centre, M PERSAUD-LACHHMAN¹, X YIN¹, T MCALLISTER², R ZAHEER², N GOJI³, K AMOAKO³, M DIARRA¹, ¹Agriculture and Agri-Food Canada, Food Research and Development Centre, ²Agriculture and Agri-Food Canada, Lethbridge Research Centre, ³Canadian Food Inspection Agency

AEM 110

The Distribution of Fitness Effects and Environmental Specificity of AMR Mutations in *Escherichia coli*. Leah CLARKE, Carleton University, AW WONG¹, ¹Carleton University

AEM 111

Probiotic Fermented Food for 120,000 People in Africa, and Counting. Gregor REID, Lawson Health Research Institute

AEM 113

Characterization of novel bile acid hydroxysteroid dehydrogenases from *Eggerthella* overexpressed in *E. coli*. Jason RIDLON, SM MYTHEN¹, SC HARRIS², S DEVENDRAN¹, C GARCIA-MENDEZ¹, AG HERNANDEZ¹, CL WRIGHT¹, IKO CANN¹, PB HYLEMON², ¹University of Illinois at Urbana-Champaign, Urbana IL, USA, ²Virginia Commonwealth University, Richmond VA, USA

AEM 115

Addition of Sodium Acetate, Sodium Chloride and Orange Peel in Production Media enhanced Xanthan Gum Production. Sutanu SAMANTA, A Plus Academy of Advancement, ²⁴²⁵ Eglinton Avenue East, Toronto, P BHADRECHA¹, S DAS¹, ¹Lovely Professional University, NH-¹, Phagwara, Punjab, India

AEM 116

Fifty Shades of *Cryptococcus neoformans*. Himeshi SAMARASINGHE, McMaster University, J XU¹, ¹McMaster University

AEM 117

Impact of Wastewater Treatment Process on the Survival of Vancomycin-resistant *Enterococcus*: Comparison of two Wastewater Treatment Plants in Kingston, Ontario. Haley SANDERSON, Queen's University, A MAJURY¹, R.S. BROWN¹, S.N LISS¹, ¹Queen's University

AEM 118

The Effect of Intrinsic and External Factors on Transconjugant Formation in Batch Cultures and Biofilms. Farhana SHAMSAD, Ryerson University, MH HAUSNER¹, ¹Ryerson University

AEM 119

***Gordonia* sp. NB4-1Y: Microbial Degradation of 6:2 Fluorotelomer Sulfonamide Alkyl Betaine and 6:2 Fluorotelomer Sulfonate.** Dayton SHAW, Thompson Rivers University, J.D. VAN HAMME¹, E.M. BOTTOS², G. MUNOZ³, J. LIU⁴, ¹Thompson Rivers University, ²Pacific Northwest National Laboratory, ³Université de Montréal, ⁴McGill University

AEM 120

Whole Genome Analysis of Non-typhoidal *Salmonella* Strains with Distinct Biofilm-forming Characteristics. Deeksha SHETTY, University of Saskatchewan, S ALSHALCHI¹, NW GAMAGE², AA GRIGORYAN², J ROY³, JR LAWRENCE³, S VIDOVIC¹, DR KORBER^{2, 1}, ²University of Saskatchewan, ³Environment Canada

AEM 121

The Role of the Extra Cytoplasmic Stress Response in Antimicrobial Resistance and Pathogenicity of Non-Typhoidal *Salmonella enteritidis*. Deeksha SHETTY, University of Saskatchewan, S VIDOVIC¹, DR KORBER^{2, 1}, ²University of Saskatchewan

AEM 122

Predicting and Measuring Microbial Growth Yields in Low Energy Environments. Christina SMEATON, University of Waterloo, P VAN CAPPELLEN¹, ¹University of Waterloo

AEM 123

Arsenic Tolerance and Plant Growth Promotion Traits of Rhizobacterial Isolates from a Heavy Metal Polluted Soil. Javiera SOTO PERLWITZ, Universidad de La Frontera, J. ORTIZ¹, A. FUENTES¹, C. ARRIAGADA¹, ¹Universidad de La Frontera

AEM 124

Organic Carbon Source Utilization by an Ammonia-Oxidizing Archaeon. Emilie SPASOV, University of Waterloo, LA SAUDER¹, JD NEUFELD¹, ¹University of Waterloo

AEM 127

Utilization of Solid-State Fermentation to Recover Nutrients from Low Value Agro-Byproducts through Insect Larval Culture. Takuji TANAKA, University of Saskatchewan, P MITRA¹, MT NICKERSON¹, JR KUTTIYATVEETIL¹, ¹University of Saskatchewan

AEM 128

The characterization and proliferation of mobile plasmids found in bacterial isolates collected from three municipal wastewater treatment plants. Amir TEHRANI, Ryerson University, K.A. GILBRIDE¹, ¹Ryerson University

AEM 129

Plant Growth-Promoting Properties and Biofilm Production of *Rhizobacteria* Associated with Tropical Plant Species under Water Stress Conditions. Gem THOMAS, The University of the West Indies, C.G ST. MARTIN¹, J ROUSE-MILLER¹, ¹The University of the West Indies

AEM 130

Long Term Exposure of Agricultural Soil to Veterinary Antibiotics Changes the Population Structure of Symbiotic Nitrogen-Fixing Bacteria Occupying Nodules of Soybeans (*Glycine max*). Ed TOPP, Agriculture and Agri-Food Canada, C REVELLIN¹, A HARTMANN¹, S SOLANAS¹, ¹Institut National de Recherche Agronomique (France)

AEM 133

The role of *fixK* in the regulation of bacterial cellulose in *Komagataeibacter* species. Andrew VARLEY, University of Ontario Institute of Technology, S. DARGAN¹, J.L. STRAP¹, ¹University of Ontario Institute of Technology

AEM 135

Biological Control of Grey Mold of Apple During Commercial Storage with *Pseudomonas fluorescens* and Potential Mechanisms of Action. Rhiannon WALLACE, University of British Columbia Okanagan, D.L. HIRKALA¹, L.M. NELSON², ¹British Columbia Tree Fruits Cooperative, ²University of British Columbia Okanagan

AEM 138

Screening of Subterranean Microorganisms for Antimicrobial Activity. Aaron WONG, Thompson Rivers University, NC CHEEPHAM¹, SG GHOSH¹, KV VANDERWOFL², ¹Thompson Rivers University, ²University of Wisconsin

AEM 141

Characterization of highly diverse and unique microbial communities within four prairie agricultural biobeds used for treatment of pesticide rinsates. Chris YOST, University of Regina, J BERGSVEINSON¹, B PERRY¹, L BRAUL², B GOSSEN², ¹University of Regina, ²Agriculture and Agri-Food Canada

AEM 142

Environmental and genetic factors influencing the germination of basidiospores in the *Cryptococcus gattii* species complex. Man YOU, McMaster University, JP XU¹, ¹McMaster University

AEM 143

Screening of cave microorganisms isolated from "White Rabbit Cave" and a newly discovered cave "Over The Hill" for antimicrobial and enzymatic activities. Vincent YU, Thompson Rivers University, N CHEEPHAM¹, S GHOSH¹, ¹Thompson Rivers University

AEM 144

Metagenomic Sequencing – how deep is deep enough? Rahat ZAHEER, Agriculture and Agri-Food Canada, Lethbridge Research Centre, N NOYES¹, RO POLO², G VAN DOMSELAAR³, PS MORLEY¹, TA MCALLISTER², ¹Department of Clinical Sciences, Colorado State University, Fort Collins, USA, ²Agriculture and Agri-Food Canada, Lethbridge Research Centre, ³National Microbiology Laboratory, Public Health Agency of Canada

AEM 145

Fe Isotope Fractionation During Microbial Reduction of Ferrihydrite (HFO) in Freshwater System by Sulfate-Reducing Bacteria (SRB). Yan ZHANG, University of Waterloo, L.W. WU¹, ¹University of Waterloo

AEM 146

Partitioning the Effects of Heritability and Local Adaptation in Driving the Gut Microbiome of Chinook Salmon (*Oncorhynchus tshawytscha*). Mubarak ZIAB, University of Windsor, D HEATH¹, SR CHAGANTI¹, ¹University of Windsor

AEM 147

Metabolic dark matter: Divergent particulate copper monooxygenases and their catalytic potential. J VERBEKE, University of Calgary, R KHADKA¹, FF ROCHMAN¹, PF DUNFIELD¹, ¹University of Calgary

AEM 148

Detection and Prevalence of Top 6 non-O157 Shiga Toxin-Producing Escherichia coli in Beef. Mohammad MELEBARI, University of Guelph, Keith Warriner, University of Guelph

AEM 149

Detection and Prevalence of Top 6 non-O157 Shiga Toxin-Producing Escherichia coli in Beef. Mohammad MELEBARI, University of Guelph, Keith Warriner, University of Guelph

Infection & Immunity

II 052

Revisiting Colistin Combination Therapy in the Era of Mobile Colistin Resistance. Craig MACNAIR, McMaster University, JM STOKES¹, LA CARFRAE¹, EB BROWN¹, ¹McMaster University

II 055

Characterization OXA-48-like carbapenemase producers in Canada, 2011-2014. Michael MULVEY, Public Health Agency of Canada, LF MATASEJE¹, DA BOYD¹, J FULLER², D HALDANE³, L HOANG⁴, B LEFEBVRE⁵, AJ MCGEER⁶, R MELANO⁷, SM POUTANEN⁶, B WILLEY⁶, P VAN CAESELE⁸, ¹Public Health Agency of Canada, ²University of Alberta, ³Queen Elizabeth II Health Sciences Centre, ⁴BC Centre for Disease Control, ⁵Laboratoire de santé publique du Québec, ⁶University Health Network/Sinai Health System, ⁷Public Health Ontario, ⁸Cadham Provincial Laboratory

II 056

Rapid and culture-free detection of bacterial strains in clinical samples by integration of bacteriolytic agents and potassium efflux assay. Nafiseh NAFISSI, University of Toronto, V.C CHEUNG¹, D.B BONA¹, E.K KILINC¹, B.C CROWLEY¹, W.N NAVARRE¹, G.G GULAK¹, K.M MAXWELL¹, ¹University of Toronto

II 057

Investigating the Effects of IL-27 on Endosomal Toll-Like Receptor Expression and Activation in Human Monocytes and Macrophages. Natalya ODOARDI, Queen's University, C PETES¹, K GEE¹, ¹Queen's University

II 058

Study of the Localization of the *Helicobacter pylori* Type IV Secretion System Components Cagl and Cagv. Flore OUDOYOU, Université de Montréal, CB BARON¹, ¹Université de Montréal

II 059

Protein Binding Partners of ME53 from Autographa Californica Nucleopolyhedrovirus (AcMNPV). Emine OZSAHIN, University of Guelph, P. KRELL¹, ¹University of Guelph

II 060

A secondary genetic modifier of Cystic Fibrosis affects *Pseudomonas aeruginosa* attachment to airway epithelium. Amber PARK, University of Guelph, M DI PAOLA¹, S AHMADI¹, Y-S WU¹, M STRUDER-KYPKE², J LAM², C BEAR¹, C KHURSIGARA², ¹University of Toronto, ²University of Guelph

II 061

Characterization of Putative Sialidase Genes in *Gardnerella vaginalis*. Mo PATTERSON, University of Saskatchewan, JE HILL¹, ¹University of Saskatchewan

II 062

The Role of Il-27 in Endotoxin Tolerance in Human Monocytes and Macrophages. Carlene PETES, Queen's University, V MINTSOPOLOUS¹, K GEE¹, ¹Queen's University

II 063

Functional Divergence of a Global Regulatory Complex Regulating Fungal Filamentation. Elizabeth POLVI, University of Toronto, F TEBBJI¹, R SHAPIRO², S HYDE³, SH KIM³, K PAPAMIHALI³, N ROBBINS³, A SELMECKI⁴, M WHITEWAY⁵, LE COWEN³, ¹Université de Laval, ²Broad Institute of MIT and Harvard, ³University of Toronto, ⁴Creighton University Medical School, ⁵Concordia University

II 064

Investigating the Gut Microbiome of Patients with Generalized Anxiety Disorder. Ryan POTTS, McMaster University, M SURETTE¹, R ANGLIN¹, P BERCIK¹, R MCCABE¹, K ROWA¹, M AMER¹, ¹McMaster University

II 065

Investigating Wall Teichoic Acid Degrading Enzymes in *Staphylococcus aureus*. Kenneth RACHWALSKI, McMaster University, OM EL-HALFAWY¹, RT GALE¹, ED BROWN¹, ¹McMaster University

II 066

Transposon sequencing of Adherent-Invasive *Escherichia coli* for the Discovery of Novel Host-Defense Peptide Resistance Genes. Michael RENOUF, Ryerson University, J.B. MCPHEE¹, ¹Ryerson University

II 067

Identification and Characterization of Fluconazole Potentiators to Abrogate Resistance in *Candida albicans*. Nicole REVIE, University of Toronto, S APPAVOO¹, T SHEKHAR-GUTURJA¹, N ROBBINS¹, L BROWN², A YUDIN¹, LE COWEN¹, ¹University of Toronto, ²Boston University

II 068

Immunophage synergy is essential for eradicating pathogens that provoke acute respiratory infections. Dwayne ROACH, Department of Microbiology, Institut Pasteur, Paris ⁷⁵⁰¹⁵, FR, C. LEUNG¹, M. HENRY², E. MORELLO², D. SINGH¹, J.P. DI SANTO³, J. WEITZ¹, L. DEBARBIEUX², ¹School of Physics, Georgia Institute of Technology, Atlanta, Georgia ³⁰³³², USA, ²Department of Microbiology, Institut Pasteur, Paris ⁷⁵⁰¹⁵, FR, ³Innate Immunity Unit, Department of Immunology, Institut Pasteur, Paris ⁷⁵⁰¹⁵, FR

II 070

Seasonal Dynamics of the most Destructive Grapevine Viruses under Field Condition in Ontario.

Mehdi SHABANIAN, University of Guelph, H XIAO¹, B MENG¹, ¹University of Guelph

II 071

Novel mutations in MexZ and their role in MexXY-dependent multidrug resistance in clinical Cystic Fibrosis isolates of *Pseudomonas aeruginosa*.

Manu SINGH, University of Manitoba, M SINGH¹, S WANG¹, Y YAU², V WATERS², A KUMAR¹, ¹University of Manitoba, ²Hospital for Sick Children

II 072

Discovery and Development of New Host-Targeted Antiviral Drugs.

Patrick SLAINE, Dalhousie University, DK KHAPERSKYY¹, SM MCALPINE¹, MW WARHUUS¹, TH HATCHETTE¹, AB BALGI², IH HAIDL¹, JM MARSHALL¹, MR ROBERGE², CM MCCORMICK¹, ¹Dalhousie University, ²University of British Columbia

II 073

Iron acquisition genes and human pathogenicity in the enterobacterial genus *Pantoea*.

Craig SOUTAR, University of Regina, J. STAVRINIDES¹, ¹University of Regina

II 076

The Kinamycin Antitumor-Antibiotics and Analogues as Bactericidal Agents for Antibiotic Resistant Gram Positive and Gram Negative Bacteria.

Carol TANNER, University of Waterloo, V.J. GOODFELLOW¹, G. LABBE¹, A. GHAVAMI¹, N. CHEN¹, A.P. KRISMANICH¹, A. DESOKY¹, G.I. DMITRIENKO¹, ¹University of Waterloo

II 077

The small RNA, *srbA*, is Important for Biofilms and Pathogenicity in *Pseudomonas aeruginosa* Strain PA14.

Patrick TAYLOR, University of Ottawa, ATM VAN KESSEL¹, A COLAVITA¹, REW HANCOCK², TF MAH¹, ¹University of Ottawa, ²University of British Columbia

II 078

Getting in on the act: prokaryotic pathogens meddle with host ubiquitination.

Dylan VALLEAU, University of Toronto, D LITTLE¹, ME URBANUS², H CUI², X XU², C CHANG³, S HOULISTON², E EVDOKIMOVA², AT QUAILE², C ARROWSMITH², B COOMBES¹, AW ENSMINGER², A SAVCHENKO⁴, ¹McMaster University, ²University of Toronto, ³Argonne National Laboratory, IL, USA, ⁴University of Calgary

II 079

Characterization of two bacterial proteins (ArlA and ArlB) associated with resistance to host defense peptides.

Mario VARGAS, Ryerson University, M.R. FADLE AZIZ¹, J.B. MCPHEE¹, ¹Ryerson University

II 081

Characterizing the Macrophage-Mediated Restriction of *Staphylococcus lugdunensis*.

David WATSON, University of Western Ontario, D. E. HEINRICHS¹, R. S. FLANNAGAN¹, ¹University of Western Ontario

II 084

Attenuated *Salmonella typhimurium* as a vector for a novel *Clostridium difficile* vaccine.

Kaitlin WINTER, McGill University, L. XING¹, B.J. WARD¹, ¹

II 085

Development of Model Mouse Microbiota for Gut Microbiome Studies. Erin WONG, University of Toronto, S. SAHA¹, G. SIAVASH¹, M. KANG¹, T. IRRAZABAL¹, A. MARTIN¹, W.W. NAVARRE¹,
¹University of Toronto

II 086

Elucidating the function of a novel porin in *Helicobacter pylori*. Keertika YOGENDIRARAJAH, University of Western Ontario, A OBERC¹, M KHODAI-KALAKI¹, N ZEBIAN¹, C CREUZENET¹,
¹University of Western Ontario

II 087

Structural and functional analysis of an essential RabGTPase of *C. albicans*. Andrew QUAILE, University of Toronto, PJ STOGIOS¹, T O'MEARA¹, T SKARINA¹, R DI LEO¹, WF ANDERSON², LE COWAN¹, A SAVCHENKO¹, ¹University of Toronto, ²Northwestern University

Molecular Genetics & Cellular Microbiology

MGCM 071

Uncovering the role of the co-evolved core microbiota in human gut microbial ecosystem dynamics and function. Kaitlyn OLIPHANT, University of Guelph, DR. E ALLEN-VERCOE¹, ¹University of Guelph

MGCM 072

Bioinformatic interrogation of phosphonate tailoring pathways. Monica PAPINSKI, Wilfrid Laurier University, G HORSMAN¹, G MORENO-HAGELSIEB¹, ¹Wilfrid Laurier University

MGCM 073

A Prospective Study of the Rate of Contamination of Bedside Patient Privacy Curtains on a Burns and Plastic Surgery Ward. Rakesh PATIDAR, University of Manitoba, KEVIN SHEK¹, ZEENIB KOHJA¹, SONG LIU¹, JUSTIN P GAWAZIUK¹, SARVESH LOGSETTY¹, AYUSH KUMAR¹, ¹University of Manitoba

MGCM 074

Replication-deficient fowl adenovirus 9 (FAdV-9)-deleted ORF8 mutant can be complemented in trans by FAdV-1 ORF8 homolog. Yanlong PEI, University of Guelph, Ontario Veterinary College, P SLAINE¹, J CORREDOR¹, B GRIFFIN¹, E NAGY¹, ¹University of Guelph, Ontario Veterinary College

MGCM 075

Antifungal drug Fluconazole facilitates the loss of heterozygosity in a hybrid of the human pathogen *Cryptococcus neoformans* species complex. Nicholas PUN, McMaster University, K DONG¹, JP XU¹,
¹McMaster University

MGCM 076

Identifying the Importance of C4 Zinc Finger Domains on the Activities of Baculovirus AcMNPV Protein ME53. Robyn RALPH, University of Guelph, P.J. KRELL¹, ¹University of Guelph

MGCM 077

Characterization of Wssf; an Acetyltransferase from *Acromobacter insuavis* and *Pseudomonas fluorescens*. Cody REESE, Wilfrid Laurier University, E.W. WILSON¹, D.S. SYCHANTHA², A.C. CLARKE², J.T.W. WEADGE¹, ¹Wilfrid Laurier University, ²University of Guelph

MGCM 078

Deciphering the Biosynthetic Logic of Exopolysaccharide Phosphonate Tailoring. Kyle RICE, Wilfrid Laurier University, K BATUL¹, C BARTLETT¹, S BANSAL², J SCHAEFER², L CEGELSKI³, J WEADGE¹, G HORSMAN¹, ¹Wilfrid Laurier University, ²University of Washington, ³Stanford University

MGCM 079

Investigating the overlapping functions of FtsZ bundling proteins, ZapA and ZapD, in *Escherichia coli*. Elyse ROACH, University of Guelph, L SEIDEL¹, C. M. KHUSRIGARA¹, ¹University of Guelph

MGCM 080

Optimizing the Electroporation Protocol for Cellular Viability in the Transformation of *Fusobacterium nucleatum*. Avery ROBINSON, University of Guelph, E. ALLEN-VERCOE¹, ¹University of Guelph

MGCM 081

Colocalization of cardiolipin synthase A, osmosensing transporter ProP and cardiolipin at *Escherichia coli* cell poles is contingent on ClsA function and modulates ProP activity. Tatyana ROMANTSOV, University of Guelph, D E CULHAM¹, K GONZALEZ¹, J M WOOD¹, ¹University of Guelph

MGCM 082

Identification of genes involved in the biofilm stimulation response to sub-lethal concentrations of antibiotics. Madeleine RUDOLPH, McMaster University, S. KARABELAS-PITTMAN¹, M.R.M. RANIERI¹, H. HARVEY¹, L.L. BURROWS¹, ¹McMaster University

MGCM 084

The Functional and Structural Investigation of Export Protein BscC. William SCOTT, Wilfrid Laurier University, A. ANDERSON¹, J. T. WEADGE¹, ¹Wilfrid Laurier University

MGCM 085

Differential expression of cytoplasmic proteins by a *Corynebacterium pseudotuberculosis* strain deficient for the factor sigma H. Nubia SEYFFERT, Federal University of Para, T.L.P. CASTRO¹, B.S.R. LUZ¹, A.V. SANTOS², L.G.C. PACHECO³, A. SILVA², V. AZEVEDO¹, ¹Federal University of Minas Gerais, ²Federal University of Para, ³Federal University of Bahia

MGCM 087

Plaque Bacterial Indicators Associated with Sjögren's Syndrome. Kamna SINGH, University of Toronto, VH TRIFONOV¹, MW HALL², M CORDOVA¹, JD NEUFELD³, LP LAING¹, HC TENENBAUM¹, RG BEIKO², DB SENADHEERA¹, ¹University of Toronto, ²Dalhousie University, ³University of Waterloo

MGCM 088

Loss of AmpG in β -lactam resistant *Pseudomonas aeruginosa* impairs growth. Clarissa SKORUPSKI, McMaster University, L.B BURROWS¹, T.M MARKO¹, R.L LAMERS¹, R.N NGUYEN¹, L.M MOHAMED¹, ¹McMaster University

MGCM 089

Characterization of FHA Domains Involved in *Saccharomyces cerevisiae* Dntp Regulation and Double-Strand Break Repair. Geburah STRAKER, University of Waterloo, BP DUNCKER¹, ¹University of Waterloo

MGCM 090

Elucidating the Mechanism of Inducible Rifamycin Resistance in *Streptomyces venezuelae*. Matthew SURETTE, McMaster University, P SPANOIANNPOULOS¹, K KOTEVA¹, GD WRIGHT¹, ¹McMaster University

MGCM 091

Phage moron JBD26-61 promotes resistance to phage infection by disrupting cyclic di-GMP mediated type-iv pilus biosynthesis. Veronique TAYLOR, University of Toronto, M.S. SHAH¹, Y.T. TSAO¹, J. BONDY-DENOMY², L.L. BURROWS³, T.F. MORAES¹, A.R. DAVIDSON¹, K.L. MAXWELL¹, ¹University of Toronto, ²University of California, San Francisco, ³McMaster University

MGCM 092

The role of ubiquinone in the osmotic stress response of *Escherichia coli*. Laura TEMPELHAGEN, University of Guelph, JM WOOD¹, ¹University of Guelph

MGCM 093

Pacifying the Beast: Protein Off-Switches for CRISPR-Cas9 Genome Editing. Annoj THAVALINGAM, University of Toronto, B. GARCIA¹, M. SHAH¹, A. PAWLUK¹, T.F. MORAES¹, E.S. SONTHEIMER², A.R. DAVIDSON¹, K.L. MAXWELL¹, ¹University of Toronto, ²University of Massachusetts Medical School

MGCM 094

What's for Dinner? Probing Bacterial Central Metabolism in the Context of Different Carbon Environments. Madeline TONG, McMaster University, S. FRENCH¹, E. D. BROWN¹, ¹McMaster University

MGCM 095

Studying the role of the AdeIJK RND efflux pump and its unlinked regulator AdeN in resistance and virulence in *Acinetobacter baumannii*. Mark UNGER, University of Manitoba, P CHONG¹, G WESTMACOTT¹, A KUMAR², ¹Public Health Agency of Canada, ²University of Manitoba

MGCM 096

Investigating the mechanisms by which the transcription factor Hsf1 regulates *Candida albicans* morphogenesis. Amanda VERI, University of Toronto, TR O'MEARA¹, RS SHAPIRO², F TEBBJI³, SH KIM¹, J COLAZO¹, N ROBBINS¹, M WHITEWAY⁴, KH WONG⁵, LE COWEN¹, ¹University of Toronto, ²Broad Institute, ³Université de Laval, ⁴Concordia University, ⁵University of Macau

MGCM 097

Comparison of Residues Important for Function of Synthases Involved in Bacterial Polysaccharide Synthesis. Samantha WEAR, University of Guelph, B.R. CLARKE¹, C. WHITFIELD¹, ¹University of Guelph

MGCM 099

A functional and mechanistic analysis of the *Streptococcus intermedius* B196 sil system. Bryan WU, McMaster University, ML MENDONCA¹, MG SURETTE¹, ¹McMaster University

MGCM 100

Oligonucleotides/aptamers based biosensing technology development for microbes and viruses detection. Emre YURDUSEV, INRS-Institut Armand Frappier, FK KHALFAOUI¹, RP PAVIC², RW WALSH¹, BS SELLAMUTHU¹, JP PERREAULT¹, ¹INRS-Institut Armand Frappier, ²Université Rennes I

MGCM 101

Characterizing Choline Kinase/Phosphocholine Cytidylyltransferase from *O. uli*. Zahra YUSSUF, Wilfrid Laurier University, GH HORSMAN¹, ¹Wilfrid Laurier University

MGCM 102

Controlling Antibiotic Production in *Streptomyces* Bacteria. Xiafei ZHANG, McMaster University, E.J. SHERWOOD¹, M.A. ELLIOT¹, ¹McMaster University

MGCM 103

Mutation in FtsH Rescue the Intracellular Growth of *Legionellapneumophila* Strain MavNΔeblock. Guangqi ZHOU, University of Toronto, A ENSMINGER¹, ¹University of Toronto

MGCM 104

Substrate-Dependent Solvent Fermentation by *Clostridium beijerinckii* NRRL-B593. Xiao ZHU, University of Waterloo, Y JIN¹, J ZHAO¹, K JOHNSTON¹, X ZHANG¹, K MA¹, ¹University of Waterloo

MGCM 105

Identification of Biologically Relevant Binding Partners of SH3 Domains using Compensatory Mutation Approach. Yun ZHU, University of Toronto, M. GORELIK¹, A.R. DAVIDSON¹, ¹University of Toronto

MGCM 106

The mitogenome of *Ceratocystis resinifera*: large mtDNAs dominated by introns and their encoded open reading frames. Abdullah ZUBAER, University of Manitoba, A WAI¹, G HAUSNER¹, ¹University of Manitoba

MGCM 107

Searching for a Natural Product Inhibitor of the Tetracycline Efflux Pump TetA. Haley ZUBYK, McMaster University, GD WRIGHT¹, ¹McMaster University

MGCM 108

Plant polysaccharides regulate biofilm formation in *Bacillus subtilis* on the roots. Maude THÉRIEN, Université de Sherbrooke, C. MORIN¹, P. B. BEAUREGARD¹, ¹Université de Sherbrooke