

CURRICULUM VITAE

Current to July 2026

Dr. George G. ZHANEL, FCAHS**(Medical Microbiologist and Clinical Pharmacologist)****PERSONAL INFORMATION**

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Email:	ggzhanel@pcsinternet.ca		

Birth Date:	April 18, 1962
Birth Place:	Olomouc, Czechoslovakia (Canadian citizen)
Marital Status:	Married (Wife-Zuzana, 2 sons Stefan-1992 and Michael-1994)

ACADEMIC QUALIFICATIONS

1994	Ph.D. in Medical Microbiology University of Manitoba Faculty of Medicine Winnipeg, Manitoba, Canada
1986	Doctor of Clinical Pharmacy (magna cum laude-with great distinction) University of Minnesota Minneapolis, Minnesota, USA
1984	Bachelors of Pharmacy and Pharmaceutical Sciences University of Manitoba Winnipeg, Manitoba, Canada

CURRENT POSITIONS

2022-Present	Associate Head, Department of Medical Microbiology/Infectious Diseases, Max Rady College of Medicine, Rady Faculty of Health Sciences, University of Manitoba, Winnipeg, Canada
2002-Present	Professor, Department of Medical Microbiology/Infectious Diseases, Max Rady College of Medicine, Rady Faculty of Health Sciences, University of Manitoba, Winnipeg, Canada
2006-Present	Director - Canadian Antimicrobial Resistance Alliance (CARA), Max Rady College of Medicine, Rady Faculty of Health Sciences, University of Manitoba, Winnipeg, Canada

PREVIOUS POSITIONS

2013-2019	Course Leader – Infectious Diseases/Medical Microbiology, Undergraduate Medical Education (UGME), Max Rady College of Medicine, Rady Faculty of Health Sciences, University of Manitoba, Winnipeg, Canada
1996-2006	Chair - Antimicrobial Resistance Research Group, Faculty of Medicine, University of Manitoba, Winnipeg, Manitoba, Canada
1994-2006	Coordinator - Antibiotic Resistance Program, Section of Infection Control, Department of Medicine, Health Sciences Centre, Winnipeg, Canada
1999-2002	Associate Professor, Department of Medical Microbiology/Section of Infectious Diseases, Faculty of Medicine, University of Manitoba, Winnipeg, Manitoba, Canada
1999-2002	Professor, Faculty of Pharmacy, University of Manitoba, Winnipeg, Manitoba, Canada
1994-1999	Assistant Professor, Department of Medical Microbiology/Section of Infectious Diseases, Faculty of Medicine, University of Manitoba, Winnipeg, Manitoba, Canada
1994-1999	Associate Professor, Faculty of Pharmacy, University of Manitoba, Winnipeg, Manitoba, Canada
1994-1997	Head - Division of Clinical Sciences and Practice, Faculty of Pharmacy, University of Manitoba, Winnipeg, Manitoba, Canada.
1990-1994	Doctor of Philosophy Candidate, Department of Medical Microbiology, Faculty of Medicine, University of Manitoba, Winnipeg, Manitoba, Canada
1989-1990	Postdoctoral Research Fellow, Department of Medical Microbiology, Faculty of Medicine, University of Manitoba, Winnipeg, Manitoba, Canada
1987-1994	Assistant Professor, Faculty of Pharmacy, University of Manitoba, Winnipeg, Manitoba, Canada
1987-1989	Clinical Instructor, St. Boniface General Hospital, Winnipeg, Manitoba, Canada
1986-1987	Clinical Specialist in Infectious Diseases, Health Sciences Centre, Winnipeg, Manitoba, Canada

UNIVERSITY OF MANITOBA ADMINISTRATIVE POSITIONS

2022-Present	Associate Head, Department of Medical Microbiology/Infectious Diseases, Max Rady College of Medicine, Rady Faculty of Health Sciences, University of Manitoba, Winnipeg, Canada
1998-1999	Acting Dean, Faculty of Pharmacy, University of Manitoba, Winnipeg, Manitoba, Canada

1997-1999 Associate Dean Research, Faculty of Pharmacy, University of Manitoba, Winnipeg, Manitoba, Canada

ADDITIONAL TRAINING

1996 Animal Infection Models-pharmacokinetics/pharmacodynamics (murine models of pneumonia, tissue cage, subcutaneous thread, thigh and peritonitis, rabbit models of meningitis and endocarditis) Antimicrobial Chemotherapy Workshop, Reykjavik, Iceland.

1992 BRL Recombinant DNA Techniques Workshop, University of Manitoba, Winnipeg, Manitoba, Canada

1990 Training in Dr. William Craig's Laboratory, Madison, Wisconsin. "Pharmacokinetics/pharmacodynamics: The postantibiotic effect in a neutropenic mouse thigh model".

1990 Training in Dr. John Hopkin's Laboratory, Madison, Wisconsin. "Pharmacokinetics/pharmacodynamics in a urinary tract infection in a mouse model".

TEACHING EXPERIENCE

1987 - Present **University of Manitoba, Max Rady College of Medicine**

Medicine I – Course Leader/Instructor – Infectious Diseases, 2013 – Present

- Treatment and prevention of common infectious diseases in adults and pediatrics (bone and joint, central nervous system, device-related, ear, intraabdominal, ocular, peptic ulcer disease, respiratory, skin and soft tissue, urinary). Antibiotic use in dermatology. Probiotics and fecal microbiota transplants
- Antibiotic concepts, cell wall active antibiotics, protein synthesis inhibitors, other antibiotics, antibiotic resistance, antibiotic applications, antifungals, antiparasitics, antivirals, disinfectants, sterilizers, antiseptics, antimicrobial coated surfaces, vaccines
 - Block 1 Infectious Diseases Session leader, 2004-2013
- Antibiotic concepts, pharmacokinetics/pharmacodynamics, cell wall active antibiotics, protein synthesis inhibitors, other antibiotics, antibiotic resistance, antibiotic applications, pathogenesis, immune system, vaccines, normal microbiota, introduction to microbes, Enterobacterales, *Pseudomonas aeruginosa*, Staphylococci, Streptococci, non-fermenters, anaerobes, *Helicobacter pylori*, infectious principles, treatment of infections in adults and pediatrics. Antibiotic use in dermatology.
- Tutorials on normal human microbiota, *S. aureus*, *S. pyogenes*, *E. coli*, Tuberculosis/antitubercular agents, viral infections/antivirals, infection prevention/public health, fungal infections/antifungals, parasitic infections/antiparasitics
 - Infectious Diseases Laboratory Session, 1991-1995
 - Normal microbiota, probiotics, disinfectants, sterilizers, antiseptics, vaccines
 - Defense Mechanisms and Therapeutics, 2000 - 2004
 - Antibiotic concepts, pharmacokinetics/pharmacodynamics, cell wall active antibiotics, protein synthesis inhibitors, other antibiotics, antibiotic resistance, antibiotic applications, antivirals, antifungals, antiparasitics,

disinfectants, preservatives, sterilizers, antiseptics, vaccines

- Block 3 Infectious Diseases course director, 2009-2013

Viral infections/antivirals, influenza, respiratory infections, infections in travellers and HIV/AIDS

Medicine II - Infectious Diseases, 1993-1999.

- Antibiotic concepts, pharmacokinetics/pharmacodynamics, cell wall active antibiotics, protein synthesis inhibitors, other antibiotics, antibiotic resistance, antibiotic applications, viral infections/antivirals, preservatives, disinfectants, sterilizers, antiseptics, topical antibiotics, antibiotics in pregnancy, treatment of infections in adults and pediatrics, probiotics

Medicine III - Mini-Hospital Microbiology Laboratory Session, 1991-1995

- Therapeutics in Infectious Diseases (pediatrics, adults and elderly), therapeutics in pregnancy and lactation, tutorials on antibiotic use in the treatment of adult and pediatric infectious diseases, pharmacokinetic/pharmacodynamic concepts

1993-Present

- Infectious Diseases/Antibiotic Review

Review of antibiotics and their use in the treatment of common infectious diseases (bone and joint, central nervous system, device-related, ear, intraabdominal, ocular, peptic ulcer disease, respiratory, skin and soft tissue, urinary), new vaccines. Antibiotic use in dermatology.

Medicine IV - Infectious Diseases/Antibiotic Review 2003-present.

- Review of antibiotics, pharmacokinetic/pharmacodynamic concepts, uses in the treatment of common infectious diseases (bone and joint, central nervous system, device-related, ear, intraabdominal, ocular, peptic ulcer disease, respiratory, skin and soft tissue, urinary). Antibiotic use in dermatology. Antimicrobial coated surfaces. Probiotics and fecal microbiota transplants.

Infectious Diseases Postdoctoral Fellows - 2002-present

Clinical Infectious Diseases Lecture Series

- New vaccines
- Antibiotic resistant infections
- Review of commonly used antibiotic classes
- Using pharmacokinetic/pharmacodynamic principles in practice
- Drug interactions and their mechanisms
- New and investigational antimicrobials
- Bacterial causes and treatment of infectious diseases (bone and joint, central nervous system, device-related, ear, intraabdominal, ocular, peptic ulcer disease, respiratory, skin and soft tissue, urinary)
- Preservatives, disinfectants, sterilizers, antiseptics
- Antimicrobial coated surfaces
- Probiotics and fecal microbiota transplants

Internal Medicine/Emergency Residents - 2007-present

Clinical Infectious Diseases Lecture Series

- Antibiotic resistant infections
- Pharmacokinetic/pharmacodynamic principles
- Kidney and liver as metabolic/excretion systems
- Drug interactions and their mechanisms
- New antibiotics and new vaccines

Department of Pharmacology and Therapeutics

Pharmacology 89.713, 1995-Present

One 3 hour seminar on cellular and molecular mechanisms of antimicrobial action

Pharmacology 2100, 1995-2013

Principles of therapy, pharmacokinetic/pharmacodynamic principles, drug interactions and their mechanisms, kidney and liver as metabolic/excretion systems, penicillins/cephalosporins, carbapenems, chloramphenicol, tetracyclines/glycylcyclines, glycopeptides/lipopeptides, aminoglycosides, quinolones, macrolides/ketolides, monobactams, oxazolidinones, polymyxins, antitubercular drugs, sulfonamides and antifolates, antimicrobials with special indications, antibiotics in pediatrics, adults, elderly, pregnancy and lactation, topical antibiotics, antiparasitic agents, preservatives, disinfectants, sterilizers, antiseptics, vaccines. Bacterial causes and treatment of infectious diseases (bone and joint, central nervous system, device-related, ear, intraabdominal, ocular, peptic ulcer disease, respiratory, skin and soft tissue, urinary).

Pharmacology 4040, 2009-Present

Antimicrobial selection, antimicrobial resistance

Department of Medical Microbiology/Infectious Diseases

The Molecular Basis of Infection and Antibiotic Action MMC 7160, 1996-Present

Course Director

Eight 3 hour tutorials on the cellular and molecular mechanisms of action and resistance of antimicrobials, pharmacokinetics/pharmacodynamics of antimicrobials, drug interactions, antivirals and agents with antimicrobial activity including preservatives, disinfectants, sterilizers, antiseptics. Antimicrobial coated surfaces. Probiotics and fecal microbiota transplants. 2020-present, prevention and treatment of COVID-19 (SARS-CoV-2) infection, influenza, RSV and invasive pneumococcal infection

Microbial Pathogenicity MMC 7050, 2004-Present

Antibiotic resistance

Two 3 hour lecture/tutorials on the cellular and molecular mechanisms of antibiotic action/resistance.

Ecology of Infectious Diseases MMC 7220, 2010-Present

Introduction to infectious diseases

Two hour lecture/tutorial on the principles and practice of infectious diseases.

Antibiotics in Infectious Diseases 1987-1989

Course Director, Infectious Diseases Fellows, Sections of Pediatric and Adult

Infectious Diseases/Medical Microbiology, University of Manitoba
Principles of antimicrobial chemotherapy, pharmacokinetic/pharmacodynamic principles, drug interactions and their mechanisms, kidney and liver as metabolic/excretion systems, treatment of common infections in adults and pediatrics, penicillins, cephalosporins, carbapenems, monobactam, aminoglycosides, fluoroquinolones, macrolides, glycopeptides, sulfonamides, tetracyclines, agents with antimicrobial activity including non-traditional antimicrobials, preservatives, disinfectants, sterilizers, antiseptics, antifungals, antivirals, antiparasitics, antitubercular agents, vaccines

Continuing Education/Medical Microbiology, 1989, Course Instructor, Certificate in Infection Control in Health Care Program - Antimicrobial Pharmacology Section, University of Manitoba – Principles of infection prevention and agents/systems used for infection prevention

University of Manitoba, Faculty of Science

Microbiology - Mechanisms of Microbial Diseases (MBIO3010), 1993-2024

Mechanism of action and resistance of: cell wall active antibiotics, protein inhibitors, other antibiotics, antiviral agents, antifungal agents. Resistance mechanisms.

University of Manitoba, Faculty of Pharmacy

Clinical Pharmacy Tutorials 46.438, 1987-1991

Introduction, pharmacokinetic/pharmacodynamic concepts of drugs, drug interactions (including the P450 system) and their mechanisms, kidney and liver as metabolic/excretion systems, thromboembolism and cerebrovascular disease, angina pectoris/myocardial infarction, congestive heart failure, review tutorial, hypertension and hypertensive emergencies, congestive heart failure, peptic ulcer disease, seizure disorders, rheumatoid arthritis, management of acute and chronic pain, urinary tract infection, respiratory tract infection, eye/ear/nose and throat infections, clinical toxicology, management of malignancies

Therapeutics 46.435, 1987-1991

Arrhythmias and antiarrhythmic agents, principles of oncology & chemotherapy and chronic pain management, AIDS - acquired immunodeficiency syndrome

Antibiotics in Infectious Diseases 46.443, 1991-1994; 46.341, 1994-1998

Course Director

Treatment of infectious diseases in pediatrics, adults and elderly. Introduction to microbiology, infectious diseases and the microbiology laboratory, pharmacokinetic/pharmacodynamic principles, drug/drug interactions and their mechanisms, kidney and liver as metabolic/excretion systems, penicillins, cephalosporins, other beta-lactams, vancomycin, aminoglycosides, fluoroquinolones, sulfonamides, tetracyclines, antiviral agents, antifungal agents, antitubercular agents, antiparasitic agents, agents used for urinary tract infections, treatment of HIV/AIDS, treatment of respiratory infections (including tuberculosis), treatment of ear infections, treatment of peptic ulcer disease, prevention and treatment of eye infections, prevention and treatment of dental

infections, prophylaxis for travelers, treatment of viral infections, mechanisms of antibiotic resistance, antibiotics in pregnancy, lactation, neonates, agents with antimicrobial activity including non-traditional antimicrobials, preservatives, disinfectants, sterilizers, antiseptics, vaccines. Antimicrobial coated surfaces. Probiotics and antibiotic use in dermatology.

Professional Practice II 46.441, 1987-1993

Course coordinator for hospital dispensing section-pharmaceutical chemistry in clinical practice

Drug Induced Diseases 46.451, 1995-1996

Course Director

Thirteen 3 hour seminars/tutorials regarding clinical pharmacokinetics/pharmacodynamics, bioequivalence, interchangeability, drug/drug interactions, kidney and liver as metabolic/excretion systems and clinical therapeutics

Drug Information 46.342, 1995-1996

Three 2 hour seminars/tutorials regarding drug literature evaluation

Advanced Topics: Antibiotics and the Treatment of Infectious Diseases 46.709, 1996-1998

Thirteen 3 hour seminars/tutorials regarding clinical pharmacokinetics/pharmacodynamics, drug/drug interactions, kidney and liver as metabolic/excretion systems and clinical therapeutics

Medical and Scientific Writing 46.711, 1996-2003

Course Director-Clinical pharmacokinetics and pharmacodynamics in research and clinical practice

Pharmaceutical Sciences Laboratory 46.452, 1996-2002

Two day laboratory session on pharmaceutical chemistry and biotechnology

Medicinal Chemistry IV - Drug Design 46.453, 1996-2002

Two hours on cellular and molecular mechanisms of action and resistance of bacteria

Medicinal Chemistry 46.340, 1997-1998, 2001-2002

Twelve hours on structure/activity relationships of antimicrobial agents, antivirals, preservatives, disinfectants, sterilizers, antiseptics

Continuing Education, Department of Pharmacy, St. Boniface Hospital 1988

Course Director

Therapeutics of cancer and cancer chemotherapy, acute and chronic pain management, musculoskeletal diseases, eye ear nose and throat infections

University of Manitoba, School of Nursing

Prevention of Illness and Disability in Nursing II 49.414, 1988-1995

Use of pharmacological agents during labour and delivery

Health Restoration in Nursing III 49.329, 1992-1996

Antimicrobial agents commonly used in nursing, drugs in pregnancy, lactation and neonates. Probiotics in infants and children.

Nurse Practitioner Program 2010-2024

Treatment and prevention of infectious diseases in pediatrics and adults. Probiotics in infants and children. Antimicrobial review.

Continuing Education, Department of Nursing, St. Boniface General Hospital 1988

Course Director

Therapeutics of cardiovascular diseases (Medical wards only)

Red River Community College

Medical Laboratory Technology Program 2007-Present

Antimicrobial resistant infections/New antimicrobials

UNERGRADUATE STUDENT/TRAINEE SUPERVISION

2025	Danylo Kruk, Summer research Student Project: CANWARD 2025 Support: Multi-industry
2025	Mai Le, Microbiology Co-op Student Project: CANWARD 2024/2025 Support: NML – Multi-industry
2024	Stacey Mikolayanko, Summer writing Student Project: Cefepime/taniborbactam Support: Venatorx
2024	Celine Mansour, Summer writing Student Project: Cefepime/taniborbactam Support: Venatorx
2024	Cole Lysak, Summer research Student Project: CANWARD 2024 Support: Multi-industry
2024	Cole Lysak, Microbiology Co-op Student Project: Characterization of Fosfomycin-resistant <i>E. coli</i> Support: NML – Dr Laura Mataseje
2023	Cole Lysak, Microbiology Co-op Student Project: SAVE 2022 Support: Multi-industry
2023	Cole Lysak, Microbiology Co-op Student Project: CANWARD 2022 Support: Multi-industry

2022	Jay Wieler, Microbiology Co-op Student Project: CANWARD 2021 and SAVE 2021 Support: Multi-industry
2022	Brielle Funk, Spring/Summer research student Project: CANWARD 2021/2 and SAVE 2021/2 Support: Multi-industry
2021	Marianna Pozdirca, Summer research student Review article on sulopenem Support: Iterum
2021	Brielle Funk, Summer research student Project: CANWARD 2020 and SAVE 2020 Support: Multi-industry
2020	Christina Deng, Summer research student Review article on lefamulin Support: Nabriva/Sunovion
2020	Brielle Funk, Summer research student Project: CANWARD 2019 and SAVE 2019 Support: Multi-industry
2019	Jenine Esquivel, Summer research student Review article on omadacycline Support: Paratek
2019	Kevin Stein, Summer research student Project: CANWARD 2019 and SAVE 2019 Support: Multi-industry
2018	Olia Katchanovski, Microbiology Co-op Student Project: Assessment of sulopenem activity versus multi-drug resistant <i>E. coli</i> Support: Iterum Therapeutics
2018	Brielle Funk, Microbiology Co-op Student Project: Assessment of imipenem/relebactam versus CANWARD pathogens Support: Multi-industry
2018	Christopher Dutka, Summer research student Ribotyping and toxin characterization from <i>Clostridium difficile</i> across Canada (CAN-DIFF 2017-2018) Support: Merck
2018	Karyn Wiebe, Summer research student Review article on cefiderocol Support: Shionogi
2018	Prahbnoor Osahan, Summer research student

- Project: CANWARD 2018 and SAVE 2018
Support: Multi-industry
- 2017 Courtney Lawrence, Summer research student
Project: Review paper on imipenem/relebactam and meropenem/vaborbactam for the treatment of resistant Gram-negative infections
Support: Internal support
- 2017 Kelsey Weshnoweski, Summer research student
Project: CANWARD 2017 and SAVE 2017
Support: Multi-industry
- 2017 Christopher Dutka, Summer research student
Project: In vitro activity of cefovecin, omadacycline and sulopenem versus Gram-positive and Gram-negative pathogens
Support: Multi-industry
- 2017 Rachel Hink, Summer research student
Project: Molecular epidemiology of *Streptococcus pneumoniae* in the SAVE study
Support: Multi-industry
- 2016 Mitchell Chiu, Microbiology Co-op Student
Project: Characterization of *Clostridium difficile* from CAN-DIFF 2016 and 2016
Support: Multi-Industry
- 2016 Erika Hartel, Summer research student
Project: Review paper on solithromycin in the treatment of community acquired respiratory tract infections
Support: Internal support
- 2016 Rheann Brownstone, Summer research student
Project: CANWARD 2016 and SAVE 2016
Support: Multi-industry
- 2016 Kate Parkinson, Summer research student
Project: Molecular analysis of resistant *Streptococcus pneumoniae* in SAVE
Support: Multi-industry
- 2016 Rachel Hink, Summer research student
Project: Pharmacodynamics of fosfomycin versus multi-drug resistant *E. coli*
Support: Paladin/Zambon
- 2015 Zhandir Narrandes, Summer research student
Project: Molecular analysis of resistant *Streptococcus pneumoniae* in CANWARD
Support: Multi-industry
- 2015 David Snyder, BSc Med Student
Project: Characterization of pediatric *Streptococcus pneumoniae* causing invasive pneumococcal disease across Canada
Support: CIHR/MMSF

- 2015 Sean Higgins, Summer research student
Project: Pharmacodynamic modeling of fosfomycin versus urinary pathogens
Support: Paladin/Zambon
- 2015 Courtney Lawrence, Summer research student
Project: Characterization of *Streptococcus pneumoniae* across Canada in SAVE and CANWARD
Support: Multi-Industry
- 2015 Rachel Hink, Summer research student
Project: CANWARD 2015 and SAVE 2015
Support: Multi-Industry
- 2015 Alexander Tsibulski, Summer research student
Project: Ribotyping and toxin characterization from *Clostridium difficile* across Canada (CAN-DIFF 2013-2015)
Support: Optimer/Cubist
- 2015 Camille Manansala, Summer research student
Project: Review paper on fosfomycin for the treatment of acute uncomplicated urinary tract infections
Support: Paladin/Zambon
- 2015 Doris Cheung, Summer research student
Project: Review paper on Eravacycline
support: TetraPhase
- 2015 Jon Klassen, Microbiology Co-op Student
Project: Characterization of the 10 most common serotypes and virulence of *Streptococcus pneumoniae* across Canada in Canada (SAVE 2011-14)
Support: Multi-Industry
- 2015 Kate Parkinson, Microbiology Co-op Student
Project: Pharmacodynamic activity of fosfomycin versus ESBL *E. coli* using an in-vitro pharmacodynamic model
Support: Paladin
- 2014 Alexander Tsibulski, Microbiology Co-op Student
Project: Characterization of serotypes, antimicrobial resistance and virulence of *Streptococcus pneumoniae* across Canada in 2012-4 (SAVE 2012-14)
Support: Multi-Industry
- 2014 Will MacDougall, Summer research student
Project: Characterization of resistant Gram-negative and Gram-positive pathogens in Canada
Support: Vice-President Research (University of Manitoba)
- 2014 Jordan Dupuis, Summer Research Student
Project: Antimicrobial activity of agents used to treat community acquired urinary infections
Support: Multi-industry

2014	Courtney Lawrence, Summer research student Project: CANWARD 2014, SAVE 2014 Support: Multi-industry
2014	Riley Love, Summer research student Project: Review paper on Tedizolid Support: Trius/Cubist
2013	Tyler Denisuik, Summer Research Student Project: Virulence assessment of invasive <i>Streptococcus pneumoniae</i> Support: Vice-President Research (University of Manitoba)
2013	Nikesh Tailor, Summer Research Student Project: CANWARD 2013 Support: Multi-Industry
2013	Shivangi Vashisht, Microbiology Co-op Student Project: Ertapenem pharmacodynamics versus ESBL producing <i>E. coli</i> at standard and high inocula Support: Merck
2013	Jordan Dupuis, Summer Research Student Project: CANWARD 2013 Support: Multi-industry
2013	Chris Yachison, Summer Research Student Project: Activity of ampicillin/sulbactam versus pathogens in Canadian hospitals Support: Pfizer
2013	Phillip Chung, Summer Research Student Project: Review paper on Ceftolozane/tazobactam Support: Cubist
2013-2014	Margot Rosenthal, BSc Med Student Project: Characterization of multi-drug resistant and extremely-drug resistant <i>Streptococcus pneumoniae</i> in Canadian hospitals Support: CIHR/MMSF
2012	Chris Yachison, BSc Honors Project Project: Characterization of MRSA in Canadian hospitals 2010/2011 Support: Multi-Industry
2012	Chris Lawson, Summer Research Student Project: Review paper on Ceftazidime/avibactam Support: AstraZeneca
2012	Alyssa Golden, Summer Research Student Project: Characterization of serotypes, antimicrobial resistance and virulence of <i>Streptococcus pneumoniae</i> across Canada in 2012 (SAVE 2012) Support: Canadian Foundation for Infectious Diseases (CFID)

2012	Margot Rosenthal, Summer Research Student Project: CANWARD 2012 Support: Multi-Industry
2012	Leanne Scharikow, Microbiology Co-op Student Project: Characterization of serotypes, antimicrobial resistance and virulence of <i>Streptococcus pneumoniae</i> across Canada in 2011 (SAVE 2011) Support: Multi-Industry
2011	Chris Yachison, Summer Research Student Project: Pharmacodynamic modeling of ertapenem, ceftaroline and comparators against resistant pathogens Support: Cerexa/Merck
2011	Chris Lawson, Summer Research Student Project: Review paper on ACHN-490 and aminoglycosides Support: Achaogen
2011	Leanne Scharikow, Summer Research Student Project: CANWARD 2011 Support: Multi-industry
2011	Andrew Denisuik, Summer Research Student Project: CANWARD 2011 Support: Multi-industry
2011	Aaron Onio, Microbiology Co-op Student Project: Characterization of hVISA in Canadian hospitals CANWARD 2007-2010 Support: Multi-Industry/National Microbiology Laboratory
2010	Kali Teichroeb, Microbiology Co-op Student Project: Characterization of ESBL-producing <i>E. coli</i> in Canadian hospitals CANWARD 2010 Support: Multi-Industry
2010	Emma Rossnagel, Summer Research Student Project: Biological activity of aminoglycoside fusion antimicrobials Support: CIHR
2010-2012	Ben Fultz, BSc Med Student Project: Characterization of penicillin-resistant multi-drug resistant <i>Streptococcus pneumoniae</i> in Canadian hospitals Support: CIHR/MMSF
2010	Sheila Felsch, Summer Research Student Project: Pharmacodynamic modeling of ceftobiprole and ceftaroline against resistant pathogens Support: Multi-industry
2010	Lauren Cox, Summer Research Student

- Project: CANWARD 2010
Support: Multi-Industry
- 2010 Michael Onotera, Summer Research Student
Project: Biological activity of aminoglycoside fusion antimicrobials
Support: CIHR
- 2010 Sara Kost, Microbiology Co-op Student
Project: Assessment of hetero-resistant VISA from MRSA in Canadian hospitals
Support: Multi-Industry
- 2009 Kristjan Thompson, BSc Med Student
Project: Molecular characterization of community-associated methicillin-resistant *Staphylococcus aureus* (CA-MRSA)
Support: CIHR/MMSF
Project Awards: Dr. Jack Wilt Memorial Award; Dr. Norman and Margaret Corne Award
- 2009 Shelley Petersen, Summer Research Student
Project: Molecular epidemiology of MDR ESBL *E. coli* in Canada
Support: Multi-industry
- 2009 Divna Calic, Summer Research Student
Project: Review paper on oritavancin
Support: Targanta
- 2009 Lauren Cox, Summer Research Student
Project: Pharmacodynamic modeling of tigecycline, ceftobiprole and doripenem against resistant pathogens
Support: Wyeth and Ortho McNeil
- 2009 Lisa Bittner, Summer Research Student
Project: CANWARD 2009
Support: Multi-industry
- 2009 Leanne Scharikow, Summer Research Student
Project: CANWARD 2009
Support: Multi-industry
- 2008 Dylan Voth, Summer Research Student
Project: Pharmacodynamics of vancomycin and ceftobiprole against MRSA, VISA and VRSA
Support: Janssen Ortho
- 2008 Lisa Bittner, Summer Research Student
Project: CANWARD 2008 study
Support: Pfizer
- 2008 Amanpreet Singh, Summer Research Project
Project: Characterization of fluoroquinolone resistance mechanism in *E. coli* from CANWARD (assessment of *qnr*, *aac6'cr* and *qepA*)
Support: Manitoba Health Research Council (MHRC)

- 2008 Kristjan Thompson, BSc Med Student
Project: Molecular characterization of community-associated methicillin-resistant *Staphylococcus aureus* (CA-MRSA)
Support: CIHR/MMSF
Project Awards: Dr. Norman and Margaret Corne Award
- 2008 Grace Snizek, Summer Research Student
Project: Review of ceftaroline
Support: Cerexa/STI
- 2008 Haley Butcher, Summer Research Student
Project: CANWARD 2008 study
Support: Wyeth
- 2007 Erin Becker, BSc Med Student
Project: Molecular characterization of multi-drug resistant *E. coli* urinary tract isolates from North America
Support: CIHR
Project Awards: Morris Neaman Award, Dr. Jack Wilt memorial award, Midwest research forum travel award
- 2007 Nick Chiu, Microbiology Co-op Student
Project: Assessment of vancomycin MIC creep in bacteremic MRSA and MRSE
Support: Multi-Industry
- 2007 Franil Tailor, Summer Research Student
Project: CANWARD study
Support: Multi-Industry
- 2007 Stacie Langster, Summer Research Student
Project: CANWARD study
Support: Multi-Industry
- 2007 Ashley Lam, Summer Research Student
Project: Review on ceftobiprole
Support: Ortho McNeil
- 2007 Shannon Trapp, Summer Research Student
Project: Review on dalbavancin, telavancin
Support: Astellas
- 2007 Vibhu Vashisht, Summer Research Student
Project: Mutant prevention concentration with antibiotic combinations versus *Pseudomonas aeruginosa*
Support: Ortho McNeil
- 2007 Kristjan Thompson, Summer Research Student
Project: CANWARD Study
Support: Multi-Industry

- 2006 Erin Becker, BSc Med Student
Project: Molecular characterization of multi-drug resistant *E. coli* urinary tract isolates from North America
Support: CIHR
Project Award: Morris Neaman Award
- 2006 Ryan Wiebe, Summer Research Student
Project: Review on carbapenems
Support: Merck, Ortho McNeil
- 2006 Sam Kasloff, BSc Honors Project
Project: Molecular epidemiology of North American urinary isolates of multi-drug resistant *Escherichia coli*
Support: Procter and Gamble
- 2006 Leanne Dilay, Summer Research Student
Project: Review on piperacillin/tazobactam
Support: Wyeth
- 2006 Kristjan Thompson, Summer Research Student
Project: Mutant prevention concentration with antibiotic combinations versus *Pseudomonas aeruginosa*
Support: Internal
- 2005 Sam Kasloff, BSc Honors Project
Project: Molecular epidemiology of North American urinary isolates of multi-drug resistant *Escherichia coli*
Support: Procter and Gamble
- 2005 Xi Wang, BSc Med Student
Project: Molecular characterization of multi-drug resistant pediatric *Streptococcus pneumoniae* from Canada 1997-2003
Support: CIHR
Project Awards: Morris Neaman Award, Dr. Jack C. Wilt Memorial Award (Best Project in Infectious Diseases) and Midwest Student Research Forum Award
- 2005 Matt Mayer, Summer Research Student
Project: Molecular epidemiology of fluoroquinolone-resistant *E.coli* in North America
Support: Procter and Gamble
- 2005 Sonya Fontaine, Summer Research Student
Project: Review of fluoroquinolones in the treatment of infectious diseases
Support: Bayer and Bristol Myers Squibb
- 2005 Ryan Wiebe, Summer Research Student
Project: Pharmacodynamics of garenoxacin versus fluoroquinolone-resistant *S.pneumoniae* in clinical isolates
Support: Internal
- 2005 Sam Kasloff, Summer Research Student

- Project: Pharmacodynamics of ertapenem versus high level penicillin-resistant *S.pneumoniae*
Support: Merck
- 2005 Kathy Karlowsky, Summer Research Student
Project: Canadian Respiratory Organism Susceptibility Study (CROSS)
Support: Pfizer
- 2005 Ben Lulasnyk, Microbiology Co-op Student
Project: Molecular mechanisms of fluoroquinolone-resistant *S.pneumoniae* in clinical isolates
Support: Internal
- 2005 Andrew Walkty, Internal Medicine Resident
Project: Characterization of multi-drug resistant *S. pneumoniae*
Support: Wyeth
Award: First prize, Residents research day (clinical investigation poster) and selected for presentation at Canadian Society for Clinical Investigation/Canadian Association of Professors of Medicine Resident Research Awards Competition
- 2005 Joann James, Microbiology Co-op Student
Project: Pharmacodynamics of telithromycin versus macrolide-resistant *S.pneumoniae*
Support: Sanofi-Aventis
- 2004 Matt Mayer, BSc Honors Project
Project: Mutant prevention concentration (MPC) using combination antibiotics against *Pseudomonas aeruginosa*
Support: Internal
- 2004 Samol Mounq, Microbiology Co-op Student
Project: Pharmacodynamics of fluoroquinolones in a simulated colon model
Support: Internal
- 2004 Kevin Collins, Microbiology Co-op Student
Project: Mutational rates of macrolides and ketolides with *S.pneumoniae*
Support: Internal
- 2004 Jennie Greisman, Summer Research Student
Project: Sequencing of ketolide/macrolide resistant *S.pneumoniae*
Support: Internal
- 2004 Matt Mayer, Summer Research Student
Project: Pharmacodynamics of fluoroquinolones against *Pseudomonas aeruginosa*
Support: Internal
- 2004 Laura Danyluk, Microbiology Co-op Student
Project: Pharmacodynamics of fluoroquinolones with and without metronidazole versus *Bacteroides fragilis*
Support: Internal
- 2004 Haider Arishi, Pediatric Infectious Diseases Fellow

- Project: Serotyping of multi-drug resistant *S. pneumoniae*
Support: Wyeth
- 2004 Sheldon Derkatch, Summer Research Student
Project: Pharmacodynamics of Iclaprim and Trimethoprim/Sulfamethoxazole against *Streptococcus pneumoniae*
Support: Arpida
- 2004 Jamie Rusen, Summer Research Student
Project: DNA sequencing of L4, L22 and 23srRNA in ketolide-resistant *Streptococcus pneumoniae*
Support: Internal
- 2004 Xi Wang, BSc Med Student
Project: Molecular characterization of multi-drug resistant pediatric *Streptococcus pneumoniae* from Canada 1997-2003
Support: CIHR
Project Awards: Morris Neaman Award
- 2004 Kathy Karlowsky, Summer Research Student
Project: Surveillance of antibiotic resistant pathogens in Canada
Support: Abbott and Aventis
- 2004 Brian Milligan, Summer Research Student
Project: Surveillance of antifungal resistant pathogens in Canada
Support: Pfizer
- 2004 Kristen Schurek, Summer Research Student
Project: DNA sequencing of fluoroquinolone-resistant *Streptococcus pneumoniae* from Canada 1997-2003
Support: Ortho-McNeil
- 2004 Crystal Johansen, Summer Research Student
Project: Review on ertapenem
Support: CIHR/Merck
- 2004 Vanessa Goleski, Microbiology Co-op Student
Project: Pharmacodynamics of fluoroquinolones with and without metronidazole versus *Bacteroides fragilis*
Support: Internal
- 2004 Jennifer Tam, Microbiology Co-op Student
Project: Mutant prevention concentration of macrolides versus ketolides against *Streptococcus pneumoniae*
Support: Internal
- 2003 Sarah Tohme, Microbiology Co-op Student
Project: Single-step and multi-step resistance development with macrolides and ketolides versus wild-type and *mefE* *Streptococcus pneumoniae*
Support: Aventis

- 2003 Melissa Goolia, Microbiology Co-op Student
Project: Pharmacodynamics of fluoroquinolones with and without metronidazole versus *Bacteroides fragilis*
Support: Internal
- 2003 Chris Mendoza, Summer Research Student
Project: Review of garenoxacin
Support: BMS
- 2003 Jamie Rusen, Summer Research Student
Project: Pharmacodynamics of ketolides against ketolide resistant *Streptococcus pneumoniae*
Support: Aventis
- 2003 Chrystel Johansen, Summer Research Student
Project: Pharmacodynamics of garenoxacin against fluoroquinolone-resistant (ParC, efflux and GyrA mutants) *Streptococcus pneumoniae*
Support: BMS
- 2003 Carrie Selin, Microbiology Co-op Student
Project: Pharmacodynamics of AR-100 against trimethoprim-susceptible and trimethoprim-resistant *Streptococcus pneumoniae*
Support: Arpida
- 2003 Kristen Schurek, Summer Research Student
Project: Molecular characterization of fluoroquinolone resistant *Streptococcus pneumoniae*
Support: Internal
- 2003 Christine Dueck, Summer Research Student
Project: Characterization of non *mef* and non-*erm* macrolide resistant *Streptococcus pneumoniae*
Support: Abbott
- 2003 Dean Swedlo, B.Sc.Med. Research Student
Project: Molecular evolution of macrolide-resistance in *S.pneumoniae* in North America
Support: CIHR studentship
Project Awards: Nicholson Prize for greatest scientific merit and travel award
- 2003 Kathy Karlowsky, Summer Research Student
Project: Canadian Respiratory Organism Susceptibility Study (CROSS)
Support: Abbott
- 2002 Rhiannon Harris, Microbiology Co-op Student
Project: Pharmacodynamics of macrolides/ketolides against hyper-susceptible *Haemophilus influenzae*
Support: internal
- 2002 Andy Cumming, Summer Research Student
Project: Impact of antibiotics on normal colonic flora
Support: Career Placement

- 2002 Dean Swedlo, B.Sc.Med. Research Student
Project: Molecular evolution of macrolide-resistance in *S.pneumoniae* in North America
Support: CIHR studentship
- 2002 Chris Mendoza, Summer Research Student
Project: Pharmacodynamics of antibiotics against *Haemophilus influenzae*
Support: internal
- 2002 Kristen Homeniuk, Summer Research Student
Project: Review of glycyclcyclines
Support: Wyeth
- 2001 Brad Bewick, Summer Research Student
Project: Pharmacodynamics of B-Lactams vs. penicillin-resistant *S.pneumoniae*
Support: CIHR studentship
- 2001 Andrew Walkty, B.Sc.Med. Research Student
Project: Characterization of clinical *S.pneumoniae* isolates resistant to fluoroquinolones
Support: MRC Studentship
Project Awards: MMSF, Nicholson Prize for greatest scientific merit and MSD Scholarship
- 2001 Mike Walters, Summer Research Student
Project: Review of ketolides: focus on respiratory infections
Support: Aventis/Abbott
- 2001 Danielle Roberts, Summer Research Student
Project: Pharmacodynamics of Macrolides/Ketolides and fluoroquinolones vs *H.influenzae*
Support: internal
- 2001 Michelle Sill, Summer Research Student
Project: Molecular fingerprinting of vancomycin-resistant Enterococci (VRE)
Support: Procter Gamble
- 2001 Melanie DeCorby, Summer Research Student
Project: Pharmacodynamics of nitrofurantoin vs. urinary tract pathogens
Support: Procter Gamble
- 2000 Danielle Roberts, Summer Research Student
Project: Pharmacodynamics of Macrolides/Ketolides vs mefA and ermB *S.pneumoniae*
Support: internal
- 2000 Kelly Ennis, Summer Research Student
Project: Review paper on new fluoroquinolones
Support: Careerstart Grant
- 2000 Andrew Walkty, B.Sc.Med. Research Student
Project: Characterization of clinical *S.pneumoniae* isolates resistant to fluoroquinolones
Support: MRC Studentship

	Project Award: MMSF BSc Med Award
2000	Michael Walters, Summer Research Student Project: Molecular mechanisms of fluoroquinolone resistance in <i>S.pneumoniae</i> Support: MRC Studentship
2000	Coleen Schroeder, Summer Research Student Project: Review paper on oxazolidinones Support: Careerstart Grant/Pharmacia
1999	Maria Dueck, Summer Research Student Project: Review paper on macrolides/ketolides Support: Careerstart Grant/Pfizer
1999	Shouren Bose, Summer Research Student Project: Mechanisms of fluoroquinolone resistance in <i>Streptococcus pneumoniae</i> Support: Internal
1999	Michael Walters, Summer Research Student Project: Pharmacodynamics of fluoroquinolones against multi-drug resistant <i>Streptococcus pneumoniae</i> Support: Careerstart Grant
1999	David Saunders, B.Sc. Medicine Research Student Project: Clinical relevance of protein binding with antifungals Support: MRC Studentship
1998	Felix Lee, Summer Research Student Project: Cellular and molecular mechanism of G1 a new antimicrobial Support: Careerstart Grant
1998	Shouren Bose, Summer Research Student Project: Pharmacodynamics of LY333328 with gentamicin against multi-drug resistant Enterococci Support: Eli Lilly
1998	Andrew Walkty, Summer Research Student Project: Review paper on new fluoroquinolones in Canada Support: Internal
1998	Catherine Chernesky, B.Sc. Medicine Research Student Project: Pharmacodynamics of antituberculars against multiply drug resistant tuberculosis (MDR-TB) Support: MRC Studentship Project Award: Fillmore Riley Ade award in Experimental Medicine
1998	David Saunders, B.Sc. Medicine Research Student Project: Clinical relevance of protein binding with antifungals Support: MRC Studentship
1997	David Saunders, Summer Research Student

- Project: Multidose pharmacodynamics of antifungals against *Candida* spp.
Support: Children's Hospital Research Foundation (CHRF)
- 1997 Brent Booker, Summer Research Student
Project: Multidose pharmacodynamics of once daily gentamicin with glycopeptides against vancomycin-resistant *Enterococcus* (VRE)
Support: PMAC-HRF/MRC Studentship
- 1997 Catherine Chernesky, B.Sc. Medicine Research Student
Project: Pharmacodynamics of antituberculars against multiply drug resistant tuberculosis (MDR-TB)
Support: MRC Studentship
- 1996 Brent Booker, Summer Research Student
Project: Pharmacodynamics of glycopeptides in an *in vitro* model.
Support: PMAC-HRF/MRC Studentship
- 1996 Marilyn Saunders, B.Sc. Medicine Research Student
Project: Pharmacodynamics of antitubercular agents against *Mycobacterium avium* complex.
Support: MRC Studentship
- 1996 Iain Kirkpatrick, B.Sc. Medicine Research Student
Project: Effects of human serum on antibiotics.
Support: MRC Studentship
- 1996 Gary Harding, Summer Research Student
Project: Pharmacodynamics of antifungals against *Candida* spp.
Support: Careerstart Grant
- 1996 David Saunders, Summer Research Student
Project: Antibiotic susceptibility at the Health Sciences Centre and St. Boniface General Hospital from 1985-1995.
Support: Allied Health Research Foundation
- 1996 Sonal Purohit, Summer Research Student
Project: Cross-Canada survey of once-daily aminoglycoside dosing.
Support: Allied Health Research Foundation
- 1995 Gary Harding, Summer Research Student
Project: Pharmacodynamics of antifungals: Focus on Pradimicin
Support: Careerstart Grant
- 1995 Iain Kirkpatrick, B.Sc. Medicine Research Student
Project: Effects of human serum on antibiotics
Support: MRC Studentship
- 1995 Marilyn Saunders, B.Sc. Medicine Research Student
Project: Pharmacodynamics of antitubercular agents against *Mycobacterium tuberculosis*
Support: MRC Studentship
Project Award: Norman and Margaret Corne Memorial Scholarship

- 1995 David Saunders, Summer Research Student
Project: Antibiotic susceptibility at the Health Sciences Centre from 1984-1994.
Support: Careerstart Grant
- 1994 Joel Kroeker, Summer Research Student
Project: Postantibiotic effect using antibiotic combinations
Support: MRC Studentship
- 1994 Marilyn Saunders, Summer Research Student
Project: Amplification and DNA sequencing of *oprF* of *P.aeruginosa*
Support: Careerstart Grant
- 1994 Gary Harding, Summer Research Student
Project: Cell envelope changes of *P.aeruginosa* during adaptive resistance
Support: Internal
- 1994 Glen Drobot, B.Sc. Medicine Research Student
Project: Antibiotic activity in human urine using an *in vitro* model
Support: MRC Studentship
Project Award: Upjohn Achievement Award and travel award
- 1993 Marilyn Saunders, Summer Research Student
Project: Characterization of LPS of *P.aeruginosa* after fluoroquinolone exposure
Support: Careerstart Grant
- 1993 Glen Drobot, B.Sc. Medicine Research Student
Project: Antibiotic activity in human urine using an *in vitro* model
Support: MRC Studentship
- 1992 Shelley Zieroth, Summer Research Student
Project: Characterization of Opr's of *P.aeruginosa* after fluoroquinolone exposure
Support: Careerstart Grant
- 1991 James Karlowsky, Summer Research Student
Project: Postantibiotic after multiple aminoglycoside exposures
Support: MRC Studentship
- 1991 Joanne Crampton, Summer Research Student
Project: Fluoroquinolone effects on mucoid and non-mucoid *P.aeruginosa*
Support: Careerstart Grant
- 1991 Sung Kim, Summer Research Student
Project: Adherence of *P.aeruginosa* to Vero cells
Support: MRC Studentship
- 1990 James Karlowsky, Summer Research Student
Project: Postantibiotic effect and kill curves using aminoglycosides against *P.aeruginosa*
Support: MRC Studentship

Undergraduate/Graduate/Postgraduate Thesis Trainee Supervision

2011	David Martin, “Multi-drug resistant subbugs in hospitals: The problem and potential solutions” (Med IV MSR-Multiple Specialty Rotation)
2010	Khaleel Meghairbi “Optimizing pharmacodynamics of β -lactam antibiotics in the critically ill patient” (97.716 thesis)
2009	Larissa Seredycz, “Treatment of community-acquired infectious diseases in family practice” (Med IV MSR-Multiple Specialty Rotation)
2006-2007	Jay Hingwala, “Multi-drug resistant community-acquired methicillin-resistant <i>Staphylococcus aureus</i> -CA-MRSA (Med IV MSR-Multiple Specialty Rotation)
2006-2007	Ryan Wiebe “Mutant prevention concentration of carbapenems versus <i>Pseudomonas aeruginosa</i> ” (4 th yr Honors Project)
2005-2006	Sam Kasloff “Molecular epidemiology of North American urinary isolates of multi-drug resistant <i>Escherichia coli</i> ” (4 th yr Honors Project)
2004-2005	Matt Mayer “Mutant prevention concentration using fluoroquinolone combination therapy against <i>Pseudomonas aeruginosa</i> ” (4 th yr Honors Project)
2003-2004	Doug Priestly “ Antibiotic resistant infections in orthopedics” (Med IV MSR-Multiple Specialty Rotation)
2002-2003	Julie-Beaudin-Dyck “ Gatifloxacin-induced hepatitis” (Professional paper)
2002-2003	Debbie Friesen “ Moxifloxacin-induced QTc prolongation” (Professional paper)
2002-2003	Kristen Homenuik “ Pyrazinamide-induced hepatotoxicity” (Professional paper)
2002-2003	Harris Iacovides “ Gatifloxacin-induced alterations in glucose homeostasis” (Professional paper)
2002-2003	Krista MaCaulay “ Telithromycin-induced blurred vision” (Professional paper)
2002-2003	Meghan McKechnie “Role of trimethoprim-sulfamethoxazole in the empiric treatment of community acquired respiratory tract infections in adults in the year 2003” (Professional paper)
2001-2002	Sara Berg “Pyrazinamide-induced hepatotoxicity” (Professional paper)
2001-2002	Michael Walters “ Review of the Ketolides” (Professional Paper)
1999-2000	Sheri Miller and Nicola Ward “Role of bacteriophages in the treatment of infectious diseases” (Professional Paper)
1999-2000	Maria Dueck “Review of macrolides and ketolides in the treatment of respiratory infections” (Professional Paper)

- 1998-1999 Joanne Hutsal and Christine Tisdale "Role of Chlamydia in coronary artery disease: should patients be treated with antibiotics" (Professional Paper)
- 1998-1999 Gloria Oramasionwu and Andrew Strempler "Does Chlamydial infection lead to infertility in males" (Professional Paper)
- 1998-1999 Andrew Walkty "Mecillinam and pivampicillin induced carnitine deficiency" (Professional Paper)
- 1998-1999 Nhan Luong "Activity of macrolides against Haemophilus influenzae" (Professional Paper)
- 1997-1998 Brent Booker and Iain Findley "Pyrazinamide-induced hepatotoxicity" (Review Paper)
- 1997-1998 Olga Goltz and Tram Dinh "Role of methenamine mandelate in the treatment of urinary tract infection" (Review Paper)
- 1997-1998 Darryl Lancaster and Richard Sigesmund "Rifampin induced hepatotoxicity" (Review Paper)
- 1997-1998 Marilyn Cacaes and Sanjeev Patel "Use of nitrofurantoin in the treatment of urinary tract infections" (Review Paper)
- 1997-1998 Olga Goltz "Role of erythromycin in otitis media" (Professional Paper)
- 1997-1998 Tram Dinh "Zinc for the common cold" (Professional Paper)
- 1996-1997 Carey-Anne Lawson "Fluconazole induced hepatotoxicity" (Professional Paper)
- 1996-1997 Anju Bector "The use of erythromycin in diabetic gastroparesis" (Professional Paper)
- 1996-1997 Shannon Siemens "Antibiotic/oral contraceptive drug interactions" (Professional Paper)
- 1995-1996 Kelly White "The role of BCG vaccine in tuberculosis" (Professional Paper)
- 1995-1996 Michael Armas "Current status of the AIDS vaccine" (Professional Paper)
- 1991-1992 Sung Kim "Penicillin-binding proteins and their relationship to beta-lactam antimicrobials" (B.Sc. Pharm. thesis)
- 1991-1992 Nancy Cummings "Clinical significance of the paradoxical effects of antimicrobials" (B.Sc. Pharm. thesis)
- 1990-1991 James Karlowsky "The use of liposomal antimicrobials in the treatment of infectious diseases" (B.Sc. Pharm. thesis)

Post Doctoral Trainee Supervision

2024-Present	Dr. Elodie Gemme Support: Internal
2024-Present	Dr. Anissa Brahami Support: Internal
2024-Present	Dr. Curtis Quan Support: Internal
2023-Present	Dr. Jeremy Li Support: Internal
2022-2023	Dr. Morgan Alford Support: Internal
2020-2021	Dr. Robert Taylor Support: Internal
2018-2021	Dr. Thomas Fear Support: Internal
2018-2021	Dr. Alyssa Golden Support: Internal
2018-2020	Dr. Sarah Henni Support: Internal
2017-2020	Dr. Michael Onotera Support: Internal
2013-2014	Dr. Lorine Pelly Support: Internal
2011-2013	Dr. Shadi Sepheri Support: Internal
2009-2010	Dr. Jared Bullard Support: Internal
2008-2009	Dr. Oscar Larios Support: Internal
2008-2010	Dr. Sergio Fanella Support: Internal
2007-2009	Dr. Ahmed Haleis Support: Internal
2007-2008	Dr. Edward Tam Support: Internal

2006-2008	Dr. Philippe Lagace-Wiens Support: Internal
2006-2009	Dr. Andrew Walkty Support: Internal
2005- 2006	Dr. Anatoly Nikulin (Visiting scholar) Support: President of Russia Training Award
2004	Dr. Haider Arishi, Support: Internal
2000- 2004	Dr. Ayman Noreddin (Visiting scholar/post-doctoral fellow) Support: ACCP/Aventis Infectious Diseases Fellowship
1997-1999	Dr. Lavern Vercaigne Support: Glaxo Wellcome Infectious Diseases/ Pharmacokinetics Fellowship
1996-1998	Dr. James Karlowsky Support: PMAC-HRF/MRC Fellowship
1995-1997	Dr. Sheryl Zelenitsky Support: Eli Lilly Infectious Diseases Fellowship

Graduate Student/Trainee Supervision

2017-2020	Rachel Hink (MSc.) Whole Genome Sequencing of Invasive Penicillin-susceptible, penicillin-intermediate and penicillin-resistant <i>Streptococcus pneumoniae</i> isolated from the SAVE study Funding: Internal
2013-2021	Andrew Denisuik (MD/PhD) Characterization of ESBL and carbapenem resistant enterobacteriaceae in Canadian hospitals Funding: University of Manitoba Wu Graduate Student Scholarship
2012-2018	Alyssa Golden, (Ph.D.) Project: Molecular characterization of twelve predominant <i>Streptococcus pneumoniae</i> serotypes causing invasive infections in Canada from 2011-2015 Support: Canadian Foundation for Infectious Diseases (CFID), University of Manitoba studentship, Manitoba Health Research Council (MHRC) scholarship
2011-2013	Andrew Denisuik (MSc.) Characterization of ESBL and carbapenem resistant enterobacteriaceae in Canadian hospitals Funding: Dr. Allan Ronald Medical Microbiology student stipend
2009-2011	Franil Tailor (MSc.) Characterization of carbapenem reduced susceptibility and resistant <i>E. coli</i> and <i>Klebsiella</i> spp. in Canadian hospitals

Funding: Dr. Allan Ronald Medical Microbiology student stipend

- 2007-2012 Aleksandra Wierzbowski (Ph.D.)
Role of *mefA/E* in macrolide/ketolide resistant *S.pneumoniae*
Funding: Manitoba Institute for Child Health (MICH), Manitoba Health Research Council (MHRC)
- 2006-2011 Trish Baudry-Simner (Ph.D.)
Characterization of multi-drug resistant ESBL producing *E.coli* from intensive care unit units in Canada
Funding: Manitoba Health Research Council (MHRC)
- 2004-2006 Kristen Schurek (MSc.)
Role of efflux in fluoroquinolone-resistant *Streptococcus pneumoniae*
Funding: University of Manitoba Fellowship (2005 declined)
Manitoba Health Research Council Studentship (2005-2006)
- 2003-2006 Tamiko Hisanaga (Ph.D. Candidate)
Role of *mefA/E* efflux system in ketolide resistance in *Streptococcus pneumoniae*
Funding: Sanofi-Aventis
- 2002-2004 Mel DeCorby (M.Sc.)
Characterization of macrolide/ketolide efflux pumps in *H.influenzae*
Funding: Abbott/Sanofi-Aventis
- 2000-2003 Aleksandra Wierzbowski (M.Sc.)
Role of *mefA/E* in macrolide resistant *S.pneumoniae*
Funding: Abbott Laboratories
- 1996-2002 Anita Carrie (Ph.D.)
Effectiveness of TMP/SMX for pyelonephritis in Manitoba: Use of healthcare claims database
Funding: Leslie Buggey Scholarship (1996-1997)
University of Manitoba Fellowship (1997-1998, 1998-1999)
Manitoba Health Research Council Studentship (1999-2002)
- 1995-1997 Mark Friesen (M.Sc.)
Characterization of fluconazole-resistant *Candida albicans*
Funding: Leslie Buggey Scholarship (1995-1996)
Merck Frosst Graduate Scholarship (1996-1997)

External Thesis Examiner or Co-Supervisor

- 2026 - Present William Wilkinson, (M. Sc. Candidate) “Integrated genomic Sequencing and microbroth dilution analysis of antimicrobial resistance in *Mycobacterium avium* complex and *Mycobacterium abscessus* group in Canada”, Department of Medical Microbiology and Infectious Diseases, Max Rady College of Medicine, University of Manitoba.

- 2025 - Present Jack Vallis, (M. Sc. Candidate) “Mechanisms of antiseptic resistance in *E. coli* “, Department of Medical Microbiology and Infectious Diseases, Max Rady College of Medicine, University of Manitoba.
- 2024 - Present Ryan Darragh, (M. Sc. Candidate) “Expoloring the role of phospholipids influence antimicrobial resistance phenotypes in *E. coli*“, Department of Medical Microbiology and Infectious Diseases, Max Rady College of Medicine, University of Manitoba.
- 2024 - Present Camilo Suarez, (M. Sc. Candidate) “Antimicrobial resistance in *Neisseria gonorrhoea*“, Department of Medical Microbiology and Infectious Diseases, Max Rady College of Medicine, University of Manitoba.
- 2024 - 2025 Samuel Lawal, (M.Sc.) “Examining *Pseudomonas aeruginosa* copper tolerance transcriptomes of sink drain isolates and exploring the role of pH on antimicrobial copper activity“, Department of Medical Microbiology and Infectious Diseases, Max Rady College of Medicine, University of Manitoba.
- 2023 - 2025 Paula Pisadny, (M. Sc.) “distribution of the high priority pathogens across the one health continuum“, Department of Medical Microbiology and Infectious Diseases, Max Rady College of Medicine, University of Manitoba.
- 2023 - Present Christian Lozeau, (Ph.D. Candidate) “synthesis and antibiotic potentiating effects of amphiphilic nebramines“, Departments of Chemistry and Medical Microbiology, College of Medicine, University of Manitoba.
- 2023 - Present Danyel Ramirez, (Ph.D. Candidate) “development of non-cytotoxic polymyxin derivatives as antibiotic potentiators against Gram-negative bacteria“, Departments of Chemistry and Medical Microbiology, College of Medicine, University of Manitoba.
- 2022- 2025 Peter O'Reilly, (M. Sc.), “Identifying molecular mechanisms of cationic antimicrobial tolerance in *Klebsiella pneumoniae* and their antibiotic cross-resistance“, Department of Medical Microbiology/Infectious Diseases, Max Rady College of Medicine, University of Manitoba
- 2022- 2025 Genevieve Loiselle, (M. Sc.), “Examining *Escherichia coli* outer membrane vesicle fusion and their applications as antimicrobial resistance delivery vehicle“, Department of Medical Microbiology/Infectious Diseases, Max Rady College of Medicine, University of Manitoba.
- 2021 - 2026 Danzel Ramirez, (Ph.D.) “Synthesis and adjuvant properties of amphiphilic tobramycin and polymyxin derivatives“, Departments of Chemistry and Medical Microbiology, College of Medicine, University of Manitoba.
- 2020 - 2024 Liam Berry, (Ph.D.) “Exploring structure activity relationships of niclosamide to overcome colistin resistance“, Departments of Chemistry and Medical Microbiology, College of Medicine, University of Manitoba.
- 2020 - 2022 Karan Gandhi, (MSc.) “Targeting biofilm infection in cystic fibrosis using a trojan horse strategy“, Departments of Chemistry and Medical Microbiology, College of Medicine, University of Manitoba.

- 2019- 2026 Domenica De Luca, (Ph.D.), “Genomic Characterization of Antifungal Resistant *Candida* Pathogens”, Department of Medical Microbiology/Infectious Diseases, College of Medicine, University of Manitoba
- 2019- 2022 Derek Tan, (M. Sc.), “Correlation and prevalence of *Clostridioides difficile* on commercial meat samples and hospital acquired infections“, Department of Medical Microbiology/Infectious Diseases, College of Medicine, University of Manitoba
- 2019- 2022 Ali Doucet, (M. Sc.), “Characterization of biofilm formation, copper tolerance and disinfectant eradication of *Pseudomonas aeruginosa* isolated from hospital sink drains“, Department of Medical Microbiology/Infectious Diseases, College of Medicine, University of Manitoba.
- 2017-2018 Christine Peragine (Ph.D.), “Clinical burden of antibiotic resistance following implementation of a multidisciplinary antimicrobial stewardship team prospective audit and feedback initiative in a major tertiary care center (ARAST Study)) A controlled interrupted time series analysis over 14 years“, Leslie Dan Faculty of Pharmacy, University of Toronto, Toronto, Ontario.
- 2018- 2021 Shelby Reimer, (M. Sc.), “High-throughput approaches to identify and outer membrane vesicle contributions among cationic antimicrobial resistant *E. coli*“, Department of Medical Microbiology/Infectious Diseases, College of Medicine, University of Manitoba.
- 2018- 2021 Kieran Milner, (M. Sc.), “Determination of *Mycobacterium tuberculosis* multidrug efflux pump antimicrobial susceptibility profiles in the expression host *Mycobacterium smegmatis* mc²155“, Department of Medical Microbiology/Infectious Diseases, College of Medicine, University of Manitoba.
- 2018- 2022 Graham Cox, (M. Sc. Candidate), “High-throughput approaches to identify and outer membrane vesicle contributions among cationic antimicrobial resistant *E. coli*“, Department of Medical Microbiology/Infectious Diseases, College of Medicine, University of Manitoba.
- 2017- 2020 Branden Gregorchuk, (M. Sc.), “Development of a rapid fluorescent assay to assess Gram-negative membrane integrity“, Department of Medical Microbiology/Infectious Diseases, College of Medicine, University of Manitoba.
- 2017- 2024 Ruth Mwatelah, (Ph. D.), “Impact of sex work and behavioral factors on the immunological and microbiological milieu of young female sex workers in Mombasa. “, Department of Medical Microbiology/Infectious Diseases, College of Medicine, University of Manitoba.
- 2017- 2020 Niki Cartwright, (M. Sc.), “Analysis of membrane lipid and protein changes in *E. coli* exposed to cationic antimicrobial agents“, Department of Medical Microbiology/Infectious Diseases, College of Medicine, University of Manitoba.
- 2016- 2018 Mark Unger, (M. Sc.), “The role of AdeN as a global transcription regulator in *Acinetobacter baumannii* and its role in antibiotic resistance and virulence“, Department of Microbiology, Faculty of Science, University of Manitoba.

- 2016- 2021 Anton Kowalski, (M. Sc.), “Synergistic and antagonistic killing of combination antimicrobial regimens“, Department of Medical Microbiology/Infectious Diseases, College of Medicine, University of Manitoba.
- 2016- 2019 Temilolu Idowu, (Ph.D.), “Aminoglycoside hybrids designed to overcome multi-drug resistance in *Pseudomonas aeruginosa*“, Departments of Chemistry and Medical Microbiology, College of Medicine, University of Manitoba.
- 2016- 2021 Carmine Slipski, (Ph. D.), “effects of membrane lipid composition with relation to cationic substrate efflux pumps in Gram-negative bacterial membranes. “, Department of Medical Microbiology, College of Medicine, University of Manitoba.
- 2015- 2018 Mariam Iskander, (M. Sc.), “Whole genome sequencing analysis of *Haemophilus influenzae* serotype a “, Department of Medical Microbiology, College of Medicine, University of Manitoba.
- 2015- 2019 Ronald Domalaon, (Ph.D.) “Polymyxin B-tobramycin hybrids designed to overcome multi-drug resistance in Gram-negative bacteria“, Departments of Chemistry and Medical Microbiology, College of Medicine, University of Manitoba.
- 2015- 2017 Matthew Choy, (M. Sc.), “Assessment of the role of EsaSR in antimicrobial susceptibility of *Burkholderia cenocepacia*“, Department of Microbiology, College of Medicine, University of Manitoba.
- 2014- 2022 Gloria Vasquez, (MD/Ph.D.), “Effect of antibiotic sequence on bacterial clearance in a rat model of peritonitis-induced septic shock“, Department of Medical Microbiology, College of Medicine, University of Manitoba.
- 2013- 2016 Tyler Kosowan (M. Sc.), “Understanding the Emergence of Nap4 *Clostridium difficile* Hospital-Acquired Infections in Canada by Genomic Analysis“, Department of Medical Microbiology, Faculty of Medicine, University of Manitoba.
- 2012-2015 Amin Olaimat (Ph.D.), “Effect of oriental mustard on behavior of Salmonella, Campylobacter and *L. monocytogenes* in poultry meat products“, Department of Food Science, Faculty of Agriculture, University of Manitoba.
- 2010-2013 Brandon Findlay (Ph.D.), “The hydrophobic domain in antimicrobial peptide based design“, Department of Chemistry, Faculty of Science, University of Manitoba.
- 2010-2015 Roniele Cordiero (Ph. D.), “Molecular identification and characterization of myrosinase-like gene in *Escherichia coli* O157:H7“, Department of Food Science, Faculty of Agriculture, University of Manitoba.
- 2009-2015 Musarrat Jahan (Ph.D.), “Antibiotic resistant enterococci in dry fermented sausage and their molecular mechanism(s) of resistance toward natural antimicrobials isolated from oriental and yellow mustard“, Department of Food Science, Faculty of Agriculture, University of Manitoba.
- 2009-2016 Laura Marginet (Ph.D.), “Understanding the bacterial biofilm and novel mechanisms for interference“, Department of Medical Microbiology, Faculty of Medicine, University of Manitoba.

- 2009-2011 Khaleel Meghairbi (M. Sc.), “Do antibiotic pharmacokinetics matter in the outcome of septic shock“, Department of Medical Microbiology, Faculty of Medicine, University of Manitoba.
- 2009-2013 Cathleen Singh (M.Sc.), “Prevalence of the ErmX resistance determinant in *Corynebacterium* species including multi-drug resistant (MDR) clinical isolates“, Department of Medical Microbiology, Faculty of Medicine, University of Manitoba.
- 2009-2015 Amarnath Pisapati (Ph.D.), “Developing novel dosing methods for antibiotics with concentration dependent killing in septic shock“, Department of Medical Microbiology, Faculty of Medicine, University of Manitoba.
- 2009-2011 Brenda-Lee Murray (M. Sc.), “The role of TEM-116 and the biofilm associated protein (Bap) in the resistance to treatment and virulence of *Acinetobacter baumannii*“, Department of Medical Microbiology, Faculty of Medicine, University of Manitoba.
- 2008-2009 Natalie Berard (Ph.D.), “The effects of essential oils on the impact of ciprofloxacin to prevent resistance from occurring in agricultural foods“, Department of Animal Sciences, Faculty of Agriculture, University of Manitoba.
- 2007-2009 Roniele Cordiero (M. Sc.), “Bacterial starter cultures and probiotics as reservoirs of antibiotic resistance transmissible to zoonotic pathogens“, Department of Food Science, Faculty of Agriculture, University of Manitoba.
- 2007-2009 Jenelle Bouchard (M. Sc.), “The determination of rumen population adaptation to forage diet supplements and their role in methane emission in cattle“, Department of Animal Sciences, Faculty of Agriculture, University of Manitoba.
- 2007-2008 Ehsan Khafipour (Ph.D.), “LPS binding protein (LBP) and its relationship with subacute ruminal acidosis (SARA) in pigs“, Department of Animal Sciences, Faculty of Agriculture, University of Manitoba.
- 2006-2008 Laura Mataseje (M. Sc.), “Characterization of AmpC *E.coli* from water “Department of Medical Microbiology, Faculty of Medicine, University of Manitoba.
- 2006-2007 Sara Olafsson (Ph.D.), “Mutant prevention concentration in *E.coli* “ Department of Infectious Diseases, Faculty of Medicine, University of Uppsala, Uppsala, Sweden.
- 2005-2007 Xu Bai (M. Sc.), “Alternatives to antibiotics in an *E.coli* K88+ disease model of weanling pigs “ Department of Animal Science, Faculty of Agriculture, University of Manitoba.
- 2004-2011 JerryLynn Brucal (Ph.D.), “Antibiotic tolerance in *Pseudomonas aeruginosa*“, Department of Microbiology, Faculty of Science, University of Manitoba.
- 2003-2005 Kyle Cullingham (M.Sc.), “Characterization of fluoroquinolone resistance in *Neisseria gonorrhoea*“, Department of Medical Microbiology, Faculty of Medicine, University of Manitoba.

- 2003-2006 George Gozho (Ph.D.), “The relationship between subacute ruminal acidosis (SARA) ruminal and blood LPS endotoxin concentrations”, Department of Animal Sciences, Faculty of Agriculture, University of Manitoba.
- 2002-2005 Famobio Olasunkamni (M.Sc.), “The role of porins in antibiotic resistance in gram-negative bacteria”, Department of Microbiology, Faculty of Science, University of Manitoba.
- 2002-2004 Laura Hermann (M.D./Ph.D.), “Characterization of T2W and antiviral activity against Reovirus”, Department of Medical Microbiology, Faculty of Medicine, University of Manitoba.
- 2002-2006 Anas A-Nabulsi (Ph.D.), “Use of lactoferrin to inhibit the growth of foodborne pathogens and spoilage bacteria in meat and meat products”, Department of Food Science, Faculty of Agriculture, University of Manitoba.
- 2001-2004 Dharshini Nadarajah (M.Sc.), “Use of antimicrobials against *Escherichia coli* 0157:H7 in food science” Department of Food Sciences, Faculty of Agriculture, University of Manitoba.
- 2001-2006 Heather Adam (Smith) (Ph.D.), “Molecular analysis of fluoroquinolone-resistant *Streptococcus pneumoniae*” Department of Medical Microbiology, Faculty of Medicine, University of Manitoba.
- 2000-2002 Amanda Jones (M.Sc.), “Polyester sutures with antimicrobial absorbable coatings”, Department of Clothing and Textiles, Faculty of Human Ecology, University of Manitoba.
- 1999-2004 Ayush Kumar (Ph.D.), “Role of efflux pumps in antibiotic resistance in *Serratia marcescens*” Department of Microbiology, Faculty of Science, University of Manitoba.
- 1999- 2001 Kim Nichol (M.Sc.), “Molecular evaluation of penicillin-binding proteins in penicillin-resistant *Streptococcus pneumoniae*” Department of Medical Microbiology, Faculty of Medicine, University of Manitoba.
- 1999- 2003 Oksana Mytychuk (M.Sc.), “Role of multidrug resistant integrons in multi-drug resistant *Salmonella typhi*” Department of Medical Microbiology, Faculty of Medicine, University of Manitoba.
- 1995-1997 Tamara Balko (M.Sc.), “Molecular characterization of TEM and ROB in *Haemophilus influenzae*” Department of Medical Microbiology, Faculty of Medicine, University of Manitoba.

COMMITTEE/BOARD APPOINTMENTS

- 2025-Present Chair Appointments Promotions and Tenure (APT) Committee, Department of Medical Microbiology and Infectious Diseases, Max Rady College of Medicine, University of Manitoba
- 2024 Canada Research Chair (CRC) Renewal Committee (Dr. Zulma Rueda), Department of

	Medical Microbiology/Infectious Diseases, Max Rady College of Medicine, University of Manitoba
2024- Present	Scientific Advisory Committee, Phage Science, Therapeutics, and Research, National Microbiology Laboratory, Winnipeg, Manitoba
2023- 2024	Search Committee, Emerging Pathogens-Bioterrorism-Assistant Professor, Department of Medical Microbiology/Infectious Diseases, Max Rady College of Medicine, University of Manitoba
2023	Search Committee, Frank Plummer Professorship-Assistant Professor, Department of Medical Microbiology/Infectious Diseases, Max Rady College of Medicine, University of Manitoba
2023	Search Committee, Headship for Department of Medical Microbiology/Infectious Diseases, Max Rady College of Medicine, University of Manitoba
2023- Present	CORE Members Awards Committee, Department of Medical Microbiology/Infectious Diseases, Max Rady College of Medicine, University of Manitoba
2022- Present	Medical Microbiology Fellowship Training Committee, Department of Medical Microbiology/Infectious Diseases, Max Rady College of Medicine, University of Manitoba
2022- Present	Clinical Microbiology Fellowship Training Committee, Department of Medical Microbiology/Infectious Diseases, Max Rady College of Medicine, University of Manitoba
2022- Present	Clinician Investigator Program (CIP) Competence Program, Max Rady College of Medicine, University of Manitoba
2022-2025	Member – Search Advisory Panel for the Scientific Executive Director, National Microbiology Laboratory (NML), Winnipeg, Canada
2021-Present	Member – Max Rady College of Medicine Executive Committee (CEC), University of Manitoba
2021	Search Committee, Administrative Assistant for Department of Medical Microbiology/Infectious Diseases, Max Rady College of Medicine, University of Manitoba
2021	Search Committee, Tenure track, Assistant/Associate Professor, Department of Medical Microbiology/Infectious Diseases, Max Rady College of Medicine, University of Manitoba
2018-2019	Search Committee, Headship for Department of Medical Microbiology/Infectious Diseases, Max Rady College of Medicine, University of Manitoba
2018-Present	Faculty Council, Rady Faculty of Health Sciences, University of Manitoba

2017-2019	Member – Steering Committee, Accreditation, Max Rady College of Medicine, University of Manitoba
2015-Present	Member – Visiting Professors Committee, Department of Medical Microbiology, Max Rady College of Medicine, University of Manitoba
2014-2015	Search Committee, Antimicrobial Resistance Scientist, Department of Medical Microbiology, College of Medicine, University of Manitoba
2014-2019	Executive Committee, Departmental teaching in Medical Microbiology, College of Medicine, University of Manitoba
2014-2024	Appointments Promotions and Tenure Committee, Department of Medical Microbiology, College of Medicine, University of Manitoba
2014-2019	Pre-clerkship Student Evaluation Committee, College of Medicine, University of Manitoba
2014-2019	Curriculum Intergration Committee, College of Medicine, University of Manitoba
2013-2015	Chair – Visiting Professors Committee, Department of Medical Microbiology, Faculty of Medicine, University of Manitoba
2013-2019	Course Leader – Infectious Diseases/Medical Microbiology, Undergraduate Medical Education (UGME), Faculty of Medicine, University of Manitoba
2012-Present	Graduate Studies Committee, Department of Medical Microbiology, Faculty of Medicine, University of Manitoba
2011-2019	Curriculum framework committee, Faculty of Medicine, University of Manitoba
2010-2013	Infectious Diseases/Medical Microbiology Curriculum Review and Renewal Planning Committee, Department of Medical Microbiology, Faculty of Medicine, University of Manitoba
2010-2013	Pre-Clerkship Curriculum Committee, Faculty of Medicine, University of Manitoba
2009-2015	Course Director, SF Infectious Diseases Block 3/Med 1, Faculty of Medicine, University of Manitoba.
2008-2013	Research Advisory Committee (RAC), Manitoba Health Research Council (MHRC), Winnipeg, Canada.
2007-2009	Member – Management of intra-abdominal infections guidelines committee, Canadian Infectious Diseases Society (CIDS), Toronto, Canada.
2008-2012	Diagnostic Services Manitoba (DSM), Research and Innovation Funding Committee, DSM, Winnipeg,, Canada.
2008-2009	Antimicrobial Resistance (AMR) Advisory Group, National Collaborating Center for

	Infectious Diseases (NCCID), Winnipeg, Canada.
2007-2008	Co-Chair- International Symposium of Emerging Resistant Infections (ISERI), Department of Medical Microbiology, Faculty of Medicine, University of Manitoba.
2006-2008	Member – Management of nosocomial and ventilatory-acquired pneumonia guidelines committee, Canadian Infectious Diseases Society (CIDS), Toronto, Canada.
2007-2019	Member-Admissions/Interview Committee, Faculty of Medicine, University of Manitoba.
2006	Co-Chair- International Nosocomial Infections Symposium (INIS), Department of Medical Microbiology, Faculty of Medicine, University of Manitoba.
2006	Member-Admissions Committee (multi-mini interview-MMI), Faculty of Medicine, University of Manitoba.
2005-2009	Member- CenterStone Ventures Scientific Advisory Committee, Winnipeg, Manitoba.
2005-2006	Department Head Search/Evaluation Committee, Department of Medical Microbiology, Faculty of Medicine, University of Manitoba.
2005-2008	Chair – Recruitment and Succession Committee (Medical Microbiology, Clinical Microbiology, and Infectious Diseases), Department of Medical Microbiology, Faculty of Medicine, University of Manitoba.
2004-2005	Member-Organizing Committee, University of Manitoba Research Days “Immunity, Infection and Health “, Faculty of Medicine, University of Manitoba.
2004-2005	Chair- International Urinary Tract Infection Symposium (IUTIS), Department of Medical Microbiology, Faculty of Medicine, University of Manitoba.
2004-2008	Member- Strategic planning committee, Department of Medical Microbiology, Faculty of Medicine, University of Manitoba.
2004-2005	Chair- International Antibiotic Resistance Symposium (IARS), Department of Medical Microbiology, Faculty of Medicine, University of Manitoba.
2004-2009	Section Rep, SF Infectious Diseases Block 1/Med 1, Faculty of Medicine, University of Manitoba.
2004-2005	Review Committee, Microbiology Graduate Program Review, Faculty of Science, University of Manitoba.
2003-2007	MD/PhD Committee, Department of Medical Microbiology, Faculty of Medicine, University of Manitoba.
2003-2004	Basic Scientist Search Committee, Department of Medical Microbiology, Faculty of Medicine, University of Manitoba.
2002-2011	Board of Directors, Kane Biotech, Winnipeg, Manitoba.

2002-2006	Executive Clinical Studies Committee, Department of Medical Microbiology, Faculty of Medicine, University of Manitoba.
2002-2006	Communal Fund Committee, Department of Medical Microbiology, Faculty of Medicine, University of Manitoba.
2002-Present	Clinical Studies Committee, Department of Medical Microbiology, Faculty of Medicine, University of Manitoba.
2002-2004	Surveillance Working Group, Canadian Committee on Antibiotic Resistance (CCAR)
2002-2004	BSc. Med Evaluation Committee, Department of Medical Microbiology, Faculty of Medicine, University of Manitoba.
2002-Present	Faculty Council, Max Rady College of Medicine, University of Manitoba
2001-2013	Visiting Professors Committee, Department of Medical Microbiology, Faculty of Medicine, University of Manitoba.
1998-1999	University 1 Council, Office of the President, University of Manitoba
1998-1999	Deans and Directors Council, Office of the President, University of Manitoba
1997-1999	Drug Resistant <i>Streptococcus pneumoniae</i> Therapeutic Working Group, Centers for Disease Control, Atlanta, Georgia
1997-1998	Strategic Planning Task Force, Office of the President, University of Manitoba
1997-1998	Vice-Chair - Strategic Planning Task Group III, Office of the President, University of Manitoba
1997-1998	Chair - Teaching Awards Committee, Faculty of Pharmacy, University of Manitoba
1994-1997	President Elect, President, Past-President - Canadian College of Clinical Pharmacy (CCCCP)
1996-1997	Accreditation Committee, Chair - Academic Curriculum and Student Affairs, Faculty of Pharmacy, University of Manitoba
1996-1999	Association of Faculties of Pharmacy in Canada (AFPC) Advisory Committee on Curricular Change for Pharmacy Education in Canada
1996-1999	Board of Directors (Secretary/Treasurer) - International Society of Antiinfective Pharmacology (ISAP)
1996-1997	Future of Health Care in Manitoba, SmartHealth - Government of Manitoba
1995-1999	MRC Regional Partnership Steering Committee, Office of the Vice-President, University of Manitoba
1995-2002	Graduate Studies Committee, Faculty of Pharmacy, University of Manitoba

1995-1998	Personnel Review Committee, Manitoba Health Research Council
1995-1999	Senate Representative, Faculty of Pharmacy, University of Manitoba
1995-1997	Chair - Curriculum Committee, Faculty of Pharmacy, University of Manitoba
1994-1997	Awards Committee, Society of Infectious Diseases Pharmacists, Chair: 1995
1994-1997	Admission Criteria Committee, Faculty of Pharmacy, University of Manitoba
1992-1994	Fellowship Funding Committee, Society of Infectious Diseases Pharmacists
1992-2001	Dean's Advisory Council, Faculty of Pharmacy, University of Manitoba
1990-1995	Chair - Doctor of Pharmacy Program Development Subcommittee, Faculty of Pharmacy, University of Manitoba
1990-2005	Manitoba Drug Standards and Therapeutics Committee, Manitoba Health Services Commission (committee member and Co-Chair)
1989-1992	Admissions Committee, Faculty of Pharmacy, University of Manitoba
1988-1993	Pharmacy Residency Program Committee, Misericordia General Hospital
1987-1995	Curriculum Committee, Faculty of Pharmacy, University of Manitoba
1987-2002	Tenure and Promotions Committee, Faculty of Pharmacy, University of Manitoba clinical faculty search (1988), Dean's search (1991-2), clinical faculty search (1992), administration/pharmacoeconomics search (1994), clinical faculty search [chair] (1994-5), pharmaceutical sciences search (1995), pharmaceutical sciences search (1995-6)
1987-2002	Faculty Council, Faculty of Pharmacy, University of Manitoba
1986-1987	Antibiotic Subcommittee, Health Sciences Centre Clinical Microbiology Council, Health Sciences Centre Hospital Formulary Committee, Health Sciences Centre

JOURNAL/REVIEWER CONSULTANTSHIPS

2019-Present	Journal Reviewer, Therapeutic Advances in Infectious Diseases
2019-Present	Journal Reviewer, Clinical Microbiology and Infection
2019-Present	Journal Reviewer, The Medical Letter
2015-Present	Journal Reviewer, Infectious Diseases and Therapy
2012-Present	Journal Reviewer, Canadian tuberculosis standards 7 th edition
2012-Present	Journal Reviewer, Journal of Medicinal Plants
2012-Present	Journal Reviewer, Expert Opinion on Biological Therapy
2011-Present	Journal Reviewer, Vaccine
2010-Present	Journal Reviewer, Expert Opinion on Drug Discovery
2010-Present	Journal Reviewer, Physical Medicine and Rehabilitation

2009-Present	Journal Reviewer, Critical Care
2009-Present	Journal Reviewer, Drug Safety
2009-Present	Journal Reviewer, The Journal of Clinical Pharmacology
2008-Present	Journal Reviewer, Lancet Infectious Diseases
2007-Present	Editorial Board, Expert Reviews in Antiinfective Therapy
2007-Present	Journal Reviewer, Scandinavian Journal of Infectious Diseases
2006-Present	Editor-in-Chief, Canadian Antimicrobial Resistance Alliance (CARA) can-r website
2006-Present	Journal Reviewer, International Journal of Infectious Diseases
2006-Present	Journal Reviewer, Chest
2006-Present	Journal Reviewer, Canadian Journal of Public Health
2005-Present	Journal Reviewer, Gene Therapy and Molecular Biology
2005-Present	Journal Reviewer, Journal of AOAC International
2005-Present	Journal Reviewer, Journal of Infection
2004-Present	Journal Reviewer, Research in Microbiology
2004-Present	Journal Reviewer, Annals of Clinical Microbiology and Antimicrobials
2004-Present	Journal Reviewer, Survey in Ophthalmology
2004-Present	Journal Reviewer, Phytochemistry
2003-Present	Editorial Board, Antimicrobial Agents and Chemotherapy
2003-Present	Editorial Board, Annals of Pharmacotherapy
2003-Present	Journal Reviewer, American Journal of Respiratory and Critical Care Medicine
2003-Present	Journal Reviewer, Expert Review in Antiinfective Therapy
2003-Present	Journal Reviewer, Journal of Clinical Microbiology
2003-Present	Journal Reviewer, Expert Opinion in Investigational Drugs
2002-Present	Journal Reviewer, Expert Opinion in Drug Safety
2002-Present	Journal Reviewer, American Journal of Dermatology
2002-Present	Journal Reviewer, Expert Opinion in Pharmacotherapy
2001-Present	Journal Reviewer, Journal of Infectious Diseases
1999-Present	Journal Reviewer, Clinical Drug Investigation
1998-Present	Journal Reviewer, Journal of Antimicrobial Chemotherapy
1997-Present	Journal Reviewer, European Journal of Clinical Microbiology and Infectious Diseases
1997-Present	Journal Reviewer, Drugs
1996-Present	Journal Reviewer, Molecular Microbiology
1995-Present	Journal Reviewer, Clinical Infectious Diseases
1995-Present	Journal Reviewer, Clinical Pharmacokinetics
1995-Present	Journal Reviewer, Canadian Journal of Infectious Diseases
1995-Present	Journal Reviewer, Antimicrobial Agents and Chemotherapy
1993-Present	Journal Reviewer, Diabetes Care
1992-Present	Journal Reviewer, Annals of Pharmacotherapy
2007-Present	Reviewer – Thrasher Research Fund
2006-Present	Reviewer – British Society of Antimicrobial Chemotherapy Research Council
2004-Present	Reviewer – National Science and Engineering Research Council of Canada (NSERC)
2003-Present	Reviewer – Scottish Medical Research Council
2001-Present	Reviewer – Nova Scotia Health Research Foundation
1997-Present	Reviewer - Medical Research Council of Canada (MRC)/CIHR
1997-Present	Reviewer - Alberta Heritage Foundation for Medical Research
1997-2002	Reviewer - Merck Frosst Scholarships (Best Paper)
1993	Reviewer - St. Paul's Hospital (Vancouver) Research Review Committee

PROFESSIONAL SOCIETY AFFILIATIONS

Infectious Diseases Society of America (IDSA)
 American Society for Microbiology (ASM)
 Association of Medical Microbiology and Infectious Diseases Canada (AMMI)
 International Society for Antiinfective Pharmacology (ISAP)
 Canadian Infectious Diseases Society (CIDS)

HONORS AND AWARDS

Personnel Support

2024	Highly cited researcher (Web of science) [identified as one of the worlds most influential scientists]
2023	Highly cited researcher (Web of science) [identified as one of the worlds most influential scientists]
2023	Dr. Charles H. Nightingale Visiting Professor in Pharmacology, Hartford Hospital, Hartford, Connecticut
2022	Elected as a Fellow into the Canadian Academy of Health Sciences (CAHS)
2022	Dr. Fred Aoki Career Achievement Award (in recognition of a career of dedication and excellence in multiple domains of medical microbiology/infectious diseases and pharmacology including, research, education, clinical practice, service and administration)
2022	Highly cited researcher (Web of science) [identified as one of the worlds most influential scientists]
2020	Canadian Association for Medical Education (CAME) merit teaching award
2002-2006	Abbott Professor in Antibiotic Resistance
1995-2000	Merck Frosst Chair in Pharmaceutical Microbiology
1994-1995	Fellowship - Medical Research Council of Canada (MRC)
1993-1994	Fellowship - Medical Research Council of Canada (MRC)
1992-1993	Fellowship - Medical Research Council of Canada (MRC)
1991-1992	Fellowship - Medical Research Council of Canada (MRC)
1990-1991	Fellowship - Medical Research Council of Canada (MRC)/PMAC-Health Research Foundation
1989-1990	Fellowship - Medical Research Council of Canada (MRC)/PMAC-Health Research Foundation

Teaching Awards and Nominations-University of Manitoba (n=109)

2025	Nominee for Pre-clerkship innovation teaching award – Med II
2025	Nominee for Pre-clerkship inspiration teaching award – Med II
2025	Nominee for Pre-clerkship mentorship teaching award – Med II
2025	Nominee for Pre-clerkship best small group teaching – Med II
2025	Nominee for Pre-clerkship innovation teaching award – Med I
2025	Nominee for Pre-clerkship best small group teaching – Med I
2025	Nominee for Pre-clerkship inspiration teaching award – Med I
2025	Nominee for Pre-clerkship mentorship teaching award – Med I
2024	Pre-clerkship inspiration teaching award – Med II
2024	Nominee for Pre-clerkship innovation teaching award – Med II
2024	Nominee for Pre-clerkship inspiration teaching award – Med II
2024	Nominee for Pre-clerkship mentorship teaching award – Med II

2024	Nominee for Pre-clerkship best small group teaching – Med II
2024	Nominee for Pre-clerkship innovation teaching award – Med I
2024	Nominee for Pre-clerkship best small group teaching – Med I
2024	Nominee for Pre-clerkship inspiration teaching award – Med I
2024	Nominee for Pre-clerkship mentorship teaching award – Med I
2023	Pre-clerkship inspiration teaching award – Med II
2023	Nominee for Pre-clerkship innovation teaching award – Med II
2023	Nominee for Pre-clerkship inspiration teaching award – Med II
2023	Nominee for Pre-clerkship mentorship teaching award – Med II
2023	Nominee for Pre-clerkship best small group teaching – Med II
2023	Nominee for Pre-clerkship innovation teaching award – Med I
2023	Nominee for Pre-clerkship best small group teaching – Med I
2023	Nominee for Pre-clerkship inspiration teaching award – Med I
2023	Nominee for Pre-clerkship mentorship teaching award – Med I
2022	Nominee for Pre-clerkship innovation teaching award – Med II
2022	Nominee for Pre-clerkship best small group teaching – Med II
2022	Pre-clerkship inspiration teaching award – Med II
2022	Pre-clerkship mentorship teaching award – Med II
2022	Nominee for Pre-clerkship innovation teaching award – Med I
2022	Nominee for Pre-clerkship best small group teaching – Med I
2022	Nominee for Pre-clerkship inspiration teaching award – Med I
2022	Nominee for Pre-clerkship mentorship teaching award – Med I
2021	Nominee for Pre-clerkship innovation teaching award – Med II
2021	Nominee for Pre-clerkship best small group teaching – Med II
2021	Pre-clerkship inspiration teaching award – Med II
2021	Pre-clerkship mentorship teaching award – Med II
2021	Nominee for Pre-clerkship innovation teaching award – Med I
2021	Nominee for Pre-clerkship best small group teaching – Med I
2021	Nominee for Pre-clerkship inspiration teaching award – Med I
2021	Nominee for Pre-clerkship mentorship teaching award – Med I
2021	Nominee for Best Course-Infectious Diseases/Therapeutics-Dr. George Zhanel
2020	Jim Parker Medical Microbiology/Infectious Diseases, College of Medicine-Undergraduate Student Teaching Award
2020	Nominee for Pre-clerkship innovation teaching award – Med II
2020	Nominee for Pre-clerkship best small group teaching – Med II
2020	Nominee for Pre-clerkship inspiration teaching award – Med II
2020	Nominee for Pre-clerkship mentorship teaching award – Med II
2020	Nominee for Pre-clerkship innovation teaching award – Med I
2020	Nominee for Pre-clerkship best small group teaching – Med I
2020	Nominee for Pre-clerkship inspiration teaching award – Med I
2020	Nominee for Pre-clerkship mentorship teaching award – Med I
2020	Nominee for Best Course-Infectious Diseases/Therapeutics-Dr. George Zhanel
2020	Canadian Medical Education Certificate of Medical Education Excellence, CAME
2019	Nominee for Pre-clerkship innovation teaching award – Med I
2019	Nominee for Pre-clerkship best small group teaching – Med I
2019	Nominee for Pre-clerkship inspiration teaching award – Med I
2019	Nominee for Pre-clerkship mentorship teaching award – Med I
2019	Nominee for Best Course-Infectious Diseases/Therapeutics-Dr. George Zhanel
2018	Jim Parker Medical Microbiology/Infectious Diseases, College of Medicine-Undergraduate Student Teaching Award
2017	Merit Award for Teaching Excellence, University of Manitoba

2017	Pre-clerkship inspiration teaching award – Med I
2017	Nominee for Pre-clerkship innovation teaching award – Med I
2017	Nominee for Pre-clerkship best small group teaching – Med I
2017	Nominee for Pre-clerkship inspiration teaching award – Med I
2016	Pre-clerkship inspiration teaching award – Med I
2016	Nominee for Pre-clerkship innovation teaching award – Med I
2016	Nominee for Pre-clerkship mentorship teaching award – Med I
2016	Nominee for Pre-clerkship inspiration teaching award – Med I
2015	Nominee for Pre-clerkship innovation teaching award – Med I
2015	Nominee for Pre-clerkship best small group teaching award – Med I
2015	Nominee for Pre-clerkship inspiration teaching award – Med I
2014	Nominee for Pre-clerkship innovation teaching award – Med II
2014	Nominee for Pre-clerkship mentorship teaching award – Med I
2014	Nominee for Pre-clerkship inspiration teaching award – Med I
2014	Nominee for Pre-clerkship innovation teaching award – Med I
2014	Jim Parker Medical Microbiology/Infectious Diseases, Faculty of Medicine-Undergraduate Student Teaching Award
2013	Nominee for teaching mentorship – Med II
2013	Nominee for inspiration in teaching – Med II
2012	Nominee for most outstanding teacher – Med I
2011	Nominee for most outstanding teacher – Med I
2011	Nominee for most outstanding teacher – Med II
2010/2011	Student Teacher Recognition Award-Faculty of Medicine
2010	Graduate Student Educator of the Year, Medical Microbiology
2010	Jim Parker Medical Microbiology/Infectious Diseases, Faculty of Medicine-Undergraduate Student Teaching Award
2010	Nominee for most outstanding teacher – Med I
2010	Nominee for most outstanding teacher – Med II
2009	Merit Award for Teaching Excellence, University of Manitoba
2009	Nominee for most outstanding teacher – Med I
2009	Nominee for most outstanding teacher – Med II
2008	Nominee for most outstanding teacher – Med I
2008	Nominee for most outstanding teacher – Med II
2007	Nominee for most outstanding teacher – Med I
2006	Jim Parker Medical Microbiology/Infectious Diseases, Faculty of Medicine-Undergraduate Student Teaching Award
2005	Nominee for most outstanding teacher – Med I
2005	Nominee for most outstanding clinician – Med III
2004	Educator of the Year, Medical Microbiology/Infectious Diseases
2004	Health Sciences Centre Graduate Students Mentorship Award
2003	Nominated for Health Sciences Centre Graduate Students Mentorship Award
2002-2003	Nominee for most outstanding teacher – Med I
2001-2002	Most outstanding teacher – Med I
2001-2002	Most outstanding teacher – Pharm II
2000-2001	Nominee for most outstanding teacher – Med I
1999-2000	Nominee for most outstanding teacher - Med I
1998-1999	Most outstanding teacher- Med III
1998-1999	Nominee for most outstanding teacher - Med I
1998-1999	Outstanding teacher – Pharm II
1997-1998	Outstanding teacher- Pharm II
1996-1997	Outstanding teacher - Pharm III

1996-1997	Nominee for most outstanding teacher - Med II
1996-1997	Nominee for most outstanding teacher - Med III
1995-1996	Nominee for most outstanding teacher - Med II
1995-1996	Nominee for most outstanding teacher - Med III
1993-1994	Bristol-Myers Squibb Award for Excellence in Teaching, University of Manitoba
1991-1992	Merit Award for Teaching Excellence, University of Manitoba
1991-1992	Bristol-Myers Squibb Award for Excellence in Teaching, University of Manitoba
1990-1991	Squibb Award for Excellence in Teaching, University of Manitoba
1988-1989	Squibb Award for Excellence in Teaching, University of Manitoba

Research Awards/Acknowledgements

h-index: 76 (truly exceptional); d-Index 88 (truly exceptional)

Citations: 23,287

Highly Influential Citations: 978

University of Manitoba (research.com): Ranked #15 researcher at the University of Manitoba (based on h-index, number of publications and citations)

2024	Highly cited researcher (one of the worlds most influential scientists as per Clarivate)
2023	Dr. Charles H. Nightingale Visiting Professor in Pharmacology, Hartford Hospital, Hartford, Connecticut
2023	Highly cited researcher (one of the worlds most influential scientists as per Web of Science)
2022	Elected as a Fellow into the Canadian Academy of Health Sciences (CAHS)
2022	Highly cited researcher (one of the worlds most influential scientists as per Web of Science)
2021	Highly cited researcher (1 of 190 Canadian scientists) as per Web of Science
1996	International Society for Antiinfective Pharmacology (ISAP) Young Scientist Award
1994	Nominee for Rh Award (Research), The Rh Institute, Winnipeg.
1994	American Society for Microbiology (ASM)/ICAAC Student Travel Award
1993	SIDP Young Investigator Award
1993	American Society for Microbiology (ASM)/ICAAC Student Travel Award
1991	Best runner-up award at "PMAC-Health Research Foundation Dr. Pierre Bois Annual Research Presentation Competition".

Other Awards and Honors

2023	Dr. Charles H. Nightingale Visiting Professor in Pharmacology, Hartford Hospital, Hartford, Connecticut
2006	Visiting Professor – Pfizer, Connecticut
2005	Visiting Professor – University of Minnesota (Duluth)
2004	Who's Who in Medical Sciences Education (WWMSE)
2004	Visiting Professor – University of Minnesota
1998	Visiting Professor - Memorial University of Newfoundland
1997	Visiting Professor - University of Michigan

1997	Visiting Professor - Wayne State University
1996	GlaxoWellcome Research Award
1992	Medical Research Council of Canada (MRC) Visiting Professor - University of Saskatchewan
1986	Graduated with Honors (magna cum laude) from University of Minnesota
1986	Elected to Rho Chi Honor Society
1985	National Honor Roll – University of Minnesota

PRESENTATIONS (selected)**1985**

1. "Psychotropics in pregnancy." Presented to the Association of Home Health Care St. Paul, St. Paul, Minnesota, April 25, 1985.
2. "Depo-provera for contraception." Presented to the Association of Home Care St. Paul, St. Paul, Minnesota, April 25, 1985.
3. "Review of calcium channel blockers." Presented to the Department of Anesthesiology, Midway Hospital, St. Paul, Minnesota, August 24, 1985.
4. "Overview of antimicrobials/antivirals: Focus on new agents." Presented to the Microbiology Laboratory, Abbott Northwestern Hospitals, Minneapolis, Minnesota, November 20, 1985.
5. "Type I and II antiarrhythmics." Presented to Clinical Nurse Specialists, Coronary Care Unit, Abbott Northwestern Hospitals, Minneapolis, Minnesota, November 21, 1985.

1986

6. "Ciprofloxacin, a new carboxyquinolone derivative." Presented to the College of Pharmacy, University of Minnesota, Minneapolis, Minnesota, January 20, 1986.
7. "Revival of vancomycin in antibiotic therapy". Presented at "Antibiotics and Infectious Diseases", Manitoba Branch, Canadian Society of Hospital Pharmacists, Winnipeg, Manitoba, October 11, 1986.
8. "Single dose treatment for urinary tract infections. Is once enough?" Presented at Therapeutic Potpourri, Manitoba Pharmaceutical Association, Winnipeg, Manitoba, November 16, 1986.

1987

9. "Urinary tract infection therapeutic update." Presented at Continuing Education, Manitoba Pharmaceutical Association, Brandon, Manitoba, August 26, 1987.
10. "The use of AZT (Azidothymidine) in AIDS patients." Presented at the annual Manitoba Health Organization Conference, Winnipeg, Manitoba, October 22, 1987.

1988

11. "Update on the use of new antimicrobial/antiviral agents." Presented to the Departments of Medicine, Nursing and Pharmacy, Beausejour District Hospital, Beausejour, Manitoba, January 18, 1988.
12. "Six new drugs." Presented at Pharmaceutical Series Continuing Education, Manitoba Pharmaceutical Association, Winnipeg, Manitoba, January 20, 1988.

13. "New Drugs for AIDS." Presented at Professional Practice Conference, Canadian Society of Hospital Pharmacist's Toronto, Ontario, February 1, 1988.
14. "Pharmacological treatment of glaucoma and other common ocular disorders/infections." Presented at the annual Manitoba Optometric Society Conference, Brandon, Manitoba, October 16, 1988.

1989

15. "Pathophysiology and therapeutics of Crohn's disease: update on new ophthalmologic preparations." Presented at Pharmaceutical Series on Continuing Education, Manitoba Pharmaceutical Association, Winnipeg, Manitoba, January 26, 1989.
16. "Cost-effective use of antimicrobials." Presented at the Annual Meeting, Canadian Society of Hospital Pharmacists, Manitoba Branch, Winnipeg, Manitoba, March 21, 1989.
17. "Pathophysiology and therapeutics of AIDS - acquired immunodeficiency syndrome." Presented at the annual meeting, Canadian Association of Pharmacy Technicians, Manitoba Branch, Winnipeg, Manitoba, April 15, 1989.
18. "Postantibiotic effect - the research begins". Presented to the Faculty of Pharmacy, University of Manitoba, Winnipeg, Manitoba, September 20, 1989.

1990

19. "The future of aminoglycosides: Replacement by cephalosporins?" Presented at Continuing Education Symposium, Canadian Society of Hospital Pharmacists, Manitoba Branch, Winnipeg, Manitoba, May 26, 1990.
20. "One year later - a research proposal". Presented to the Department of Medical Microbiology, Faculty of Medicine, University of Manitoba, Winnipeg, Manitoba, October 3, 1990.

1991

21. "Current trends in the treatment of urinary tract infection". Presented at Continuing Education Symposium, Manitoba Pharmaceutical Association, Winnipeg, Manitoba, March 12, 1991.
22. "Antimicrobial effects of *Pseudomonas aeruginosa* phenazine pigments". Presented to Department of Medical Microbiology, University of Manitoba, Winnipeg, Manitoba, March 18, 1991.
23. "Modification of antibiotic activity by human biological fluids". Presented at PMAC-Health Research Foundation Symposium, Montreal, Quebec, October 31, 1991.

1992

24. "Antimicrobial effects on bacterial adherence to uroepithelial cells". Presented to the Department of Medical Microbiology, Faculty of Medicine, University of Manitoba, Manitoba, March 11, 1992.
25. "The evolving antibiotic treatment of UTI". Presented to the Canadian Society of Hospital Pharmacists 45th Annual General Meeting, Saskatoon, Saskatchewan, August 14, 1992.

26. "Pharmacokinetics and pharmacodynamics of beta-lactam antibiotics". Presented at the Royal College of Physicians and Surgeons and Canadian Society of Clinical Investigation Annual Meetings, Ottawa, Ontario, September 11, 1992.
27. "Once daily aminoglycoside dosing: Pharmacokinetics and pharmacodynamics and the importance of continuing education". Presented as an MRC visiting professor to the College of Pharmacy, University of Saskatchewan, Saskatoon, Saskatchewan, November 26, 1992.
28. "Pharmacokinetics and pharmacodynamics of antimicrobials: the importance of the postantibiotic effect. Presented as an MRC visiting professor to the College of Pharmacy, University of Saskatchewan, Saskatoon, Saskatchewan, November 27, 1992.

1993

29. "Fluoroquinolone resistance in *Pseudomonas aeruginosa*". Presented to the Department of Medical Microbiology, University of Manitoba, Winnipeg, Manitoba, February 10, 1993.
30. "Controversial uses of new antibiotics". Presented at the Annual Shoppers Drug Mart Education Conference, Winnipeg, Manitoba, October 1, 1993.
31. "The postantibiotic effect". Presented to the Canadian Society of Hospital Pharmacists (CSHP), Saskatchewan Branch Annual Meeting, Regina, Saskatchewan, October 22, 1993.
32. "Changing strategies in aminoglycoside dosing". Presented to the Canadian Society of Hospital Pharmacists (CSHP), Saskatchewan Branch Annual Meeting, Regina, Saskatchewan, October 23, 1993.

1994

33. "The postantibiotic effect: relevance to once daily aminoglycoside dosing". Presented at Grand Rounds, Department of Pharmacology and Therapeutics, Faculty of Medicine, January 7, 1994.
34. "Genetics of multiple antibiotic resistance". Presented to the Department of Medical Microbiology, Faculty of Medicine, University of Manitoba, Winnipeg, Manitoba, January 17, 1994.
35. "IV fluoroquinolones: replacement for aminoglycosides". Presented at the Canadian College of Clinical Pharmacy (CCCP), Vancouver, British Columbia, July 10, 1994.
36. "The evolution of once daily aminoglycoside dosing". Presented at the 14th Annual Okanagan Pharmacy Update, Penticton, British Columbia, September 24, 1994.

1995

37. "The Manitoba Antibiotic Research Laboratory (MARL)". Presented at the 3rd Annual Pharmaceutical Research Fair, Winnipeg, Manitoba, June 13, 1995.
38. "The crisis in antibiotic resistance". Presented to the Microscan users group meeting, Winnipeg, Manitoba, June 27, 1995.
39. "Resistant microorganisms - implications for infection control". Presented at continuing education for hospital staff, Concordia Hospital, Winnipeg, Manitoba, October 12, 1995.
40. "Antimicrobials and acquired resistance". Presented at the Manitoba Congress of Medical Laboratory Technologists Annual Meeting, Winnipeg, Manitoba, October 26, 1995.

41. "Treatment of urinary infections in subjects with diabetes mellitus". Presented as a research seminar in the Faculty of Pharmacy, University of Manitoba, Winnipeg, Manitoba, November 7, 1995.
42. "Cellular and molecular mechanisms of antimicrobial resistance". Presented at the clinical infectious diseases lecture series, Winnipeg, Manitoba, November 8, 1995.
43. "Potential research linkages between Manitoba Antibiotic Research Laboratory (MARL) and Pharmaceutical Industry. Presented to the Infectious Diseases research group, Eli Lilly, Indianapolis, Indiana, November 14, 1995.

1996

44. "A Canadian viewpoint of antimicrobial resistance". Presented to the Departments of Hematology and Pathology, Health Sciences Centre, Winnipeg, Manitoba, January 23, 1996.
45. "Antimicrobial resistance: A global catastrophe". Presented to the Departments of Microbiology and Infection Control, St. Boniface General Hospital, Winnipeg, Manitoba, January 23, 1996.
46. "The worldwide problem of antibiotic resistance". Presented to the Department of Oral Biology, Faculty of Dentistry, University of Manitoba, Winnipeg, Manitoba, February 8, 1996.
47. "The global crisis: antibiotic resistance". Presented at the Canadian Society of Medical Laboratory Technologists Annual Meeting, Winnipeg, Manitoba, June 18, 1996.
48. "Bactericidal effects of LY333328 against vancomycin-resistant enterococci (VRE)". Presented at the Infectious Diseases Global Medical Conference, Eli Lilly, Indianapolis, Indiana, September 12, 1996.
49. "Pharmacodynamics of LY303366 an investigation echinocandin against fluconazole-sensitive and fluconazole-resistant *Candida albicans*". Presented at the Infectious Diseases Global Medical Conference, Eli Lilly, Indianapolis, Indiana, September 13, 1996.
50. "Antibiotic Resistance". Presented at the Joint Canadian College of Clinical Pharmacy (CCCP) and Canadian Society of Hospital Pharmacy (CSHP) Annual General Meeting, Calgary, Alberta, September 29, 1996.
51. "Cross-Canada survey of once-daily aminoglycoside usage". Presented at the Joint Canadian College of Clinical Pharmacy (CCCP) and Canadian Society of Hospital Pharmacy (CSHP) Annual General Meeting, Calgary, Alberta, September 30, 1996.
52. "Pharmacoeconomic issues regarding antibiotic selection". Presented at The Antibiotic Puzzle: The Role of Second Line Agents in the Management of Common Infections, Kananaskis, Alberta, October 18, 1996.
53. "Pharmacodynamics of LY303366 against *Candida albicans*". Presented at Eli Lilly Canada Inc., Toronto, Ontario, November 22, 1996.
54. "Pharmacodynamic effects of LY333328 against vancomycin-resistant enterococci (VRE)". Presented at Eli Lilly Canada Inc., Toronto, Ontario, November 22, 1996.
55. "Pharmacological principles of antibiotic chemotherapy". Presented at the Community Awareness Institute for Appropriate Prescribing of Antibiotics, Alton, Ontario, November 23, 1996.

56. "How to assess drugs when the drug rep calls". Presented at "Pharmacology Update", Continuing Education for Family Physicians, University of Manitoba, Winnipeg, Manitoba, December 6, 1996.
57. "Pharmacoeconomic considerations in the treatment of community acquired infections". Presented at Continuing Medical Education, Edmonton, Alberta, December 9, 1996.

1997

58. "Clinical relevance of LY303366 pharmacokinetic/pharmacodynamic properties against *Candida* spp." Presented at the LY303366 Study Coordinator Meeting, Panama City Beach, Florida, February 21, 1997.
59. "Canadian perspective on antibiotic resistance". Presented to the College of Pharmacy, University of Michigan, Ann Arbor, Michigan, February 28, 1997.
60. "The global problem of antibiotic resistance". Presented at Grand Rounds, Departments of Medicine and Pharmacy, Henry Ford Hospital, Detroit, Michigan, March 1, 1997.
61. "Historical perspective of carbapenems". Presented at Merck Frosst, Montreal, Quebec, March 15, 1997.
62. "Problems with antibiotic resistance in Canada". Presented at the Institute for Postgraduate Medical Education, Bratislava, Slovak Republic, April 19, 1997.
63. "Antibiotic use and its relationship to antibiotic resistance". Presented at the Institute of Preventive and Clinical Medicine, Bratislava, Slovak Republic, April 22, 1997.
64. "Antibiotic resistance in Canada and the United States". Presented at the Institute of Microbiology, Faculty of Medicine, Comenius University, Bratislava, Slovak Republic, April 24, 1997.
65. "Principles in the development of antibiotic resistance". Presented to the Faculty of Medicine, Comenius University, Bratislava, Slovak Republic, April 24, 1997.
66. "The epidemiology and spread of antibiotic resistance in Canada". Presented at the National Institute for Public Health, Prague, Czech Republic, April 29, 1997.
67. "Antibiotics and cost: how to keep costs down and maintain quality of care". Presented at Grand Rounds, Grace General Hospital, Winnipeg, Manitoba, May 7, 1997.
68. "A new echinocandin antifungal agent". Presented at the Infectious Diseases Global Medical Conference, Sydney, Australia, July 1, 1997.
69. "Subject variability in response to narrow therapeutic range drugs". Presented at the Canadian Society of Pharmaceutical Scientists (CSPS) Satellite Conference on Narrow Therapeutic Range Drugs, Edmonton, Alberta, August 25, 1997.
70. "Pharmacoeconomic implications of antibiotic resistance". Presented at the Antibiotic Puzzle, Kananaskis, Alberta, August 29, 1997.
71. "Sequential antibiotic therapy for hospital acquired infections". Presented to the Departments of Medicine, Nursing, Pharmacy and Microbiology, Dauphin Hospital, The Pas Hospital, Flin Flon Hospital, and Thompson Hospital, Winnipeg, Manitoba, September 18, 1997.

72. "Using antibiotic pharmacokinetics/pharmacodynamics to overcome antibiotic resistance". Presented at Janssen-Ortho Pharmaceutical Representative Training Program, Winnipeg, Manitoba, September 22, 1997.
 73. "Principles and practice of pharmacoeconomics in treating infectious diseases". Presented at Janssen-Ortho Pharmaceutical Representative Training Program, Winnipeg, Manitoba, September 22, 1997.
 74. "Pharmacokinetic/pharmacodynamic modelling of LY303366 a new echinocandin against systemic fungal infections". Presented at the Global Medical Conference, Eli Lilly, Indianapolis, Indiana, September 26, 1997.
 75. "Fluconazole resistant *Candida* infections: prevalence and mechanisms". Presented at the Canadian College of Clinical Pharmacy (CCCCP) Annual Conference, Ottawa, Ontario, September 27, 1997.
 76. "Development of echinocandins (LY303366) for the treatment of fungal infections". Presented at a North American Clinical Investigators Meeting, Toronto, Ontario, September 30, 1997.
 77. "Antibiotic resistance in North America" Presented at Continuing Education, Manitoba Pharmaceutical Association, Winnipeg, Manitoba, October 8, 1997.
 78. "Antibiotic resistance in North America" Presented at Continuing Education, Manitoba Pharmaceutical Association, Brandon, Winkler, Dauphin, Flin Flon, The Pas, and Thompson, October 9, 1997.
 79. "Antibiotic resistance in Manitoba and Canada". Presented at Grand Rounds, Portage la Prairie, Manitoba, October 24, 1997.
 80. "Design of novel antibiotics for the treatment of antibiotic resistant infections". Presented to scientific staff, Microcide Pharmaceuticals Inc., Mountainview, California, November 13, 1997.
 81. "Paradigm shifts in the treatment of infectious diseases". Presented at Mount Sinai Hospital, Continuing Education, Toronto, Ontario, December 4, 1997.
 82. "Clinical relevance of narrow therapeutic range drugs". Presented to the Canadian Society of Pharmaceutical Scientists (CSPS) Satellite Conference on Narrow Therapeutic Range Drugs, Winnipeg, Manitoba, December 13, 1997.
- 1998**
83. "Cross Canada respiratory pathogen resistance study". Presented to GlaxoWellcome, Toronto, Ontario, March 11, 1998.
 84. "Growing problem of antibiotic resistance in Canada". Presented to the Newfoundland Pharmaceutical Association, St. John's Newfoundland, March 12, 1998.
 85. "Vancomycin resistant enterococci: A difficult to treat superbug". Presented to the School of Pharmacy, Memorial University of Newfoundland, St. John's, Newfoundland, March 13, 1998.
 86. "Pharmacological considerations in the treatment of infectious diseases". Presented at the 4th Annual Pediatric Research Conference, Calgary Children's Hospital, Calgary, Alberta, April 2, 1998.
 87. "Treatment of infectious diseases: Implications of antibiotic resistant pathogens". Presented to the Canadian Society of Hospital Pharmacists (CSHP) (Alberta Branch), Calgary, Alberta, April 2, 1998.

88. "Treatment of Vancomycin-resistant enterococcus: Implications of new pharmacodynamic data". Presented at the American College of Clinical Pharmacy (ACCP) Annual Research Forum, Palm Springs, California, April 6, 1998.
89. "Design of novel antibiotics for the treatment of resistant gram-positive infections". Presented to the research and discovery committee at Merck Research Laboratories, Rahway, New Jersey, April 7, 1998.
90. "Comparisons of carbapenems: Activity, pharmacokinetics, clinical efficacy, adverse effects and dosing". Presented at Merck Frosst, Montreal, Quebec, April 16, 1998.
91. "Antibiotic resistance in respiratory infections: Clinical implications and treatment options". Presented at Rural Physicians Update, Edmonton, Alberta, April 26, 1998.
92. "Fluoroquinolones in Canada: Focus of levofloxacin". Presented to the Drug Use Evaluation - Professional Special Ties Group, Toronto, Ontario, May 5, 1998.
93. "Grepafloxacin: a new fluoroquinolone". Presented at the advisory meeting on Grepafloxacin, Banff, Alberta, September 2, 1998.
94. "Clinical significance of antibiotic resistance in respiratory infections". Presented to the Departments of Medicine, Pharmacy and Nursing in the Pas, Thompson, Flin Flon and Dauphin, Winnipeg, Manitoba, September 3, 1998..
95. "Appropriate use of antibiotics; Focus on sequential therapy, third generation cephalosporins, serious infections and chronic bronchitis". Presented to the Departments of Medicine and Pharmacy, Dauphin General Hospital, Manitoba, September 14, 1998.
96. "Grappling with the problem of antibiotic resistance". Presented at the Clinical Information Conference for Specialists, Whistler, British Columbia, October 26, 1998.
97. "Pharmacoeconomics in the treatment of infectious diseases". Presented at the Pharmaceutical Representatives Workshop, Health Sciences Centre, Winnipeg, Manitoba, October 26, 1998.
98. "Treatment of acute exacerbations of chronic bronchitis". Presented at the Pharmaceutical Representatives Workshop, Health Sciences Centre, Winnipeg, Manitoba, October 26, 1998.
99. "Treatment of respiratory tract infections: focus on new fluoroquinolones". Presented at Medical Grand Rounds, Prince Albert Hospital, Prince Albert, Saskatchewan, October 27, 1998.
100. "Ciprofloxacin, levofloxacin, grepafloxacin and trovafloxacin: which fluoroquinolones should be on the formulary?". Presented at Pharmacy Grand Rounds, Royal University Hospital, Saskatoon, Saskatchewan, October 27, 1998.
101. "Antibiotic resistance in community acquired pneumonia". Presented at a community Practitioner Update, Saskatoon, Saskatchewan, October 27, 1998.
102. "New fluoroquinolones: Their role in treating respiratory infections?". Presented at Grand Rounds , Regina General Hospital, Regina, Saskatchewan, October 28, 1998.

103. "Evolving patterns of antibiotic resistance: clinical relevance and treatment options". Presented at a Practitioner Update, Weyburn General Hospital, Weyburn, Saskatchewan, October 28, 1998.
104. "New treatments for community acquired pneumonia". Presented at a Community Practitioner Update, Edmonton, Alberta, October 28, 1998.
105. "The role of fluoroquinolones in community acquired pneumonia". Presented at a Community Practitioner Update, Edmonton Alberta, October 29, 1998.
106. "Multidrug resistant *Streptococcus pneumoniae* in respiratory infections: Clinical relevance". Presented at a Pharmacist, Physician Update, Edmonton, Alberta, October 29, 1998.
107. "The Pharmacare process in Manitoba: how does a drug get on the formulary". Presented to Manitoba Disease Organizations, Winnipeg, Manitoba, November 18, 1998.
108. "Formation of research groups: good or bad idea". Presented at the University of Manitoba Deans and Directors Retreat, Gimli, Manitoba, November 20, 1998.
109. "Pharmacokinetic/pharmacodynamic parameters that correlate with clinical outcome in the management of infectious diseases". Presented at Respiratory Medicine Grand Rounds, Universite Laval, Quebec City, November 25, 1998.
110. "Multidrug resistant *Streptococcus pneumoniae* in Canada: Prevalence, clinical relevance and treatment options". Presented at Respiratory Medicine Grand Rounds, Universite Laval, Quebec City, November 26, 1998.

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111. "Strategic planning at the faculty or departmental level at the university". Presented to Deans and Directors at the University of Manitoba, Winnipeg, Manitoba, January 29, 1999.
112. "The new fluoroquinolones in Canada". Presented at the Second Annual Issues and Controversies in Respiratory Medicine (ICRM), Key West, Florida, February 6, 1999.
113. "Minimizing inappropriate antibiotic use in community practice: focus on respiratory tract infections". Presented to Family Physicians Continuing Medical Education, Brandon, Manitoba, February 25, 1999.
114. "Battling the crisis in antibiotic resistance". Presented at Graduate Research in Progress (GRIP), Faculty of Pharmacy, University of Toronto, Toronto, Ontario, February 25, 1999.
115. "Pharmacokinetics/pharmacodynamics of New Fluoroquinolones against *Streptococcus pneumoniae*". Presented at Infectious Diseases/Microbiology/Respirology Grand Rounds, Lakeshore General Hospital, Montreal, Quebec, March 8, 1999.
116. "Clinical significance and treatment of antibiotic resistant respiratory infections". Presented at Infectious Diseases/Medical Microbiology Grand Rounds, Hotel Dieu, Montreal, Quebec, March 8, 1999.
117. "The new respiratory fluoroquinolones: Which one to add to the formulary". Presented at Medicine Grand Rounds, St. John Regional Hospital, St. John, New Brunswick, March 9, 1999.
118. "Design of cell-membrane active antibiotics to treat vancomycin-resistant enterococci (VRE), methicillin resistant *Staphylococcus aureus* (MRSA) and penicillin-resistant *Streptococcus pneumoniae* (PRSP)".

Presented at Infectious Diseases/Microbiology Grand Rounds, Halifax Queen Elizabeth II Hospital, Halifax, Nova Scotia, March 10, 1999.

119. "Antibiotic resistance in the Maritimes: Implications for treatment of infections". Presented at Family Practice Rounds, Moncton City Hospital, Moncton, New Brunswick, March 10, 1999.
120. "Pharmacokinetic/pharmacodynamic considerations in the treatment of infectious diseases". Presented at Medical Grand Rounds, King Khalid National Guard Hospital, Jeddah, Saudi Arabia, April 10, 1999.
121. "Treatment of community acquired pneumonia". Presented at Grand Rounds, Al Hada Hospital, Taif, Saudi Arabia, April 11, 1999.
122. "Pharmacokinetic/pharmacodynamic considerations in the treatment of respiratory infections". Presented at Grand Rounds, King Faisal Specialist Hospital and Research Center, Riyadh, Saudi Arabia, April 12, 1999.
123. "Methods to achieve cost effective treatment of infectious diseases". Presented at Grand Rounds, King Fahad Medical Military Complex, Dahrn, Saudi Arabia, April 14, 1999.
124. "Selecting antibiotic treatment for respiratory infections using pharmacodynamic principles". Presented at the Gulf Respiratory Consensus Meeting, Bahrain, April 15, 1999.
125. "The role of the new fluoroquinolones on the hospital formulary". Presented at Infectious Diseases/Respirology Grand Rounds, Royal Victoria Hospital, Montreal, Quebec, April 21, 1999.
126. "Treatment of respiratory infections in the setting of antibiotic resistance". Presented at Grand Rounds, Maisonneuve-Rosemont Hospital, Sherbrook, Quebec, April 22, 1999.
127. "Antibiotic resistant bugs – how do we make them- how do we break them". Presented at the 41st scientific assembly of the Manitoba College of Family Physicians, Winnipeg, Manitoba, April 24, 1999.
128. " Treatment of resistant infections in the emergency room". Presented to Emergency Physicians, Quebec City, Quebec, April 29, 1999.
129. "Influence of multidrug resistant *Streptococcus pneumoniae* on the treatment of respiratory infections". Presented at Infectious Diseases/Respirology Grand Rounds, Kingston, General Hospital, Kingston, Ontario, May 11, 1999.
130. "Impact of antibiotic resistance in the treatment of respiratory infections". Presented at Respiratory/Pharmacy Rounds, Ottawa Hospitals, Ottawa, Ontario, May 11, 1999.
131. "Ciprofloxacin, Grepafloxacin, Levofloxacin and Trovafloxacin, which ones to put on the hospital formulary". Presented to the Pharmacy Department Concordia Hospital, Winnipeg, Manitoba, May 17, 1999.
132. "Multidrug resistant respiratory infections: How best to treat inpatients and outpatients". Presented to Grace Hospital, Assiniboine Clinic Medical and Pharmacy Staff, Winnipeg, Manitoba, May 18, 1999.
133. "Update on antibiotic resistance in Canada". Presented at the Canadian Society of Hospital Pharmacists Annual Meeting, Saskatoon, Saskatchewan, August 16, 1999.

134. "Treatment of respiratory infections: Role of macrolides". Presented at the Specialists Medical Update, Cairo, Egypt, September 9, 1999.
135. "Comparisons of macrolides and their role in treatment in community acquired pneumonia and acute exacerbations of chronic bronchitis". Presented at a Specialists Medical Update, Alexandria, Egypt, September 10, 1999.
136. "The use of antimicrobials for the treatment of respiratory tract infections". Presented at a Family Physicians Respiratory Infections Update, New York, New York, September 18, 1999.
137. "Management of community acquired pneumonia in the era of antibiotic resistance". Presented at a Family Physicians Pneumonia Update, Winnipeg, Manitoba, September 21, 1999.
138. "Treatment of community acquired infections in the days of antibiotic resistance". Presented at Continuing Education for Family Physicians, Department of Continuing Medical Education, Faculty of Medicine, University of Manitoba, Winnipeg, Manitoba, October 1, 1999.
139. "Appropriate use of antibiotics; Focus on sequential therapy, third generation cephalosporins, serious infections and chronic bronchitis". Presented to the Departments of Medicine and Pharmacy, Swan River General Hospital, Manitoba, October 5, 1999.
140. "Molecular mechanisms and risk factors for antibiotic resistance". Presented at the American College of Clinical Pharmacy Meeting, Kansas City, Missouri, October 25, 1999.
141. "The CROSS study: An update on antimicrobial resistance in Canadian respiratory pathogens 1999". Presented at Medical and Pharmacy Rounds, Ottawa Hospital, Ottawa, Ontario, October 27, 1999.
142. "More fluoroquinolones are coming: What role should they have?" Presented to southern hospital pharmacists, Ottawa, Ontario, October 27, 1999.
143. "Clinical significance and treatment of antibiotic resistance in respiratory infections". Presented at Infectious Diseases Rounds, Royal Victoria General Hospital, Montreal, Quebec, October 28, 1999.
144. "Antibiotic resistance in *Streptococcus pneumoniae*, *Haemophilus influenzae* and *Moraxella catarrhalis*: Results from a Cross Canada respiratory tract surveillance study." Presented at Infectious Diseases/Respirology Rounds, Jewish General Hospital, Montreal, Quebec, October 28, 1999.
145. "How to manage infections in the setting of antibiotic resistance." Presented at Family Physicians and Pharmacy Rounds, Montreal, Quebec, October 28, 1999.
146. "Prevalence of antibiotic resistance in respiratory infections: Clinical significance and treatment options." Presented at the Canadian Association of Emerging Physicians (CAEP), Quebec City, Quebec, October 30, 1999.
147. "More and more fluoroquinolones where are they going." Presented at Medical Grand Rounds, Kentville General Hospital, Kentville, Nova Scotia, November 1, 1999.
148. "Treatment of pneumonia and acute exacerbations of acute bronchitis." Presented to Medical Specialists, Moncton, New Brunswick, November 1, 1999.

149. "The cephalosporin classification can we apply it to fluoroquinolones. " Presented at Medical Grand Rounds, Dartmouth General Hospital, Halifax, Nova Scotia, November 2, 1999.
150. "Classification and treatment of community acquired pneumonia in the days of multi-drug resistant *S.pneumoniae*. " Presented at Specialist Grand Rounds, Cape Breton Medical Centre, Nova Scotia, November 2, 1999.
151. "Treatment of respiratory infections in the emergency room. " Presented at Emergency Medicine Rounds, McKellar Medical Centre, Thunder Bay, Ontario, November 3, 1999.
152. "Management of community acquired respiratory infections in community practice." Presented at Family Medicine Rounds, Thunder Bay, Ontario, November 3, 1999.
153. "Clinical significance of macrolide-resistance in respiratory infections. " Presented at Medical Specialty Rounds, Doha, Qatar, November 6, 1999.
154. "Management of pharyngitis otitis media bronchitis and pneumonia in outpatients. " Presented at Medical Rounds, Tawam Clinic, Al-Ain, United Arab Emirates, November 7, 1999.
155. "Treatment of otitis media in the era of penicillin and multi-drug resistant *S.pneumoniae*. " Presented at Pediatric Rounds, Tawam University Hospital, Al-Ain, United Arab Emirates, November 7, 1999.
156. "Macrolides in the new millenium. " Presented at Family Physician and Subspecialty Rounds, Dubai, United Arab Emirates, November 7, 1999.
157. "Prevalence of antibiotic resistance in respiratory infections: Implications for management. " Presented at Chest Physicians Rounds, Hamad Military Hospital, Abu Dhabi, United Arab Emirates, November 8, 1999.
158. "Minimizing the development of penicillin-resistant *S.pneumoniae* through minimizing beta-lactam use. " Presented at Specialist Rounds, Abu Dhabi, United Arab Emirates, November 8, 1999.
159. "Selection of penicillin-resistant *Streptococcus pneumoniae*: All antibiotics are not the same. " Presented at Medical and Specialty Rounds, Kuwait City, Kuwait, November 9, 1999.
160. "Antibiotic use and the development of antibiotic resistance. " Presented at Medical Grand Rounds, Jordan University Hospital, Amman, Jordan, November 10, 1999.
161. "Management of upper and lower tract respiratory infections. " Presented at Medical and Specialty Rounds, Amman, Jordan, November 10, 1999.
162. "Biochemical and genetic mechanisms of antibiotic resistance. " Presented at the American University of Lebanon, Beirut, Lebanon, November 11, 1999.
163. "Does antibiotic resistance influence the treatment of antibiotic resistant infections. " Presented at Medical and Specialty Rounds, Beirut, Lebanon, November 11, 1999.
164. "More and more fluoroquinolones: What to do with the hospital formulary. " Presented at Medical Grand Rounds, Scarborough General Hospital, Toronto, Ontario, November 16, 1999.

165. "The cephalosporin generational concept for fluoroquinolones. " Presented to clinical pharmacists, Toronto, Ontario, November 16, 1999.
166. "*S.pneumoniae* *H.influenzae* and *M.catarrhalis* resistance in Canadian respiratory pathogens. " Presented at Medical Grand Rounds, Waterloo Medical Centre, Kitchener/Waterloo, Ontario, November 17, 1999.
167. "Treatment of pneumonia sinusitis and bronchitis in the days of penicillin resistant *S.pneumoniae*. " Presented at Respiriology Rounds, St. Josephs Hospital, London,, Ontario, November 17, 1999.
168. "Role of the new respiratory fluoroquinolones in the management of community acquired pneumonia. " Presented at Medical Microbiology and Infectious Diseases Rounds, London,, Ontario, November 17, 1999.
169. "Significance and management of respiratory infections in the new millenium. " Presented at Medical Grand Rounds, University Hospital, London,, Ontario, November 18, 1999.
170. "Which fluoroquinolones to put on the hospital formulary. " Presented to the Oshawa drug utilization group, Oshawa, Ontario, November 18, 1999.
171. "Results of the Canadian respiratory organism susceptibility study (CROSS). " Presented at Medical Grand Rounds, Henderson General Hospital, Hamilton, Ontario, November 19, 1999.
172. "Influence of multidrug resistant *Streptococcus pneumoniae* on the morbidity mortality and management of respiratory infections in Canada. " Presented at Medical Grand Rounds, Scarborough Grace General Hospital, Toronto, Ontario, November 19, 1999.
173. "Management of infections in the emergency room in the setting of antibiotic resistance". Presented to emergency room physicians, Winnipeg, Manitoba, November 24, 1999.
174. "Antibiotic resistance: Evolution, mechanisms and clinical significance". Presented at Grand Rounds, Faculty of Pharmacy, University of Manitoba, Winnipeg, Manitoba, November 30, 1999.
175. "Molecular mechanisms of antibiotic resistance". Presented at the Midyear Clinical Meeting, Orlando, Florida, December 9, 1999.

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176. "The status of antibiotic resistant infections in Manitoba and Canada". Presented at the On The Edge Lecture series, University of Manitoba, Winnipeg, Manitoba, January 12, 2000.
177. "Whats bugging your patients: How does antibiotic resistance affect your patients". Presented to family physicians, Winnipeg, Manitoba, January 19, 2000.
178. "Hospitals/Institutions should list several fluoroquinolones on the formulary". Presented at Issues and Controversies in Respiratory Medicine (ICRM), Tampa Bay, Florida, February 4, 2000.
179. "Controversial issues regarding the respiratory fluoroquinolones". Presented at Issues and Controversies in Respiratory Medicine (ICRM), Tampa Bay, Florida, February 4, 2000.

180. "Treatment of respiratory infections in the days of antimicrobial resistance in respiratory infections". Presented at Continuing Medical Education to Brandon, Dauphin, Swan River, Winnipeg, Manitoba, February 8, 2000.
181. "Antimicrobial resistance and its impact on the management of community acquired respiratory infections. Presented at Continuing Medical Education, Winnipeg, Manitoba, February 8, 2000.
182. "Resistance trends in Canada". Presented at FOCUS: Treatment of respiratory infections a clinical perspective, Tuscon, Arizona, March 17, 2000.
183. "Antibiotic resistance in urinary tract infections in Canada". Presented at an International Urinary Tract Infection Conference, Vienna, Austria, March 26, 2000.
184. "Prevalence clinical significance and treatment of respiratory infections in the days of antibiotic resistance". Presented at Family Practice Continuing Education, Portage, Manitoba, March 30, 2000.
185. "Teaching in the Medical School". Presented at 1st annual teaching workshop, Faculty of Medicine, University of Manitoba, Winnipeg, Manitoba, April 6, 2000.
186. "Treatment of respiratory infections in the era of multi-drug resistant *S.pneumoniae*". Presented at Family Practice Rounds Continuing Education, Winnipeg, Manitoba, April 7, 2000.
187. "Antibiotic resistance in respiratory infection: What does it all mean ? ". Presented at Fort Garry Educational Symposium, Winnipeg, Manitoba, April 8, 2000.
188. "Treatment of Community Acquired Pneumonia ". Presented at Issues in Geriatric Medicine. Medical Educational Symposium, Winnipeg, Manitoba, April 15, 2000.
189. "Current issues in antibiotic resistance ". Presented at Advances in Respiratory Therapy, Satellite Symposium of the American Thoracic Society (ATS) Meeting, Toronto, Ontario, May 4, 2000.
190. "Antibiotic resistance in respiratory infections: The future of respiratory fluoroquinolones ". Presented at Advances in Respiratory Therapy, Smith Kline Beecham Pharmaceuticals, Toronto, Ontario, May 5, 2000.
191. "Controversies consequences and real clinical outcomes in the management of new respiratory quinolones ". Presented at a satellite symposium of the American Thoracic Society Meeting (ATS) , Toronto, Ontario, May 6, 2000.
192. "Treatment of community acquired pneumonia and acute exacerbations of chronic bronchitis in the new millenium ". Presented at Interlake Medical Rounds, Gimli, Manitoba, May 8, 2000.
193. "Clinical management of respiratory infections in the days of antibiotic resistance and multi-drug resistant pathogens ". Presented at Grand Rounds in Medicine, Toronto East General Hospital, Toronto, Ontario, May 10, 2000.
194. " Treatment of upper and lower respiratory infections ". Presented at a Medical Education Symposium, Regina, Saskatchewan, May 13, 2000.

195. "Antibiotic resistance in British Columbia and Canada: Focus on respiratory infections ". Presented at Grand Rounds in Medicine, Royal Jubilee Hospital, Victoria, British Columbia, May 16,2000.
196. "The role of macrolides and fluoroquinolones in the treatment of respiratory infections ". Presented at Lansdowne Medical Clinic, Victoria, British Columbia, May 16,2000.
197. "Management of respiratory infections in the days of antibiotic resistance ". Presented at Family Physicians Update, Kamloops, British Columbia, May 16,2000.
198. "Canadian Respiratory Organism Susceptibility Study (CROSS) 1997-2000 ". Presented at Medical Grand Rounds, Kelowna General Hospital, Kelowna, British Columbia, May 17,2000.
199. "Outpatient management of lower respiratory infections in the new millenium ". Presented at Family Physicians Update, Vancouver, British Columbia, May 17,2000.
200. "Clinical and economic evaluation of new fluoroquinolones vs comparators for the management of community acquired pneumonia ". Presented at Medical Grand Rounds, Langley General Hospital, Langley, British Columbia, May 18, 2000.
201. "The new fluoroquinolones where do they fit into clinical practice ". Presented at Family Physicians Update, Vancouver, British Columbia, May 18, 2000.
202. "Treatment of antibiotic resistant respiratory infections in the new era ". Presented at Family Physicians Update, Langley, British Columbia, May 18, 2000.
203. "Role of the new macrolides/ketolides and fluoroquinolones in the treatment of respiratory infections ". Presented at the annual meeting of Canadian College of Clinical Pharmacy (CCCP), Kananaskis, Alberta, June 10,2000.
204. "Role of the new macrolides/ketolides and fluoroquinolones in the treatment of respiratory infections ". Presented at the annual meeting of Canadian College of Clinical Pharmacy (CCCP), Kananaskis, Alberta, June 10,2000.
205. "Antibiotic resistance in *Streptococcus pneumoniae*, *Moraxella catarrhalis* and *Haemophilus influenzae* and its clinical significance ". Presented at Family Physicians Update, Thunder Bay, Ontario, June 22, 2000.
206. "Treatment of acute exacerbations of chronic bronchitis in the days of antibiotic resistance ". Presented at Medical Grand Rounds, Aberdeen Hospital New Glasgow, New Glasgow, Nova Scotia, June 28,2000.
207. "Multi-drug resistant *Streptococcus pneumoniae*: Its clinical significance in the management if respiratory infections ". Presented at Medical Grand Rounds, Saint John Regional Hospital, St. John, New Brunswick, June 28,2000.
208. "Management of upper and lower respiratory infections: Resistance data from the Maritimes ". Presented at Physicians Medical Update, Yarmouth, Nova Scotia, June 28,2000.
209. "Antibiotic resistance in the Maritimes: Clinical significance and patient management ". Presented at Grand Medical Rounds, Cape Breton Regional Hospital, Sydney, Nova Scotia, June 29,2000.

210. "Management of infections in the Maritimes due to resistant organisms ". Presented at Family Physicians Update, Corner Brook, Newfoundland, June 29, 2000.
211. "Antibiotic resistance and its influence in the treatment of respiratory infections ". Presented at Respiratory Medicine Rounds, Halifax, Nova Scotia, June 29, 2000.
212. "Treatment of antibiotic resistant infections ". Presented at the Medical Microbiology/Infectious Diseases Retreat, Hecla Island, Manitoba, August 19, 2000.
213. "Research in the Manitoba Antibiotic Resistance Laboratory (MARL)". Presented to Medical/Scientific/Marketing/Economics departments, Ortho McNeil Pharmaceutical, New Jersey, August 21, 2000.
214. "Role of cephalosporins in the treatment of upper and lower respiratory tract infections". Presented to the Antibiotic subcommittee at the Health Sciences Centre and St. Boniface General Hospitals, Winnipeg, Manitoba, August 24, 2000.
215. " Macrolide-resistant *S.pneumoniae* in Canada: Prevalence, significance and treatment options". Presented to the Medical Department, Abbott Pharmaceuticals, Chicago, Illinois, August 25, 2000.
216. " Macrolide-resistant *S.pneumoniae* in Canada: Prevalence, significance and treatment options". Presented to the Medical Department, Abbott Pharmaceuticals, Chicago, Illinois, August 25, 2000.
217. "Treatment of community acquired pneumonia: The new CDC treatment guidelines". Presented at the Global Infectious Diseases Conference, Paris, France, September 8, 2000.
218. " Antibiotic Resistant Organisms". Presented at Community and Hospital Infection Control Association (CHICA) Manitoba Chapter Annual Meeting, Winnipeg, Manitoba, September 29, 2000.
219. " Antibiotic resistance in industrialized and developing countries. Management strategies". Presented at grand medical rounds. Concordia General Hospital, Winnipeg, Manitoba, October 12, 2000.
220. " Antibiotic resistance in Ontario: Relevance to treatment". Presented at Family Physician Update. Toronto, Ontario, October 16, 2000.
221. " Respiratory infections in the emergency setting: Issues of antibiotic resistance". Presented at City Wide Emergency Rounds, Mount Sinai Hospital, Toronto, Ontario, October 17, 2000.
222. " Treatment of respiratory infections in the year 2000: Is it influenced by antibiotic resistance". Presented at Grand Medical Rounds, St. Michael's Hospital, Toronto, Ontario, October 17, 2000.
223. " Prevalence of multi-drug resistant *S.pneumoniae* and its influence on treatment". Presented at Grand Medical Rounds, Sudbury, Ontario, October 18, 2000.
224. "Penicillin-Resistant *S.pneumoniae* and Beta-lactamase producing *H.influenzae* and *M.catarrhalis* in Canada.". Presented at Specialist Rounds, Ottawa, Ontario, October 18, 2000.
225. "Canadian treatment guidelines for the management of community acquired pneumonia and acute exacerbations of chronic bronchitis.". Presented at Family Physician Rounds, Newmarket, Ontario, October 19, 2000.

226. "Treatment of penicillin-resistant and multi-drug resistant *S.pneumoniae* infections". Presented at Family Physician Rounds, Brampton, Ontario, October 19, 2000.
227. "Antibiotic resistance and its relationship to antibiotic use". Presented at Family Physician Rounds, Mississauga, Ontario, October 19, 2000.
228. "Fluoroquinolones in the new millenium: When to use them when not to use them". Presented at Medical Grand Rounds, St. Josephs Hospital, Toronto, Ontario, October 20, 2000.
229. "Comparison of fluoroquinolones: Focus on gemifloxacin". Presented at the National Gemifloxacin Advisory Meeting, Vancouver, Ontario, October 21, 2000.
230. "Treatment of acute exacerbations of chronic bronchitis". Presented at a satellite meeting of CHEST, San Francisco, California, October 23, 2000.
231. "Antibiotic resistance in Saudi Arabia: Comparison to the Canadian experience". Presented at a Grand Medical Rounds, Khamis Mushait Hospital, Abha, Saudi Arabia, October 28, 2000.
232. "Role of macrolides, penicillins and cephalosporins in the management of upper and lower respiratory infections". Presented at a Ministry of Health Medical Rounds, Abha, Saudi Arabia, October 28, 2000.
233. "Treatment guidelines for the management of community acquired pneumonia". Presented at Specialist Rounds, Abha, Saudi Arabia, October 28, 2000.
234. "Respiratory tract infections: Antibiotic resistance and its influence on treatment management ". Presented at Medical Grand Rounds, King Fahad Armed Forces Hospital, Jeddah, Saudi Arabia, October 29, 2000.
235. "Antibiotic treatment of bronchitis and pneumonia in the days of antibiotic resistance ". Presented at Specialist Rounds, Madinah, Saudi Arabia, October 29, 2000.
236. "Prevalence of penicillin-resistant and multi-drug resistant *S.pneumoniae* in the Middle East: Impact on treatment ". Presented at King Khaled Medical Military Complex, Dammam, Saudi Arabia, October 30, 2000.
237. "Upper and lower respiratory tract infections: Resistance significance and treatment ". Presented at Specialist Rounds, Hafouf, Saudi Arabia, October 30, 2000.
238. "Otitis media, sinusitis and pharyngitis/tonsillitis: Influence of antibiotic resistance on management ". Presented at Medical Grand Rounds, Hafer Baten Medical Military Base, Hafer Baten, Saudi Arabia, October 31, 2000.
239. "Community acquired pneumonia treatment guidelines: Similarities between Canada and Saudi Arabia ". Presented at Specialist Rounds, Dammam, Saudi Arabia, October 31, 2000.
240. "Management of respiratory infections in the Gulf ". Presented at Specialist Rounds, King Khalid University Hospital, Riyadh, Saudi Arabia, November 1, 2000.
241. "Antibiotic resistance and its influence on managing infections in the new millenium ". Presented at KOLCG Grand Rounds, Riyadh, Saudi Arabia, November 2, 2000.

242. "Resistance in respiratory infections: Clinical significance and their management Presented at Specialist Rounds, Riyadh, Saudi Arabia, November 2, 2000.
243. "Acute exacerbations of chronic bronchitis: How should patients be managed ". Presented at Specialist Rounds, Al Quassim, Saudi Arabia, November 4, 2000.
244. "Influence of pharmacokinetic and pharmacodynamic factors in the management of infectious diseases ". Presented at the Arab Society of Chemotherapy Microbiology and Infectious Diseases Annual Meeting, King Fahad National Guard Hospital, Riyadh, Saudi Arabia, November 5, 2000.
245. "Using pharmacokinetics and pharmacodynamics to explain the differences between cephalosporins in management of pneumococcal infections ". Presented at the target program, Montreal, Quebec, November 10, 2000.
246. "Antibiotic resistance: Using pharmacokinetics and pharmacodynamics to tailor antibiotic treatment ". Presented at the regional gemifloxacin meeting, Vancouver, British Columbia, November 11, 2000.
247. "The future of fluoroquinolones in hospital infections ". Presented at Pharmacy Rounds, Cite de la Sante, Laval, Quebec, November 15, 2000.
248. "Management of outpatient infections in the days of antibiotic resistance ". Presented at Family Medicine Update, Laval, Quebec, November 15, 2000.
249. "Antibiotic resistance in Quebec: Focus on the management of respiratory infections ". Presented at Medical Grand Rounds, Jewish General Hospital, Montreal, Quebec, November 16, 2000.
250. "Emergency room management of community acquired pneumonia ". Presented at Emergency Grand Rounds, St. Mary's Hospital, Montreal, Quebec, November 16, 2000.
251. "Pharmacokinetics and pharmacodynamics of antibiotics and their role in the management of infectious diseases ". Presented at Medical Update, Montreal, Quebec, November 16, 2000.
252. "The place of macrolides, beta-lactams and fluoroquinolones in the management of community and hospital acquired infections ". Presented at Respiriology Conference for Family Physicians, Montreal, Quebec, November 17, 2000.
253. "Management of acute and chronic sinusitis in the days of antibiotic resistance ". Presented at Family Medicine Update, Montreal, Quebec, November 17, 2000.
254. "The place of new antibiotics in the management of hospital infections ". Presented at Medical Grand Rounds, Centre Hopital Universitaire de Montreal, Montreal, Quebec, November 17, 2000.
255. "Pharmacotherapy of new investigational antibiotics ". Presented at Canadian Society of Hospital Pharmacists Annual Meeting (British Columbia Branch), Vancouver, British Columbia, November 18, 2000.

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256. "Pharmacology: Management of urinary, skin and soft tissue and respiratory infections". Presented at Continuing Medical Education Rural Program, Faculty of Medicine, University of Manitoba, Steinbach, Manitoba, January 16, 2001.
257. "Management of upper and lower respiratory infections in a rural practice: Influence of antibiotic resistance ". Presented at Medicine Grand Rounds, Brandon Clinic, Brandon, Manitoba, January 18, 2001.
258. "What is the driving force of antibiotic resistance: Are some antibiotics worse than others ? ". Presented at the Health Action Centre, Winnipeg, Manitoba, January 23, 2001.
259. "Changing patterns of microbial resistance in upper respiratory infection". Presented at targeting upper respiratory infections in adults, Lake Louise, Alberta, January 26, 2001.
260. "Treatment of community acquired infections in the days of antibiotic resistance ". Presented at Medicine Grand Rounds, Dauphin Hospital, Dauphin, January 29, 2001.
261. "Management of otitis media and acute sinusitis ". Presented at Medical Rounds, University of Manitoba Medical Clinic, Winnipeg, Manitoba, January 30, 2001.
262. "Development of antibiotic resistance in the treatment of infectious diseases ". Presented at Family Physician Update, Huntsville, Ontario, February 17, 2001.
263. "Management of respiratory infections in community practice ". Presented at Family Physician Update, Winnipeg, Manitoba, February 20, 2001.
264. "Update on new respiratory fluoroquinolones ". Presented at the Awareness of Information on Respiration (AIR) Regional Meeting, Banff, Alberta, February 24, 2001.
265. "The role of macrolides and ketolides in the management of respiratory infections in Canada ". Presented at the Aventis Canada, Laval, Quebec, February 26, 2001.
266. "Antibiotic resistance and management of community acquired respiratory infections ". Presented at Family Physician Update, Winnipeg, Manitoba, February 27, 2001.
267. "Antibiotic resistance in otitis media and subsequent management ". Presented at Family Physician Update, Winnipeg, Manitoba, February 28, 2001.
268. "Management of infectious maladies of the upper and lower airways ". Presented at Family Physician Update, Quebec City, Quebec, March 1, 2001.
269. "Comprehensive review of the fluoroquinolones: Are there differences ? ". Presented at the Medical Representative Training Session, Quebec City, Quebec, March 2, 2001.
270. "The role of beta-lactams tetracyclines macrolides, sulfonamides and fluoroquinolones in the management of respiratory infections ". Presented at Family Physician Update, Quebec City, Quebec, March 2, 2001.
271. "Update on the new fluoroquinolones ". Presented at Awareness in Respiration (AIR): Infectious conference for respirologists and emergency physicians, Quebec City, Quebec, March 3, 2001.

272. "Antibiotic resistance in *S.pneumoniae*, *H.influenzae* , *M.catarrhalis* and group A Streptococcus in Canada ". Presented at Family Physician Update, Calgary, Alberta, March 7, 2001.
273. "Treatment of community acquired pneumonia in hospitalized patients ". Presented at Respiriology Grand Rounds, Foothills General Hospital, Calgary, Alberta, March 8, 2001.
274. "The cephalosporin generational concept with fluoroquinolones ". Presented at Medical Grand Rounds, Peter Lougheed Hospital, Calgary, Alberta, March 8, 2001.
275. "Treatment of antibiotic resistant infections in the year 2001 ". Presented at Family Physician Update. Vancouver, British Columbia, March 8, 2001.
276. "Impact of antibiotic resistance on the treatment of infectious diseases ". Presented at Medical Grand Rounds, Langley General Hospital, Langley, British Columbia, March 9, 2001.
277. "Antibiotic resistance in western Canada: Prevalence and clinical significance ". Presented at Specialist Update, Vancouver, British Columbia, March 9, 2001.
278. "Macrolides vs fluoroquinolones: Which is better for treatment of respiratory infections ? ". Presented at Medical Specialist Update, Montreal, Quebec, March 15, 2001.
279. "Prevalence of antibiotic resistance in respiratory infections in Quebec: Impact on management ". Presented at Montreal Family Physician Annual Conference, Montreal, Quebec, March 16, 2001.
280. "Treatment of acute and chronic sinusitis ". Presented at specialist update, Quebec City, Quebec, March 16, 2001.
281. "Comprehensive review of fluoroquinolones ". Presented at Awareness of Respiration (AIR), Specialist conference for respirologists and emergency physicians, Quebec City, Quebec, March 17, 2001.
282. "Comparison of macrolides and ketolides ". Presented at Aventis Pharma, Montreal, Quebec, March 23, 2001.
283. "Management of pediatric infections in the days of antibiotic resistance ". Presented at Pediatric Grand Rounds, ThunderBay, Ontario, April 3, 2001.
284. "Antibiotic resistance in otitis media, sinusitis and pharyngitis/tonsillitis: Impact on clinical outcome ". Presented at Pediatric Grand Rounds, University of Manitoba, Winnipeg, Manitoba, April 12, 2001.
285. "Oxazolidinones: Finally a new antibiotic class ". Presented at the Linezolid launch, Miami, Florida, April 23, 2001.
286. "Review of gatifloxacin a new fluoroquinolone: Where does it fit in ? ". Presented at Respiratory Infection Conference for Specialists, Miami, Florida, April 27, 2001.
287. "Antibiotic resistant infections: Does it affect outcomes ? ". Presented at Family Physician Update, Winnipeg, Manitoba, April 28, 2001.

288. "Management of acute exacerbations of chronic bronchitis: Does antibiotic resistance influence treatment ? ". Presented at Family Physician Update, Saskatoon, Saskatchewan, April 29, 2001.
289. "Comprehensive review of macrolides and ketolides: Focus on telithromycin ". Presented at Aventis Pharma, Montreal, Quebec, May 3, 2001.
290. "Pharmacokinetics/Pharmacodynamics and antibiotics: What does it all mean ? " Presented at Fighting Infectious Diseases Conference, Toronto, Ontario, May 3, 2001.
291. "Cellular and molecular mechanisms of resistance to B-Lactams and fluoroquinolones " Presented at Making a Difference (MAD), Infectious Diseases Pharmacotherapy Conference, Orlando, Florida, May 4, 2001.
292. "More new antibiotics: What to do with them ? " Presented at Medical Grand Rounds, Dauphin, Manitoba, May 7, 2001.
293. "Update on antibiotic resistance in respiratory infections in Canada " Presented at Family Physician and Specialist Update, Ottawa, Ontario, May 9, 2001.
294. "Influence of antibiotic resistance in respiratory infections. Prevalence significance and effect on treatment " Presented at Medical Grand Rounds, Kingston General Hospital, Kingston, Ontario, May 10, 2001.
295. "Management of community acquired pneumonia in the days of antibiotic resistance " Presented at Family Physician Update, Sarnia, Ontario, May 10, 2001.
296. "Treatment of community acquired infections in family practice " Presented at Family Physician Update, Windsor, Ontario, May 11, 2001.
297. "Controversial issues with fluoroquinolones: Pharmacokinetics/pharmacodynamics and resistance development " Presented at the FORTE conference for infectious diseases practitioners, Niagara on the Lake, Ontario, May 12, 2001.
298. "Role of new cephalosporins in the treatment of respiratory tract infections " Presented at the Family physician update, Winnipeg, Manitoba, May 16, 2001.
299. "Pharmacokinetics and pharmacodynamics of macrolides and ketolides " Presented at a Satellite meeting of the American Thoracic Society (ATS) conference, San Francisco, California, May 18, 2001.
300. "Management of infectious diseases in rural practice: Influence of antibiotic resistance " Presented at Russell Medical Rounds, Russell, Manitoba, May 23, 2001.
301. "Formulary decisions regarding fluoroquinolones in Manitoba hospitals " Presented to Manitoba Hospital Pharmacists, Winnipeg, Manitoba, May 23, 2001.
302. "Influence of multi-drug resistant *S.pneumoniae* on the treatment of respiratory infections " Presented at Brandon Medical Rounds, Brandon, Manitoba, May 24, 2001.
303. "Treatment of chronic infectious sinusitis: Does antibiotic resistance affect treatment ? " Presented at an Ear Eyes Nose and Throat (ENT) specialist meeting, Vancouver, British Columbia, May 28, 2001.

304. "Use of molecular technologies to combat antibiotic resistance" Presented at the American Society of Health System Pharmacy Annual Meeting, Los Angeles, California, June 4, 2001.
305. "Clinical significance of macrolide resistance: Why are we not seeing patient failures ?" Presented at an Infectious Diseases/Respirology Update, Victoria, British Columbia, June 15, 2001.
306. "Impact of antibiotic resistance on the family physician" Presented at the Vista Medical Centre, Winnipeg, Manitoba, June 19, 2001.
307. "Saskatchewan resistance patterns in *S.pneumoniae*, *H.influenzae* and *M.catarrhalis*" Presented at a Saskatoon/Regina teleconference, Winnipeg, Manitoba, June 20, 2001.
308. "What is the future of macrolides nationally and internationally ? " Presented at a Respirology Update, Kelowna, British Columbia, June 24, 2001.
309. "Management of respiratory infections in the nursing home" Presented at Geriatric Grand Rounds, Queen Elizabeth II Hospital, Halifax, Nova Scotia, September 5, 2001.
310. "Antibiotic resistance in the maritimes: Implications for management" Presented at Medical Grand Rounds, St. John Hospital, St. John, New Brunswick, September 5, 2001.
311. "Management of community acquired pneumonia in the new millenium" Presented at Medical Grand Rounds, Moncton Hospital, Moncton, New Brunswick, September 6, 2001.
312. "What to do with new antibiotics on the formulary" Presented at Medical Grand Rounds, Sydney General Hospital, Sydney, Nova Scotia, September 6, 2001.
313. "Controversial issues regarding the management of respiratory tract infections" Presented at Medical Grand Rounds, Yarmouth, Nova Scotia, September 6, 2001.
314. "Canadian Respiratory Organism Susceptibility Study: Implications for Prince Edward Island" Presented at Medical Grand Rounds, Queen Elizabeth II Hospital, Charlottetown, Prince Edward Island, September 7, 2001.
315. "Antibiotic resistance and its implications on the management of sinusitis" Presented at Family Physician Update, Winnipeg, Manitoba, September 12, 2001.
316. "Treatment of otitis media in the days of antibiotic resistance" Presented at a Pediatrics Update, Winnipeg, Manitoba, September 13, 2001.
317. "Development of new antibiotics in the treatment of infectious diseases" Presented at a Family Physicians Update, Winnipeg, Manitoba, September 20, 2001.
318. "New fluoroquinolones: Which when why" Presented at a Family Physicians Update, Edmonton, Alberta, September 30, 2001.
319. "Re-evaluating the treatment of infectious diseases in the days of antibiotic resistance" Presented at Medical Grand Rounds, Centre Hopital Universite Laval, Laval, Quebec, October 3, 2001.

320. "Treatment of infectious diseases: Focus on Bacterial Eradication" Presented at Medical Grand Rounds, L'enfant Jesus Hopital, Laval, Quebec, October 3, 2001.
321. "Acute exacerbations of chronic bronchitis: Prevalence clinical significance and treatment options" Presented at the Seminars of respirology of Quebec, Quebec City, Quebec, October 3, 2001.
322. "Antibiotic resistance in respiratory pathogens in Quebec and Canada" Presented at Medical Grand Rounds, CHUM, Montreal, Quebec, October 4, 2001.
323. "Outcomes of infections caused by resistant pathogens" Presented at Medical Grand Rounds, Jewish General, Montreal, Quebec, October 4, 2001.
324. "Treatment of upper respiratory infections" Presented at Family Physicians update, Montreal, Quebec, October 5, 2001.
325. "Antibiotic resistance and antibiotic use" Presented at Family Physicians update, Montreal, Quebec, October 5, 2001.
326. "Clinical implications of antibiotic resistant infections" Presented at Infectious Diseases Symposium, University of Illinois in Chicago, Chicago, Illinois, October 12, 2001.
327. "Antibiotic resistance in respiratory infections" Presented at Family Physicians Update, Lake Louise, Alberta, October 13, 2001.
328. "Review of new antibiotics: Whats their role in practice ? " Presented at Family Physicians Update, Lake Louise, Alberta, October 13, 2001.
329. "Treatment of infectious diseases in the days of antibiotic resistance " Presented at Medical Grand Rounds, Lindsay Medical Centre, Lindsay, Ontario, October 16, 2001.
330. "Importance of bacterial eradication in the treatment of infectious diseases " Presented at Family Physicians Update, Toronto, Ontario, October 17, 2001.
331. "Prevention of infections: Importance of vaccination " Presented at Family Physicians Update, Toronto, Ontario, October 17, 2001.
332. "Resistant infections in Canada: Development of new antibiotics " Teleconference for Family Physicians. Regina and Yorkton, Saskatchewan, October 22, 2001.
333. "Clinical and economic evaluation of fluoroquinolones versus standard treatment for community acquired pneumonia " Awareness in respiration, Palm Springs, California, October 28, 2001.
334. "Macrolide resistance in Canada: Future role of macrolides " Presented at the annual meeting of the Canadian Association of Microbiology and Infectious Diseases (CACMID), Victoria, British Columbia, November 5, 2001.
335. "New antibiotics on the horizon " Presented at the Manitoba Pharmaceutical Association annual meeting, Winnipeg, Manitoba, November 7, 2001.
336. "What is driving the development of new antibiotics " Teleconference presented at the Rural Manitoba Pharmaceutical Association annual meeting, Winnipeg, Manitoba, November 8, 2001.

337. "Clinical significance of resistance in chest infections " Presented at Respiriology Grand Rounds. Ottawa General Hospital, Ottawa, Ontario, November 9, 2001.
338. "How to minimize the development of antibiotic resistance in the treatment of infectious diseases " Presented at Respiriology Club Rounds, Ottawa, Ontario, November 9, 2001.
339. "Treatment of upper and lower respiratory tract infections: Focus on B-lactams and macrolides " Presented at Family Physician Update, Ottawa, Ontario, November 10, 2001.
340. "Antibiotic resistance in British Columbia: Comparison with Canada " Presented at Respiriology/Family Physician Update, Kelowna, British Columbia, November 13, 2001.
341. "Dissemination of multi-drug resistant *Streptococcus pneumoniae* globally: Implications for vaccination " Presented at Medical Grand Rounds, New Westminster Hospital, New Westminster, British Columbia, November 14, 2001.
342. "The crowded antibiotic formulary: Streamlining or adding antibiotics " Presented at Medical Grand Rounds, Surrey Hospital, Surrey, British Columbia, November 14, 2001.
343. "Treatment of acute exacerbations of chronic bronchitis: How to maximize cure " Presented at Microbiology/Infectious Diseases/ Respiriology Update, Vancouver, British Columbia, November 14, 2001.
344. "Dissemination of multi-drug resistant *Streptococcus pneumoniae* globally: Implications for vaccination " Presented at Medical Grand Rounds, New Westminster Hospital, New Westminster, British Columbia, November 14, 2001.
345. "The Canadian respiratory organism susceptibility study (CROSS) " Presented at Medical Grand Rounds, Royal Victoria Hospital, Victoria, British Columbia, November 15, 2001.
346. "Influence of antibiotic resistance on treatment of infectious diseases " Presented at Family Physician Update, Calgary, Alberta, November 17, 2001.
347. "Antibiotic resistance in Toronto: What is happening " Presented at Respiriology Grand Rounds, Toronto West Hospital, Toronto, Ontario, November 19, 2001.
348. "Risk factors for resistant pathogens " Presented at Medical grand rounds, Humber Hospital, Toronto, Ontario, November 19, 2001.
349. "Cellular and molecular mechanisms of fluoroquinolone resistance: One step two step " Presented at infectious diseases/medical microbiology update, Toronto, Ontario, November 19, 2001.
350. "Will fluoroquinolones turn into cephalosporins ? " Presented at Family Physician Update, Toronto, Ontario, November 19, 2001.
351. "The importance of understanding mechanisms of antibiotic resistance " Presented at Respiriology Grand Rounds, St. Joseph's Hospital, Hamilton, Ontario, November 20, 2001.
352. "Treatment of infections in critical care setting " Presented at critical care rounds, Hamilton Hospital, Hamilton, Ontario, November 20, 2001.

353. "Management of infectious diseases: What the family physician needs to know " Presented at Family physician update, Grimsby, Ontario, November 20, 2001.
354. "Antibiotic resistance in southern Ontario: Implications for treatment " Presented at Respiriology Grand Rounds, London Health Sciences Centre, London, Ontario, November 21, 2001.
355. "The role of new antibiotics in the hospitalized patient " Presented at Infectious Diseases Grand Rounds, London Health Sciences Centre, London, Ontario, November 21, 2001.
356. "Understanding the clinical relevance of resistance in respiratory infections " Presented at Family physician update, Cambridge, Ontario, November 21, 2001.
357. "Bacterial eradication leads to minimization of antibiotic resistance " Presented at Respiriology Update, Toronto, Ontario, December 2, 2001.
358. "Appropriate antibiotic use: Its worth it " Presented at Family Physician Update, Toronto, Ontario, December 2, 2001.
359. "Oxazolidinones: Finally a new class of antibiotics " Presented at Infectious Diseases update, Winnipeg, Manitoba, December 6, 2001.
360. "Macrolide resistance in Canada: Incidence of *meflrm* from 1997-2001 " Presented at Infectious Diseases/Microbiology Update, Chicago, Illinois, December 16, 2001.

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361. "New antibiotics: What role do they have for the internist " Presented at Medical Grand Rounds, Health Sciences Centre, Winnipeg, Manitoba, January 8, 2002.
362. "What is the future of fluoroquinolones in Canada " Presented at Fluoroquinolone update, Banff, Alberta, January 10, 2002.
363. "What is the future of macrolides in Canada " Presented at macrolide update, Ottawa, Ontario, January 14, 2002.
364. "Management of community acquired respiratory illness " Presented at Medical Grand Rounds, Concordia Hospital, Winnipeg, Manitoba, January 17, 2002.
365. "Treatment of otitis media in the days of antibiotic resistance " Presented at Pediatric Update, Toronto, Ontario, January 19, 2002.
366. "Molecular mechanisms of macrolide resistance in *S.pneumoniae* " Presented at macrolide update, Bologna, Italy, January 22, 2002.
367. "Antibiotic resistant infections: Myths and realities " Presented at Awareness in Respiration (AIR), Cancun, Mexico, January 31, 2002.
368. "Controversial issues regarding the new fluoroquinolones " Presented at Awareness in Respiration (AIR), Cancun, Mexico, February 1, 2002.

369. "Clinical significance of macrolide resistance " Presented at Awareness in Respiration (AIR), Cancun, Mexico, February 1, 2002.
370. "How to evaluate new antibiotics " Presented at Awareness in Respiration (AIR), Cancun, Mexico, February 1, 2002.
371. "Antibiotic resistant infections: Incidence, clinical implications and treatment " Presented at a Specialist Conference on Infectious Diseases, Knysna, South Africa, February 14, 2002.
372. "Why are patients not failing antibiotic treatment despite antibiotic resistance " Presented at Pharmacy Rounds, Toronto General Hospital, Toronto, Ontario, February 25, 2002.
373. "What the family physician needs to know about antibiotic resistance " Presented at Family Physician Update, Toronto, Ontario, February 26, 2002.
374. Antibiotic resistance in respiratory infections " Presented at Family Physician Update, Deerhurst, Ontario, March 2, 2002.
375. "Pharmacokinetics and pharmacodynamics in the treatment of respiratory infections " Presented at Family Physician Update, Deerhurst, Ontario, March 2, 2002.
376. "Formulary issues with new antimicrobials " Presented at Pharmacy Rounds, Ottawa General Hospital, Ottawa, Ontario, March 5, 2002.
377. "What to do with all these fluoroquinolones " Presented at Pharmacy Rounds, Ottawa Civic Hospital, Ottawa, Ontario, March 5, 2002.
378. "Treatment of community acquired pneumonia in the days of antibiotic resistance" Presented at Family Physician Update, Windsor, Ontario, March 5, 2002.
379. "How to overcome antibiotic resistance when treating infectious diseases " Presented at Medical Grand Rounds, Royal Victoria Hospital, Barrie, Ontario, March 6, 2002.
380. "Prevalence of antibiotic resistance in Canada " Presented at Medical Grand Rounds, Scarborough Centenary Hospital, Scarborough, Ontario, March 6, 2002.
381. "Significance of antibiotic resistance in acute exacerbations of chronic bronchitis " Presented at Family Physician Update, Toronto, Ontario, March 6, 2002.
382. "Prevalence, significance and treatment of antibiotic resistant infections " Presented at Medical Grand Rounds, Lakeridge Health, Oshawa, Ontario, March 7, 2002.
383. "Treatment of respiratory illness in 2002" Presented at Family Physician Update, Toronto, Ontario, March 7, 2002.
384. "What to do with the formulary and antimicrobials " Presented at Pharmacy Rounds, Scarborough General, Scarborough, Ontario, March 7, 2002.
385. "Antibiotic resistance in family practice: what does it mean ? " Presented at Family Physician Update, Toronto, Ontario, March 7, 2002.

386. "Manitoba antibiotic resistance data: Implications for community acquired infections" Presented at Family Physician Update, Steinbach, Manitoba, March 11, 2002.
387. "The future of cephalosporins in the treatment of infectious diseases" Presented at advisory meeting, Montreal, Quebec, March 18, 2002.
388. "The importance of bacterial eradication in treating infections ? " Presented at Family Physician Update, Edmonton, Alberta, March 21, 2002.
389. "Treatment of infectious diseases in the new millenium" Presented at Family Physician Update, Edmonton, Alberta, March 21, 2002.
390. "New antibiotics for treating infectious diseases" Presented at Medical Grand Rounds, Camrose Hospital, Camrose, Alberta, March 22, 2002.
391. "Treatment of otitis media in the days of antibiotic resistance" Presented at Pediatricians Update, Banff, Alberta, March 23, 2002.
392. "Treatment of upper respiratory tract infections in the days of antibiotic resistance " Presented at Family Physician Update, Banff, Alberta, March 23, 2002.
393. "Development of new antibiotics: What new for family practice " Presented at Urban Family Physician Program, University of Manitoba, Winnipeg, Manitoba, April 5, 2002.
394. "Antibiotic resistance is driving the development of new antibiotics " Presented at Rural Family Physician Program, University of Manitoba, Selkirk, Manitoba, April 9, 2002.
395. "Ontario data on antibiotic resistance: Implications for treating infections " Presented at Family Physician Update, Ottawa, Ontario, April 13, 2002.
396. "Antibiotic resistance and its significance in outcome " Presented at Family Physician Program, Moncton, New Brunswick, April 19, 2002.
397. "The role of macrolides and ketolides in the treatment of community acquired infections " Presented at Family Physician Program, Moncton, New Brunswick, April 19, 2002.
398. "The future development of antibiotics: Why are they coming ? " Presented at Specialist Meeting, Dominican Republic, April 22, 2002.
399. "Molecular mechanisms of macrolide resistance " Presented at Specialist Meeting, Toronto, Ontario, April 29, 2002.
400. "Antibiotic resistance is driving the development of new antibiotics like the ketolides " Presented at a Respirologist Specialist Meeting, Kelowna, British Columbia, May 4, 2002.
401. "The global impact of antibiotic resistant infections " Presented at the Canadian Association of Research Nurses Annual Meeting (Manitoba Branch), Winnipeg, Manitoba, May 14, 2002.
402. "Treatment of infectious diseases by the family doctor " Presented at Family Residents Academic half day, Winnipeg, Manitoba, June 3, 2002.

403. "Research in the Manitoba antibiotic resistance program: Where is the future going ? " Presented to the Winnipeg Regional Hospital Authority (WRHA), Winnipeg, Manitoba, June 6, 2002.
404. "The role of macrolides in the treatment of infectious diseases: Today and tomorrow " Presented at a Specialist Meeting, Crete, Greece, June 17, 2002.
405. "Development of new antimicrobials: What role will they play ? " Presented at 3rd Annual review in Respiriology, Kelowna, British Columbia, June 22, 2002.
406. "Recent data on the status of antibiotic resistance in respiratory infections in Canada " Presented at 3rd Annual review in Respiriology, Kelowna, British Columbia, June 22, 2002.
407. "Pharmacokinetics and pharmacodynamics: the importance of bacterial eradication " Presented at 3rd Annual review in Respiriology, Kelowna, British Columbia, June 22, 2002.
408. "The development of the new fluoroquinolones; Why are they here ? " Presented through medicine teleconference, Memphis, Tennessee, June 25, 2002.
409. "Role of the new fluoroquinolones in the treatment of infectious diseases " Presented through medicine teleconference, Los Angeles, California, June 27, 2002.
410. "The future of the new fluoroquinolones in the treatment of infectious diseases " Presented at Bayer preceptorship, Winnipeg, Manitoba, July 9, 2002.
411. "Molecular mechanisms of resistance of fluoroquinolones in *Streptococcus pneumoniae* " Presented at fluoroquinolone meeting, Seattle, Washington, August 2, 2002.
412. "Status of antibiotic resistance in Manitoba and Canada" Presented at Manitoba Intravenous Nurses Association Annual Meeting, Winnipeg, Manitoba, September 12, 2002.
413. "New advances in the treatment of infectious diseases" Presented at Medical Grand Rounds, Peterborough General Hospital, Peterborough, Ontario, September 16, 2002.
414. "Antibiotic resistance in infectious diseases: Implications for treatment" Presented at Family Physician Update, Belleville, Ontario, September 17, 2002.
415. "All you want to know about new antibiotics" Presented at Family Physician Update, Belleville, Ontario, September 17, 2002.
416. "Antibiotic resistance in community acquired pneumonia associated with failures: Implications for treatment" Presented at Respiriology Rounds, Toronto East General Hospital, Toronto, Ontario, September 17, 2002.
417. "Pharmacokinetics and pharmacodynamics of aminoglycosides and fluoroquinolones: Implications for clinical practice" Presented at train the trainer specialist meeting, San Diego, California, September 26, 2002.
418. "Macrolide resistance in respiratory infections: Prevalence, significance and implications for resistance propagation" Presented at train the trainer specialist meeting, San Diego, California, September 26, 2002.

419. "Importance of bacterial eradication in the treatment of respiratory infections" Presented at update on pulmonary and critical care medicine, Ann Arbor, Michigan, October 1, 2002.
420. "New antibiotics in the treatment of respiratory infections" Presented at update on pulmonary and critical care medicine, Ann Arbor, Michigan, October 1, 2002.
421. "Everything you wanted to know about antibiotic treatment but were afraid to ask" Presented at Family Physician Update, Detroit, Michigan, October 1, 2002.
422. "Molecular mechanisms of macrolide resistance: Dissemination of the macrolide efflux genetic assembly (MEGA) element" Presented at Infectious Diseases Grand Rounds, Henry Ford General Hospital, Detroit, Michigan, October 2, 2002.
423. "Influence of antibiotic resistance on the treatment of infectious diseases" Presented at Specialist Update, Vancouver, British Columbia, October 8, 2002.
424. "Antibiotic resistance in British Columbia: Impact on treatment" Presented at Medical Grand Rounds, St. Paul's Hospital, Vancouver, British Columbia, October 9, 2002.
425. "Treatment guidelines of respiratory infections in Canada" Presented at Pharmacology Rounds, Royal Columbian Hospital, Vancouver, British Columbia, October 9, 2002.
426. "The Canadian Respiratory Organism Surveillance Study (CROSS)" Presented at Microbiology Rounds, Vancouver General Hospital and Health Sciences Centre, Vancouver, British Columbia, October 9, 2002.
427. "Methods of minimizing antibiotic resistant infections: Importance of bacterial eradication" Presented at Family Physician Update, Vancouver, British Columbia, October 9, 2002.
428. "Treatment of community acquired pneumonia in a community hospital setting" Presented at Medical Grand Rounds, Lions Gate Hospital, Vancouver, British Columbia, October 10, 2002.
429. "Rapid emergence of multi-drug resistant *Streptococcus pneumoniae* in North America: Dissemination of results clones" Presented at Medical Grand Rounds, Surrey Memorial Hospital, Surrey, British Columbia, October 10, 2002.
430. "Comparison of antibiotic resistance in Canada and central/eastern Europe: Influence on treatment" Presented at Specialist Meeting on Antibiotic Resistant Infections, Prague, Czech Republic, October 15, 2002.
431. "Macrolides: Their role in the empiric treatment of respiratory infections" Presented at Specialist Meeting on Antibiotic Resistant Infections, Brno, Czech Republic, October 16, 2002.
432. "What is driving the development of antibiotic resistant *Streptococcus pneumoniae* in central/eastern Europe" Presented at Specialist Meeting on Antibiotic Resistant Infections, Ostrava, Czech Republic, October 17, 2002.
433. "Comparison of Canadian and United States community acquired pneumonia guidelines" Presented at Medical Grand Rounds, Salinas Valley Memorial Hospital, San Francisco, California, October 22, 2002.

434. "Fluoroquinolone pharmacokinetics pharmacodynamics microbiology clinical efficacy and safety" Presented to the Quatra Health System Pharmacy Association, San Francisco, California, October 22, 2002.
435. "Antibiotic resistant infections in the United States: Comparison with Canada" Presented to Pulmonology Fellows/Internal Medicine Residents, San Francisco, California, October 23, 2002.
436. "Development of new antibiotics" Presented at Medical Grand Rounds, Mount Diablo Hospital, San Francisco, California, October 24, 2002.
437. "Clinical relevance of antibiotic resistance in treating infectious diseases" Presented at a Specialist Update, San Francisco, California, October 24, 2002.
438. "What to do with all these resistant superbugs" Presented at Pharmacy Rounds, Tacoma Medical Centre, Seattle/Tacoma, Washington, November 4, 2002.
439. "Treatment of infectious diseases in the days of superbugs" Presented at Specialist Update, Seattle, Washington, November 4, 2002.
440. "New antibiotics: What to do with the formulary" Presented at Pharmacy Rounds, Harbourview Medical Centre, Seattle, Washington, November 5, 2002.
441. "Treatment of pneumonia in a community hospital setting" Presented at Medical Grand Rounds, South Tahoe Medical Centre, Tahoe, Nevada, November 6, 2002.
442. "Antibiotic resistant infections in the United States: Clinical implications" Presented at Specialist Update, Reno, Nevada, November 6, 2002.
443. "Antibiotic resistance in respiratory infections" Presented at Specialist Review in Respiriology, Winnipeg, Manitoba, November 16, 2002.
444. "Molecular mechanisms of macrolide and fluoroquinolone resistance: Implications for clinical practice" Presented at Specialist Review in Respiriology, Winnipeg, Manitoba, November 16, 2002.
445. "Treatment of community acquired respiratory infections" Presented at Family Physician Update, Winnipeg, Manitoba, November 20, 2002.
446. "Molecular mechanisms of macrolide and ketolide resistance" Presented at Specialist Meeting on Macrolides/Ketolides, Vancouver, British Columbia, November 22, 2002.
447. "Pharmacokinetics and pharmacodynamics of macrolides and ketolides" Presented at Specialist Meeting on Macrolides/Ketolides, Vancouver, British Columbia, November 22, 2002.
448. "Pharmacokinetics and pharmacodynamics of fluoroquinolones: What is the role of garenoxacin ? " Presented at the garenoxacin update, Wallingford, Connecticut, November 26, 2002.
449. "Comparison of ciprofloxacin, levofloxacin, gatifloxacin and moxifloxacin in terms of chemistry, pharmacokinetics, pharmacodynamics and resistance." Presented at Alberta Teleconference, Winnipeg, Manitoba, November 28, 2002.

450. "Treatment of respiratory infections with macrolides: Is there a difference ? " Presented at Macrolides: A critical review of new data, what lies ahead ?, Rome, Italy, December 6, 2002.

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451. "Molecular mechanisms of macrolide resistance: The answer to why are we not seeing macrolide failures ? " Presented at Macrolides Forum: Abbott Labs Meeting, Toronto, Manitoba, January 12, 2003.
452. "Antibiotic resistance in the United States and Canada: Comparison of TRUST and CROSS " Presented at Specialist Update, Yuba City, California, January 27, 2003.
453. "Treatment of respiratory infections in the United States: Implications if resistant pathogens" Presented at Respirology Club, Stockton, California, January 28, 2003.
454. "Comparison of the CDC, IDSA and Canadian community acquired pneumonia guidelines" Presented at Medical Grand Rounds, Doctors Hospital, Modesto, California, January 29, 2003.
455. "Critical review of the fluoroquinolones in the United States: Comparison of chemistry, mechanisms of action/resistance, pharmacokinetics, pharmacodynamics, clinical trials and adverse effects" Presented at Clinical Pharmacy Update, Fresno, California, January 29, 2003.
456. "The role of pharmaceutical industry in medical education: perspective of a researcher and educator" Presented at the Faculty of Medicine Students Association pharmaceutical industry/medical education symposium. University of Manitoba, Winnipeg, Manitoba, Feb 14, 2003.
457. "The global concern of antibiotic resistant infection: What can be done ? " Presented at the Cebu Annual Family Physicians Association Meeting, Cebu City, Phillippines, March 5, 2003.
458. "The emerging crisis of antibiotic resistant infections: Comparison of Canada and Southeast Asia " Presented at the Microbiology/Infectious Diseases Society Meeting, Manila, Phillippines, March 6, 2003.
459. "Solutions to the problem of antibiotic resistant infectious diseases " Presented at the Phillippine College of Chest Physicians (PCCP) Annual Meeting, Manila, Phillippines, March 7, 2003.
460. "How to minimize the growing problem of antibiotic resistant infections: Focusing on bacteriological eradication" Presented at the Family Physicians Society Meeting, Manila, Phillippines, March 7, 2003.
461. "Maximizing pharmacokinetic/pharmacodynamic parameters leads to optimal bacteriological eradication: An innovative method to limit resistance spread " Presented at Medical Grand Rounds, Castle Medical Center, Honolulu, Hawaii, March 11, 2003.
462. "Treatment of infections in family practice " Presented at Family Practice Rounds, Mililani Physicians Centre, Honolulu, Hawaii, March 12, 2003.
463. "Insuring the fluoroquinolones: A formula for managed care " Presented at HMSA Insurance group, Honolulu, Hawaii, March 12, 2003.

464. "Combating antibiotic resistant infections: Solutions and challenges " Presented at Pharmacy Rounds, Wahiawa General Hospital, Honolulu, Hawaii, March 12, 2003.
465. "New antimicrobials for the future treatment of infectious diseases " Presented at Specialist update, Honolulu, Hawaii, March 12, 2003.
466. "Multi-drug resistant organisms are leading to the development of new antibiotics: Focus on North America " Presented at Specialist Update, Honolulu, Hawaii, March 13, 2003.
467. "Prevalence clinical significance and treatment options of antibiotic resistant infections " Presented at Medical Grand Rounds, Straub Clinic and Hospital, Honolulu, Hawaii, March 14, 2003.
468. "Pharmacoeconomic issues relating to new antibiotics " Presented at Pharmacy Rounds, Tripler Medical Center, Honolulu, Hawaii, March 14, 2003.
469. "Pharmacokinetics and pharmacodynamic properties as well as molecular mechanisms of resistance of new fluoroquinolones " Presented at a Managed Care Meeting, Dallas, Texas, March 22, 2003.
470. "What is the role of antibiotics in driving MRSA, VRE and *Clostridium difficile* colitis " Presented at a teleconference, Medical and Pharmacy Groups, Western United States, April 1, 2003.
471. "Antibiotic resistance in Canada compared to Russia: What measures can we impliment ? " Presented at the CIS Man and Medicine Annual Conference, Moscow, Russia, April 10, 2003.
472. "Antibiotic use and infection control issues: What can be done ? " Presented at a teleconference, Medical and Pharmacy Groups, Southern United States, April 17, 2003.
473. "Comparison of antibiotic resistance between US and Canada: Similarities and differences " Presented at Specialist Update, Dallas, Texas April 22, 2003.
474. "Management of multidrug resistant infections " Presented at Microbiology Rounds, Parkland Hospital, Dallas, Texas, April 23, 2003.
475. "Vaccination, infection control and appropriate antibiotic use: Methods to control antibiotic resistant infections " Presented at Medical Grand Rounds, Presbyterian Hospital of Dallas, Dallas, Texas, April 23, 2003.
476. "Cellular and molecular mechanisms of fluoroquinolone resistance in *Streptococcus pneumoniae*" Presented at Antibiotic Induced Collateral Damage, Nappa, California, May 3, 2003.
477. "Influence of antibiotics on the normal colonic flora" Presented at Antibiotic Induced Collateral Damage, Nappa, California, May 3, 2003.
478. "The role of cephalosporins in the treatment of respiratory infections" Presented at a teleconference, Family Physicians, Manitoba/Saskatchewan, May 21, 2003.
479. "The role of cephalosporins and macrolides in the treatment of respiratory infections" Presented at a teleconference, Family Physicians, Ontario, May 22, 2003.
480. "Antibiotic resistant infections in Canada: What can be done" Presented at a teleconference, Family Physicians, Ontario, May 28, 2003.

481. "Antibiotic resistance in urinary tract infections: Comparison between Canada and the US " Presented Urinary Tract Infection Update, Toronto, Ontario, May 31, 2003.
482. "Antibiotic resistant infections in Ontario vs. Canada " Presented at a teleconference, Family Physicians, Ontario, June 2, 2003.
483. "Relationship between macrolide use and macrolide resistance in Canada" Presented at a Family Physician Update, Winnipeg, Manitoba, June 11, 2003.
484. "Relationship between macrolide use and macrolide resistance in Canada" Presented at a Family Physician Update, Winnipeg, Manitoba, June 11, 2003.
485. "Importance of bacterial eradication in the prevention of antibiotic resistant infections" Presented at the Canadian Association of Emergency Physicians (CAPE) Annual Meeting, Winnipeg, Manitoba, June 12, 2003.
486. "Appropriate antibiotic use in general practice " Presented at a teleconference, Family Physicians, Manitoba/Ontario, June 16, 2003.
487. "Treatment of otitis media in the days of antibiotic resistance" Presented at the Canadian Society of Pediatrics Annual Meeting, Calgary, Alberta, June 17, 2003.
488. "Appropriate antibiotic use in family practice: Will it minimize resistance? " Presented at a teleconference, Family Physicians, Ontario, June 25, 2003.
489. "Appropriate antibiotic use in general practice: Will it improve outcome? " Presented at a teleconference, Family Physicians, British Columbia/Ontario, June 26, 2003.
490. "A review of the new fluoroquinolones: Where does IV moxifloxacin fit in ? " Presented at a Bayer preceptorship meeting, Winnipeg, Manitoba, July 15, 2003.
491. "Gatifloxacin-induced glucose alterations: Analysis of published cases " Presented at a Bayer preceptorship meeting, Winnipeg, Manitoba, July 15, 2003.
492. "Molecular mechanisms of fluoroquinolone resistance in *Streptococcus pneumoniae* " Presented at a ICAAC symposium on antibiotic induced collateral damage, Chicago, Illinois, September 13, 2003.
493. "Macrolides: Are there any differences ? " Presented at an ICAAC symposium on antimicrobial resistance in respiratory infections: Clinical implications and impact on optimizing therapy, Chicago, Illinois, September 14, 2003.
494. "Microbiology, infectious diseases and antibiotics: Review of basic principles " Presented to Cancer Care Nursing, Winnipeg, Manitoba, September 22, 2003.
495. "What is driving antibiotic resistant infections in Canada ? " Presented at a teleconference, Family Physicians, Maritimes and Ontario, October 1, 2003.
496. "Telithromycin: A new ketolide, what role will it play ? " Presented to Winnipeg Specialists, Winnipeg, Manitoba, October 2, 2003.

497. "The clinical relevance of antibiotic resistance in community practice" Presented at Family Physician Rounds, Credit Valley Hospital Clinic, Toronto, Ontario, October 6, 2003.
498. "How to treat infectious diseases in community practice in the days of antibiotic resistant infections" Presented at Family Physician Rounds, Hamilton, Ontario, October 6, 2003.
499. "Importance of bacterial eradication in the treatment of infectious diseases" Presented at Medical Grand Rounds, Brantford General Hospital, Brantford, Ontario, October 7, 2003.
500. "Antibiotic resistance in respiratory infections in Canada: How do we compare with other countries ?" Presented at Family Physician Update, Niagara Falls, Ontario, October 7, 2003.
501. "Role of pharmacokinetics and pharmacodynamics in the treatment of infectious diseases" Presented at Family Physician Update, Kitchener/Waterloo, Ontario, October 7, 2003.
502. "What is driving penicillin, macrolide, and fluoroquinolone resistance in Canada and the United States ?" Presented at Emergency Grand Rounds, Hamilton General Hospital, Hamilton, Ontario, October 8, 2003.
503. "Maximizing pharmacodynamics in the treatment of respiratory infections ?" Presented at Specialist Update, Detroit, Michigan October 8, 2003.
504. "An evidenced based review of the fluoroquinolones " Presented at Medical Grand Rounds Sinai Grace Hospital, Detroit , Michigan October 9, 2003.
505. "The role of cephalosporins in the treatment of infectious diseases: How has resistance impacted on their outcome ? " Presented at a teleconference, Family Physicians, Western Canada, October 14, 2003.
506. "Bacterial killing is the new goal in the treatment of infectious diseases " Presented at a Specialist Meeting, Cannes, France, October 17, 2003.
507. "Treatment of infectious diseases in the family practice setting " Presented at Family Medicine Resident Rounds, University of Oklahoma Medical Centre, Oklahoma City, Oklahoma, October 21, 2003.
508. "Comparison of antibiotic resistance rates between North America, South America, Europe and the Far East: Why such differences ? " Presented at a Specialist Update, Oklahoma City, Oklahoma, October 21, 2003.
509. "Innovative ways to combat the growing problem of antibiotic resistant infections in hospitals " Presented at Medical Grand Rounds, St. John's Hospital, Tulsa, Oklahoma, October 22, 2003.
510. "Pharmacokinetics and pharmacodynamics of antibiotics: Can they help us in the treatment of infectious diseases ? Presented at Medical Grand Rounds, Tulsa Regional Medical Centre, Tulsa, Oklahoma, October 22, 2003.
511. "Treatment of infectious diseases in Canada and the United States: Similarities and differences ? " Presented at a Specialist Update, Tulsa, Oklahoma, October 22, 2003.

512. "How to decide what to put on the formulary " Presented to a Specialist Update Teleconference, Montreal, Quebec, December 2, 2003.
513. "A critical review of the new ketolides: What role will they play in the treatment of infectious diseases " Presented at Medical Grand Rounds, Concordia Hospital, Winnipeg, Manitoba, December 4, 2003.
514. "What is driving the development of antibiotic resistant pathogens around the world ? " Presented at an International Infectious Disease Meeting, Florence, Italy, December 6, 2003.
515. "The new ketolides: Review of chemistry, microbiology, mechanisms of action and resistance, pharmacokinetics and pharmacodynamics, clinical trials and adverse effects " Presented at a Specialist Update, Winnipeg, Manitoba, December 8, 2003.
516. "How to solve the antibiotic resistance crisis " Presented at Medical Grand Rounds, Royal Victoria Hospital, Saskatoon, Saskatchewan, December 9, 2003.
517. "Solutions to the global problem of antibiotic resistant infections " Presented at a Family Physician Update, Saskatoon, Saskatchewan, December 9, 2003.
518. "Comparison of the macrolides and the ketolides " Presented at a Family Physician Update, Regina, Saskatchewan, December 10, 2003.

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519. "What is the future of macrolides " Presented at an Specialist Update, Montreal, Quebec, January 8, 2004.
520. "Treatment of otitis media: Impact of vaccination on resistance evolution " Presented at a Pediatric Update, Winnipeg, Manitoba, January 22, 2004.
521. "What is the clinical relevance of resistance to penicillins and cephalosporins " Presented at a Specialist Update, Winnipeg, Manitoba, February 2, 2004.
522. "What role will ketolides have in the treatment of infectious diseases " Presented at Infectious Diseases Rounds, Vancouver General Hospital and Health Sciences Centre, Vancouver, British Columbia, February 9, 2004.
523. "Impact of antibiotic resistance in the treatment of infectious diseases " Presented at Internal Medicine Resident Rounds, Vancouver General Hospital and Health Sciences Centre, Vancouver, British Columbia, February 9, 2004.
524. "What is driving the development of antibiotic resistant infections in Canada " Presented at a Family Physicians Update, Vancouver, British Columbia, February 9, 2004.
525. "Development of new antibiotics: What is driving their development " Presented at Medical Grand Rounds, Surrey Memorial Hospital, Surrey, British Columbia, February 10, 2004.
526. "Antibiotic resistance in Canada: Current status " Presented at a Specialist Update, Kelowna, British Columbia, February 10, 2004.

527. "Treatment of respiratory infections in the emergency setting " Presented at a Specialist Update, Kelowna, British Columbia, February 11, 2004.
528. "The future of antibiotic use and resistance " Presented at a Specialist Update, Regina, Saskatchewan, February 12, 2004.
529. "Optimizing pharmacokinetic and pharmacodynamic properties when using antibiotics " Presented at a Specialist Update, Orlando, Florida, February 18, 2004.
530. "Treating infectious diseases in the days of antibiotic resistant infections " Presented at a Family Physician Update, Winkler, Manitoba, February 24, 2004.
531. "Management of respiratory infections in the days of antibiotic resistant infections " Presented at a Family Physician Update, Brandon, Manitoba, February 24, 2004.
532. "A review of new antibiotics on the horizon " Presented at Medical Grand Rounds, St. Boniface Hospital, Winnipeg, Manitoba, February 26, 2004.
533. "Treatment of infectious diseases in the days of multi-drug resistant pathogens " Presented at Specialist Update, Winnipeg, Manitoba, March 2, 2004.
534. "Pharmacodynamic activity of fluoroquinolones against *Bacteroides fragilis* simulating achievable serum and stool concentrations " Presented at the Council on Appropriate Use of Antimicrobials, Cancun , Mexico, March 5, 2004.
535. "Can we optimize the use of antibiotics to minimize the development and spread of resistant pathogens " Presented to the Manitoba Drug Standards and Therapeutics Committee (MDSTC), Winnipeg, Manitoba, March 9, 2004.
536. "What is the future of antimicrobials ? " Presented at Grand Rounds, Department of Pharmacology and Therapeutics, Faculty of Medicine, University of Manitoba, Winnipeg, Manitoba, March 19, 2004.
537. "The future of antibiotic resistant infections " Presented at Graduate and Fellows Recognition Graduation, Department of Experimental and Clinical Pharmacology, University of Minnesota, Minneapolis, Minnesota, USA, April 14, 2004.
538. "Development and future use of antibiotics in the treatment of infectious diseases" Presented at Surgery Rounds, Department of Surgery, Regions Medical Center, St. Paul, Minnesota, USA, April 15, 2004.
539. "Pharmacokinetics and pharmacodynamics of macrolides and ketolides against respiratory pathogens" Presented at a Ketolide Symposium, Toronto, Ontario, April 16, 2004.
540. "The global battle against antibiotic resistant pathogens: Strategies that we can use " Presented at the East Asian Conference on Infectious Diseases, Hong Kong, April 23, 2004.
541. "Maximizing antibiotic pharmacodynamic properties to influence infection outcome and minimize resistance development " Presented at the Hong Kong Society of Family Physicians Annual Meeting, Hong Kong, April 24, 2004.

542. "Antibiotic resistant infections in the surgical setting: Focus on infection control and appropriate antibiotic use " Presented at Surgical Nursing Rounds, Department of Surgery, Heath Sciences Centre, Winnipeg, Manitoba, April 28, 2004.
543. "High dose fluoroquinolones: Pharmacokinetics/pharmacodynamics and safety considerations " Presented at the Canadian Infectious Diseases Society (CIDS) annual meeting, Calgary, Alberta, April 30, 2004.
544. "Antibiotic resistance and treatment of urologic infections " Presented at Urology Rounds, Department of Urology, University of Manitoba, Winnipeg, Manitoba, May 5, 2004.
545. "Antibiotic resistance and treatment of neonatal infections: Focus on key pathogens " Presented at Neonatology Rounds, University of Manitoba, Winnipeg, Manitoba, May 10, 2004.
546. "Ertapenem: A review of a new generation carbapenem " Presented at an Infectious Diseases/Surgery Update, Winnipeg, Manitoba, June 3, 2004.
547. "Pharmacokinetics and pharmacodynamics of macrolides and ketolides " Presented at an Infectious Diseases/Respirology Meeting, Montreal, Quebec, June 12, 2004.
548. "Macrolides: Microbiological and pharmacological properties " Presented at a teleconference, Montreal, Quebec, August 18, 2004.
549. "Clinical trials performed with ketolides " Presented at a specialist meeting, Winnipeg, Manitoba September 11, 2004.
550. "Review of ketolide data: Focus on activity, resistance, pharmacokinetics/pharmacodynamics and clinical trials " Presented at a specialist meeting, Toronto, Ontario, September 14, 2004.
551. "Comparison of the macrolides and ketolides " Presented at a Saskatchewan Family Physicians Annual Meeting, Saskatoon, Saskatchewan, September 24, 2004.
552. "Pharmacokinetics and pharmacodynamics of antibiotics " Presented at a specialist meeting, Chicago, Illinois, September 25, 2004.
553. "Treatment of community acquired infectious diseases in day to day practice " Presented at Medical Rounds, Four Rivers Clinic, Winnipeg, Manitoba, September 27, 2004.
554. "The use of vaccination to reduce the spread of resistant infections " Presented at Medical Rounds, Assiniboine Clinic, Winnipeg, Manitoba, September 30, 2004.
555. "Eradication of the pathogen is the new goal in treating infectious diseases " Presented at Medical Rounds, Steinbach, Manitoba, October 1, 2004.
556. "Comparison of resistance data between Canada and the US: Current trends and future directions " Presented at a specialist meeting, San Antonio, Texas, October 5, 2004.
557. "The future of antibiotics " Presented at Medical Grand Rounds, University of Texas Medical Centre, San Antonio, Texas, October 6, 2004.

558. "Managing patients with infectious diseases in 2004 " Presented at Medical Rounds, St Annes Clinic, St Annes, Manitoba, October 21, 2004.
559. "How to reduce the spread of antibiotic resistant infections in the community setting " Presented at a Family Physician Update, Winnipeg, Manitoba, October 26, 2004.
560. "Antibiotic resistance can be minimized by eradicating bacteria " Presented at Medical Crossfire, Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), Washington, DC, October 30, 2004.
561. "Treatment of infectious diseases in the days of skyrocketing resistance rates " Presented at a Specialist Update, Danville, California, November 8, 2004.
562. "The prevalence and clinical significance of antibiotic resistant infections " Presented at Medical Grand Rounds, Doctors Medical Centre, Modesto, California, November 9, 2004.
563. "Treatment of community acquired pneumonia: What to use and how to use it " Presented at a Specialist Update, Modesto, California, November 9, 2004.
564. "Strategies to minimize antibiotic resistant infections in the hospital and community setting " Presented at Medical Grand Rounds, Sierra View Hospital, Potterville, California, November 10, 2004.
565. "Maximizing bacterial eradication and minimizing the development of resistance " Presented at a Specialist Update, Bakersfield, California, November 10, 2004.
566. "Will anymore antibiotics be discovered and developed ? " Presented at a Specialist Update, Tulsa, Oklahoma, November 16, 2004.
567. "Treatment of urinary and respiratory infections with the knowledge of antibiotic resistant pathogens " Presented at Medical Grand Rounds, Saint Francis Medical Centre, Tulsa, Oklahoma, November 17, 2004.
568. "Infection control strategies to minimize the spread of antibiotic resistant pathogens " Presented at Medical Grand Rounds, Integris Medical Centre, Oklahoma City, Oklahoma, November 17, 2004.
569. "What is the future of the macrolides, ketolides and fluoroquinolones ? " Presented at a Specialist Update, Oklahoma City, Oklahoma, November 17, 2004.
570. "Strategies to improve patient outcome when treating infectious disease due to resistant organisms " Presented at Medical Grand Rounds, Tulsa Regional Medical Centre, Tulsa, Oklahoma, November 18, 2004.
571. "Treatment of nosocomial pneumonia and nosocomial urinary infections " Presented at a Medical Grand Rounds, Muskeoge Medical Centre, Muskeoge, Oklahoma, November 18, 2004.
572. "Short course high dose therapy: The future of treating infectious diseases " Presented at the Annual Oklahoma State University Family Physicians Meeting, Tulsa, Oklahoma, November 19, 2004.
573. "The future of infectious diseases: Spread of community acquired MRSA " Presented at Medical Grand Rounds, Hillcrest Medical Centre, Tulsa, Oklahoma, November 19, 2004.

574. "Microbiology and resistance issue in nosocomial and ventilatory acquired pneumonia" Presented at the Canadian Nosocomial Pneumonia Guidelines Committee, Toronto, Ontario, November 20, 2004.
575. "Pharmacokinetics and pharmacodynamics of antibiotics: Importance of bacterial eradication in the treatment of infectious diseases" Presented at the European Chemotherapy Congress (ECC), Paris, France, December 2, 2004.
576. "Pharmacokinetics and pharmacodynamics of macrolides and ketolides versus *Streptococcus pneumoniae*" Presented at a Specialist Meeting, Toronto, Ontario, December 4, 2004

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577. "Treatment of infectious diseases caused by multidrug resistant pathogens: What should we do ?" Presented at a Specialist Meeting, Indianapolis, Indiana, January 25, 2005.
578. "Using biotechnology to discover new antibiotics: Is this the future of new antibiotics ?" Presented at Medical Grand Rounds, St. Vincent Hospital, Indianapolis, Indiana, January 25, 2005.
579. "Comparison of methicillin-resistant *Staphylococcus aureus* (MRSA) and vancomycin-resistant enterococcus (VRE) in Canada and the United States " Presented at a Specialist Meeting, Indianapolis, Indiana, January 25, 2005.
580. "The future of antibiotic resistant infections and the development of antibiotics " Presented at a Specialist Meeting, Detroit, Michigan, January 26, 2005.
581. "Short-course high-dose therapy: The future of the treatment of infectious diseases " Presented at a Specialist Meeting, Detroit, Michigan, January 26, 2005.
582. "Limiting the spread of antibiotic resistant infections " Presented at a Specialist Meeting, Detroit, Michigan, January 27, 2005.
583. "Treatment of infectious diseases over the next 5-10 years: How should it evolve ? " Presented at Infectious Diseases Rounds, Foothills General Hospital, Calgary, Alberta, February 14, 2005.
584. "Managing the rapid spread of antibiotic resistant infections in community practice " Presented at a Family Physician Update, Calgary, Alberta, February 14, 2005.
585. "Community-acquired methicillin-resistant *Staphylococcus aureus* (CA-MRSA): Why is it here and what to do about it " Presented at Medical Grand Rounds, Royal Alexandra Hospital, Edmonton, Alberta, February 15, 2005.
586. "Infection control, vaccinations and appropriate antibiotic use: The keys to minimizing resistant infections " Presented at a Family Physician Update, Edmonton, Alberta, February 15, 2005.
587. "Ketolides: What role should they play in clinical practice " Presented at a Family Physician Update, Edmonton, Alberta, February 15, 2005.
588. "The role of the normal colonic flora in the preservation of antibiotic susceptible bacteria" Presented at a US west coast teleconference, February 16, 2005.

589. "Comparison of the fluoroquinolones" Presented at a US west coast teleconference, February 17, 2005.
590. "Infections caused by multi-drug resistant organisms: What's in store in the future" Presented at a Family Physician Update, Saskatoon, Saskatchewan, March 7, 2005.
591. "Development of new antibiotics over the next 5 years" Presented at a Specialist Update, Winnipeg, Manitoba, March 21, 2005.
592. "Antibiotic resistant infections: International solutions to an international problems" Presented at Molecular Biology and Biochemistry Grand Rounds, University of Minnesota (Duluth), Duluth, Minnesota, April 12, 2005.
593. "Molecular epidemiology of antibiotic resistant infections: Why is the spread of resistant clones so rapid" Presented at Grand Rounds, National research Council (NRC), Winnipeg, Manitoba, April 15, 2005.
594. "The future of the ketolides" Presented at a specialist meeting, Sanofi-Aventis, Montreal, Quebec, April 18, 2005.
595. "How to get antibiotics on the formulary: Use an evidence based approach" Presented at a specialist meeting, Toronto, Ontario, April 21, 2005.
596. "Update on the status of antibiotic resistant infections in North America: Where do we need to go ?" Presented at Grand Rounds, Department of Medical Microbiology, Faculty of Medicine, University of Manitoba, Winnipeg, Manitoba, April 27, 2005.
597. "Management of antibiotic resistant infections in the emergency room: practical solution " Presented at the Canadian Association of Emergency Physicians (CAEP), Edmonton, Alberta, May 29, 2005.
598. "Antibiotic resistant infections. The basics of who, what, where and why " Presented at the Saskatchewan chapter of Canadian Society of Hospital Pharmacists (CSHP) annual meeting, Saskatoon, Saskatchewan, October 15, 2005.
599. "How will we use antibiotics in the future " Presented at the Saskatchewan chapter of Canadian Society of Hospital Pharmacists (CSHP) annual meeting, Saskatoon, Saskatchewan, October 15, 2005.
600. "Strategies to limit the spread of antibiotic resistant infections " Presented at Bug Day, Faculty of Medicine, University of Manitoba, Winnipeg, Manitoba, October 18, 2005.
601. "Antibiotic resistant infections in Canadian hospitals " Presented at a hospital pharmacists meeting, Toronto, Ontario, October 28, 2005.
602. "The Canadian Intensive Care Unit Surveillance Study – CAN-ICU " Presented at a Infectious Diseases, Respiratory Medicine meeting, Montreal, Quebec, October 30, 2005.
603. "Management of antibiotic resistant infections in the emergency department: What to do ?" Presented at Citywide Emergency medicine Grand Rounds, Winnipeg, Manitoba, November 9, 2005.

604. "Treatment of community-acquired Methicillin-resistant *Staphylococcus aureus*: Not just skin and soft tissue infections anymore " Presented at a specialist meeting, Sacramento, California, November 14, 2005.
605. "Management of community acquired infections in family practice " Presented at a family practice meeting, Modesto, California, November 15, 2005.
606. "Infections caused by Superbugs: What does the future hold ? " Presented at a specialist meeting, Modesto, California, November 15, 2005.
607. "Treatment of urinary tract infections in family practice: What is the clinical significance of antibiotic resistant bacteria ? " Presented at a family practice meeting, Fresno, California, November 16, 2005.
608. "Investigational antibiotics: What is coming ? " Presented at a specialist meeting, Fresno, California, November 16, 2005.
609. "How do we control multi-drug resistant *Clostridium difficile* ? " Presented at a specialist meeting, San Francisco, California, Nov 17, 2005.
610. "Management of extended spectrum B-lactamase (ESBL) producing *Escherichia coli* infections " Presented at a specialist meeting, San Francisco, California, November 17, 2005.
611. "Infectious diseases research: The Winnipeg advantage" Presented at University of Manitoba Celebration of Infectious Diseases Research Excellence, Winnipeg, Manitoba, November 30, 2005.
612. "Pharmacokinetics/pharmacodynamics in urinary tract infections: Clinical relevance" Presented at Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), Washington DC, December 18, 2005.
613. "Pharmacokinetics/pharmacodynamics of antibiotic combinations" Presented at Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), Washington DC, December 18, 2005.

2006

614. "Pharmacokinetics/pharmacodynamics of aminoglycosides in patients with cystic fibrosis" Presented to the Cystic Fibrosis teams of Victoria and Saskatchewan, Winnipeg, Manitoba, January 18, 2006.
615. "The basics of the tetracyclines/glycylcyclines: Chemistry, mechanism of action/resistance, microbiology, pharmacokinetics/pharmacodynamics and clinical role" Presented to Infectious Diseases/Surgery/Intensivists group, Toronto, Ontario, January 20, 2006.
616. "Antibiotic resistance in intensive care units in Canada: Results of the CAN-ICU study" Presented to Infectious Diseases/Surgery/Intensivists group, Toronto, Ontario, January 20, 2006.
617. "Appropriate use of newer and older antibiotics" Presented at the 4th Annual UCLA Pulmonary and Critical Care Update, Los Angeles, California, February 17, 2006.

618. "The new fluoroquinolones: A review of adverse effect and place on the hospital formulary" Presented at a Health Sciences Centre microbiology/infectious diseases preceptorship, Winnipeg, Manitoba, February 28, 2006.
619. "Pharmacokinetics/pharmacodynamics of macrolides and ketolides: What have we learned and where do we need to go ? " Presented at a scientific/medical discovery/development meeting, Pfizer, Groton, Connecticut, March 14, 2006.
620. "The epidemiology of severe nosocomial infections: Bacteria on the move " Presented at the Association of Medical Microbiologists and Infectious Diseases (AMMI) annual meeting, Victoria, British Columbia, March 18, 2006.
621. "The new glycylcyclines: A review of tigecycline, background, chemistry, mechanisms of action and resistance, microbiology, pharmacokinetics/pharmacodynamics, clinical trials, adverse effects and role in therapy " Presented to the Medical Department of Wyeth Netherlands, New York, New York, March 23, 2006.
622. "The future of antibiotic resistant infections " Presented at a western Canada teleconference, Winnipeg, Manitoba, April 10, 2006.
623. "Antibiotic resistant infections in surgery " Presented at the 46th Annual Update in General Surgery 2006, Toronto, Ontario, April 21, 2006.
624. "Antibiotic resistant infections in the intensive care unit: How best to treat patients" Presented at Critical Care Rounds, St. Josephs Hospital, Toronto, Ontario, April 21, 2006.
625. "Canadian antimicrobial susceptibility in hospital acquired infections " Presented at the Canadian Hospital Acquired Pneumonia (HAP) and Ventilatory Acquired Pneumonia (VAP) guidelines committee, Toronto, Ontario, April 28, 2006.
626. "Hospital Acquired Pneumonia (HAP) and Ventilatory Acquired Pneumonia (VAP) etiology and pathogenesis " Presented at the Canadian Hospital Acquired Pneumonia (HAP) and Ventilatory Acquired Pneumonia (VAP) guidelines committee, Toronto, Ontario, April 28, 2006.
627. "Antimicrobial resistance in Canadian intensive care units: Multi-drug resistant (MDR) pathogens are emerging nationally " Presented at an Infectious Diseases forum, Calgary, Alberta, May 5, 2006.
628. "Antimicrobial resistant infections in the hospital setting: Current status and what to do " Presented at an Infectious Diseases Pharmacy forum, Toronto, Ontario, May 26, 2006.
629. "Research projects of the Canadian Antimicrobial Resistance Alliance (CARA) " Presented at a Department of Medical Microbiology Seminar, Faculty of Medicine, University of Manitoba, Winnipeg, Manitoba, May 29, 2006.
630. "Laboratory aspects of antimicrobial resistant infections" Presented at the Canadian Society of Medical Laboratory Scientists (CSLMS) Annual Meeting, Winnipeg, Manitoba, May 29, 2006.
631. "How should we use antimicrobials for the treatment of infectious diseases in the future" Presented at the VIII International IACMAC Congress for Antimicrobial Chemotherapy, Moscow, Russia, May 31, 2006.

632. "The use of antimicrobial pharmacokinetics/pharmacodynamics in the treatment of severe community and hospital acquired pneumonia" Presented at the VIII International IACMAC Congress for Antimicrobial Chemotherapy, Moscow, Russia, June 1, 2006.
633. "Antimicrobial resistance in urological infections: Where are we today and what to do" Presented at urology grand rounds, Department of Urology, University of Manitoba, Winnipeg, Manitoba, June 7, 2006.
634. "Infections caused by resistant Superbugs: Issues for the operating room " Presented at the Canadian Association of Operating Room Nurses Annual Meeting, Winnipeg, Manitoba, June 17, 2006.
635. "The use of pharmacokinetics and pharmacodynamics in the treatment of infections in patients with cystic fibrosis " Presented to the Pediatric and Adult Cystic Fibrosis team, Health Sciences center, Winnipeg, Manitoba, October 13, 2006.
636. "Infections caused by resistant superbugs: From DNA to the bedside " Presented at the 2006 International Center for Infectious Diseases Research and Innovation Retreat, Winnipeg, Manitoba, October 24, 2006.
637. "Treatment of community-associated MRSA infections in the community and hospital " Presented at infectious diseases, respiratory and critical care rounds, San Diego, California, November 13, 2006.
638. "Multidrug resistant infections in the hospital setting " Presented at infectious diseases/medical microbiology rounds, San Diego, California, November 14, 2006.
639. "Infections in the intensive care unit: Treat early and aggressively by optimizing antimicrobial pharmacokinetics/pharmacodynamics " Presented at infectious diseases, respiratory and critical care rounds, Los Angeles, California, November 15, 2006.
640. "Treat early, aggressively, using combinations and then de-escalate when treating intensive care unit infections " Presented at infectious diseases/medical microbiology rounds, Los Angeles, California, November 16, 2006.
641. "Final results of the Canadian Intensive Care Unit Study (CAN-ICU): Focus on Ontario data " Presented at critical care rounds, Hamilton Health Sciences Center, Hamilton, Ontario, November 27, 2006.
642. "The worldwide spread of antibiotic resistant superbugs: Are we doomed ? " Presented at research day hosted by medical affairs, Wyeth Pharmaceuticals, Toronto, Ontario, November 28, 2006.
643. "Antibiotic resistant infections in Canadian hospitals: Focus of extended spectrum B-lactamase producing organisms ? " Presented at city wide infectious diseases rounds, Sunnybrook Health Sciences Center, Toronto, Ontario, November 28, 2006.
644. "How best to manage infections in the ICU: Focus on Canadian data ? " Presented at city wide critical care rounds, St. Michaels hospital, Toronto, Ontario, November 28, 2006.
645. "MRSA infections: Whats the data and how to manage these patients ? " Presented at infectious diseases/medical microbiology postdoctoral fellows academic day, Winnipeg, Manitoba, December 6, 2006.

646. "Antibiotic resistance in British Columbia/Alberta: Comparison with Canada ? " Presented at infectious diseases rounds, Vancouver General and Health Sciences Center, Vancouver, British Columbia, December 7, 2006.
647. "Treatment of antibiotic resistant infections: Focus on new antimicrobials ? " Presented at medical microbiology rounds, Vancouver General and Health Sciences Center, Vancouver, British Columbia, December 7, 2006.
648. "Solutions to antimicrobial resistant infections: Infection control, vaccination, optimizing pharmacokinetics/pharmacodynamics and new antibiotics " Presented at a specialist update, Vancouver, British Columbia, December 7, 2006.
649. "Microbiology and resistance issues in intraabdominal infections " Presented at the Canadian intraabdominal infectious guidelines group, Toronto, Ontario, December 8, 2006.

2007

650. "Infections caused by antibiotic resistant superbugs: Are we doomed ?" Presented at the Annual Conference of Professional Development Week (PDW), Winnipeg, Manitoba, January 18, 2007.
651. "The global spread of multi-drug resistant pathogens: The critical need for new antimicrobials " Presented at Chemistry Rounds, Department of Chemistry/Biochemistry, University of Manitoba, Winnipeg, Manitoba, January 19, 2007.
652. "What can we do about the worldwide spread of infections caused by antimicrobial resistant organisms" Presented at infectious diseases, respiratory and critical care rounds, Reno, Nevada, January 22, 2007.
653. "Infection control, vaccination, appropriate antimicrobial use and development of new antimicrobials are the key to slow the progression of resistant pathogens" Presented microbiology/infectious diseases, respiratory and emergency rounds, Portland, Oregon, January 23, 2007.
654. "Optimizing pharmacokinetics/pharmacodynamics is the key to treating critically ill patients with antimicrobial resistant infections" Presented at respiratory, critical care, microbiology/infectious diseases and emergency rounds, Seattle, Washington, January 24, 2007.
655. "Past, present and future of the Canadian Antimicrobial Resistance Alliance (CARA) and the can-r website" Presented at the annual ca-r editorial meeting, Toronto, Ontario, January 30, 2007.
656. "Infections caused by antibiotic resistant superbugs: Are we doomed ? " Presented at the Get to know your research at your University series, University of Manitoba, Winnipeg, Manitoba, February 20, 2007.
657. "Management of infections caused by resistant organisms: New antibiotics on the horizon ? " Presented at a specialist update, Phoenix, Arizona, Feb 28, 2007.
658. "Antimicrobial resistance in intensive care units in Canada " Presented at New Insights into Infections in the Canadian ICU setting, Symposia of the Association of Medical Microbiology and Infectious Diseases in Canada (AMMI), Halifax, Nova Scotia, March 15, 2007.

659. "Microbiological, pharmacokinetic and pharmacodynamic properties of ceftobiprole: Comparison to ceftriaxone, cefotaxime, ceftazidime and cefepime " Presented at an infectious diseases/medical microbiology ceftobiprole meeting, Toronto, Ontario, April 12, 2007.
660. "What can surgeons do about antibiotic resistant pathogens/infections: Infection control and antibiotic stewardship " Presented at Surgery Grand Rounds, Health Sciences Center, Winnipeg, Manitoba, April 25, 2007.
661. "What's in the future for science students graduates from the University of Manitoba ? " Presented at the University of Manitoba Science Students Association (SSA) graduation, Winnipeg, Manitoba, April 28, 2007.
662. "Research progress from the Canadian Antimicrobial Resistance Alliance (CARA)", Presented to the department of Medical Microbiology, Faculty of Medicine, University of Manitoba, Winnipeg, Manitoba, May 7, 2007.
663. "What is the benefit to Manitobans from research conducted by the Canadian Antimicrobial Resistance Alliance (CARA)", Presented to a business group of Winnipeg, Winnipeg, Manitoba, May 25, 2007.
664. "Antibiotic resistance issues in cystic fibrosis: Microbiological and pharmacological issues " Presented at a cystic fibrosis meeting, Toronto, Ontario, June 1, 2007.
665. "Infections caused by resistant pathogens: Comparing Manitoba data to Canadian data " Presented at a specialist update, Winnipeg, Manitoba, June 27, 2007.
666. "Resistance in Canadian hospitals" Presented at the Canadian Critical Care Foundation (CCCCF) annual meeting, Toronto, Ontario, October 30, 2007.
667. "Correlating antimicrobial resistance with antimicrobial usage in Canada" Presented at the Canadian College of Hospital Pharmacy, Satellite Symposium, Toronto, Ontario, November 16, 2007.
668. "Daptomycin: Review of chemistry, mechanism of action and resistance, microbiology, pharmacokinetics and pharmacodynamics and comparison to vancomycin and linezolid " Presented at a Medical Microbiology/Infectious Diseases meeting, Vancouver, British Columbia, Nov 30, 2007.
669. "Role of newer antimicrobials in the treatment of resistant infections" Presented at a Critical care Specialist meeting, Toronto, Ontario, December 7, 2007.

2008

670. "The fluoroquinolones: A review of all the data and their role in the future" Presented at a Specialty representative training, Winnipeg, Manitoba, January 21, 2008.
671. "Antibiotic resistance in Canadian hospitals: How to prevent it and how to treat resistant infections" Presented at a Professional Practice Conference, Canadian Society of Hospital Pharmacists (CHSP) annual meeting, Toronto, Ontario, January 27, 2008.
672. "What does the future hold for the fluoroquinolones" Presented at a Specialty representative training, Winnipeg, Manitoba, January 28, 2008.

673. "How should internists treat infectious diseases in the days of resistant superbugs" Presented to the internal medicine residence, University of Manitoba, Winnipeg, Manitoba, March 25, 2008.
674. "New antibiotics in 10 minutes ? " Presented to the Manitoba assembly of family physicians, Winnipeg, Manitoba, April 10, 2008.
675. "New antimicrobials and vaccines: Whats on the horizon ? " Presented to family practitioners, Family physicians update, Winnipeg, Manitoba, April 19, 2008.
676. "Antibiotic resistant infections: Current activities of the Canadian Antimicrobial Resistance Alliance (CARA) " Presented to the Manitoba Chapter and the Canadian Society of Hospital Pharmacists (CSHP), family practitioners, Winnipeg, Manitoba, April 19, 2008.
677. "New antibiotics for the treatment of community-associated (CA) and healthcare-associated (HA) methicillin-resistant *Staphylococcus aureus* " Presented at a Specialist update, Dallas, Texas, April 21, 2008.
678. "What's new in the treatment of infectious diseases " Presented at an infectious diseases update, Dallas, Texas, April 22, 2008.
679. "Comparing antibiotic resistant infections and antibiotic usage in the US and Canada " Presented at internal medicine grand rounds, Methodist Health System, Dallas, Texas, April 22, 2008.
680. "Antibiotic resistant infections: Problems and solutions" Presented at a specialist update, Dallas, Texas, April 22, 2008.
681. "Comparison of ceftobiprole to cefepime, ceftriaxone, cefotaxime and ceftazidime: Chemistry, mechanisms of action and resistance, microbiology, pharmacokinetics, pharmacodynamics, clinical trials, adverse effects and role in therapy " Presented to the Comprehensive Antimicrobial Management Program (CAMP) group, Presbyterian Hospital, Dallas, Texas, April 23, 2008.
682. "Comparison of doripenem to ertapenem, imipenem and meropenem: Chemistry, mechanisms of action and resistance, microbiology, pharmacokinetics, pharmacodynamics, clinical trials, adverse effects and role in therapy " Presented at internal medicine grand rounds, Presbyterian Hospital, Dallas, Texas, April 23, 2008.
683. "The Canadian Antimicrobial Resistance Alliance (CARA); What Who and How " Presented at the National Collaborating Center for Infectious Diseases (NCCID) symposium, Winnipeg, Manitoba, June 24, 2008.
684. "Antimicrobial resistant infections in Canada: What is the Canadian Antimicrobial Resistance Alliance (CARA) doing ? " Presented at the Summer Retreat of the National Collaborating Centers Annual Meeting, Kelowna, British Columbia, August 7, 2008.
685. "Infection control, vaccination, prudent antimicrobial use and developing new agents: Strategies to overcoming antimicrobial resistant infections " Presented at the Manitoba Association of Asian Physicians (MAAP) Annual Meeting, Hecla Island, Manitoba, August 8, 2008.
686. "Treatment of antimicrobial resistant infections in 2008 " Presented at Specialists rounds, San Diego, California, November 10, 2008.

687. "New antimicrobials for the treatment of resistant infections: Focus on Doripenem" " Presented at Specialists rounds, Los Angeles, California, November 11, 2008.
688. "Investigation treatments for infectious diseases " Presented at Specialists rounds, Los Angeles, California, November 12, 2008.
689. "Overview of antimicrobial resistant pathogens causing infectious diseases in the United States and Canada" Presented at Specialists rounds, Los Angeles, California, November 13, 2008.
690. "Ceftobiprole: Review of its chemistry, mechanism of action/resistance, microbiology, pharmacokinetics/pharmacodynamics, clinical trials, adverse effects and role in therapy " Presented at Specialist rounds, Calgary, Alberta, November 17, 2008.
691. "Antimicrobial resistant pathogens in Canada: Review of CANWARD 2007 " Presented at Grand Rounds, Grey Nuns Hospital, Edmonton, Alberta, November 18, 2008.
692. "Novel strategies for the treatment infectious diseases " Presented at Specialist Rounds, Edmonton, Alberta, November 18, 2008.
693. "Antimicrobial resistance and treatment of intraabdominal infections" Presented at Specialist Rounds, Toronto, Ontario, November 22, 2008.
694. "Comparison of ceftobiprole to cefepime, ceftriaxone, cefotaxime and ceftazidime" Presented at a Specialist marketing/sales meeting, Phoenix, Arizona, December 2, 2008.
695. "Strategies to limit the spread of resistant infections: Focus on prevention and novel therapeutics" Presented at Infectious Diseases Rounds, St. Joseph's hospital, Hamilton, Ontario, December 10, 2008.
696. "New antimicrobials for the treatment of resistant infections" Presented at Infectious Diseases Rounds, London Health Sciences Center, London, Ontario, December 10, 2008.
697. "Current status of MRSA, VRE, ESBL, *Clostridium difficile* and MDR gram-negative bacilli in North America" Presented at Infectious Diseases Rounds, North York Hospital, Toronto, Ontario, December 11, 2008.
698. "Management of skin soft tissue infections, respiratory infections and urinary tract infections in the days of resistant pathogens" Presented at Infectious Diseases Rounds, Lakeridge Hospital, Oshawa, Ontario, December 11, 2008.

2009

699. "Development of resistance with carbapenems and *Pseudomonas aeruginosa*: Focus on the mutant prevention concentration (MPC) " Presented at an Infectious Diseases Specialists meeting, New York City, New York, Jan 20, 2009.
700. "Antibiotic resistance in Canadian hospitals: Current status of MRSA, VRE, ESBL MDR gram-negative bacilli and other pathogens" Presented at the annual meeting of Canadian Society of Hospital Pharmacists (CSHP), Toronto, Ontario, February 1, 2009.

701. "Vaccination, infection control, antimicrobial stewardship, probiotics, aggressive treatment of infectious diseases and new antimicrobials as solutions to infections caused by antimicrobial resistant pathogens" Presented at an Infectious Diseases/Microbiology Specialist meeting, UCLA, Los Angeles, California, March 25, 2009.
702. "A review of the carbapenems: What to do with the hospital formulary ?" Presented at an Infectious Diseases Pharmacy meeting, Los Angeles, California, March 26, 2009.
703. "Molecular mechanisms of carbapenem resistance in *Pseudomonas aeruginosa*: Focus on porins, efflux and β -lactamases" Presented at a Specialist meeting, Ortho McNeil, Raritan, New Jersey, April 8, 2009.
704. "Treatment of infectious diseases in the surgical patient" Presented at the Annual University of Toronto Surgery Meeting, Toronto, Ontario, April 17, 2009.
705. "Hot topics in infectious diseases: Management of MRSA and ESBLs" Presented at Medical Microbiology Grand Rounds, Winnipeg, Manitoba, April 20, 2009.
706. "Antibiotics on the horizon: Challenges for regulatory authorities" Presented at the Annual Canadian Association of Professional Regulatory Affairs (CAPRA), Toronto, Ontario, April 21, 2009.
707. "Antimicrobial resistant infections: Current status of in-patient and out-patient infections and solutions to their management" Presented at a Specialist Meeting, Sudbury, Ontario, April 31, 2009.
708. "New antimicrobials on the horizon ?" Annual Assembly of Manitoba Family Physicians, Winnipeg, Manitoba, May 2, 2009.
709. "Comparison of the carbapenems: Focus on doripenem". Presented at a carbapenem teleconference, Winnipeg, Manitoba, May 12, 2009.
710. "Comparison of the penicillin, cephalosporins and carbapenems: How to maximize bacterial killing and minimize resistance development". Presented at a specialist update, Las Vegas, Nevada, May 27, 2009.
711. " β -lactam pharmacokinetics and pharmacodynamics: Minimizing resistance development in *Pseudomonas aeruginosa*". Presented at a specialist update, Phoenix, Arizona, May 28, 2009.
712. "How to minimize antimicrobial resistance development using antimicrobials". Presented at a specialist update, Louisville, Kentucky, June 11, 2009.
713. "Optimizing antimicrobial use through antimicrobial stewardship". Presented at a specialist update, Phoenix, Arizona, June 18, 2009.
714. "Treatment of multi-drug resistant *Pseudomonas aeruginosa* and *Acinetobacter* spp.: Optimizing antimicrobial use and focusing on new antimicrobials". Presented at a specialist update, Phoenix, Arizona, July 9, 2009.
715. "Comparison of the new carbapenems: Which to put on the formulary". Presented at a specialist update, Las Vegas, Nevada, July 10, 2009.

716. "Antimicrobial resistant infections on the islands compared to the mainland: What to do". Presented at a specialist update, Honolulu, Hawaii, July 29, 2009.
717. "Treatment of infectious diseases in the days of multi-drug resistant pathogens". Presented at a specialist update, Honolulu, Hawaii, July 29, 2009.
718. "Update on the status of antimicrobial resistant pathogens in North America: Pathogens and solutions". Presented at the Canadian Society of Hospital Pharmacy (CSHP) annual meeting, Winnipeg, Manitoba, August 11, 2009.
719. "Washing your hands and using antimicrobials wisely, the key aspects to reduce the spread of resistant infections". Presented at a specialist update, Samaritan Hospital, Peoria, Illinois, August 25, 2009.
720. "The importance of antimicrobial pharmacokinetics/pharmacodynamics in optimizing infectious diseases treatment". Presented at a specialist update, Peoria, Illinois, August 25, 2009.
721. "How to use B-lactams in the treatment of infectious diseases". Presented at a specialist update, Indianapolis, Illinois, August 26, 2009.
722. "Describing the spread of resistant pathogens in North America". Presented at a specialist update, Indianapolis, Illinois, August 26, 2009.
723. "The rapid evolution of multi-drug resistant (MDR) ESBL and KPC Enterobacteriaceae in North America". Presented at a specialist update, New York City, New York, September 30, 2009.
724. "Reducing the spread of resistant superbugs: Bacteria and Viruses". Presented at a specialist update, Houston Infectious Diseases Society, Houston, Texas, October 7, 2009.
725. "Making formulary decisions for antimicrobials: What all should be considered". Presented at a clinical pharmacists update, Houston Texas, October 8, 2009.
726. "An overview of the CAN-R website: Canada's premiere website for antimicrobial resistance". Presented at a CIHR antimicrobial resistance database planning session, McMaster University, Hamilton, Ontario, October 15, 2009.
727. "Review of macrolide usage and macrolide resistance in Canada: 1998-2008". Presented at a specialist update, Toronto, Ontario, November 27, 2009.
728. "The Baddest bug: Comparison of MRSA, ESBL/KPC producers and *Acinetobacter* spp/*Pseudomonas aeruginosa*". Presented at the 44th American Society of Hospital Pharmacy (ASHP) Midyear Clinical Meeting, Las Vegas, Nevada, December 8, 2009.

2010

729. "Review of the mechanisms of action and resistance, microbiology, pharmacokinetics and pharmacodynamics of doripenem: Comparison to other carbapenems". Presented at the Society of Critical Care Medicine (SCCM) Symposium, Miami, Florida, January 8, 2010.
730. "Treating infectious diseases in 2010: How to proceed ? ". Presented at a specialist update, Indianapolis, Indiana, January 27, 2010.

731. "New antimicrobials to combat resistant infections: What should we do with them ? ". Presented at internal medicine rounds, Hendricks Regional Hospital, Indianapolis, Indiana, January 28, 2010.
732. "Review of probiotics and other prevention strategies to minimize antimicrobial resistant infections " Presented to the Internal Medicine Residents, Winnipeg, Manitoba, February 23, 2010.
733. "Comparison of ertapenem, imipenem, meropenem and doripenem " Presented at a Clinical Pharmacists Update, Montreal, Quebec, March 20, 2010.
734. "Pharmacokinetics and pharmacodynamics of aminoglycosides, fluoroquinolones and β -lactams: What is the state of the art ? " Presented at a Clinical Pharmacists Update, Montreal, Quebec, March 20, 2010.
735. "Germs: You cant live with them and you cant live without them. Presently at the Reh-Fit foundation annual healthy living awards. Winnipeg, Manitoba, April 15, 2010.
736. "All the facts about carbapenems" Presented at a Clinical Pharmacists Update, Toronto, Ontario, April 16, 2010.
737. "Pharmacokinetics and pharmacodynamics of penicillins, cephalosporins and carbapenems" Presented at a Critical care Specialists Update, Toronto, Ontario, April 17, 2010.
738. "The evolution of *Streptococcus pneumoniae* serotypes in Canada: Implications for vaccination. " Presented at a medical/economic update meeting, Toronto, Ontario, April 20, 2010.
739. "Treating infectious diseases in rural/northern medical units." Presented at a northern medical medicine/pharmacy update meeting, Winnipeg, Manitoba, May 28, 2010.
740. "Review of the Crystal session: Methods and results." Presented at the national champions meeting of managing surgical intra-abdominal infections (SIAI), Toronto, Ontario, June 18, 2010.
741. "Role of carbapenems in the treatment of surgical intra-abdominal infections (SIAI)." Presented at the national champions meeting of managing surgical intra-abdominal infections (SIAI), Toronto, Ontario, June 18, 2010.
742. "Vaccination, probiotics, infection control and prudent antibiotic: Keys to managing infectious diseases." Presented at a family physician update, Winnipeg, Manitoba, June 19, 2010.
743. "New aminoglycosides: Needed to treat multi-drug resistant organisms." Presented at Ribs on the Red, meeting with Intellectual Ventures", Winnipeg, Manitoba, June 23, 2010.
744. "Evolving face of antimicrobial resistance." Presented at the symposium Zero Tolerance for Hospital Acquired Infections, Florida Society of Health System Pharmacists (FSHP), Orlando, Florida, July 30, 2010.
745. "The role of carbapenems in the treatment of intraabdominal infections." Presented at surgery/infectious diseases symposium on treatment of intraabdominal infections, Toronto, Ontario, September 24, 2010.

746. “Antibiotic discovery and development: Solutions to infections caused by resistant organisms.” Presented at chemistry grand rounds, University of Winnipeg, Winnipeg, Manitoba, October 1, 2010.
747. “Treatment of antimicrobial resistant infections in the US: Focus on resistant Gram-positive cocci and multi-drug resistant (MDR) Gram-negative bacilli”, Presented at the Missouri Society of Managed Care System Pharmacists, St. Louis, Missouri, October 14, 2010.
748. “Hospital-associated infections: Problems and solutions“. Presented at the North Carolina Society of Pharmacists, Durham, North Carolina, October 25, 2010.
749. “Treatment of surgical intraabdominal infections: The new Canadian guidelines“. Presented at a surgery/internal medicine update, Brandon, Manitoba, October 28, 2010.
750. “Comparison of carbapenems to other antimicrobial classes: What’s the data ?“. Presented at an infectious diseases national update, Quebec City, Quebec, November 6, 2010.
751. “What pathogens are causing infections in your ICU ?“. Presented at the Canadian Critical care Forum, Toronto, Ontario, November 8, 2010.
752. “Antimicrobial considerations for preventing and treating infectious diseases“. Presented at a Family Physician Update, Toronto, Ontario, November 20, 2010.
753. “*Clostridium difficile*: Introduction” Presented at *Clostridium difficile* associated disease (CDAD) symposium, Winnipeg, Manitoba, December 7, 2010.

2011

754. “Epidemiology, microbiology, prevention and treatment of surgical intraabdominal infections“. Presented at a surgery grand rounds, Winnipeg, Manitoba, January 19, 2011.
755. “What antimicrobials lead to optimal bacteriological and clinical outcomes in the treatment of surgical intraabdominal infections and complicated skin and skin structure infections“. Presented to the Manitoba branch of the Canadian Society of Hospital Pharmacy (CSHP), Winnipeg, Manitoba, January 19, 2011.
756. “Comparison of carbapenems: Current and investigational agents. Comparisons to the penicillins and cephalosporins“. Presented to the drug use evaluation professional specialties group, University of Toronto, Toronto, Ontario, January 20, 2011.
757. “A comparison of the macrolides azithromycin, clarithromycin and erythromycin: What about Zmax SR ?“. Presented at a specialist meeting, Toronto, Ontario, February 5, 2011.
758. “Review of the recommendations for the prevention and treatment of surgical intraabdominal infections“. Presented at surgery rounds, Winnipeg, Manitoba, February 28, 2011.
759. “General attributes that employers look for when hiring graduate students“. Presented at Breaking into the Manitoba job market, Winnipeg, Manitoba, March 7, 2011.
760. “Infections caused by antimicrobial resistant superbugs in community practice: What does it mean ? “. Presented at Family Physician Update, Vancouver, British Columbia, March 19, 2011.

761. “Antibiotics, vaccines and probiotics: Keys to treating and preventions infections“. Presented at a Specialist Physician Update, Calgary, Alberta, April 16, 2011.
- 762.“The lipoglycopeptides: Comparison of dalbavancin, oritavancin and telavancin to the glycopeptide vancomycin“. Presented at a Specialist Update, New Jersey, New York, April 27, 2011.
- 763.“Antibiotic resistant pathogens in surgical intraabdominal infections: Trends and relevance“. Presented at a satellite symposia of the Canadian Association of General Surgeons (CAGS), London, Ontario, September 16, 2011.
- 764.“New aminoglycosides for the treatment of Gram-negative and Gram-positive infections“. Presented at the Interscience Conference on Antimicrobial Agents (ICAAC), Chicago, Illinois, September 19, 2011.
- 765.“Old and new antimicrobials for the treatment of intraabdominal infections: What should we do ? Presented at a regional surgery meeting, Toronto. Ontario, October 18, 2011.
- 766.“Whats new in the prevention and treatment of community acquired respiratory tract infections: Vaccination, infection control, probiotics, prebiotics and antibiotics“. Presented at a family doctor meeting, Edmonton, Alberta, October 27, 2011.
- 767.“The importance of professionalism in the University/Hospital workplace: What should and what should we not do ?”. Presented to the Department of Medical Microbiology, Graduate Students, Faculty of Medicine, University of Manitoba, Winnipeg, Manitoba, November 28, 2011.

2012

- 768.“Community-acquired respiratory tract infections (CARTI) in your office/outpatient setting: What should you know ? ” Presented at a Primary Care Practitioner Update, Toronto, Ontario, January 24, 2012.
- 769.“Antimicrobial resistance in intra-abdominal infections, skin and skin structure infections, diabetic foot infections and urinary tract infections: What’s the problem and what to do ? ” Presented at a National Emergency Room Physician Meeting, Toronto, Ontario, January 27, 2012.
- 770.“Antimicrobial resistant infections: New preventions and treatments ” Presented at a National Pharmacy Meeting, Toronto, Ontario, February 3, 2012.
- 771.“Pneumococcal vaccines in 2012: History, current situation and the future ” Presented at building an adult immunization practice: The primary care physician’s role in disease prevention, at the Texas Osteopathic Medical Association MidWinter conference, Dallas, Texas, Feb 3, 2012.
- 772.“New strategies for the prevention and treatment of community-acquired respiratory tract infections: Where are we today and where are we going ? ? ” Presented at a Family Practitioner Update, Winnipeg, Manitoba, February 15, 2012.
- 773.“Treatment and prevention of community-acquired respiratory tract infections: Update for the family practitioner ” Presented at a Primary Care Practitioner Update, Halifax, Nova Scotia, March 20, 2012.
- 774.“Vaccinations used for the prevention of respiratory and invasive infections” Presented at a Primary Care Practitioner Update, Bathurst, New Brunswick, March 21, 2012.

775. "How to prevent and treat respiratory tract infections" Presented at a Primary Care Practitioner Update Webinar for Saskatchewan, Alberta and British Columbia, March 27, 2012.
776. "Antimicrobial treatment of intraabdominal, skin and skin structure, diabetic foot and urinary tract infections in community and hospital settings" Presented at a National Infectious Diseases Meeting, Toronto, Ontario, April 20, 2012.
777. "Review of the vaccines available to prevent invasive *Streptococcus pneumoniae* infections" Presented at Building an Adult Immunization Practice: The Primary Care Physicians Role in Prevention, Colorado Association of family Physicians (CAFP), Colorado Springs, Colorado, April 21, 2012.
778. "*Streptococcus pneumoniae* serotypes and their antimicrobial susceptibility across Canada: Influence of vaccination and antimicrobial usage" Presented at Association of Medical Microbiology and Infectious Diseases in Canada (AMMI/CACMID), Vancouver, British Columbia, May 3, 2012.
779. "Antimicrobials, prebiotics, probiotics and vaccination: Their influence on antimicrobial resistance organisms" Presented at the Department of Medical Microbiology, Faculty of Medicine, University of Manitoba, Winnipeg, Manitoba, May 30, 2012.
780. "Does step down therapy avoid resistance: Treatment of critically ill patients with septic shock" Presented at a symposium on treatment of severe infections and de-escalation strategy of antimicrobial therapy, Faculty of Medicine, University of Manitoba, Winnipeg, Manitoba, September 18, 2012.
781. "Treatment of prevention of infections in the emergency department" Presented at the St. Paul's emergency medicine update, Whistler, British Columbia, Sept 28, 2012.
782. "Infections caused by resistant superbugs: Are we doomed" Presented at "Edge of Science", Faculty of Medicine, University of Manitoba, Winnipeg, Manitoba, October 1, 2012.
783. "Review of available vaccines for prevention of invasive and mucosal infections caused by *Streptococcus pneumoniae*" Presented at continuing education, Canadian Society of Hospital Pharmacists (Manitoba Branch), Winnipeg, Manitoba, October 20, 2012.
784. "Comparison of polysaccharide and conjugated pneumococcal vaccines: What should we do ?" Presented at the Texas Association of Family Physicians (Houston Branch), Houston, Texas, October 27, 2012.
785. "Prevention and Treatment of infectious diseases in emergency departments, medical wards, surgical wards and intensive care units. Presented at a western Canada infectious diseases meeting, Vancouver, British Columbia, November 2, 2012.
786. "Usage of PCV13 and Pneumovax in adult patients: When, where and how ?" Presented at the Texas Association of Family Physicians (Dallas Branch), Dallas, Texas, November 3, 2012.
787. "Immunizing children and adults against invasive pneumococcal infections: Immunizing and boosting. Presented at the Chicago Association of Family Physicians, Chicago, Illinois, November 10, 2012.

788. "Comparison of available treatments for infections in the hospital setting". Presented at an internal medicine meeting, Montreal, Quebec, November 16, 2012.
789. "Outpatient parenteral antimicrobial therapy (OPAT): Comparison of available agents". Presented at an OPAT meeting, Montreal, Quebec, November 16, 2012.
790. "Treatment and prevention of community acquired pneumonia ", Presented at managing the many bugs of CAP: An ongoing challenge, American Society of Healthcare Pharmacists, Annual Midyear meeting, Las Vegas, Nevada, December 3, 2012.

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791. "Macrolide usage in the treatment of community acquired respiratory infections: Correlating resistance to outcomes", Presented at Pfizer Medical, New York, New York, January 10, 2013.
792. "Treatment of *Clostridium difficile* infection (CDI)", Presented at an Infectious Diseases Meeting, Montreal, Quebec, January 11, 2013.
793. "Treatment of infectious diseases in animals: Focus on antimicrobial classes", Presented at a satellite meeting of the North America Veterinary Conference (NAVC), Orlando, Florida, January 19, 2013.
794. "Prevention and treatment of *Clostridium difficile* infection (CDI)", Presented at a *Clostridium difficile* infection (CDI) meeting, Niagara Falls, Ontario, January 29, 2013.
795. "Review of fidaxomicin in the treatment of *Clostridium difficile* infection (CDI)", Presented at a *Clostridium difficile* infection (CDI) meeting, Niagara Falls, Ontario, January 29, 2013.
796. "Antimicrobial drug discovery and development: How the process works", Presented at a Café Scientifique, Winnipeg, Manitoba, Feb 25, 2013.
797. "Current topics in the treatment and prevention of *Clostridium difficile* infection (CDI)", Presented at an infectious diseases advisory meeting, Winnipeg, Manitoba, March 1, 2013.
798. "What are the advantages and disadvantages of treatments and preventative methods used for *Clostridium difficile* infection (CDI)", Presented at an infectious diseases advisory meeting, Winnipeg, Manitoba, March 1, 2013.
799. "Prevention and treatment of infectious diseases in children", Presented at a pediatric infectious diseases advisory meeting, Montreal, Quebec, March 22, 2013.
800. "Treatment of *Clostridium difficile* infection (CDI) in 2013: What do we have at our disposal ?" Presented at the Association of Medical Microbiology and Infectious Diseases (AMMI) annual meeting, Quebec City, Quebec, April 4, 2013.
801. "Antimicrobial stewardship strategies in the hospital and community setting: What do we do in 2013 ? " Presented at the British Columbia Infectious Diseases symposium, Vancouver, British Columbia, May 25, 2013.
802. "Review of the current treatment strategies for *Clostridium difficile* infection (CDI)" Presented at a national Pharmacy CDI symposium, Toronto, Ontario, May 31, 2013.

803. "Review of the non-clinical properties of fidaxomicin in the treatment of *Clostridium difficile* infection (CDI)" Presented at a national Pharmacy CDI symposium, Toronto, Ontario, May 31, 2013.
804. "Review of the clinical properties of fidaxomicin in the treatment of *Clostridium difficile* infection (CDI)" Presented at a national Pharmacy CDI symposium, Toronto, Ontario, May 31, 2013.
805. "Treatment and prevention of infections in the emergency department setting" Presented at the Canadian Association of Emergency Physicians (CAEP), Vancouver, British Columbia, June 3, 2013.
806. "How best to prevent and treat hospital-associated infections such as *Clostridium difficile* infection (CDI)" Presented at a western Canada Infectious Diseases/Medical Microbiology meeting, Vancouver, British Columbia, July 12, 2013.
807. "Chemistry, mechanisms of action/resistance, microbiology, pharmacokinetics and pharmacodynamics of fidaxomicin" Presented at a western Canada Infectious Diseases/Medical Microbiology meeting, Vancouver, British Columbia, July 12, 2013.
808. "Clinical data comparing vancomycin and fidaxomicin in the treatment of *Clostridium difficile* infection (CDI)" Presented at a western Canada Infectious Diseases/Medical Microbiology meeting, Vancouver, British Columbia, July 12, 2013.
809. "Hospital-associated infections: Prevention and treatment" Presented at a central Canada Infectious Diseases/Medical Microbiology meeting, Toronto, Ontario, July 18, 2013.
810. "Advantages and disadvantages of current and new treatments for *Clostridium difficile* infections (CDI)" Presented at a central Canada Infectious Diseases/Medical Microbiology meeting, Toronto, Ontario, July 18, 2013.
811. "When should we use current and investigational treatments for *Clostridium difficile* infection (CDI)" Presented at a central Canada Infectious Diseases/Medical Microbiology meeting, Toronto, Ontario, July 18, 2013.
812. "Knowing the current and future armanentarium to treat and prevent infectious diseases" Presented at Antibiotic optimization in today's hospital setting, Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), Denver, Colorado, September 10, 2013.
813. "Treatment and prevention of *Clostridium difficile* infection (CDI)" Presented at *Clostridium difficile* infection (CDI): Discovering the need for new treatment algorithms and care pathways, Canadian Surgery Forum, Ottawa, Ontario, September 20, 2013.
814. "Comparing investigational treatments to state of the art treatments for *Clostridium difficile* infection (CDI)" Presented at a specialist continuing educational event on *Clostridium difficile* infection (CDI). Vancouver, British Columbia, September 26, 2013.
815. "Treatment and prevention of infectious diseases in the emergency room setting" Presented at 11th annual St. Paul's Emergency Medicine Conference, Whistler, British Columbia, September 27, 2013.
816. "Prevention of *Streptococcus pneumoniae* infections: Review of older and newer vaccines" Presented at Grand Rounds, Respiriology Department, Faculty of Medicine, University of Alberta, Edmonton, Alberta, October 9, 2013.

817. "How best to use daptomycin, linezolid, tigecycline, fidaxomicin in the treatment of community and hospital infections" Presented at Pharmacy Rounds, Pharmacy Department, University of Alberta Hospitals, Edmonton, Alberta, October 9, 2013.
818. "Treatment and prevention of infections in animal: Drivers of resistance and effects on human health" Presented at a Roundtable discussion on antibiotic use in animals, Zoetis, Kalamazoo, Michigan, October 17, 2013.
819. "Comparison of current and future β -lactam and β -lactamase inhibitor combinations. Presented at an infectious diseases meeting, Toronto, Ontario, November 1, 2013.
820. "Vaccines used to prevent infectious in adults: Canadian vs US guidelines" Presented at a respiratory medicine meeting, Winnipeg, Manitoba, November 5, 2013.
821. "Treatment of infectious diseases in small and large animals: Few differences, many similarities" Presented at an animal infectious diseases meeting, Phoenix, Arizona, November 23, 2013.

2014

822. "Antimicrobial resistance in dermatology: How best to treat acne " Presented at an international acne symposium, Washington DC, February 2, 2014.
823. "How to manage infections caused by resistant superbugs in the ICU: Treatment and prevention" Presented at the Canadian Critical Care Conference, Whistler, British Columbia, February 26, 2014.
824. "Treatment and prevention of *Clostridium difficile* infection (CDI): Old and new strategies" Presented at the Canadian Critical Care Conference, Whistler, British Columbia, February 26, 2014.
825. "New antimicrobials to treat multi-drug resistant gram-positive and gram-negative infections: What is the future ?" Presented at an infectious diseases/medical microbiology symposium, Toronto, Ontario, February 28, 2014.
826. "Treatment and prevention of *Clostridium difficile* infection (CDI): Where are we today ?" Presented at infectious diseases/medical microbiology rounds, Hotel Dieu Hospital, Montreal, Quebec, March 17, 2014.
827. "Whats the role of probiotics, fecal transplant, IVIG, immunotherapy, vaccination and new antimicrobials in the treatment and prevention of *Clostridium difficile* infection (CDI)" Presented at infectious diseases/medical microbiology and pharmacy rounds, Hopital Sainte Marie, Trois Rivieres, Quebec, March 18, 2014.
828. "Review of fidaxomicin: Chemistry, mechanisms of action and resistance, microbiology, pharmacokinetics/pharmacodynamics, clinical trials, adverse effects and place in therapy of *Clostridium difficile* infection (CDI)" Presented at an infectious diseases/medical microbiology and gastroenterology symposium, Montreal, Quebec, March 18, 2014.
829. "Treatment algorithms for *Clostridium difficile* infection (CDI)" Presented at infectious diseases/medical microbiology rounds, Cite de la Sante, Montreal, Quebec, March 19, 2014.

830. "Investigational agents for preventing and treatment *Clostridium difficile* infection (CDI)" Presented at an infectious diseases/medical microbiology, gastroenterology and pharmacy symposium, Montreal, Quebec, March 19, 2014.
831. "*Clostridium difficile* infection (CDI) in 2014: What is the best way forward today and tomorrow ?" Presented at infectious diseases/medical microbiology rounds, CHUL de Ste-Foy, Quebec City, Quebec, March 20, 2014.
832. "New agents for the treatment of *Clostridium difficile* infection (CDI)" Presented at a gastroenterology and pharmacy symposium, Quebec City, Quebec, March 20, 2014.
833. "Infections caused by multi-drug resistant Gram-negative organisms: What to do today and what to do tomorrow ?" Presented at the western branch of the Canadian Society of Hospital Pharmacy (CSHP), Banff, Alberta, March 24, 2012.
834. "Old and new vaccines for the prevention of infections caused by *Streptococcus pneumoniae*: Which ones to use and how" Presented at the Association of Medical Microbiology and Infectious Diseases (CACMID/AMMI), Victoria, British Columbia, April 4, 2014.
835. "The macrolides: Review of properties good and bad" Presented at a pediatric respiratory symposium, Faculty of Medicine, University of Manitoba, Winnipeg, Manitoba, April 24, 2014.
836. "Can pneumococcal vaccination reduce antimicrobial resistance ?" Presented at a Canadian Respiratory Congress, Calgary, Alberta, April 26, 2014.
837. "International treatment guidelines for *Clostridium difficile* infection (CDI): What should we do ?" Presented at an infectious diseases, pharmacy and gastroenterology symposium, Toronto, Ontario, April 30, 2014.
838. "Antimicrobial stewardship, infection control, probiotics, new antimicrobials, fecal transplant, IVIG and resins: Whats their role in managing *Clostridium difficile* infection (CDI) ?" Presented at an infectious diseases/microbiology rounds, Oshawa hospital, Oshawa, Ontario, May 1, 2014.
839. "Whats the future in management of *Clostridium difficile* infection (CDI) ?" Presented at an infectious diseases, pharmacy symposium, Toronto, Ontario, May 1, 2014.
840. "Extended spectrum beta-lactamase (ESBL) producing organisms in Canadian hospitals; Where are we today and what should we do about it? " Presented at an infectious diseases symposium, Toronto, Ontario, May 2, 2014.
841. "Antimicrobial resistance in dermatology: What does it mean and how to prevent it ? Presented at an international dermatology symposium: Monte Carlo, Monaco, May 30, 2014.
842. "Treatment and prevention of *Clostridium difficile* infection (CDI)" Presented at an infectious diseases symposium, Toronto, Ontario, June 12, 2014.
843. "Extended spectrum beta-lactamase (ESBL) producing organisms in western Canada " Presented at an infectious diseases symposium, Vancouver, British Columbia, June 13, 2014.
844. "Antimicrobial resistance in Canada: What are the solutions, focusing on new antimicrobials." Presented at Health Canada, Ottawa, Ontario, June 19, 2014.

845. "New diagnostics and treatments for resistant Gram-negative infections" Presented at Challenges and Opportunities in Managing Serious Bacterial Infections, an ICAAC symposium, Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), September 7, 2014.
846. "New diagnostics and treatments for resistant Gram-positive infections" Presented at Challenges and Opportunities in Managing Serious Bacterial Infections, an ICAAC symposium, Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), September 7, 2014.
847. "New treatments for *Clostridium difficile* infection (CDI)" Presented at infectious diseases rounds, London Health Sciences Center, London, Ontario, September 16, 2014.
848. "Preventing nosocomial infections: What should we do ? " Presented at medicine grand rounds, Bluewater Health, Sarnia, Ontario, September 16, 2014.
849. "Treatment and prevention of hospital acquired infections: Focus on multi-drug resistant infections " Presented at medicine grand rounds, Rouge valley Health System, Ajax Site, Ontario, September 17, 2014.
850. "Treatment and prevention of *Clostridium difficile* infection (CDI)" Presented at an internal medicine symposium, Toronto, Ontario, September 17, 2014.
851. "Treatment of urinary tract infections: A review of old and new agents" Presented at a UTI symposium, Toronto, Ontario, October 30, 2014.
852. "A review of old and new vaccines for preventing invasive pneumococcal disease" Presented as a webinar through the International Committee of Infectious Diseases (ICID), Toronto, Ontario, October 30, 2014.
853. "Treatment and prevention of *Clostridium difficile* infection (CDI) in patients with inflammatory bowel disease (IBD)" Presented at a gastroenterology symposium, Toronto, Ontario, November 9, 2014.
854. "Advantages and disadvantages of treatments for *Clostridium difficile* infection (CDI)" Presented at an infectious diseases symposium, Montreal, Quebec, November 14, 2014.
855. "Why is *Clostridium difficile* infection (CDI) so difficult to treat" Presented at infectious diseases grand rounds, Hamilton Health Sciences center, Hamilton, Ontario, November 26, 2014.
856. "The basic science and clinical aspects of *Clostridium difficile* infection (CDI): What's old and new" Presented at Farncombe rounds, Hamilton Health Sciences center, McMaster site, Hamilton, Ontario, November 26, 2014.
857. "How best to prevent nosocomial infections" Presented at a general medicine symposium, Toronto, Ontario, November 27, 2014.
858. "An update on optimal treatments of antimicrobial resistant infections" Presented at medicine grand rounds, Orillia Soldiers Memorial Hospital, Orillia, Ontario, November 28, 2014.
859. "A review of conjugate and non-conjugate vaccines for pneumococcal infections" Presented at the Canadian Immunization Congress (CIC), Ottawa, Ontario, December 4, 2014.

860. "A review of *Clostridium difficile* genotypes and resistance rates in Canadian institutions: " Presented at a national infectious diseases update, Toronto, Ontario, December 4, 2014.
861. "*Clostridium difficile* infection (CDI): Pathogenesis, biology, burden of illness, prevention and treatment, " Presented at an infectious disease update, Montreal, Quebec, December 6, 2014.
862. "Treating *Clostridium difficile* infection (CDI): What should we do ?" Presented at a gastroenterology/infectious diseases update, Toronto, Ontario, December 8, 2014.

2015

863. "Advantages and disadvantages of using antimicrobials and agents with antimicrobial activity in dermatology", Presented at the scientific panel on antibiotic use in dermatology (SPAUD), via webinar at Las Vegas, January 21, 2015.
864. "Treatment and prevention of urinary tract infection: Review of old and new" Presented at a medical microbiology/infectious diseases symposium, Toronto, Ontario, January 23, 2015.
865. "Preventing pneumococcal infections; Invasive and non-invasive infections" Chairing a Prevnar 13 meeting of medical microbiology/infectious diseases and family medicine, Montreal, Quebec, January 30-31, 2015.
866. "New treatments for urinary tract infection" Presented at a family physician/urology symposium, Ottawa, Ontario, February 19, 2015.
867. "Review of fosfomycin for the treatment of urinary tract infections: What role should it play ? " Presented at a family physician/urology symposium, Toronto, Ontario, February 24, 2015.
868. "Treatment of urinary tract infections: The role of probiotics, cranberry juice and antibiotics " Presented at a family physician/urology symposium, Toronto, Ontario, February 26, 2015.
869. "Antimicrobial resistance in urinary tract pathogens in Canada " Presented at a family physician/urology symposium, Toronto, Ontario, March 9, 2015.
870. "Review of properties of old and new antimicrobials for treatment and prophylaxis of urinary tract infection " Presented at a family physician/urology symposium, Toronto, Ontario, March 10, 2015.
871. "Evolution of multi-drug resistant *E. coli* in urinary infections across Canada " Presented at a family physician/urology symposium, London, Ontario, March 12, 2015.
872. "The role of telavancin in the treatment of hospital and ventilator tract pneumonia and complicated skin and skin structure infections " Presented at a medical microbiology and infectious diseases symposium, Toronto, Ontario, March 13, 2015.
873. "Issues and controversies in the treatment of urinary tract infections in Canada" Presented at a family physician/infectious diseases and urology symposium, Calgary, Alberta, March 17, 2015.
874. "Management of upper and lower urinary tract infections: What to do in 2015 " Presented at a family physician/infectious diseases and urology symposium, Vancouver, British Columbia, March 18, 2015.

875. "Comparing new and old treatments and preventative strategies for urinary infections " National webinar presented to family physicians, infectious diseases and urology, Toronto, Ontario April 22, 2015.
876. "Antimicrobial stewardship in the emergency department: How best to treat and prevent infections " Presented at the Emergency medicine prairie annual conference (EMPAC), Winnipeg, Manitoba, May 1, 2015.
877. "The role of antimicrobial stewardship as it pertains to the treatment of urinary infections " Presented at the annula Primary Care Today meeting for family physicians, Toronto, Ontario, May 9, 2015.
878. "Comparison of ceftolozane/tazobactam to other new as well as old agents for the treatment of gram-negative infections: What will be its role ? " Presented at a national webinar, Winnipeg, Manitoba, May 19, 2015.
879. "New antimicrobials for the treatment of multi-drug resistant Gram-negative infections: Whats here today and on the horizon " Presented at a western Canada infectious diseases/medical microbiology meeting, Vancouver, British Columbia, May 22, 2015.
880. "Antibiotic resistance, an actual worldwide emergency: How to manage" Presented at the international meeting "Uncomplicated urinary infections state of the art: From antibiotic resistance to the best practice", Milan, Italy, May 27, 2015.
881. "Treatment and prevention of urinary tract infections: Standard of care in 2015 " Presented at a family physician rounds, Brandon Clinic, Brandon, Manitoba, June 18, 2015.
882. "Review of old and new antibiotics, role of probiotics, vaccines, cranberries and other strategies for urinary tract infections " Presented at a family physician rounds, Winnipeg, Manitoba, June 25, 2015.
883. "Influence of antimicrobial resistance on treatment of lower and upper tract urinary infections and prostatitis" Presented at a medical microbiology/infectious diseases symposium, Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), San Diego, California, September 19, 2015.
884. "Review of the role of fosfomycin for treatment and prevention of urinary tract infection" Presented at a family physician symposium, Ottawa, Ontario, September 23, 2015.
885. "What is the role of fosfomycin for treatment and prevention of acute and chronic prostatitis" Presented at a urology meeting, Montreal, Quebec, September 24, 2015.
886. "Prevention and treatment of infections in the days of antimicrobial resistant infections: Review of new antibiotics" Presented at a family physician and specialist meeting, Montreal, Quebec, September 24, 2015.
887. "Treatment and prevention of invasive pneumococcal infections and community acquired pneumonia: Antibiotics and vaccines, what to use when" Presented at a general medicine continuing education symposium, Winnipeg, Manitoba, October 1, 2015.

888. "The use of antibiotics as well as adjuvants such as monoclonal antibodies in the treatment of *Clostridium difficile* infection-CDI" Presented at a pharmacy education symposium, Toronto, Ontario, October 15, 2015.
889. "Overview of treatments for MRSA infections: Oral and IV, old and new" Presented at a pharmacy education symposium, Toronto, Ontario, October 16, 2015.
890. "Webex series: review of PPSV23 (Pneumovax) and PCV13 (Prevnar13) for prevention of invasive pneumococcal infections as well as non-bacteremic pneumococcal pneumonia". Presented at the webex series, Montreal, Quebec, October 19, 2015.
891. "Treatment of complicated skin and skin structure infections (cSSTI) and hospital acquired and ventilator acquired pneumonia (HAP/VAP)" Presented at a medical microbiology/infectious diseases symposium, Toronto, Ontario, October 23, 2015.
892. "A review of prevention and treatment of urological infections; treatment comparisons and role of fosfomycin" Presented at a urology meeting, Winnipeg, Manitoba, October 28, 2015.
893. "Antimicrobial resistance in urinary tract infections: Whats the current data ?" Presented at a national medical microbiology/infectious diseases meeting, Toronto, Ontario, October 30, 2015.
894. "Review of the CAPITA (community acquired pneumonia immunization trial in adults): Reductions in invasive pneumococcal infections as well as non-bacteremic pneumococcal pneumonia". Presented at a geriatric pneumonia meeting, Toronto, Ontario, October 30, 2015.
895. "Infections caused by antimicrobial resistant organisms: What every practitioner should know in 2015" Presented at infectious diseases update, hot topics and whats new, Victoria, British Columbia, November 7, 2015.
896. "Invasive pneumococcal infections and pneumococcal pneumonia: Focus on prevention" Presented at infectious diseases update, hot topics and whats new, Victoria, British Columbia, November 7, 2015.
897. "Treatment and prevention of invasive pneumococcal infections" Presented at a family doctor symposium, Winnipeg, Manitoba, November 8, 2015.
898. "Antibiotic resistant Gram-positive and Gram-negative pathogens is driving the need for new antimicrobial agents" Presented at a family doctor symposium, Winnipeg, Manitoba, November 26, 2015.
899. "When and how to use PPSV23 (Pneumovax) and PCV13 (Prevnar13) for prevention of invasive pneumococcal infections as well as non-bacteremic pneumococcal pneumonia". Presented at a family doctor symposium, Winnipeg, Manitoba, December 3, 2015.

2016

900. "Antibiotics 101, patient and hospital antibiograms and new antimicrobial agents". Presented at a medical/marketing/sales symposium, Fort Lauderdale, Florida, January 12, 2016.
901. "The family doctor and vaccination: Focus on influenza and pneumococcal infections". Presented at a family doctor symposium, Winnipeg, Manitoba, January 13, 2016.

902. "Antimicrobial use in humans versus animals". Presented at the north american veterinary conference, Orlando, Florida, January 17, 2016.
903. "Treatment and prevention of urinary tract infections in 2016". Presented at a family doctor symposium, Hamilton, Ontario, February 18, 2016.
904. "Treatment and prevention of cystitis, pyelonephritis and prostatitis in the days of multi-drug resistant pathogens". Presented at a family doctor and specialist symposium, Windsor, Ontario, February 22, 2016.
905. "Antibiotic resistant infections causing urinary tract infections". Presented at a family doctor and specialist symposium, Ottawa, Ontario, February 25, 2016.
906. "Preventing urinary tract infections: What should we do". Presented at a family doctor and specialist symposium, Toronto, Ontario, February 29, 2016.
907. "Responsible use of antimicrobials in the face of resistance: The human approach". Presented at the western veterinary conference, Las Vegas, Nevada, March 7, 2016.
908. "Review of new antimicrobials in practice: Focus on telavancin and ceftolozane/tazobactam". Presented at the Canadian Society of Hospital Pharmacy (CSHP) conference western branch seminar, Banff, Alberta, March 11, 2016.
909. "Review of fosfomycin: What role does it have in the treatment and prevention of urinary tract infections". Presented at a family doctor and specialist symposium, Montreal, Quebec, March 16, 2016.
910. "What's new in the treatment and prevention of urinary tract infections". Presented at a family doctor and specialist symposium, Toronto, Ontario, April 4, 2016.
911. "When, who and how to immunize geriatric patients to prevent influenza and pneumococcal infection". Presented at the Canadian Geriatric Society Conference, Vancouver, British Columbia, April 15, 2016.
912. "Addressing issues of resistance, cephalosporins, mutant prevention concentration, pharmacokinetics, pharmacodynamics etc". Presented to the Veterinary Operations Team, Zoetis, Chicago, Illinois, April 19, 2016.
913. "Sorting out how best to prevent pneumococcal infections in all age groups". Presented at a family doctor update, Winnipeg, Manitoba, April 21, 2016.
914. "Review of new antimicrobials for the treatment of gram-positive and gram-negative infections. Presented at the Canadian Society of Hospital Pharmacy (CSHP) Manitoba branch, Winnipeg, Manitoba, April 23, 2016.
915. "Review of ceftolozane/tazobactam: How does it compare to other B-lactams ? ". Presented at a specialists update, Richmond hospital, Vancouver, British Columbia, April 26, 2016.
916. "New antibiotics for the treatment of resistant infections: Properties and role in practice ? ". Presented at a specialists update, Surrey Memorial hospital, Vancouver, British Columbia, April 27, 2016.

917. "Strategies to limit the spread and overcome antibiotic resistant infections ? ". Presented at a specialists update, Surrey Memorial hospital, Vancouver, British Columbia, April 27, 2016.
918. "Treatment of prevention of upper and lower urinary tract infections: Comparison of agents and strategies ". Presented at annual meeting Paladin labs, Montreal, Quebec, April 28, 2016.
919. "Review of the status of antibiotic resistant infections in the maritimes and Canada". Presented at the annual meeting of the Atlantic chapter, Canadian Society of Hospital Pharmacists, Halifax, Nova Scotia, April 30, 2016.
920. "Management of urinary tract infections in 2016, whats the state of the art ? ". Presented at PriMed Canada, Toronto, Ontario, May 7, 2016.
921. "Treatment of multi-drug resistant (MDR) *Pseudomonas aeruginosa* infections: What should we do ?". Presented at a specialist meeting, Vancouver, British Columbia, May 27, 2016.
922. "Treatment and prevention of community acquired pneumonia and invasive pneumococcal disease: Historical aspects and current thinking ". Presented at PriMed Canada, Winnipeg, Manitoba, June 3, 2016.
923. "Antimicrobial resistant infections on a global scale with a focus on southeast Asia: What are the problems and what are the solutions ". Presented at a southeast asia international symposium on uncomplicated urinary tract infections: State of the art management of the disease worldwide and antibiotic resistance, Manilla, Philippines, July 19, 2016.
924. "Treatment of urinary tract infections and respiratory tract infections in the emergency room setting: Whats new in 2016" Presented at 14th annual St. Paul's Emergency Medicine Conference, Whistler, British Columbia, September 23, 2016.
925. "Treatment and prevention of infectious diseases in 2016: Whats does the latest research show" Presented at an international multi-specialty conference, Wroclaw, Poland, September 30, 2016.
926. "How best for the family doctor to prevent and treatment of upper and lower urinary tract infections" Presented at the Polish National Congress for Family Doctors, Wroclaw, Poland, October 1, 2016.
927. "A review of new antimicrobials for the treatment of Gram-positive and Gram-negative infections" Presented at Medical Microbiology/Infectious Diseases Grand Rounds, Winnipeg, Manitoba, October 5, 2016.
928. "Solutions to the problems of antimicrobial resistant infections: Old and new antimicrobials for the treatment of Gram-positive and Gram-negative infections" Presented at Regina Chapter of the Canadian Society of Hospital Pharmacists, Regina, Saskatchewan, October 22, 2016.
929. "Comparison of treatment and prevention of infections in humans and animals" Presented at Antiinfective Expert Panel Roundtable, Minneapolis, Minnesota, October 25, 2016.
930. "Treatment of multi-drug resistant (MDR) Gram-negative bacillary infections: Whats New ? " Presented at ID Weeke, New Orleans, Louisiana, October 27, 2016.
931. "Prevention and treatment of urinary tract infection in the days of MDR pathogens" Presented at Family Medicine/Specialist meeting, Calgary, Alberta, November 24, 2016.

932. "Canadian and worldwide data on antimicrobial resistance in urinary tract infection pathogens; What does it all mean ? " Presented at Family Medicine/Specialist meeting, Montreal, Quebec, November 28, 2016.

2017

933. "The spread of multi-drug resistant Gram-negative bacilli across Canada and the world: What should we do ?" Presented at Specialist meeting, Quebec City, January 12, 2017.
934. "Management of urinary tract infections in 2016" Presented at Family Medicine/Specialist meeting, Calgary, Alberta, January 16, 2017.
935. "Treatment of upper and lower tract urinary infections in the days of resistance" Presented at Family Medicine/Specialist meeting, Edmonton, Alberta, January 17, 2017.
936. "Role of probiotics/bacteriotherapy, estrogens, cranberry preparations, vaccines in prevention and treatment of urinary tract infections" Presented at Family Medicine/Specialist meeting, Vancouver, British Columbia, January 19, 2017.
937. "Antibiotic resistance in Quebec: How should it effect the treatment of common infections ?" Presented at Family Medicine/Specialist meeting, Montreal, Quebec, January 23, 2017.
938. "Management of cystitis, pyelonephritis and prostatitis in 2016 ?" Presented at Family Medicine/Specialist meeting, Toronto, Ontario, January 24, 2017.
939. "Preventing influenza and pneumococcal infections: Focus on the elderly ?" Presented at Family Medicine meeting, Winnipeg, Manitoba, February 7, 2017.
940. "Treatment and prevention of acute uncomplicated cystitis in the days of MDR ESBL *E. coli*" Presented at Family Medicine/Specialist meeting, Toronto, Ontario, February 8, 2017.
941. "Urosepsis due to MDR ESBL *E. coli*: How best to prevent it" Presented at Family Medicine/Specialist meeting, Ottawa, Ontario, February 9, 2017.
942. "Urinary tract infections caused by antibiotic resistant pathogens: What should the general practitioner know in 2017 ?" Presented at a Family Medicine meeting, Montreal, Quebec, February 13, 2017.
943. "Antibiotic resistant pathogens causing urinary tract infections in 2017: Why and how are they spreading ?" Presented at a Family Medicine/Specialist meeting, Hamilton, Ontario, February 14, 2017.
944. "The role on new agents in the treatment of infections caused by antibiotic resistant Gram-negative infections: Comparing Australia to Canada ?" Presented at a Specialist meeting, Sydney, Australia, February 20, 2017.
945. "Antimicrobial resistant infections: Lost of problems but many solutions" Presented at Medical Microbiology/Infectious Diseases Grand Rounds, Princess Alexandra Hospital, Brisbane, Australia, February 21, 2017.

946. "New innovative solutions to the problem of antimicrobial resistant infections" Presented at Medical Microbiology/Infectious Diseases Grand Rounds, Westmead Hospital, Sydney, Australia, February 22, 2017.
947. "Old and new treatments of *Clostridium difficile* infection (CDI): Whats works and what does not ?" Presented at the Australian Society for Antimicrobials (ASA) meeting, Adelaide, Australia, February 23, 2017.
948. "The optimal ways to treat multi-drug resistant (MDR) and extensively-drug resistant (XDR) infections in 2017" Presented at the Australian Society for Antimicrobials (ASA) meeting, Adelaide, Australia, February 24, 2017.
949. "New and investigational antimicrobials for treating treat multi-drug resistant (MDR) and extensively-drug resistant (XDR) infections" Presented at the Australian Society for Antimicrobials (ASA) meeting, Adelaide, Australia, February 24, 2017.
950. "Challenging our beliefs about antiinfectives: A human medicine perspective" Presented at a dermatology symposium, Western Veterinary Community Conference, Las Vegas, Nevada, March 6, 2017.
951. "Strategic empiric treatment for resistant *Pseudomonas* and ESBL producing Enterobacteriaceae" Presented at an early appropriate antibiotic therapy symposium, European Association of Hospital Pharmacists (EAHP), Cannes, France, March 22, 2017.
952. "Challenging our beliefs about antiinfectives: A human medicine perspective" Presented at a dermatology symposium, Western Veterinary Community Conference, Las Vegas, Nevada, March 6, 2017.
953. "New strategies for preventing community acquired pneumonia and influenza" Presented at Annual Conference of Pharmacists Manitoba, Winnipeg, Manitoba, April 9, 2017.
954. "Preventing and treatment respiratory tract infections in 2017" Presented at Annual Conference of Manitoba Primary care Nurses Association, Winnipeg, Manitoba, April 29, 2017.
955. "New and investigational antimicrobials available for the treatment of resistant Gram-positive and Gram-negative infections" Presented at Association of Medical Microbiology and Infectious Diseases AMMI/CACMID, Toronto, Ontario, May 5, 2017.
956. "Prevention and treatment of community acquired respiratory tract infections: What is the evidence" Presented at the Bowmanville Medical Center, Bowmanville, Ontario, May 15, 2017.
957. "Antibiotic use and antibiotic resistance in community acquired pneumonia, acute exacerbations of chronic bronchitis, otitis media and acute bacterial sinusitis" Presented at a family doctor educational update, Hamilton, Ontario, May 15, 2017.
958. "The role of prevention of respiratory infections by respirologists" Presented at Respirology Grand Rounds, West Lincoln Memorial Hospital, Grimsby, Ontario, May 16, 2017.
959. "Antibiotic resistance in community acquired respiratory tract infections: Whats should the primary care practitioner know and do? " Presented at Family Medicine Rounds, West Durham Family Health Center, Pickering, Ontario, May 16, 2017.

960. "Review of PCV7, PCV10, PCV13 and PPSV23 and their role in preventing invasive and non-invasive infections in all age groups" Presented at a Family Medicine Update, Mississauga, Ontario, May 16, 2017.
961. "Current treatment and preventative strategies in infectious diseases" Presented at Family Medicine Ground Rounds, St Mary's Hospital, Kitchener, Ontario, May 17, 2017.
962. "Whats is the role of PCV13 and PPSV23 in the prevention on infections in young, old and immunocompromised patients" Presented at a Primary Care Update, Peterborough, Ontario, May 17, 2017.
963. "The influence of antibiotic resistance on the treatment of community acquired respiratory tract infections" Presented at a Primary Care Practitioner Update, Oakville, Ontario, May 17, 2017.
964. "How best to prevent invasive pneumococcal disease in 2017" Presented at Respiriology Grand Rounds, West Lincoln Memorial Hospital, Barrie, Ontario, May 18, 2017.
965. "New antibiotics and new vaccines for treating and preventing infections" Presented at a Primary Care Update, Toronto, Ontario, May 18, 2017.
966. "Antimicrobial resistant infections in Canada, US and the World: Problems and solutions" Presented at conference: Staying ahead of antimicrobial resistant superbugs: Environmental challenges and clinical solutions, Winnipeg, Manitoba, May 19, 2017.
967. "New and investigational agents for the treatment of resistant Gram-positive and Gram-negative infections in the intensive care unit: What data do we have in treatment of sepsis" Presented at the 2nd Annual Polish Sepsis Meeting, Wroclaw, Poland, May 26, 2017.
968. "New agents for the treatment of resistant Gram-positive infections" Presented at the 2nd Annual Polish Sepsis Meeting, Wroclaw, Poland, May 27, 2017.
969. "Antibiotic resistance in acne: The data, what it means and what should we do" Presented at Scientific Panel on Antibiotic Use in Dermatology (SPAUD), American Acne and Rosacea Society (AARS), Washington, District of Columbia, June 10, 2017.
970. "Antibiotic resistant infections: Lots of problems but review of the latest solutions" Presented at Uncomplicated urinary tract infections: State of the art and how to manage, Merida, Mexico, June 16, 2017.
971. "Infections cause by antibiotic resistant organisms, comparson of North America and Latin America" Presented at Antimicrobial Resistance in Mexico: State of the art, Mexico City, June 28, 2017.
972. "New and old antimicrobials for the treatment of infections caused by antibiotic resistant organisms" Presented at Antimicrobial Resistance in Mexico: State of the art, Monterrey, June 29, 2017.
973. "How best to prevent and treat infections caused by antibiotic resistant organisms" Presented at Antimicrobial Resistance in Mexico: State of the art, Guadalajara, June 30, 2017.
974. "New/investigational antimicrobials here and on the horizon: Canada versus the world" Presented at Verity Pharma, Toronto, Ontario, August 30, 2017.

975. "Risks, prevalence, prevention of infectious diseases" Presented at a Long-Term Care meeting, Toronto, Ontario, September 14, 2017.
976. "Review of influenza and pneumococcal vaccination" Presented at respirology grand rounds, St. Mary's General Hospital, Kitchener, Ontario, September 15, 2017.
977. "Using vaccination to reduce antimicrobial resistant infections" Presented at family medicine rounds, Barrie, Ontario, September 15, 2017.
978. "Review of polysaccharide and conjugate vaccines for preventing invasive and non-invasive pneumococcal infection" Presented at a primary care update, Calgary, Alberta, September 25, 2017.
979. "Review of properties of conjugate vaccines: Why, when and how to use them" Presented at a primary care update, Toronto, Ontario, September 26, 2017.
980. "Treatment of infections caused by antimicrobial resistant infections: review of old and new antimicrobials" Presented at a national multi-specialty meeting, Santiago, Chile, September 29, 2017.
981. "Defining the prevalence and risk factors for resistant Gram-negative infections in the ICU setting" Presented at the Canadian Critical Care Conference, Toronto, Ontario, October 2, 2017.
982. "Preventing infectious diseases using vaccination" Presented at family medicine rounds, Kitchener, Ontario, October 2, 2017.
983. "Preventing and treating infectious diseases in 2017: Whats the best approach" Presented at grand rounds, Oakville Trafalgar Memorial Hospital, Oakville, Ontario, October 3, 2017.
984. "The best way to prevent respiratory infections is to vaccinate: Focus on guidelines in high risk patients" Presented at a primary care update, Toronto, Ontario, October 4, 2017.
985. "Antimicrobial usage and stewardship in dermatology: What to do in 2017" Presented at a clinical dermatology update, Las Vegas, Nevada, October 13, 2017.
986. "Review of old and new tetracyclines for the treatment of acne and rosacea" Presented at a clinical dermatology update, Las Vegas, Nevada, October 14, 2017.
987. "Sarecycline: Review of properties and comparison to other tetracyclines" Presented at a clinical dermatology update, Las Vegas, Nevada, October 14, 2017.
988. "Review of omadacycline: A microbiologists and pharmacologists perspective" Presented at an investors meeting, New York City, New York, October 20, 2017.
989. "Gram-negative bacteria: Canadian epidemiology and resistance patterns relevant to ICU and risk factors for resistant infections and consultation" Presented at the Canadian Intensive Care Unit Specialists Meeting, Toronto, Ontario, October 21, 2017.
990. "State of the art: How best to treat and prevent urinary tract infections: Whats old and what new" Presented at a primary care training meeting, Montreal, Quebec, November 21, 2017.

991. "Review of ceftolozane/tazobactam: How does it compare with old and new therapies for multi-drug resistant organisms" Presented at a national multi-specialty meeting, Lima, Peru, November 23, 2017.

992. "Review of ceftobiprole: Comparison to old and new therapies for multi-drug resistant organisms" Presented at a national medical microbiology/infectious diseases meeting, Monreal, Quebec, December 1, 2017.

2018

993. "The challenges and solutions for preventing pneumococcal disease and influenza in the geriatric patient" Presented at Provincial-Wide Geriatric Rounds, Vancouver General Hospital, Vancouver, British Columbia, January 23, 2018.

994. "Solutions to the problem of infections caused by multi-drug resistant (MDR) infections" Presented at British Columbia Centres for Disease Control (BCCDC), Vancouver, British Columbia, January 23, 2018.

995. "Using vaccination to reduce antimicrobial and multi-drug resistant (MDR) *Streptococcus pneumoniae* infections" Presented at a Primary Care Update, Vancouver, British Columbia, January 23, 2018.

996. "Antibiotic resistant infections in British Columbia compared to Canada and the world" Presented at City Wide Infectious Diseases Grand Rounds, Royal Jubilee Hospital, Victoria, British Columbia, January 24, 2018.

997. "Preventing and treating respiratory tract infections in the days of virulent and resistant pathogens" Presented at a Primary Care Update, Victoria, British Columbia, January 24, 2018.

998. "Vaccination as an antimicrobial stewardship initiative to reduce resistance." Presented at the MPG Pharmacy Consultants Group Meeting, Vancouver, British Columbia, January 25, 2018.

999. "Review of the solutions to the problem of antibiotic resistant infections" Presented at Inter City Infectious Diseases Grand Rounds, Vancouver General Hospital, Vancouver, British Columbia, January 25, 2018.

1000. "Review of the new antimicrobials for treating resistant Gram-positive and Gram-negative infections" Presented to Medical Microbiology/Infectious Diseases Fellows, Vancouver General Hospital, Vancouver, British Columbia, January 25, 2018.

1001. "Review of the IV fosfomycin: In-vitro, in-vivo properties and clinical trials" Presented to Medical Microbiology/Infectious Diseases Specialists, Association of Medical Microbiology and Infectious Diseases of Canada (AMMI), Vancouver, British Columbia, 2018.

1002. "Review of the ceftobiprole: In-vitro properties, what's the data and what does it mean" Presented to Medical Microbiology/Infectious Diseases Specialists, Association of Medical Microbiology and Infectious Diseases of Canada (AMMI), Vancouver, British Columbia, 2018.

1003. "Review of the IV fosfomycin: In-vitro and in-vivo properties, what does it mean for Canada" Presented to the Antiinfective Review Committee, Health Canada, Ottawa, Ontario, May 22, 2018.

1004. "Review of new antimicrobials for infections caused by Gram-negative bacilli: What is driving their discovery/development" Presented at Pharmacology Rounds, Sunnybrook Hospital, Toronto, Ontario, May 29, 2018.
1005. "Review of new antimicrobials for infections caused by Gram-positive infections: What is driving their discovery/development" Presented at the Canadian Society of Hospital Pharmacists (CSHP-GTA Branch meeting), Toronto, Ontario, May 29, 2018.
1006. "The ideal academic lecture: What to do and what not to do" Presented at Anaesthesiology Grand Rounds, College of Medicine, University of Manitoba, Winnipeg, Manitoba, May 30, 2018.
1007. "Antibiotic resistant infections: Global problems and global solutions" Presented at Uncomplicated Urinary Tract Infection: State of the Art, how best to manage in the days of worldwide resistance, Manila, Philippines, June 26, 2018.
1008. "Treatment of urinary tract infections in the days of antibiotic resistant infections" Presented at Uncomplicated Urinary Tract Infection: State of the Art, how best to manage in the days of worldwide resistance, Melbourne, Australia, June 28, 2018.
1009. "Treatment of urinary tract infections in Canada, the US and Australia: Similarities and differences" Presented at Mayne Pharma, Melbourne, Australia, June 29, 2018.
1010. "Antimicrobial stewardship in dermatology: What to do and what not to do" Presented at Society for Pediatric Dermatology 43rd Annual meeting, Lake Tahoe, California, July 12, 2018.
1011. "Using vaccination as an antimicrobial stewardship strategy: Whats the evidence" Presented as a national Webex to Rexall Pharmacists, Winnipeg, Manitoba, July 19, 2018.
1012. "Vaccinating against influenza and *Streptococcus pneumoniae*: Who, how, why and when" Presented as a national Webex to Rexall Pharmacists, Winnipeg, Manitoba, July 25, 2018.
1013. "Comparison of Pneumovax, PCV10, PCV13: What is the evidence" Presented at a family medicine and pharmacy update, Winnipeg, Manitoba, August 9, 2018.
1014. "Treatment of infections in community practice: How should I treat common infections in 2018 ?" Presented at a family practice update, Vancouver, British Columbia, September 6, 2018.
1015. "Treating and preventing infections caused by antibiotic resistant organisms: What to do in 2018?" Presented at a family practice update, Vancouver, British Columbia, September 7, 2018.
1016. "Treatment and prevention of upper and lower respiratory infections in 2018?" Presented at a family practice update, Windsor, Ontario, October 15, 2018.
1017. "Treatment and prevention of lower and upper urinary tract infections in 2018?" Presented at a family practice update, London, Ontario, October 16, 2018.
1018. "Antibiotic resistant pathogens: How do they affect the treatment of infections?" Presented at a family practice update, Burlington, Ontario, October 17, 2018.
1019. "Role of ceftolozane/tazobactam in clinical practice: Review of in-vitro and in-vivo data?" Presented at a specialist practice update, Toronto, Ontario, October 26, 2018.

1020. "Review of ceftobiprole: Chemistry, mechanism of action and resistance, microbiology, pharmacokinetics and pharmacodynamics and role in clinical practice?" Presented at a specialist practice update, Vancouver, British Columbia, November 9, 2018.
1021. "Pneumococcal vaccination a part of the antimicrobial stewardship program: Results from the SAVE study 2011-2016?" Presented at a research exchange meeting (via Webex), Canadian Immunization Conference (CIC), Ottawa, Ontario, December 5, 2018.
1022. "New antibiotics coming to Canada; A review focusing on ceftolozane/tazobactam" Presented at Health Canada (via Webex), Ottawa, Ontario, March 13, 2018.

2019

1023. "Preventing influenza and pneumococcal infections: What is the best way to do this in 2019 ?" Presented at a family practice update, Regina, Saskatchewan, January 16, 2019.
1024. "Treatment and prevention of community acquired respiratory tract infections in 2019 ?" Presented at a family practice update, Thunder Bay, Ontario, February 13, 2019.
1025. "Review of guidelines and new treatments for preventing community acquired infections" Presented at a family practice update, Thunder Bay, Ontario, February 14, 2019.
1026. "Review of old and new vaccines for preventing influenzae and pneumococcal infections" Presented at a Pharmacists Manitoba practice update, Winnipeg, Manitoba, February 19, 2019.
1027. "Debate: PCV13 versus PCV10 to prevent invasive pneumococcal disease (IPD) and community acquired pneumonia (CAP)" Presented at an infectious diseases meeting, Toronto, Ontario, February 22, 2019.
1028. "The global crisis of antibiotic resistant infections: What are the potential solutions" Presented at the Brazil treatment of urinary tract infections meeting, Sao Paulo, Brazil, March 15, 2019.
1029. "Infections caused by resistant pathogens: Comparing North American problems and solutions to the Latin America/South America situation" Presented at Era Pos Antibioticos, Sao Paulo, Brazil, March 16, 2019.
1030. "Reviewing the worldwide crisis of infections caused by resistant pathogens: How does Canada compare Latin America" Presented at the LATAM Infectious Diseases Forum, Mexico City, Mexico, April 26, 2019.
1031. "The role of carbapenems and new B-lactam/B-lactamase inhibitors in antimicrobial stewardship programs (AMS)" Presented at the LATAM Infectious Diseases Forum, Mexico City, Mexico, April 27, 2019.
1032. "New antibiotics for the treatment of multi-drug resistant infections" Presented at a Quebec Infectious Diseases symposium, Montreal, Quebec, May 16, 2019.
1033. "Unveiling of CLEAR (Canadian Leadership on Antimicrobial Real-Life Usage Registry): Usage of new intravenous antibiotics in Canada" Presented at a Quebec Infectious Diseases symposium, Montreal, Quebec, May 16, 2019.

1034. "Antibiotic resistant infections in intensive care units: Pathogens, resistance and treatment options" Presented at a western Canada Critical Care /Infectious Diseases symposium, Vancouver, British Columbia, May 24, 2019.
1035. "Fosfomycin: review of oral and intravenous formulations" Presented at an Ontario infectious diseases webinar, Toronto, Ontario, May 30, 2019.
1036. "Fosfomycin: Review of chemistry, mechanism of action/resistance, microbiology, pharmacokinetics, pharmacodynamics, animal uses, clinical trials, adverse effects, drug interactions and place in therapy" Presented at an infectious diseases update, Toronto, Ontario, May 30, 2019.
1037. "Ceftolozane/tazobactam: Comparison of its properties to ceftazidime/avibactam and other new IV antimicrobials" Presented at a pharmacy and infectious diseases update, Toronto, Ontario, June 14, 2019.
1038. "Introduction of the CLEAR (Canadian LEadership on Antimicrobial Real-life Usage Registry): Analysis of the usage of new IV antimicrobials in Canada" Presented at a pharmacy and infectious diseases update, Toronto, Ontario, June 14, 2019.
1039. "Antibiotic resistance infections: Comparing North America to Asia, pathogens and infections. "Presented at the UTI Challenge: New strategy against multi-drug resistance in 2019, Urological Association of Asia (UAA) Annual Meeting, Kuala Lumpur, Malaysia, August 8, 2019.
1040. "New treatments and preventative strategies for urinary tract infections "Presented at the UTI challenge: New strategy against multi-drug resistance in 2019, Urological Association of Asia (UAA) Annual Meeting, Kuala Lumpur, Malaysia, August 8, 2019.
1041. "Antibiotic resistant and multi-drug resistant infections; Comparing Quebec to Canada and the World. Pathogens, resistance and treatment options" Presented at an antimicrobial stewardship pharmacist symposium, Montreal, Quebec, September 11, 2019.
1042. "Review of new/investigational antimicrobials for the treatment of infections caused by multi-drug resistant Gram-positive and Gram-negative infections" Presented at Infectious Diseases/Medical Microbiology Grand Rounds, Centre hospitalier de l'Université de Montréal (CHUM), Montreal, Quebec, September 12, 2019.
1043. "How best to prevent infectious diseases: Review of the vaccination strategies available or coming soon" Presented at a family physician, pharmacist, specialist and respiratory therapist continuing medical education symposium, Winnipeg, Manitoba, September 19, 2019.
1044. "Antimicrobial resistant infections in South America: Review of pathogens and comparison to the West" Presented at an Infectious Diseases/Medical Microbiology, Intensive Care and Pulmonary Specialist Symposium, Valledupar, Colombia, September 24, 2019.
1045. "Treatment of infections caused by resistant and multidrug resistant infections in 2019 ? Review of old and new treatments and when and how to use combination therapy" Presented at Infectious Diseases/Medical Microbiology Grand Rounds, Fundacion Sante Fe Bogota University Hospital, Bogota, Colombia, September 25, 2019.

1046. "Management of infectious diseases in 2019: What should we do and how to do it ? " Presented at Critical Care Grand Rounds, Fundacion Cardioinfantil-Instituto de Cardiologia, Bogota, Colombia, September 26, 2019.
1047. "Prevention and treatment of infections caused by antimicrobial resistant, multi-drug resistant and extremely-drug resistant infections" Presented at Intensive Care, Infectious Diseases/Medical Microbiology and Internal Medicine Grand Rounds, San Jose Hospital, Bogota, Colombia, September 26, 2019.
1048. "Review of investigational antimicrobials: Where do they fit in and when and how should they be used ? " Presented at an Intensive Care, Infectious Diseases/Medical Microbiology and Internal Medicine Symposium, Pereira, Colombia, September 27, 2019.
1049. "Antimicrobial resistance in urinary tract infections: Need for alternative treatments and preventative strategies" Presented at a pre-NDS meeting, Biologics and Genetic Therapies Directorate (BGTD), Health Canada, Ottawa, Ontario, October 7, 2019.
1050. "Review of lefamulin: History, chemistry, mechanism of action and resistance, pharmacokinetics/pharmacodynamics and clinical usage: Focus on community-acquired respiratory tract infections. Presented at an Infectious Diseases/Medical Microbiology Specialist meeting, Toronto, Ontario, October 19, 2019.
1051. "Preventing infectious diseases in individuals over 65 years of age: How to keep people healthy" Presented at Zoomer for Boomers Radio and Television, Toronto, Ontario, October 23, 2019.
1052. "How, when, with what and why to immunize patients in 2019" Presented at a Family Physician, Pharmacists, Nurse Practitioner Update, Victoria, British Columbia, November 7, 2019.
1053. "Review of new antibiotics: Update for busy clinicians" Presented at an Infectious diseases update 2019, Victoria, British Columbia, November 8, 2019.
1054. "Tips on how best to prevent antibiotic resistant bacterial infections" Presented at an Infectious diseases update 2019, Victoria, British Columbia, November 8, 2019.
1055. "Review of intravenous fosfomycin: An antibiotic needed in Canada" Presented at an Infectious diseases/Medical Microbiology and Infectious Diseases/Stewardship Clinical Pharmacy, national webinar, Winnipeg, Manitoba, November 12, 2019.
1056. "Treatment of infections caused by antibiotic resistant organisms; What to do ? " Presented at an Infectious diseases/Medical Microbiology and Infectious Diseases/Stewardship Clinical Pharmacy, update, Vancouver, British Columbia, November 21, 2019.
1057. "Review of new and investigational antimicrobials: Properties and clinical usage ? " Presented at Internal Medicine Grand Rounds, Surrey Memorial Hospital, Fraser Health Authority, Vancouver, British Columbia, November 22, 2019.
1058. "How best to prevent infectious diseases ? " Presented at the Canadian Society of Hospital Pharmacy (CSHP) [British Columbia branch], Vancouver, British Columbia, November 22, 2019.

1059. "Treatment of urinary tract infections in the days of antimicrobial resistant pathogens? " Presented at a microbiology/infectious diseases advisory meeting, Bio-Rad Laboratories, San Francisco, California, December 9, 2019.
1060. "Optimal diagnostics of urine specimens in the treatment of urinary tract infections " Presented at a microbiology/infectious diseases advisory meeting, Bio-Rad Laboratories, San Francisco, California, December 10, 2019.

2020

1061. "New antibiotics and new therapies for treating and preventing infections caused by antibiotic resistant organisms " Presented at the Canadian Society of Hospital Pharmacy Professional Practice Conference (CSHP-PPC), Toronto, Ontario, February 4, 2020.
1062. "Treatment and prevention of urinary tract infections in 2020: What to do ? " Presented at the MEDS Conference, Winnipeg, Manitoba, February 8, 2020.
1063. "Treatment and prevention of respiratory tract infections in 2020: What to do ? " Presented at the MEDS Conference, Winnipeg, Manitoba, February 8, 2020.
1064. "Focus on community acquired pneumonia-CAP and lefamulin in Canada. Webinar-Presented at a national Sunovion medical update, Winnipeg, Manitoba, March 25, 2020.
1065. "Antibiotic selection to treat seriously ill patients in hospital " Webinar-Presented at a national Verity training event, Toronto, Ontario, April 15, 2020.
1066. "Review of the latest data with CANWARD and review of the CLEAR study " Webinar-Presented at a national Merck medical update, Winnipeg, Manitoba, May 26, 2020.
1067. "How best to perform antimicrobial susceptibility testing for oral and intravenous fosfomycin " Webinar-Presented at a national Verity medical update, Winnipeg, Manitoba, June 16, 2020.
1068. "Antimicrobial resistant infections: Lots of problems and lots of solutions " Webinar-Presented at a Canadian Society of Hospital Pharmacists (CSHP-western Canada branch) annual meeting, Winnipeg, Manitoba, June 17, 2020.
1069. "The most current data from the CLEAR study: Focus on ceftobiprole" Webinar-Presented at a international medical update on treating resistant Gram-positive infections, Winnipeg, Manitoba, July 14, 2020.
1070. "Review of the current CANWARD data and the current data from the CLEAR study " Webinar-Presented to Ottawa medical/pharmacy infectious diseases practitioners, Winnipeg, Manitoba, July 15, 2020.
1071. "Antimicrobial susceptibility testing for oral and intravenous fosfomycin comparing agar dilution, disk diffusion and Etest versus *E. coli* " Webinar-Presented at a national microbiologist forum, Winnipeg, Manitoba, July 28, 2020.
1072. "Comparison of influenza and COVID-19 (SARS-CoV-2) pathogens and infections in 2020: What Should we do ? " Webinar-Presented at Pharmacy Association of Saskatchewan (PAS) virtual conference series, Winnipeg, Manitoba, July 30, 2020.

1073. "Pneumococcal vaccines: An antimicrobial stewardship strategy" Webinar-Presented at a National Save on Foods conference, Winnipeg, Manitoba, September 2, 2020.
1074. "Treatment of acute bacterial skin and soft tissue infections (ABSSSI): An evidence-based review of therapy" Webinar-Presented at a Latin America Infectious Diseases Meeting, Winnipeg, Manitoba, September 7, 2020.
1075. "Treatment of urinary tract infections: Focus on microbiological, pharmacokinetic and pharmacodynamic data" Webinar-Presented at an International UTI study group, Winnipeg, Manitoba, September 10, 2020.
1076. "Urinary tract infections: Treatment using fosfomycin, review of properties" Webinar-Presented at an International UTI study group, Winnipeg, Manitoba, September 17, 2020.
1077. "Review of clinical practice guidelines for complicated intra-abdominal infections in adults" Webinar-Presented at a Latin America Infectious Diseases Meeting, Winnipeg, Manitoba, September 28, 2020.
1078. "Review of antimicrobial resistant infections in Canada and the world; Focus on new agents and the CLEAR data" Webinar-Presented at Grand Rounds North York General Hospital-Toronto (Ontario), Winnipeg, Manitoba, September 30, 2020.
1079. "Influenza and pneumococcal vaccines: How, when, and why " Webinar-Presented at a National Walmart #1 conference, Winnipeg, Manitoba, October 1, 2020.
1080. "How best to prevent infection and vaccinate in the days of COVID-19 (SARS-CoV-2) ? " Webinar-Presented at a Walmart #2 conference, Winnipeg, Manitoba, October 1, 2020.
1081. "Old and new antimicrobials: Review of properties and assessment when, where and how they should be used" Webinar-Presented at Grand Rounds Kingston General Hospital-Toronto (Ontario), Winnipeg, Manitoba, October 6, 2020.
1082. "Case presentation-management of bacteremic hospital-acquired bacterial pneumonia: How best to manage ? " Webinar-Presented at a European/Middle East/Latin America/North America Infectious Diseases Meeting, Winnipeg, Manitoba, October 6, 2020.
1083. "Treatment of infections in sick patients: Utilizing microbiological data and pharmacokinetics/pharmacodynamics in maximizing outcome" Webinar-Presented at a European/Middle East/Latin America/North America Infectious Diseases Meeting, Winnipeg, Manitoba, October 6, 2020.
1084. "Vaccinating and preventing infection during the COVID-19 (SARS-CoV-2) pandemic: Should we give influenza and pneumococcal vaccines ?" Webinar-Presented at a Saskatchewan and Manitoba virtual conference, Winnipeg, Manitoba, October 8, 2020.
1085. "IV and oral amoxicillin/clavulanate: Review of chemistry, mechanisms of action/resistance, microbiological activity, clinical efficacy and safety and role in therapy" Webinar-Presented to a Ontario Infectious Diseases Research/Clinical Group, Winnipeg, Manitoba, October 21, 2020.

1086. “New strategies to overcome infections caused by multi-drug resistant pathogens” Webinar- Presented at a Canadian Society of Hospital Pharmacists (CSHP-Newfoundland branch) annual meeting, Winnipeg, Manitoba, October 24, 2020.
1087. “Use of topical antimicrobial agents and agents with antimicrobial activity in dermatology” Webinar- Presented at an International Dermatology Seminar, Winnipeg, Manitoba, October 29, 2020.
1088. “Antibiotic resistance patterns in Canada: What are the trends and what does it mean” Webinar- Presented at Infectious Diseases Update: Hot topics whats new ?, Winnipeg, Manitoba, November 6, 2020.
1089. “How to prevent infections and which vaccinations to administer during the COVID-19 pandemic?” Webinar- Presented at the Manitoba Thoracic Society Virtual Education Day, Winnipeg, Manitoba, November 20, 2020.
1090. “Managing respiratory tract infections in the era of COVID-19 (SARS-CoV-2) “ Webinar- Presented at the Kingdom of Saudi Arabia (KSA) critical care journal club, Winnipeg, Manitoba, November 24, 2020.

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1091. “How our Canadian clinicians using you IV antimicrobials in Canada: Update from the CLEAR study”. Virtual, Merck virtual national infectious diseases rounds, Presented in Winnipeg, Manitoba, January 14, 2021.
1092. “Treatment of carbapenem-resistant Enterobacterales (CRE) in Canada versus the United States“ virtual, British Columbia medical microbiology/infectious diseases journal club, Vancouver, British Columbia, Presented in Winnipeg, Manitoba, February 18, 2021.
1093. “Review of new antimicrobials: What role will they have in your practice ? virtual, Section of Infectious Diseases, Department of Medicine, Shared Health Manitoba, Presented in Winnipeg, Canada, March 3, 2021.
1094. “Vaccinating during the COVID-19 pandemic: Review of influenza, pneumococcal and COVID-19 pathogens, pathogenesis, infectious morbidity/mortality and vaccines”. virtual, National webinar for general practitioners and specialists, Presented in Winnipeg, Canada, March 24, 2021.
1095. “Canada’s report card on antimicrobial resistant infections: Pass or fail ?”. virtual, Canadian Society of Hospital Pharmacy Annual Conference (CSHP), Toronto, Ontario, Presented in Winnipeg, Canada, March 26, 2021.
1096. “Antibiotic resistant infections a global emergency: Problems and solutions”. virtual, Brazilian Society of Infectious Diseases and Brazilian Society of Urology Symposium, Sao Paulo, Brazil, Presented in Winnipeg, Canada, March 28, 2021.
1097. “Treatment of infections in the critical care unit: What should we do ?”. virtual, Saudi Arabia Critical Care Society Annual Conference, Riyadh, Saudi Arabia, Presented in Winnipeg, Canada, April 5, 2021.

1098. "New antimicrobials: A review of properties and how best to use". virtual, Ontario Infectious Diseases Specialists and Clinical Pharmacists Symposium, Toronto, Ontario, Presented in Winnipeg, Canada, April 14, 2021.
1099. "Recurrent *Clostridioides difficile* infection: Review of treatment options". virtual, National Infectious Diseases Specialists Symposium, Toronto, Ontario, Presented in Winnipeg, Canada, April 19, 2021.
1100. "Review of conjugated vaccines in Canada and beyond: Current and future ?". National Vaccine Specialists Symposium, Montreal, Quebec, Presented in Winnipeg, Canada, May 8, 2021.
1101. "Review of serotypes 22F and 33F causing invasive pneumococcal disease as well as respiratory tract infection; What role will PCV-15 play ?". National Vaccine Specialists Symposium, Montreal, Quebec, Presented in Winnipeg, Canada, May 18, 2021.
1102. "Using vaccinations as an antimicrobial stewardship strategy: Focus on pneumococcal and influenza vaccines". virtual, International Vaccine Specialists Symposium, New York, Presented in Winnipeg, Canada, May 21, 2021.
1103. "Dalbavancin: Part A-Review of its properties and usage versus the competition". virtual, National Specialists Symposium, Montreal, Quebec, Presented in Winnipeg, Canada, May 25, 2021.
1104. "Dalbavancin: Part B-Review of its properties and usage versus the competition". virtual, National Specialists Symposium, Montreal, Quebec, Presented in Winnipeg, Canada, May 26, 2021.
1105. "New antimicrobials: Review of all new/investigational agents". virtual, Quebec/New Brunswick Infectious Diseases Specialists and Clinical Pharmacists Symposium, Montreal, Quebec, Presented in Winnipeg, Canada, May 27, 2021.
1106. "The role of pneumococcal vaccination on antimicrobial resistance and antimicrobial stewardship". virtual, Combating Infections: Before and After, International Infectious Diseases Symposium, Bogota, Colombia, Presented in Winnipeg, Canada, June 1, 2021.
1107. "Vaccinating during the COVID-19 pandemic: review of influenza, pneumococcal and COVID-19 pathogens and vaccines". virtual, Ontario Community Pharmacists, Toronto, Ontario, Presented in Winnipeg, Canada, June 13, 2021.
1108. "Treatment of multi-drug resistant infections: New antimicrobials and new approaches". virtual, National meeting of Infectious Diseases Specialists, Vancouver, British Columbia, Presented in Winnipeg, Canada, June 22, 2021.
1109. "Treatment and prevention of multi-drug resistant infections: Whats New". virtual, National meeting of Multi-Specialists, Toronto, Ontario, Presented in Winnipeg, Canada, June 22, 2021.
1110. "Treatment of pneumonia in critically ill patients during the COVID-19 (SARS-CoV-2) pandemic". virtual, Saudi/Gulf Regional Critical Care Society Journal Club, Riyadh, Saudi Arabia, Presented in Winnipeg, Canada, June 22, 2021.
1111. "Lets vaccinate against viral [COVID-19 (SARS-CoV-2)] and bacterial infections". virtual, Primary Care Practitioners Across Canada, Toronto, Ontario, Presented in Presented in Winnipeg, Canada, July 28, 2021.

1112. “Treatment of urinary tract infections in the setting of multi drug resistant pathogens spreading across the globe”. virtual, International Urinary Tract Infection Symposium, Milan, Italy, Presented in Presented in Winnipeg, Canada, September 20, 2021.
1113. “Epidemiology of resistant pneumococci, surveillance systems and cost burden and health”. virtual, International *Streptococcus pneumoniae* antimicrobial resistance vaccine development scientific and engagement group. New Jersey, Presented in Winnipeg, Canada, September 21, 2021.
1114. “Influenza, COVID-19 and pneumococcal vaccines: What are the best prevention strategies and what should we do ?” virtual, Canadian General Practitioner Meeting. Toronto, Ontario, Presented in Winnipeg, Canada, September 22, 2021.
1115. “Review of dalbavancin for the treatment of complicated skin and soft tissue infections as well as off label uses”. virtual, National Infectious Diseases Specialists. Montreal, Quebec, Presented in Winnipeg, Canada, September 24, 2021.
1116. “Vaccinating in 2021: What to do, when, why and how”. virtual, Ontario Pharmacists Association. Toronto, Ontario, Presented in Winnipeg, Canada, September 30, 2021.
1117. “Review the current treatment of acute bacterial skin and skin structure infections (ABSSSI)”. virtual, Training Program for Ontario Specialists. Toronto, Ontario, Presented in Winnipeg, Canada, October 12, 2021.
1118. “Acute bacterial skin and skin structure infections (ABSSSI): the patients journey outpatients and inpatients”. virtual, Training Program for Ontario Specialists. Toronto, Ontario, Presented in Winnipeg, Canada, October 14, 2021.
1119. “Structure, microbiology, pharmacokinetics and pharmacodynamics of dalbavancin for the treatment of complicated skin and soft tissue infections”. virtual, Quebec Infectious Diseases Specialists. Montreal, Quebec, Presented in Winnipeg, Canada, October 14, 2021.
1120. “Current treatment guidelines for recurrent *Clostridium difficile* infection (CDI) and the role of fecal microbiota therapy (FMT) by country” virtual, Latin America Specialists Meeting. Philadelphia, Pennsylvania, Presented in Winnipeg, Canada, October 13, 2021.
1121. “The impact of COVID on the role of ceftibiprole in post-COVID-19 clinical practice”. virtual, United Arab Emirates Infectious Diseases Week (UAE-ID Week), Dubai, UAE, Presented in Winnipeg, Canada, October 23, 2021.
1122. “Review of dalbavancin properties for treating complicated skin and soft tissue infections”. virtual, Ontario Infectious Diseases Specialists. Toronto, Ontario, Presented in Winnipeg, Canada, October 26, 2021.
1123. “The role of conjugate pneumococcal vaccine PCV15 in preventing infections: Review of biological properties and serotype evolution”. virtual, Health Canada-Vaccine Division. Ottawa, Ontario, Presented in Winnipeg, Canada, October 28, 2021.
1124. “Understanding the changing pneumococcal infection and serotype evolution landscape”. virtual, National Vaccine Discussion Group, Montreal, Canada. Presented in Winnipeg, Canada, November 2, 2021.

1125. "Treatment resistant infections in critically ill patients". virtual, King Abdul Aziz Medical City Infectious Diseases Grand Rounds, Riyadh, Saudi Arabia, Presented in Winnipeg, Canada, November 3, 2021.
1126. "Treatment of urinary tract infections in 2021". virtual, International Urinary Tract Infection Meeting, Milan Italy, Presented in Winnipeg, Canada, November 3, 2021.
1127. "An umbrella with holes: Current pneumococcal disease prophylaxis in Canada". virtual, Victoria Infectious Diseases Update, Victoria, British Columbia. Presented in Winnipeg, Canada, November 5, 2021.
1128. "New treatments for acute bacterial skin and skin structure infections: Whats the latest". virtual, Victoria Infectious Diseases Update, Victoria, British Columbia. Presented in Winnipeg, Canada, November 6, 2021.
1129. "New treatments for multi-drug resistant gram-negative bacillary infections in critically ill patients". virtual, National Expert Inpput Forum, Montreal, Quebec. Presented in Winnipeg, Canada, November 10, 2021.
1130. "Impact of governmental price controls on availability of new antimicrobials in Canada". virtual, National Physician Alliance Roundtable Meeting, Toronto, Ontario. Presented in Winnipeg, Canada, November 15, 2021.
1131. "The role of the new conjugate pneumococcal vaccines PCV15 and PCV20 in Canada: What role will they play and how should they be used". virtual, National Vaccine Discussion Group, Montreal, Canada. Presented in Winnipeg, Canada, November 30, 2021.
1132. "Current challenges in the treatment of acute bacterial skin and skin structure infections". virtual, Canadian Critical Care Forum (CCCF), Toronto, Ontario. Presented in Winnipeg, Canada, December 2, 2021.
1133. "The strained saga of pneumococcal disease serotypes antimicrobial stewardship and prophylaxis in Canada". Virtual, Infectious Diseases Specialists Meeting in Ontario, Presented in Winnipeg, Canada, December 8, 2021.

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1134. "Treatment of acute bacterial skin and skin structure infections (ABSSSI): Review of current treatments". Virtual, Infectious Diseases Specialists Meeting in Western Canada, Presented in Winnipeg, Canada, January 12, 2022.
1135. "Treatment of urinary tract infections: Need for better diagnostics and new antibiotics". Virtual, General practitioners, technical advisors, engineers and investors, Hologic Medical Technology in San Francisco, California, Presented in Winnipeg, Canada, January 26, 2022.
1136. "Review of dalbavancin: chemistry, mechanism of action/resistance, microbiology, pharmacokinetics/pharmacodynamics and review of clinical trials". Virtual, Infectious Diseases Specialists Meeting in Quebec, Canada, Presented in Winnipeg, Canada, January 31, 2022.

1137. "Dalbavancin a new one dose treatment for acute bacterial skin and skin structure infections (ABSSSI)". Virtual, Infectious Diseases Specialists Meeting in Ontario, Canada, Presented in Winnipeg, Canada, February 3, 2022.
1138. "Treatment of urinary tract infections in 2022: New therapies". Virtual, Rational Therapy in Urology-XVI All Russian Conference in Moscow, Russia, Presented in Winnipeg, Canada, February 10, 2022.
1139. "Review of scientific and clinical properties of dalbavancin: When and how should it be used". Virtual, Infectious Diseases Specialists Meeting in Atlantic Canada, Presented in Winnipeg, Canada, February 10, 2022.
1140. "Review of IV amoxicillin/clavulanic acid: What role will it play in Canada ?". Virtual, Drug Utilization Evaluation-DUE Pharmacists in Ontario, Presented in Winnipeg, Canada, February 17, 2022.
1141. "The importance of antimicrobial resistance in vaccine preventable diseases and the potential role of vaccination". Virtual, World Society for Pediatric Infectious Diseases (WSPID), Antimicrobial resistance and vaccine preventable diseases symposium, Presented in Winnipeg, Canada, February 21, 2022.
1142. "Review of the properties of dalbavancin; Comparison to vancomycin and daptomycin". Virtual, Infectious Diseases Specialists Meeting in Regina, Saskatchewan, Presented in Winnipeg, Canada, February 23, 2022.
1143. "Review of old and new cephalosporins: properties, advantages, disadvantages and clinical uses". Virtual, Infectious Diseases and Critical Care Specialists Meeting in the United Arab Emirates (UAE), Presented in Winnipeg, Canada, March 9, 2022.
1144. "Current diagnostic and treatment strategies in urinary tract infections". Virtual, Orbital Diagnostics and Hologic Collaboration Meeting for the United States and Canada, Presented in Winnipeg, Canada, March 18, 2022.
1145. "Review of new antimicrobials: Focus on IV amoxicillin/clavulanate". Virtual, Clinical Pharmacology Grand Rounds, Sunnybrook General Hospital in Toronto, Ontario, Presented in Winnipeg, Canada, March 24, 2022.
1146. "Pneumococcal disease serotypes vaccination and stewardship: A strained". Virtual, McMaster Children's Hospital Grand Rounds, Hamilton, Ontario, Presented in Winnipeg, Canada, March 30, 2022.
1147. "The future of pneumococcal disease prevention in Canada". Virtual, Association of Medical Microbiology and Infectious Diseases (AMMI) symposium, Vancouver, British Columbia, Presented in Winnipeg, Canada, April 6, 2022.
1148. "Case study, treatment of carbapenem-resistant enterobacterales (CRE) infections: Comparison of Canada and US". Virtual, Public Health Agency of Canada (PHAC) AMR Task Force, Presented in Winnipeg, Canada, April 20, 2022.

1149. "Review of new cephalosporins: focus on ceftobiprole for the treatment of resistant infections". Virtual, United Arab Emirates Symposium, Dubai, UAE, Presented in Winnipeg, Canada, April 24, 2022.
1150. "Current and future treatments for acute bacterial skin and skin structure infections (ABSSSI)". Virtual, Canadian Society of Hospitals Pharmacists – British Columbia branch, Presented in Winnipeg, Canada, May 4, 2022.
1151. "Antimicrobial resistant pathogens causing respiratory tract infections in the ICU: Implications for therapy, focus on central Canada". Virtual, Ontario/Quebec Infectious Diseases and Critical Care Symposium, Presented in Winnipeg, Canada, May 5, 2022.
1152. "Antimicrobial resistant pathogens causing respiratory tract infections in the ICU: Implications for therapy, focus on western Canada". Virtual, Ontario/Quebec Infectious Diseases and Critical Care Symposium, Presented in Winnipeg, Canada, May 5, 2022.
1153. "Review of current and new antimicrobials for acute bacterial skin and skin structure infections (ABSSSI)". Virtual, Canadian Society of Hospitals Pharmacists – Ontario branch, Presented in Winnipeg, Canada, May 10, 2022.
1154. "Understanding the pneumococcal disease landscape and unmet needs for Canadian pediatric populations". Virtual, Canadian Specialists Meeting, Presented in Winnipeg, Canada, June 4, 2022.
1155. "Discussing funded and unfunded vaccines in Canada. What does the evidence show?". Podcast for pediatric and adult general practitioners. Recorded in Winnipeg, Canada, June 8, 2022.
1156. "What role does vaccination play in antimicrobial resistance stewardship". Virtual, International Specialists Meeting, Presented in Winnipeg, Canada, June 16, 2022.
1157. "Overview of antimicrobial resistance in Canada: where are we in 2022?". Virtual, British Columbia Infectious Diseases Symposium, Presented in Winnipeg, Canada, June 17, 2022.
1158. "Therapeutic approaches in the management of multi drug resistant gram-negative infections". Virtual, British Columbia Infectious Diseases Symposium, Presented in Winnipeg, Canada, June 18, 2022.
1159. "How do vaccines reduce antimicrobial resistance". Podcast for an International Vaccination Symposium, Recorded in Winnipeg, Canada, June 22, 2022.
1160. "How can a vaccination program be part of an antimicrobial stewardship program". Presented at an International Pediatric Vaccination Symposium, Recorded in Winnipeg, Canada, June 29, 2022.
1161. "Treatment of skin soft tissue infections in 2022: Whats new?". Virtual, Presented at the Canadian Annual Emergency Physicians (CAEP) Meeting, Winnipeg, Canada, June 29, 2022.
1162. "Dalbavancin: A new antimicrobial for the treatment of acute bacterial skin and skin structure infections (ABSSSI)". Virtual, Presented at the Saskatchewan branch of the Canadian Society of Hospital Pharmacy (CSHP), Winnipeg, Canada, July 17, 2022.

1163. "The role of new antibiotics for treating hospital acquired an ventilator associated pneumonia" Virtual, Presented at the Pan Canadian consensus consult meeting on treating pneumonia, Winnipeg, Canada, September 8, 2022.
1164. "How to interpret a hospital antibiogram and use intravenous antimicrobial therapies ? Presented at a National Infectious Diseases Symposium, Tuscon, Arizona, September 17, 2022.
1165. "How best to prepare your patients for the upcoming winter upper respiratory tract infection season ?" Virtually, Presented at a Family Doctor, Pharmacist and Nurse Practitioner Vaccination Symposium, Winnipeg, Canada, Septemeber 28, 2022.
1166. "How best to treat respiratory tract infections in the ICU: Focus on Quebec versus Canada". Virtual, Quebec Infectious Diseases and Critical Care Symposium, Presented in Winnipeg, Canada, September 30, 2022.
1167. "Vaccinating your adult patients this fall: update on the COVID-19 vaccines, flu shots and pneumococcal vaccines in Canada" Presented at a Family Doctor, Pharmacist and Nurse Practitioner Vaccination Symposium, Winnipeg, Canada, October 12, 2022.
1168. "Using vaccines as a antimicrobial stewardship initiative: How does it work ?" Presented at the Asian Congress on Pediatric Infectious Diseases (ACPID), virtually, Seoul, South Korea, October 25, 2022.
1169. "Review of new agents to treat multi-drug resistant gram-positive infections: Focus on dalbavancin" Presented at British Columbia Infectious Diseases Rounds, virtually, Vancouver, British Columbia, November 10, 2022.
1170. "Prevention of influenza: A review of available vaccines, properties and strengths and weaknesses" Presented at National Influenza Vaccine Symposium, virtually, Winnipeg, Manitoba, November 16, 2022.
1171. "A review of new antimicrobials in the pipeline: Whats new in Canada, the US and Europe and whats needed" Presented at an Ontario Antimicrobial Stewardship and Antimicrobial Resistance Symposium, virtually, Toronto, Ontario, November 23, 2022.
1172. "Review of available COVID-19 vaccines in Canada: Properties, strengths and weaknesess" Presented at a National Novavax Advisory Meeting virtually, Toronto, Ontario, December 8, 2022.

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1173. "Antibiotic resistant superbugs: Lots of problems but also lots of solutions" Presented at the Professional Development Week (PDW), Canadian Association of Pharmacy Students and Interns (CAPSI), virtually Saskatoon, Saskatchewan, January 5, 2023.
1174. "Treatment of hospital-acquired bacterial pneumonia (HABP) and ventilator-associated bacterial pneumonia (VABP): What to do ?" Presented at Infectious Diseases and Critical Care Grand Rounds, Hopital Maissoneuve Rosemont, Montreal, Quebec, January 25, 2023.
1175. "Antibiotic resistant infections in the critical care unit: How best to manage patients ?" Presented at Infectious Diseases and Critical Care Grand Rounds, Sherbrooke Hospital, Sherbrooke, Quebec, January 25, 2023.

1176. "Update on antimicrobial resistance globally, in Canada and focusing on Quebec" Presented at Infectious Diseases and Critical Care Grand Rounds, virtual, Lemoyne Hospital, Montreal, Quebec, January 26, 2023.
1177. "Treatment of infectious diseases in 2023 as affected by antimicrobial resistance" Presented at an Infectious Diseases, Pharmacy and Critical Care Grand Update, Ottawa, Ontario, January 26, 2023.
1178. "The epidemiology of multi-drug resistant pathogens in the acute care setting: Focus on Québec" Presented at Infectious Diseases Pharmacy Rounds, virtual, Winnipeg, Manitoba, February 7, 2023.
1179. "Review of antibiotics use in clinical practice: Pharmacokinetic and pharmacodynamic properties and clinical usage" Presented at Infectious Diseases Update, Avir Pharma, Montreal, Quebec, February 21, 2023.
1180. "Invasive pneumococcal disease: Update on epidemiology, serotype evolution, virulence and risk factors for disease" Presented at Pharmacist Roles in Pneumococcal Disease, virtually, Canadian Association of Pharmacy and Interns (CAPSI), Winnipeg, Manitoba, March 9, 2023.
1181. "The role of vaccination in fighting antimicrobial resistance" Presented at national Philippines Vaccine Update, virtually, Winnipeg, Manitoba, March 25, 2023.
1182. "Respiratory syncytial virus (RSV) pathogenesis, risk factors, treatment and the need for vaccination" Presented at a national vaccine update, virtually, Winnipeg, Manitoba, March 29, 2023.
1183. "Treating community-acquired and hospital-acquired respiratory tract infections: Old agents and new" Presented at an infectious diseases update, Edmonton, Alberta, April 4, 2023.
1184. "Review of new antibiotics to treat infectious diseases: Focus on pharmacokinetics and pharmacodynamics" Presented at an infectious diseases update, Calgary, Alberta, April 5, 2023.
1185. "Review of new proposed and the old pneumonia guidelines in Canada" Presented at an infectious diseases update, virtual, Winnipeg, Manitoba, April 18, 2023.
1186. "Review of vaccines to be used in primary care; What to give, when and how" Presented at a primary care update Winnipeg, Manitoba, April 20, 2023.
1187. "Review on pneumococcal vaccines: Old and new". Presented at Sick Kids Pediatric Update Conference, Toronto, Ontario, May 6, 2023.
1188. "Prevention of infectious diseases in adult patients: What to use , when and how ?" Presented at SpiritRx Infectious Update, virtually, Winnipeg, Manitoba, May 9, 2023.
1189. "Treatment of urinary tract infection in the days of antibiotic resistance". Presented at UTI Update, virtually, Sao Paulo, Brazil, May 9, 2023.
1190. "Antimicrobial resistance in Canada: Focus on new antimicrobial agents". Presented at Infectious Diseases Grand Rounds, St. Joseph's Hospital, London, Ontario, May 17, 2023.
1191. "New Antimicrobials in Canada: The good the bad and the ugly". Presented at Hamilton Health sciences Infectious Diseases Update, Hamilton, Ontario, May 17, 2023.

1192. "Review current protocols and treatment strategies for hospital acquired bacterial pneumonia (HAP) and ventilator associated bacterial pneumonia (VAP)". Presented at St. Michael's Hospital, virtual, Toronto, Ontario, May 24, 2023.
1193. "Review of fosfomycin usage to treat UTI in pregnancy". Presented at an International UTI in Pregnancy Update, virtually, Milan, Italy, May 25, 2023.
1194. "Review of pneumococcal infections: Focus on serotype 3". Presented at the Hong Kong Geriatrics Society Annual Scientific Meeting, virtually, Hong Kong, June 17, 2023.
1195. "Review of the CLEAR-Canadian Leadership on Antimicrobial Usage Real Life Registry". Podcast present at Canadian Breakpoint with Dr. Rupeena Purewal, virtually, Saskatoon, Saskatchewan, June 25, 2023.
1196. "Review of Intravenous Fosfomycin: Pharmacokinetics and pharmacodynamics properties and Clinical Usage". Presented at the 4th Annual IDiPaC 4 conference, virtually, Udine, Italy, July 1, 2023.
1197. "Review of Current Pneumococcal Vaccines and Their Role in Children". Presented at the paediatric pneumococcal, expert input forum - Western Canada, virtually, Winnipeg, Manitoba, September 6, 2023.
1198. "Review of Current Pneumococcal Vaccines and Their Role in Children". Presented at the paediatric pneumococcal, expert input forum – Central/Eastern Canada, virtually, Winnipeg, Manitoba, September 7, 2023.
1199. "Antimicrobial Resistant Infections in Atlantic Canada: Problems and Solutions in Difficult to Treat Infections". Presented to the Newfoundland Antimicrobial Stewardship Team, St. John's, Newfoundland, September 12, 2023.
1200. "New Antimicrobials: Properties, Pharmacokinetics/Pharmacodynamics, Advantages/Disadvantages and When and How to Use Them". Presented at Infectious Diseases Grand Rounds, Memorial University Hospital, St. John's, Newfoundland, September 13, 2023.
1201. "Using Vaccination as an Antimicrobial Stewardship Strategy: Focus on RSV". Presented at a National Vaccination Webinar, Virtually, Winnipeg, Manitoba, September 14, 2023.
1202. "Preparing for the Fall: Vaccinating Your Patients To Prevent Infections and Bad Outcomes... What To Do and How To Do It". Presented at a National Vaccination Webinar, Virtually, Winnipeg, Manitoba, September 20, 2023.
1203. "Review of Pneumococcal Diseases in Canada: The Need for New Pneumococcal Vaccines". Presented at Heath Canada, Vaccination Branch, virtually, Winnipeg, Manitoba, September 26, 2023.
1204. "How To Become Successful". Presented at a Medical Microbiology and Infectious Diseases Career Series for Graduate Students and Postdoctoral Fellows, Department of Medical Microbiology and Infectious Diseases, Winnipeg, Manitoba, September 27, 2023.
1205. "Whats New With Vaccination for Adults: Focus on Prevention". Presented at a National Vaccination Webinar, virtually, Winnipeg, Manitoba, September 28, 2023.

1206. "Review of Pneumococcal Vaccines: Which Ones To Use, How and When". Presented at a Family Physician Update, Winnipeg, Manitoba, October 3, 2023.
1207. "Review of Respiratory Syncytial Virus (RSV): Virology, Pathogenesis, Infections Diseases, Treatment and Now Prevention, How and When". Presented at a National Vaccination Webinar, Virtually, Winnipeg, Manitoba, October 4, 2023.
1208. "Lets Vaccinate Your Patients Against COVID-19, Influenza, RSV, Pneumococcal Infections and Herpes Zoster". Presented at Noon Rounds, Assiniboine Medical Clinic, Winnipeg, Manitoba, October 5, 2023.
1209. "Prevention of Infectious Diseases in Community Practice: Focus on Vaccination". Presented at Pharmacists Manitoba Annual Conference, Virtually, Winnipeg, Manitoba, October 15, 2023.
1210. "All Those Vaccines: Which Ones To Use and When". Presented at Primary Care Update, Winnipeg, Manitoba, October 17, 2023.
1211. "Review of Pneumococcal Vaccines for Adults: What To Do With PCV-13, PCV-15, PCV-20 and PPSV23". Presented at a Primary Care Update, Winnipeg, Manitoba, October 24, 2023.
1212. "Review of Pneumococcal Vaccines for Pediatrics: What To Do With PCV-13, PCV-15, PCV-20 and PPSV23". Presented at a National Vaccination Webinar, Consortium For Infectious Diseases Control (CIDC), Virtual, Winnipeg, Manitoba, October 25, 2023.
1213. "Vaccinating Your Patients in 2023: Lets Prevent Infections Not Treat Them". Presented at a Primary Care Update, Winnipeg, Manitoba, October 26, 2023.
1214. "What To Do With Your Career and How To Get There ? ". Presented to Infectious Diseases Trainees, Hartford Hospital as Part of the Dr. Charles H. Nightingale Visiting Professorship, Hartford Hospital, Hartford, Connecticut, November 2, 2023.
1215. "How To Be a Great Teacher and Mentor ? ". Presented to the Department of Pharmacy as Part of the Dr. Charles H. Nightingale Visiting Professorship, Hartford Hospital, Hartford, Connecticut, November 2, 2023.
1216. "The Need for Novel Antimicrobials: Where are we and Where are we Going ?". Presented at a National Infectious Diseases Update, Virtual, Winnipeg, Manitoba, November 16, 2023.
1217. "Vaccinating Your Patients in 2023: Understanding the Different Types of Pneumococcal Vaccines for Adults". Presented at a National Vaccine Forum, Virtual, Winnipeg, Manitoba, December 14, 2023.

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1218. "V116 vaccine coverage: How Does it Compare with Other Conjugated and Non-conjugated Pneumococcal Vaccines". Presented at Understanding the Evolving Pneumococcal Disease Landscape in Adults & Immunization Strategies. A National Vaccine Symposium, Virtual, Winnipeg, Manitoba, January 8, 2024.

1219. "PCV-20 What Value Does it Bring: A Review of all Properties and Comparison to Other Pneumococcal Vaccines". Presented at a National Pfizer Vaccine Sales and Medical Meeting, Virtual, Winnipeg, Manitoba, January 18, 2024.
1220. "Understanding the Available Treatments of Recurrent *Clostridium difficile* Infection (rCDI): The Role of Fecal Microbiota Transplantation (FMT) including RBX2660". Presented at a National Fecal Microbiota Transplant Meeting, Toronto, Ontario, January 24, 2024.
1221. "Comparison of RSV treatments: Review of Vaccines and Monoclonal Antibodies". Presented at the Victoria Infectious Diseases Update, Victoria, British Columbia, February 3, 2024.
1222. "Antimicrobial Resistant Infections in Canada and Quebec: What Are The Solutions". Presented at a CHUM-Centre Hospitalier Universite de Montreal Infectious Diseases Grand Rounds, Virtual, Winnipeg, Manitoba, February 6, 2024.
1223. "The need for New Antimicrobials: Focus on Meropenem/Vaborbactam, Its Properties, Pharmacokinetics/Pharmacodynamics and Role in Treating Resistant Infections". Presented at a National Infectious Diseases Advisory Board Meeting, Toronto, Ontario, February 16, 2024.
1224. "Review of RSV vaccine clinical trials in pregnant mothers: Whats the Data ? ". Presented at a Western Canada Vaccine Training Symposium, Calgary, Alberta, February 23, 2024.
1225. "Antimicrobial Resistant Infections in Canada and Globally: Review of Potential Solutions Including New Antimicrobials, Vaccines, Optimizing PK/PD, Diagnostics, Bacteriophages, Fecal Microbiota Transplants". Presented at a Western Branch, Canadian Society of Hospital Pharmacy (CSHP), Banff, Alberta, March 10, 2024.
1226. "The Need for New and Novel Antimicrobials: What is Driving This Need and What Are the Needs". Presented at the Antibacterial Discovery Summit, Gordon Research Conference (GRC), Venture Beach, California, March 17, 2024.
1227. "The Need for New Vaccines: Describing Serotype Coverage of V116 A Novel Pneumococcal Conjugate Vaccine". Presented at a Satellite Meeting on Pneumococcal Vaccines at the International Symposium of Pneumococci and Pneumococcal Diseases (ISPPD), Virtual, Capetown, South Africa, March 21, 2024.
1228. "Lets Vaccinate Against the FAB 4 Influenza, Covid-19, RSV and Pneumococcal infections: Why How and Who". Presented at the Canadian Respiratory Conference, Toronto, Ontario. April 11, 2024.
1229. "A Review of Respiratory Syncytial Virus (RSV) vaccines: Properties, Formulations, Indications, Effectiveness and Safety and who to immunize". Presented virtually at the Canadian National Viral Infections Webinar, Winnipeg, Manitoba, April 17, 2024.
1230. "Antibiotic resistance in Canada and globally: What are the most current problems and what are the current best solutions?". Presented at the Professional Practice Conference (PPC), Niagara falls, Ontario, April 21, 2024.
1231. "Vaccinating your Patients Against Viral and Bacterial Infections: What Should we do, When and How". Presented at the Charleswood Medical Clinic, Winnipeg, Manitoba, April 23, 2024.

1232. "Update on the Safety, Efficacy, Safety and Availability of RSV vaccines". Presented at the Assiniboine Medical Clinic, Winnipeg, Manitoba, April 25, 2024.
1233. "New Vaccines in the Pipeline for Viral and Pneumococcal infections. Focus on V116". Presented at the Canadian geriatric society conference 2024, Calgary, Alberta, April 27, 2024.
1234. "Review of meropenem/vaborbactam: chemistry, microbiology, pharmacokinetics, pharmacodynamics, clinical trials, adverse effects, and place in therapy". Presented at a national new antibiotic meeting, Toronto, Ontario, May 8, 2024.
1235. "RSV vaccines in patients over 60 years of age at risk: Who, when and how to vaccinate". Presented at a national RSV vaccine meeting, Toronto, Ontario, May 10, 2024.
1236. "Comparing meropenem/vaborbactam to existing treatments for carbapenem-resistant enterobacterales-CRE: Focus on pharmacokinetics/pharmacodynamics, advantages and disadvantages". Presented at a virtual new antibiotic pharmacy, May 15, 2024.
1237. "Review of RSV: Burden of disease in children and adults". Presented at a national RSV vaccine meeting, Toronto, Ontario, May 31, 2024.
1238. "New maternal vaccine for RSV: Review of the data". Presented at a national RSV vaccine meeting, Toronto, Ontario, May 31, 2024.
1239. "New adult vaccine for RSV: Review of the data". Presented at a national RSV vaccine meeting, Toronto, Ontario, May 31, 2024.
1240. "New antimicrobials in Canada and the US: Review of all agents and their properties including PK/PD". Presented at a Specialists meeting on antimicrobials, Saskatoon, Saskatchewan, June 3, 2024.
1241. "The CLEAR and CANWARD studies: National collaborations between the Canadian Antimicrobial Resistance Alliance and Health Canada". Presented at Infectious Diseases Grand Rounds, Royal University Hospital, Saskatoon, Saskatchewan, June 4, 2024.
1242. "Treatment of Recurrent *Clostridium difficile* Infection (rCDI): The Role of Fecal Microbiota Transplantation (FMT) including RBX2660". Presented at a National Fecal Microbiota Transplant Meeting, Montreal, Quebec, June 10, 2024.
1243. "Vaccinating at risk adults: focussing on influenza, COVID-19, RSV and pneumococcal disease". Presented to physicians, nurses and pharmacists at Bison Medical Clinic, Winnipeg, Manitoba, June 20, 2024.
1244. "Treatment of acute bacterial skin and skin structure and infections (ABSSSI). Focus on new and old intravenous agents". Presented at a virtual specialists meeting on resistant infections in Canada changes in antimicrobial management, July 17, 2024.
1245. "Review of influenza vaccines available in Canada for the 2024/2025 season. Focus on the high-dose influenza vaccine and the adjuvanted influenza vaccine". Presented at a virtual national meeting of family physicians, August 26, 2024.

1246. “New vaccines for RSV: Comparison of Arexvy and Abrysvo”. Presented at a national specialists meeting on vaccines, Toronto, Ontario, August 28, 2024.
1247. “Pneumococcal vaccines: Review of all vaccines for children and adults”. Presented virtually at a national pharmacists meeting on vaccines, Winnipeg, Manitoba, August 29, 2024.
1248. “Let’s vaccinate to get ready for the fall/winter: What to do in your patients”. Presented at a family physician update to the Egyptian Physicians of Manitoba, Winnipeg, Manitoba, September 5, 2024.
1249. “Review of the current Pneumococcal vaccination guidelines in the US and Canada”. Presented at a specialist meeting, Toronto, Ontario, September 6, 2024.
1250. “Treatment of hospital-acquired bacterial pneumonia and ventilatory-associated bacterial pneumonia in Canada”. Presented at a Video meeting, Toronto, Ontario, September 13, 2024.
1251. “Preventing RSV in adults, review of available vaccines”. Presented at a generalist/specialist meeting, virtually, Winnipeg, Manitoba, September 17, 2024.
1252. “Review of influenza, RSV, COVID-19 and pneumococcal vaccines: What to administer, when and to whom”. Presented at a family physician/pharmacy/nursing meeting, Regina, Saskatchewan, September 18, 2024.
1253. “Vaccinating in 2024, review of vaccines focusing on Herpes Zoster”. Presented to the Gimli family physician/pharmacy group, Winnipeg, Manitoba, September 19, 2024.
1254. “Protecting your patients in 2024, review of the adult vaccination guidelines”. Presented to the Portage La Prairie family physician/pharmacy group, Portage La Prairie, Manitoba, October 9, 2024.
1255. “How protect adults and infants from RSV severe disease”. Presented to the Lindenridge family physician/pharmacy group, Winnipeg, Manitoba, October 10, 2024.
1256. “Review of new antimicrobials in the US and Canada”. Presented virtually to the Microbiology and Infectious Diseases Section, Trois Rivières, Quebec, October 15, 2024.
1257. “Review of the most antimicrobial resistant serotypes causing pneumococcal infection and how best to prevent their infection and severe disease”. Presented at exploring Immunization strategies against pneumonia, Asia Pacific Vaccine Academy meeting, Seoul, Korea, October 30, 2024.
1258. “Review of whether recombinant zoster vaccine (RZV) prevents cardiovascular, cerebrovascular and dementia compared to non vaccinated groups”. Presented virtually to a specialist Zoster vaccination group, from Seoul Korea, October 31, 2024.
1259. “SWOT analysis of current fecal microbiota transplant (FMT) and SWOT of RBX2660...how are they similar and different”. Presented virtually to an infectious diseases and gastroenterology specialist meeting, Winnipeg, Manitoba, November 4, 2024.
1260. “Review of intravenous Fosfomycin: Properties, PK/PD, usage and clinical outcomes”. Presented virtually to a mixed audience of specialists and generalists, Meitheal Pharma, Winnipeg, Manitoba, November 13, 2024.

1261. "Comparing fecal microbiota transplant (FMT) and RBX2660". Presented at an infectious diseases and gastroenterology specialist meeting, Calgary, Alberta, November 19, 2024.
1262. "Presenting and moderating the properties and lay out of the revised/updated bioMerieux Vitek 2 antimicrobial susceptibility testing (AST) cards". Presented virtually at a microbiologists national meeting, Winnipeg, Manitoba, November 25, 2024.
1263. "Antimicrobial resistance in Canada and implications for treatment of multi-drug resistant infections: Focus on Atlantic Canada". Presented virtually at microbiology/infectious diseases grand rounds, Fredericton/Moncton, New Brunswick, November 28, 2024.
1264. "Presenting and moderating the properties and lay out of the new proposed extended MDRO bioMerieux Vitek 2 antimicrobial susceptibility testing (AST) card". Presented virtually at a microbiologists national meeting, Winnipeg, Manitoba, December 3, 2024.
1265. "Does recombinant zoster vaccine (RZV) prevent cardiovascular and/or cerebrovascular disease compared to non vaccinated groups". Presented virtually to a specialist Zoster vaccination group, virtually, Winnipeg, Manitoba, December 4, 2024.
1266. "Meropenem/vaborbactam: Review of properties, PK/PD, and role in the treatment of infectious diseases". Presented virtually as a webinar to specialists in infectious diseases, microbiology and clinical pharmacy, Winnipeg, Manitoba, December 5, 2024.
1267. "The history of bacteriology and antibiotics/antibiotic resistance research at the University of Manitoba". Presented at Medical Microbiology and Infectious Diseases grand rounds, Winnipeg, Manitoba, December 11, 2024.

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1268. "Preventing infections in adults: Review of influenza, COVID-19, RSV, pneumococcal and herpes zoster vaccines", Presented to the Concordia clinic family physicians, Winnipeg, Manitoba, January 8, 2025.
1269. "The need for new BL/BLI's in Canada: Review of imipenem/relebactam". Presented virtually to Health Canada, Winnipeg, Manitoba, January 15, 2025.
1270. "Critical properties of the new BL/BLI imipenem/relebactam". Presented virtually to Health Canada, Winnipeg, Manitoba, January 15, 2025.
1271. "The link between antimicrobial resistant infections and vaccinations: Vaccines as an antimicrobial stewardship strategy". Presented at the AMR/Vaccines symposium at an Alberta multidisciplinary meeting, Edmonton, Alberta, January 20, 2025.
1272. "Comprehensive review of V116 in the vaccination of older patients: Comparison to PCV13 PCV 15 PCV20 and PPSV23". Presented virtually at a national vaccination meeting, Winnipeg, Manitoba, January 23, 2025.
1273. "Prevention and antimicrobial resistance of emerging ST3 and key non-vaccine serotypes". Presented at the pediatric infectious disease society of the Philippines, Manila, Philippines, February 20, 2025.

1274. “The invisible threat: a comprehensive analysis of pneumococcal disease epidemiology”. Presented at a pediatric and adult vaccination meeting, Singapore, February 21, 2025.
1275. “PCV15, PCV20 and V116: vaccine coverage and properties in both paediatrics and adults”. Presented at a pediatric and adult vaccination meeting, Singapore, February 21, 2025.
1276. “Review of RSV vaccines”. Presented virtually at a national pediatric and adult vaccination meeting, Winnipeg, Manitoba, February 28, 2025.
1277. “Review of vaccines to prevent respiratory infections”. Presented virtually at a national pediatric and adult vaccination meeting, Winnipeg, Manitoba, March 11, 2025.
1278. “Review of the current status of treating recurrent CDI infection and current role of fecal microbiota transplant (FMT)”. Presented at a Manitoba/Saskatchewan recurrent CDI infection meeting, Winnipeg, Manitoba, March 12, 2025.
1279. “Ceftobiprole: A review of its properties, PK/PD and clinical usage in Canada as per the national CLEAR study”. Presented virtually to a national audience of healthcare practitioners, Winnipeg, Manitoba, March 18, 2025.
1280. “Review of current conjugated and non-conjugated pneumococcal vaccines used in Canada. What are the most current guidelines in preventing pneumococcal infection and pneumococcal pneumonia in adults?”. Presented virtually to a national audience of healthcare practitioners, Winnipeg, Manitoba, March 21, 2025.
1281. “Ceftobiprole: Final review of the CLEAR data”. Presented virtually to a national audience of healthcare practitioners, Winnipeg, Manitoba, March 31, 2025.
1282. “Review of current RSV and HZV vaccines: When should they be used, which ones to use and how to use them?”. Presented to family physicians, Bridgewater Medical Clinic, Winnipeg, Manitoba, April 3, 2025.
1283. “Comprehensive review of the usage of IV Fosfomycin in Canada. What infections are treated what pathogens are treated? Is the drug used alone or in combination and a review of its safety” Presented at a national meeting of medical/sales/marketing, Nashville, Tennessee, April 9, 2025.
1284. “Review of individual patient and hospital antibiograms as well as antimicrobial susceptibility testing with a focus on IV Fosfomycin, interpretive breakpoints and PK/PD” Presented at a national meeting of medical/sales/marketing, Nashville, Tennessee, April 9, 2025.
1285. “Prevention of community acquired viral and bacterial respiratory infections and shingles” Presented at a family physician and pharmacist meeting, Winnipeg, Manitoba, May 15, 2025.
1286. “Review of vaccines to prevent community acquired viral and bacterial respiratory infections” Presented at Better Health Clinic, Winnipeg, Manitoba, May 22, 2025.
1287. “Review of new BL/BLI inhibitors: Which ones to use, when and how” Presented at a national infectious diseases/medical microbiology meeting, Virtual Winnipeg, Manitoba, June 4, 2025.

1288. "New IV antibiotics in Canada: Review of new and old agents" Presented at the Canadian Society of Hospital Pharmacy - CSHP meeting, Ottawa, Ontario, June 6, 2025.
1289. "Vaccines for RSV and Shingles: Why, when and how to use them" Presented to the Gimli Family Physician meeting, Winnipeg, Manitoba, June 12, 2025.
1290. "How best to prevent and treat *Streptococcus pneumoniae* infections, including infections of the lung" Presented at Lets Talk Lungs, Saskatchewan Lung Society, Virtual Winnipeg, Manitoba, June 16, 2025.
1291. "Review of Flu, RSV, COVID-19, Pneumococcal and Zoster vaccines" Presented to the Gemini Family Physician meeting, Winnipeg, Manitoba, June 23, 2025.
1292. "Review of new IV antimicrobials in Canada: Comparison to the United States" Presented at Intensive Care Grand Rounds, Hamilton Health Sciences Center/McMaster University, Hamilton, Ontario, June 24, 2025.
1293. "Review of pneumococcal vaccines in the control of emerging antimicrobial resistant pneumococcal strains" Presented at an Asia Pacific pneumococcal forum" Bangkok, Thailand, July 19, 2025.
1294. "Review of *Clostridium difficile* infection-CDI: The basics, microbiology, diagnostics, and treatment guidelines" Presented at a national CDI infectious diseases and gastroenterology meeting, Vancouver, British Columbia, September 9, 2025.
1295. "Review of the colonic microbiome: what role does it play in infection prevention and the importance of restoration methods such as FMT and Rebyota" Presented at a national CDI infectious diseases and gastroenterology meeting, Vancouver, British Columbia, September 9, 2025.
1296. "What are the current vaccines to prevent RSV and Varicella Zoster" Presented at the Charleswood Medical Clinic, Winnipeg, Manitoba, September 17, 2025.
1297. "Review of antibiotics in Canada and the CLEAR study" Presented to the Sarnia Hospital and the Ontario Chapter of the Canadian Society of Hospital Pharmacy-CSHP, Virtual Winnipeg, Manitoba, September 18, 2025.
1298. "Comparison of Influenza and RSV; Review of microbiology, diseases characteristics and vaccine strategies" Presented at the Egyptian Doctors Meeting of Manitoba, Winnipeg, Manitoba, September 18, 2025.
1299. "Treatment of *Staphylococcus aureus* endocarditis: What's old and what's new" Presented at International Symposium of Severe Infections in Critical Patients (IDiPaC International), Barcelona, Spain, September 26, 2025.
1300. "*Clostridium difficile* infection-CDI: Current treatment guidelines for recurrent CDI" Presented at a national CDI infectious diseases and gastroenterology meeting, Montreal, Quebec, September 30, 2025.
1301. "The colonic microbiome: When to use FMT and the role of Rebyota" Presented at a national CDI infectious diseases and gastroenterology meeting, Montreal, Quebec, September 30, 2025.
1302. "Factors to consider when selecting a pneumococcal vaccine for children: Immunogenicity, valency

- and dosing schedule” Presented at a national pediatric and pediatric infectious diseases meeting, Ho Chi Minh City, Vietnam, October 4, 2025.
1303. “Review of pneumococcal vaccines: How to select the best one and select a dosing schedule” Presented at a national infectious diseases meeting, Ho Chi Minh City, Vietnam, October 5, 2025.
1304. “Comparison of PCV7, PCV10, PCV13, PCV15, PCV20 and PPVSV23” Presented at the Pasteur Institute Ho Chi Minh City, Ho Chi Minh City, Vietnam, October 6, 2025.
1305. “PCV15 data: From clinical trials to real world evidence” Presented to the VNVC Vaccination Center Network, Ho Chi Minh City, Vietnam, October 7, 2025.
1306. “Review of ST3 in relation to other pneumococcal serotypes and vaccine immunogenicity and effectiveness” Presented at a Hanoi infectious diseases meeting, virtually from Ho Chi Minh City, Vietnam, October 8, 2025.
1307. “Review of vaccine preventable infections: Covid-19, influenza, RSV, *Streptococcus pneumoniae*” Presented virtually at a western Canada vaccine meeting, Winnipeg, October 15, 2025.
1308. “Review of vaccine preventable infections: Covid-19, influenza, RSV, *Streptococcus pneumoniae*” Presented virtually at a central Canada vaccine meeting, Winnipeg, October 16, 2025.
1309. “Review of vaccine preventable infections: Covid-19, influenza, RSV, *Streptococcus pneumoniae*” Presented virtually at an eastern Canada vaccine meeting, Winnipeg, October 21, 2025.
1310. “Review of IV amoxicillin/clavulanate: Properties, uses, efficacy and safety” Presented virtually at a easter Canada infectious diseases, microbiology and pharmacy meeting, Winnipeg, October 22, 2025.
1311. “Treatment of CRE infections: Review of old and new ” Presented virtually at a London, Onatrio Infectious Diseases City Wide Symposium, Winnipeg, October 22, 2025.
1312. “Thank you for vaccinating your patients: Focus on the Fab4” Presented at the Canadian National Respiratory Care and Education Conference, Calgary, Alberta, October 24, 2025.
1313. “Review of IV amoxicillin/clavulanate: Properties, uses, efficacy and safety” Presented virtually at a western Canada infectious diseases, microbiology and pharmacy meeting, Winnipeg, October 30, 2025.
1314. “Review of IV amoxicillin/clavulanate: Properties, uses, efficacy and safety” Presented virtually at a central Canada infectious diseases, microbiology and pharmacy meeting, Winnipeg, November 4, 2025.
1315. “New IV antibiotics: Focus on current data from the CLEAR study and focus on IV fosfomycin.” Presented at a Quebec (Grand rounds infectious diseases Cite de la santé Laval) meeting, virtually, Winnipeg, Manitoba, November 5, 2025.
1316. “The benefits of RSV and Zoster vaccination: Infectious and non-infectious benefits” Presented at a family physician meeting, Winnipeg, November 5, 2025.
1317. “The benefits of RSV and Zoster vaccination: Infectious and non-infectious benefits” Presented at Grand rounds Assiniboine Medical Clinic, Winnipeg, November 6, 2025.

1318. "Let's vaccinate your adult patients: increasing" Presented at the nurse practitioners association of Canada annual meeting, Winnipeg, November 7, 2025.
1319. "Review of delafloxacin it's properties and it's usage to treat community acquired bacterial pneumonia, acute bacterial skin and skin structure infections and surgical site infections" Presented at an infectious diseases meeting, Toronto, Ontario, November 12, 2025.
1320. "Delafloxacin: What roll will it play in clinical practice ?" Presented at an infectious diseases meeting, Toronto, Ontario, November 12, 2025.
1321. "Treatment of CRE infections: Review of meropenem/vaborbactam " Presented at a Brampton Civic Hospital Grand Rounds, Toronto, Ontario, December 10, 2025.

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1322. "Treatment of MRSA infections: Review of new antibiotics, ceftobiprole, dalbavancin, ceftaroline, IV doxycycline, delafloxacin, IV fosfomycin. " Presented to infectious diseases specialists, microbiologists and infectious diseases pharmacists, Winnipeg, Manitoba, March 26, 2026.
1323. "New antibiotics in Canada: Review of CLEAR and ceftolozane/tazobactam, ceftobiprole, dalbavancin, IV fosfomycin, IV amoxicillin/clavulanate, IV meropenem/vaborbactam. " Presented to infectious diseases specialists, microbiologists and infectious diseases pharmacists, virtual for Quebec Clinicians, April 8, 2026.
1324. "Antimicrobial resistance around the globe and review of CLEAR. " Presented to infectious diseases specialists, microbiologists and infectious diseases pharmacists, virtual for Maritime and Quebec Clinicians, April 9, 2026.
1325. "Respiratory vaccines, where are we and where are we going " Workshop discussion with European/North American/Latin American infectious diseases specialists and microbiologists, ESCMID, Munich, Germany, April 19, 2026.
1326. "Current state of norovirus diagnostics, therapeutics and vaccines " Workshop discussion with European/North America infectious diseases specialists and microbiologists, ESCMID, Munich, Germany, April 20, 2026.
1327. "New IV and oral antimicrobials of the future: Where is the field moving to ? " Workshop discussion with European/North American infectious diseases specialists and microbiologists, ESCMID, Munich, Germany, April 20, 2026.
1328. "Review new antibiotics and how best to use them " Presented at the Professional Practice Conference (PPC) of CSHP, Halifax, Nova Scotia, May 2, 2026.
1329. "Novel antimicrobials in the pipeline " Presented to the Sterimax Development Team, Winnipeg (Virtual), Manitoba, May 23, 2026.
1330. "Review of new antibiotics and new vaccines" " Presented at Medical Microbiology and Infectious Diseases Grand Rounds, Max Rady College of Medicine, Winnipeg, Manitoba, May 27, 2026.

1331. "Reviewing strategies of how best to administer vaccines for prevention of infections in adults"
Presented at a National Podcast Saskatchewan Lung Association, June 2, 2026.
1332. "Direct experience with pneumococcal conjugate vaccines PCV7, PCV10, PCV13, PCV15, PCV20
and PCV 21" Presented at an Asian Pacific PCV21 Speaker Forum, Singapore, August 1, 2026.
1333. "Navigating serotype replacement: The role of PCV20 and PCV21 in the evolving pneumococcal
landscape" Presented at Respiratory Grand Rounds, Changi Hospital, Singapore, August 3, 2026.
1334. "When and how best to use pneumococcal conjugate vaccines in preventing invasive pneumococcal
disease and community acquired pneumonia in high risk adults" Presented at Infectious Diseases
Grand Rounds, Khoo Teck Puat Hospital, Singapore, August 3, 2026.
1335. "Review of the various conjugate pneumococcal vaccines: When, how and which ones to use"
Presented at a Family Physician Roundtable, Singapore, August 3, 2026.

ABSTRACTS (selected)

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1. Davidson RJ*, **Zhanel GG**, Hoban DJ: The in-vitro postantibiotic effect (PAE) of fluoroquinolones
against methicillin-sensitive (MSSA) and methicillin-resistant (MRSA) *Staphylococcus aureus*.
American Society for Microbiology (ASM), Anaheim, California, 1990.
2. **Zhanel GG**, Hoban DJ, Davidson RJ*: The effect of subinhibitory concentrations of aminoglycosides
on the in-vitro postantibiotic effect (PAE) of *Pseudomonas aeruginosa*. American Society for
Microbiology (ASM), Anaheim, California, 1990.
3. Davidson RJ*, Hoban DJ, **Zhanel GG**, Hutlet J: Reproducibility of the in-vitro postantibiotic effect
(PAE) using fluoroquinolones against *Staphylococcus aureus*. American Society for Microbiology
(ASM), Anaheim, California, 1990.
4. **Zhanel GG**, Davidson RJ*, Hoban DJ: The in-vitro postantibiotic effect (PAE) of ciprofloxacin and
ampicillin against gram-positive and gram-negative bacteria. Association of Faculties of Pharmacy of
Canada (AFPC), Regina, Saskatchewan, 1990.
5. Davidson RJ*, **Zhanel GG**, Hoban DJ: Serum enhances the postantibiotic effect (PAE) of
fluoroquinolones against *Staphylococcus aureus*. Conjoint Meeting on Infectious Diseases (CACMID),
Halifax, Nova Scotia, 1990.
6. **Zhanel GG**, Karlowsky JA*, Davidson RJ*, Hoban DJ, Harding GKM. The influence of human urine
on the postantibiotic effect (PAE) of ampicillin, ciprofloxacin, and trimethoprim/sulfamethoxazole
against *Escherichia coli*. Conjoint Meeting on Infectious Diseases (CACMID), Halifax, Nova Scotia,
1990.
7. Hoban DJ, Weshnoweski B, Palatnick L, **Zhanel GG**, Davidson R*. Bactericidal activity of RP59500:
a new semisynthetic streptogramin against *Staphylococcus* species as determined by kill-kinetic studies.
Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), Atlanta, Georgia, 1990.

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9. Davidson RJ*, **Zhanel GG**, Hoban DJ: Studies into the transport of ¹⁴C-pefloxacin into *Staphylococcus aureus*. American Society for Microbiology (ASM), Dallas, Texas, 1991.
10. Davidson RJ*, **Zhanel GG**, Hoban DJ, Nicolle LE: The effect of subinhibitory concentrations of ciprofloxacin against *Pseudomonas aeruginosa* as determined by the postantibiotic effect (PAE) and killing curves. American College of Clinical Pharmacy (ACCP), Minneapolis, Minnesota, 1991.
11. Davidson RJ*, **Zhanel GG**, Hoban GG, Hoban DJ: The uptake of ¹⁴C-Pefloxacin in *Staphylococcus aureus* during the postantibiotic effect. Interscience Conference of Antimicrobial Agents and Chemotherapy (ICAAC), Chicago, Illinois, 1991.
12. **Zhanel GG**, Davidson RJ*, Hoban DJ: Ciprofloxacin activity against mucoid and non-mucoid *Pseudomonas aeruginosa*. Conjoint Meeting on Infectious Diseases (CACMID), Quebec City, Quebec, 1991.
13. Davidson RJ*, **Zhanel GG**, Hoban DJ: Acquired resistance in *Staphylococcus aureus* reduces the postantibiotic effect of fluoroquinolones. Conjoint Meeting on Infectious Diseases (CACMID), Quebec City, Quebec, 1991.
14. **Zhanel GG**, Nicolle LE, Kim SO*, Davidson RJ*, Hoban DJ: Comparison of voided uroepithelial cell and vero cell assays in measuring the effect of ciprofloxacin of gentamicin on adherence of *Pseudomonas aeruginosa*. American Society for Microbiology (ASM), New Orleans, Louisiana, 1991.
15. Davidson RJ*, **Zhanel GG**, Hoban DJ: The development of resistance to *Staphylococcus aureus* reduces the postantibiotic effect of fluoroquinolones. American Society for Microbiology (ASM), New Orleans, Louisiana, 1991.

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16. **Zhanel GG**, Karlowsky JA*, Davidson RJ*, Hoban DJ: Human cerebrospinal fluid (CSF) prolongs the postantibiotic effect (PAE) of cefotaxime, ciprofloxacin and gentamicin against *Escherichia coli*. American College of Clinical Pharmacy (ACCP), Toronto, Ontario, 1992.
17. **Zhanel GG**, Nicolle LE, Kim S*: Antibiotic effects on bacterial adherence in the urinary tract. Association of Faculties of Pharmacy of Canada (AFPC), Winnipeg, Manitoba, 1992.
18. **Zhanel GG**, Nicolle LE, Harding GKM: Urinary cell count and infecting organism predict spontaneous clearing of asymptomatic bacteriuria in diabetic women. Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), Anaheim, California, 1992.
19. Karlowsky JA*, **Zhanel GG**, S. Zieroth*, DJ Hoban, RJ Davidson*: Postantibiotic effect (PAE) using single and multiple dosing of gentamicin against *Escherichia coli*. Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), Anaheim, California, 1992.
20. **Zhanel GG**, Davidson RJ*, Karlowsky JA*, Hoban DJ: The influence of human serum, urine and cerebrospinal fluid on the postantibiotic effect (PAE). International Symposium on Bacterial Infection Models in Antimicrobial Chemotherapy, Helsinore, Denmark, 1992.

21. Davidson, RJ*, **Zhanel GG**, Drobot GR*, Karlowsky JA*, Hoban DJ: Accumulation of fluoroquinolones in *Staphylococcus aureus* during the postantibiotic effect. International Symposium on Bacterial Infection Models in Antimicrobial Chemotherapy, Helsinore, Denmark, 1992.
22. Harding GKM, Nicolle LE, **Zhanel GG**: Predictors of spontaneous clearing of asymptomatic bacteriuria in diabetic women. Conjoint Meeting on Infectious Diseases (CACMID), Toronto, Ontario, 1992.
23. Karlowsky JA*, **Zhanel GG**, Davidson RJ*, Zieroth S*, Hoban DJ: Postantibiotic effect (PAE) using single and multi-dose exposure of cefotaxime, gentamicin and ciprofloxacin against *Escherichia coli*. Conjoint Meeting on Infectious Diseases (CACMID), Toronto, Ontario, 1992.
24. Drobot GR*, Davidson RJ*, **Zhanel GG**, Karlowsky JA*, Hoban DJ: Membrane transport of fluoroquinolones in *Staphylococcus aureus* during the postantibiotic effect. Conjoint Meeting on Infectious Diseases (CACMID), Toronto, Ontario, 1992.
25. **Zhanel GG**, Karlowsky JA*, Davidson RJ*, Hoban DJ: The in-vitro postantibiotic effect is markedly affected by biological fluids. Conjoint Meeting on Infectious Diseases (CACMID), Toronto, Ontario, 1992.

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26. **Zhanel GG**, Karlowsky JA*, Davidson RJ*, Hoban DJ, Nicolle LE: Acquisition of fluoroquinolone resistance in *Pseudomonas aeruginosa* is associated with reduced expression of pili and altered outer-membrane protein and lipopolysaccharide profiles. American Society for Microbiology (ASM), Atlanta, Georgia, 1993.
27. Karlowsky JA*, Davidson RJ*, **Zhanel GG**, Hoban DJ: Once daily aminoglycoside dosing assessed by MIC reversion time and the PAE in *Pseudomonas aeruginosa*. American Society for Microbiology (ASM), Atlanta, Georgia, 1993.
28. Hoban DJ, Palatnick L, Karlowsky JA*, Davidson RJ*, **Zhanel GG**: The in-vitro bactericidal activity of lomefloxacin against *Escherichia coli*. European Congress of Clinical Microbiology and Infectious Diseases (ECCMID), Seville, Spain, 1993.
29. Karlowsky JA*, **Zhanel GG**, Davidson RJ*, Hoban DJ: The accumulation of gentamicin in *Pseudomonas aeruginosa* during the postantibiotic effect. Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), New Orleans, Louisiana, 1993.
30. **Zhanel GG**, Karlowsky JA*, Davidson RJ*, Hoban DJ, Nicolle LE: Comparison of clinical and laboratory derived fluoroquinolone resistant mutants. Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), New Orleans, Louisiana, 1993.
31. Karlowsky JA*, Davidson RJ*, **Zhanel GG**, Hoban DJ: The effect of aminoglycoside concentration on MIC reversion time and the PAE using *Pseudomonas aeruginosa*. Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), New Orleans. Louisiana, 1993.
32. Karlowsky JA*, **Zhanel GG**, Davidson RJ*, Hoban DJ: The effect of aminoglycoside concentration on MIC reversion time and postantibiotic effect using *Pseudomonas aeruginosa*. American College of Clinical Pharmacy (ACCP), Reno, Nevada, 1993.

33. **Zhanel GG**, Karlowsky JA*, Davidson RJ*, Hoban DJ, Nicolle LE: Reduced expression of pili and altered outer membrane protein and lipopolysaccharide profiles are associated with acquisition of fluoroquinolone resistant mutants of *Pseudomonas aeruginosa*. American College of Clinical Pharmacy (ACCP), Reno, Nevada, 1993.
34. Karlowsky JA*, **Zhanel GG**, Drobot GR*, Saunders MH*, Hoban DJ: The relationship between gentamicin uptake and postantibiotic effect in *Pseudomonas aeruginosa*. Conjoint Meeting on Infectious Diseases (CACMID), Vancouver, British Columbia, 1993.
35. **Zhanel GG**, Karlowsky JA*, Saunders MH*, Drobot GR*, Davidson RJ*, Hoban DJ: Fluoroquinolone-resistant *P. aeruginosa*: Comparison of clinical and laboratory-derived mutants. Conjoint Meeting on Infectious Diseases (CACMID), Vancouver, British Columbia, 1993.
36. Davidson RJ*, Karlowsky JA*, Saunders M*, Drobot GR*, **Zhanel GG**, Hoban DJ: The relationship between MIC reversion time and the postantibiotic effect with aminoglycosides in *Pseudomonas aeruginosa*. Conjoint Meeting on Infectious Diseases (CACMID), Vancouver, British Columbia, 1993.

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37. Davidson RJ*, Karlowsky JA*, **Zhanel GG**, Hoban DJ: The effect of hydrophobicity on the accumulation and the postantibiotic effect of four fluoroquinolones in *Staphylococcus aureus*. American Society for Microbiology (ASM), Las Vegas, Nevada, 1994.
38. **Zhanel GG**, Karlowsky JA*, Davidson RJ*, Hoban DJ, Nicolle LE: Development of multiple antibiotic resistant (Mar) mutants of *Pseudomonas aeruginosa* after exposure to fluoroquinolones. Conjoint Meeting on Infectious Diseases (CACMID), Montreal, Quebec, 1994.
39. **Zhanel GG**, Harding GKM, Nicolle LE: Asymptomatic bacteriuria (ABU) in diabetic women increases with duration of diabetes and is higher in aboriginal women. Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), Orlando, Florida, 1994.
40. **Zhanel GG**, Karlowsky JA*, Davidson RJ*, Hoban DJ, Hancock REW, Nicolle LE: The role of OprF of *Pseudomonas aeruginosa* on fluoroquinolone (FQ) resistance and multiple antibiotic resistance (Mar). Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), Orlando, Florida, 1994.
41. Karlowsky JA*, **Zhanel GG**, Davidson RJ*, Hoban DJ: Aminoglycoside induced adaptive resistance in *Pseudomonas aeruginosa* correlates with changes in membrane potential and can be eliminated by a H⁺-ATPase inhibitor. Conjoint Meeting on Infectious Diseases (CACMID), Montreal, Quebec City, 1994.

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42. Davidson RJ*, **Zhanel GG**, Karlowsky JA, Hoban DJ: *norA* mediated fluoroquinolone resistance in *Staphylococcus aureus*. American Society for Microbiology (ASM) Washington D.C., 1995.
43. **Zhanel GG**, Saunders MH*, Hancock REW, Nicolle LE: DNA sequencing of outer membrane protein F (OprF) in multiple antibiotic resistant (**Mar**) *Pseudomonas aeruginosa*. American Society for Microbiology (ASM), Washington, D.C., 1995.
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- (BL-Neg) *H. influenzae*. Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), San Francisco, CA, 1995.
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 46. Karlowksy JA*, Hoban DJ, Laing N, **Zhanel GG**: Rapid amplification method for the diagnosis of bacteremia. Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), San Francisco, CA, 1995.
 47. Embil J*, Kabani A, **Zhanel G**, Nicolle L: Prevalence of colonization with resistant bacteria in high risk units in a Canadian tertiary care centre. Royal College Annual Meetings, Ottawa, 1995.
 48. Karlowksy JA*, **Zhanel GG**: Characterization of aminoglycoside induced, adaptively resistant *P. aeruginosa*. International Symposium on Pharmacodynamics of Antimicrobials, Quebec City, Quebec, 1995.
 49. **Zhanel GG**, Drobot GR*, Karlowksy JA*, Hoban DJ: Antibiotic activity in microbiological media versus human urine: comparison of ampicillin, ciprofloxacin and trimethoprim/sulfamethoxazole. Symposium on Pharmacodynamics of Antimicrobials, Quebec City, Quebec, 1995.
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53. Klym K*, Wolfe J, Hoban D, **Zhanel GG**, Karlowksy J*, Hershfield E, Kabani A. The potential impact of Gen-Probe MTD Test on the treatment of *Mycobacterium tuberculosis* (Mtb). American Society for Microbiology (ASM), New Orleans, Louisiana, 1996.
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3. **Zhanel GG**: Invited book review. Biotherapeutic Agents and Infectious Diseases. Canadian Journal of Infectious Diseases 1999.
4. **Zhanel GG**: Invited book review. The microbes fight back: Antibiotic Resistance, Lancet Infectious Diseases 2017.

INFECTION TREATMENT GUIDELINES

2018	Anti-infective review, treatment guidelines panel member
2010	Intrabdominal Infections (IAI)
2009	Acute Otitis Media (AOM)
2008	Hospital Acquired Pneumonia (HAP) and Ventilator Acquired Pneumonia (VAP)
2006	Urinary Tract Infections (UTI)
2001	Community Acquired Pneumonia (CAP-Gulf Region)
2000	Community Acquired Pneumonia (CAP-Canada)
2000	Community Acquired Pneumonia (CAP-US)
1999	Acute Otitis Media (AOM)
1997	Urinary Tract Infections

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