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I. EDUCATION

- 1982–1987 *Médico Veterinario (MV)*. School of Veterinary Sciences, National University of Buenos Aires (UBA), Argentina.
Graduate with distinction, Highest GPA in the class.
- 1991–1995 *Doctor in Philosophy (Ph.D.)*. Department of Veterinary and Biomedical Sciences University of Nebraska, Lincoln, NE.
Graduated with distinction.

Postdoctoral Training

- 1995–1996 *Research Associate*. Department of Veterinary and Biomedical Sciences, University of Nebraska - Lincoln, Lincoln, NE.
- 1996–2000 *Post Doctoral Fellow*. Department of Microbiology, University of Pennsylvania, School of Medicine, Philadelphia, PA.

National, International or Major Institutional Awards and Honours

- ***Joseph J. Garbarino Achievement*** award, granted by the Animal Health Institute Foundation (Alexandria, VA) in recognition of “outstanding original research in animal health”, 1995.
- ***New Investigator Award***, granted by the Canadian Institutes of Health Research (CIHR), 2002–2007 (*see grants for details*).
- ***AHFMR Scholar*** Award, granted by the Alberta Heritage Foundation for Medical Research (AHFMR), 2002–2007 (*see grants for details*).
- ***Burroughs-Welcome Fund*** Investigator in Pathogenesis of Infectious Disease (US\$ 450,000), 2006–2013 (*see grants for details*).
- ***McCalla Professorship***, in recognition of significant contributions to their field of research, teaching and learning, University of Alberta, 2007.
- ***Louis D. Hyndmann Sr. Award***, in recognition of significant contributions to improving the welfare of animals used in research, teaching and testing, University of Alberta, Edmonton, AB. 2012.

II. ACADEMIC APPOINTMENTS

- 2000–2006 Assistant Professor, Department of Biochemistry, University of Alberta, Edmonton, AB, Canada, with Cross-Appointment in the Department of Medical Microbiology and Immunology (MMI).
- 2006–2012 Associate Professor (Tenured), Department of Biochemistry, University of Alberta, Edmonton, AB, Canada, with Cross-Appointment in MMI.
- 2012–ongoing Professor (Tenured), Department of Biochemistry, University of Alberta, Edmonton, AB, Canada, with Cross-Appointment in MMI.
- 2000–ongoing Member of the Signal Transduction Research Group.
- 2000–2010 Member of the Molecular Mechanisms of Growth Control Research Group.

- 2004–2016 Member of the Alberta Centre for Prion and Protein Folding Diseases.
- 2007–2015 Member of the Alberta Veterinary Research Institute, University of Alberta, Edmonton, AB, Canada.
- 2011–2016 Founding Member, Li Ka Shing Institute of Virology, University of Alberta, Edmonton, AB, Canada.
- 2016–*ongoing* Professor of Chemical Virology (Tenured), Baker Institute for Animal Health, College of Veterinary Medicine, Cornell University, Ithaca, NY

III. ADMINISTRATIVE ACTIVITIES

Leadership positions

- Canadian Coordinator, University of Alberta-Helmholtz Institute - Infectious Diseases Research Initiative (2011–*ongoing*). This is an international collaboration between ten top-level researchers in Alberta and Germany.
- Chair, MD Research Committee (MD-STIR), Faculty of Medicine and Dentistry (2005–2016).
- Co-Leader, University of Alberta-Zhejiang University Taskforce, Faculty of Medicine and Dentistry (2011–2013).
- Acting Chair (as needed), Health Sciences Animal Care and Use Committee (HS-ACUC). Drs. K. Fouad and then N. Jahroudi, Chairs (2006–2010).
- Co-Chair, 37th International Herpesvirus Workshop (IHW), Calgary, AB, (2012).
- Director, ProPhysis, Inc. (2012–*ongoing*). A spin off company of the University of Alberta dedicated to the development of broad-spectrum antivirals and innovative oncolytic viruses.
- Director, Baker Institute for Animal Health and Feline Health Center, College of Veterinary Medicine, Cornell University, Ithaca, NY. (2016–*ongoing*)

Organizer

- Introduction to Ethics in Research seminars for first-year graduate students in the Departments of Biochemistry, Medical Microbiology and Immunology, and Cell Biology (2002–*ongoing*).
- Ethics in Research seminar for medical students enrolled in the “Special Training in Research”(MD-STIR) program (2002–*ongoing*).

Memberships

- MD with Special Training in Research Committee (MD-STIR). Faculty of Medicine and Dentistry; Dr. M. Glerum, Chair (2000–2002).
- Health Sciences “Animal Welfare and Policy Committee” and then “Animal Care and Use Committee” (ACUC-HS); Drs. L. Kline, then K. Fouad, then N. Jahroudi, Chairs (2002–2012).
- Panel organizing the “Ethics and Scientific Integrity (ESI) Days” of the Faculties of Medicine and Dentistry and Graduate Studies and Research (several times - as required - from 2004–*ongoing*).
- Communications Committee, Department of Biochemistry (2004–2009).
- Recruitment Committee, Department of Biochemistry (2004–2010).

- Faculty of Graduate Studies and Research Graduate Scholarship Committee, Faculty of Graduate Studies and Research (FGSR); Dr. M. Shirvani, Dean (2008–2012).
- Research Advisory Committee, Department of Biochemistry (2010).

Community Service

- Member of the Edmonton Steering and Evaluation Committee for the Sanofi-Aventis Biotech Challenge (2005–2007).
- Interviewee:
 - CBC-radio 1 series on microbiology
 - CBC International
 - National TV stations
 - Provincial and National Publications dedicated to science education of the general public (viruses)
 - Global News (National TV) prime time news (novel antivirals)

IV. EDITORIAL ASSIGNMENTS

Member of Review panels of Granting Agencies

- Agencia de Promoción Científica y Tecnológica (*FONCYT*), Argentina (2003–*ongoing*)
- Canadian Institutes of Health (*CIHR BMB*) Biochemistry and Molecular Biology B Grant Review panel (2003–2007).
- Gerhard Herzberg Canada Gold Medal for Science and Engineering, [1M Award administered by the Natural Sciences and Engineering Research Council of Canada] (*NSERC*) (2006). This is the major basic sciences award in Canada.
- *CIHR DRA and CGA* Doctoral Research Award A and Canada Graduate Scholarships Master's Awards A Committees (2009–2012).
- Alberta Innovates-Health Solutions (*AHHS*) Fellowship Advisory Committee (2011–*ongoing*).
- National Institutes of Health (*NIH*) Multi-project grants P01 (2012–*ongoing*).
- *CIHR* Postdoctoral Fellowship Committees (2013–*ongoing*).
- Canadian Institute of Health Research (*CIHR*) Virology and Viral Pathogenesis (*VVP*) Grant Review Panel (2014–2015).

Ad Hoc Reviewer for Granting Agencies

- *FONCYT*, Argentina (1999–2003).
- *CIHR PT* (Pharmacology and Toxicology) Peer Review Panel (2002).
- Consejo Nacional de Innovación, Ciencia y Tecnología (*CONICET*), Uruguay (2005).
- *NSERC*, Strategic project grants (2003–*ongoing*) and Discovery Grant programs (2005–*ongoing*).
- Centre National de la Recherche Scientifique (*CNRS*), France (2008–*ongoing*).
- Health and Medical Research Fund (*HMRP*), Hong Kong, China (2011–*ongoing*).
- Research Foundation - Flanders (*FWO*) (2013–*ongoing*).
- Canada Research Chairs Program (*CRC*) (from 2014).

External Evaluator for Project Grants

External evaluator of an NIH project grant on VZV latency (PIs, Drs. Cohrs,

Mahalingam, Gilden). University of Colorado School of Medicine, Denver, CO, USA (March 4–5, 2015).

Editorial Boards

- Virology Journal (L. Wang, *Editor-in-Chief*). BioMed Central Ltd, London, UK. (2012–2018).
- PLOS ONE (E. Martins and E Veitch, *Senior Editors*) Public Library of Science, San Francisco, CA and Cambridge, UK (2013–ongoing).
- Journal of Virology (Dr. R. Sandri-Goldin, *Editor-in-chief*) American Society for Microbiology, Washington, D.C. (2014–2016).
- Antimicrobial Chemistry and Chemotherapy (AAC) (Dr. Louis B Rice, *Editor-in-chief*) American Society for Microbiology, Washington, D.C. (2015–2017).
- Antiviral Research, The official Journal of the International Society for Antiviral Research (ISAR) (Dr. Mike Bray, *Editor-in-chief*) Elsevier B.V, Amsterdam, Netherlands. (2015–2017).

Section Editor

PLOS ONE (E. Martins and E Veitch, *Senior Editors*, Public Library of Science, San Francisco, CA and Cambridge, UK (2014–ongoing).

Ad hoc reviewer

PLOS Pathogens; Science Translational Medicine; Journal of Virology; Antiviral Chemistry and Chemotherapy (AVCC); Nanoscale; PLOS ONE; Antiviral Research; mBio; mSphere; Virus Research; BioMedCentral Microbiology; Journal of Antimicrobial Chemistry (JAC); European Journal of Medicinal Chemistry; Current HIV Research; Current Medicinal Chemistry (CMC); Biochemistry and Cell Biology; Molecular and Cellular Neuroscience; Biochemical Pharmacology; Biological Procedures Online; Journal of Antimicrobial Chemotherapy; Annals of Clinical Microbiology and Antimicrobials; Journal of Pharmacy & Pharmaceutical Sciences; Cell Proliferation; Journal of Virological Methods; Archives of Virology; Microbial Cell Factories; Journal of Molecular Medicine; Current Cancer Drug Targets; Journal of Biomedicine and Biotechnology; Anti-Infective Agents in Medicinal Chemistry; AIDS research and Therapy; Expert Opinion on Emerging Drugs; Medicinal Chemistry; others.

Consultancies

2000	Ad Hoc consultant, Smith-Kline Beecham, King of Prussia, PA.
2000	Ad Hoc consultant, Pharmacia and Upjohn Company, Kalamazoo, MI.
2002–2003	Virology consultant, Protarga, Philadelphia, PA.
2002	Protein kinase inhibitors consultant, PlanA consultants, Stanford, CA.
2003	Antivirals consultant, Easton Associates, New York, NY.
2005	Antivirals consultant, Cairn Consulting LLC, Neshanic Station, NJ.
2009–2011	Antivirals consultant, Epiphany Biosciences. San Francisco, CA.

Organizer

2009–ongoing	Member of the <i>Priscilla Schaffer Lecture</i> committee, International Herpesvirus Workshops; Chair of the <i>Priscilla Schaffer Lecture</i> (2011–2012).
2010–2012	Co-Chair, 37 th International Herpesvirus Workshop (IHW), Calgary, AB,

- August 4–9, 2012.
- 2011–2012 Co-Chair, Li Ka Shing Institute of Virology and Gairdner Foundation Symposium “Meeting the Challenge of Emerging, Acute and Persistent Viral Diseases”, Edmonton, Alberta, May 31–June 1, 2012.
- 2011–2014 Member of the Local Organizing Committee, 21st International Symposium on Hepatitis C and Related Viruses, Banff, AB, 2014.
- 2011–*ongoing* Member of the International Organizing Committee of the IHW.
- 2013–2014 Member of the Organizing Committee, Fourth Canadian HCV Symposium, Banff, AB, February 2014.
- 2014–*ongoing* Member of the Planning committee of the Colorado alphaherpesviruses latency symposium (CALs).

Professional Societies:

- American Society for Microbiology, USA (DNA viruses).
- International Society for Antiviral Research.
 - Member of the Publications Committee (2007–*ongoing*).
 - Member of the Posters Award Committee (2014–*ongoing*).
 - Ambassador for Canada and South America of (2014–*ongoing*).

V. TEACHING AND TRAINING

Lecture Teaching

- 1983–1984 Undergraduate Teaching Assistant. Department of Biophysics, School of Veterinary Sciences, UBA (Argentina). 4 students; 6 h/week.
- 1984–1987 Undergraduate Teaching Assistant. Department of Biochemistry, School of Veterinary Sciences, UBA (Argentina). 6 students; 6 h/week.
- 1987–1988 Teaching Assistant. Department of Biochemistry, School of Veterinary Sciences, UBA (Argentina). 25 students; 6 h/week.
- 1988–1991 Lecturer. Department of Biochemistry, School of Veterinary Sciences, UBA (Argentina). 25 students; 6 h/week.
- 2001–2016 Lecturer. Biochemistry 450/550 “The molecular biology of mammalian viruses”. Approximately 100 students from 2001–2005; 35 Students from 2005 on; 10 lectures, a midterm and term papers.
- 2001–2005 Lecturer. Biochemistry 205 “Introduction to Biochemistry II”. Approximately 200 students; 15 lectures, 1 mid term and final.
- 2004–2005 Lecturer Biochemistry 203 “Introduction to Biochemistry I”. Approximately 100 students; 17 lectures, 1 mid term and final.
- 2006–2016 Chair, MD with Special Training in Research Program. The program is designed to provide MD students with high-level training in research. Twelve professors. Approximately 20 students; 24 weeks of research, proposals, final reports and oral evaluations.
- 2007–2016 Lecturer. Biochemistry 410/510 “Signal Transduction”. Approximately 50 students; 6 lectures, a half midterm and term papers.
- 2008 Facilitator. DMED 512 “Infection, Inflammation and Immunity”. Approximately 12 students; 12 sessions.
- 2009–2011 Facilitator. DMED 552 “Reproductive Medicine and Urology”. Approximately 11 students; 16 sessions.
- 2011–2014 Facilitator. MED 521/DDS 506 “Gastroenterology and Nutrition”. Approximately 11 students; 12 sessions.

- 2012–2016 Course coordinator. Biochemistry 450/550 “The molecular biology of mammalian viruses”. Four lecturers. Approximately 30 students; 40 lectures, two midterms, final and term papers.

Highlights of Trainee Accomplishments

Professional Achievements

- University Professors (Assistant or Associate): 4
- Medical Professionals (Doctors, Naturopathic Doctor, Dentist, Pharmacist): 7
- Paramedical Professionals (Nurse, Physiotherapist): 2
- Completing postdoctoral training (in highly regarded international institutions): 2
- Engineer: 1

Major National or International Awards

- CIHR Next Generation Award (1 student - 2007)

Patents

- Co-inventors in patent applications issued, undergoing examination or in provisional applications (1 student - 4 patents)
- Co-inventor in an ongoing disclosure of invention (2 students - 1 disclosure)

Major Extramural Fellowships

- CIHR Doctoral Studentship: 1
- AHFMR/AI-HS Doctoral Studentship: 2
- AI-HS Postdoctoral fellowship: 1
- Alexander Graham Bell Canada Graduate Scholarship (Doctoral, NSERC): 1
- NSERC graduate Studentships: 5
- China Research Council Graduate Studentship (Doctoral): 1
- King Saud Bin Abdulaziz Scholarship Grant (Doctoral or Masters): 2
- CONACYT (Mexico): 1

Provincial Fellowships

- Queen Elizabeth II Graduate Scholarship: 3
- Province of Alberta Graduate Scholarship: 2

Other Fellowships

- 75th Anniversary Studentship Award: 5
- Aboriginal Health Career Bursary: 1
- President's Doctoral Prize of Distinction: 1
- University of Alberta Recruitment Award: 1
- Biochemistry Graduate Assistantships in Teaching and Learning Skills: 1

Undergraduate Summer Studentships

- AHFMR/AI-HS: 4
- NSERC: 2
- FOMD Summer Studentship: 1

Current Trainees

1. Hu, M-Y (2009–*ongoing*) M.Sc. Student; “Chromatinization of viral genomes during infection”. International student.
2. Gibeault, R (2011–*ongoing*) Summer Student until August 31, 2011, Ph.D. student from September 1, 2011 (Biochemistry); “Histone mobilization during infection”. NSERC M.Sc. and Ph.D. Studentships.
3. Awadh, A (2011–*ongoing*) Ph.D. student, September 1, 2011; “Novel antivirals”. (King Saud Bin Abdulaziz Scholarship Grant). International student.
4. Flores, E (2013–*ongoing*) Ph.D. student, March 1, 2013; “Epigenetic regulation of viral gene expression”. (CONACYT Studentship). International student.
5. Speerstra, S (2013–*ongoing*) M.Sc. Student, July 1, 2013; “Mechanisms of action of novel antivirals”. Biochemistry Graduate Assistantships in Teaching and Learning Skills Studentship. International student.
6. Erdmann, R (2013–*ongoing*) Research Technician, 2013; “Novel antivirals”.
7. Bildersheim, M (2014–*ongoing*) Undergraduate summer, volunteer and Medical Doctor with special Training in Research student; “Histone dynamics in viral replication compartments.” (AI-HS Summer Studentship, 2).
8. Mukhtarov, F (2014–*ongoing*) Ph.D. student, August 16, 2014; “Novel antivirals”. (75th Anniversary Studentship Award, Recruitment Award). International student.
9. Romani, B (2015–*ongoing*) Postdoctoral Fellow, September 1, 2015; “Epigenetic regulation of viral gene expression”.
10. Fung, M (2015–*ongoing*) Undergraduate Summer student, then volunteer in the lab; “Characterization of the biological functions of the ICP4 DNA binding domain”. FOMD Summer Studentship.
11. Boyd, M (2015–2016) Undergraduate Honours student; “Lipid peroxidation of virions”.
12. Correa-Sierra, C (2016–*ongoing*) Postdoctoral Fellow; “Epigenetic regulation of cytomegalovirus pathogenesis” (AI-HS postdoctoral fellowship).
13. Rycholowska, M (2016–*ongoing*) Research Assistant

Former Trainees**Visiting Scientists**

1. Diwan, P (2007) Visiting Scientist; “CDKs in the regulation of transcription from the genomes of cells and viruses”. *Prerna is an Associate Professor, RLA College, Delhi University, Delhi, India.*

Postdoctoral Fellows

1. Diwan, P (2001–2003) Postdoctoral Fellow; “CDKs in the regulation of transcription from the genomes of cells and viruses”. *See entry under Visiting Scientists.*
2. Lacasse, JJ, Ph.D. (2010–2011) Postdoctoral Fellow; “Instability of HSV-1 chromatin during lytic infections”. *Jonathan switched his career to Business and is a Senior Consultant, Valuation and Litigation Support at Meyers Norris Penny LLP.*
3. Conn, K, Ph.D. (2010–2014) Postdoctoral Fellow; “Histone mobilization during HSV infection”. *Kristen is a Research Associate, MRC-University of Glasgow Centre for Virus Research, Glasgow, UK*

Graduate Students (11)

1. Coccaro, Ersilia (2001–2005) Ph.D. student; “Genomic regulation of viral gene expression”. (Province of Alberta Graduate Scholarship; 75th Anniversary Studentship Award) *Ersilia is a now a dentist.*
2. Provencher, Véronic (2002–2006) M.Sc. student; “Effects of PCIs on nuclear localization of viral proteins”. (Alberta Learning Graduate Student Scholarship) *Véronic is a practicing naturopathic doctor in St. Albert, AB.*
3. Zehong, Guan (2003–2004) Visiting Ph.D. student; “Requirement for CDKs in HSV-1 replication”. (China research council studentship) *Guan completed her Ph.D. at the University of Inner Mongolia, China, and has recently immigrated to Canada. Guan is now a research technician at the University of Toronto, Toronto, ON.*
4. St. Vincent, Mirielle (2003–2012) Ph.D. student; “Novel inhibitors of viral fusion”. (NSERC M.Sc. and Ph.D. studentships, Native students bursary; Alexander Graham Bell recipient) *Mim is currently an Assistant Professor, Université de Saint-Boniface (USB), University of Manitoba, Winnipeg, MB.*
5. Lacasse, Jonathan J (2003–2010) Ph.D. student; “Effects of PCIs on viral gene expression”. (AHFMR and CIHR Ph.D. Studentships) *See Postdoctoral Fellows.*
6. Conn, K (2003–2010) Ph.D. student; “Histone mobility during HSV infection”. (Province of Alberta Graduate Scholarship, 75th Anniversary Studentship Award) *See Postdoctoral Fellows.*
7. Newman, E (2006–2010). “Regulation of HSV-1 DNA replication”. *Emma is a Research technician, University of Alberta.*
8. Muqadas, Muhammad (2008–2010) M.Sc. Student; “Novel inhibitors of viral fusion”. *Muhammad was in a prolonged leave of absence for personal reasons and eventually left the program. He is now a Senior Clinical Pharmacist.*
9. Colpitts, Che (2009–2014). Provisional Ph.D. student; “Novel inhibitors of viral fusion” (NSERC doctoral studentship, AI-HS Ph.D. Studentship). *Che is currently a Postdoctoral fellow with Dr. T Baumert lab, Centre National de la Recherche Scientifique, Strasbourg, France, under support of a CIHR postdoctoral fellowship.*
10. Alzahari, Zaenab (2013) M.Sc. Student, January 1, 2013; “Epigenetic regulation of viral gene expression” (King Saud Bin Abdulaziz Scholarship Grant). *Zaenab had to withdraw from the program due to truly extenuating personal circumstances.*
11. Todd, Brendan (2015) Ph.D. student, September 1, 2015; “Silencing of viral genomes”. *Brendan transferred to Dr. Götte’s group when I decided to move to Cornell.*
12. Shott, R (2006–2016) Ph.D. student; “Kinomics of the pathogenesis of prion diseases”. (75th Anniversary Studentship Award, NSERC M.Sc. Studentship, QEII recipient, CIHR MD/Ph.D. Studentship).

Undergraduate students (14)

1. Hamula, C (2002–2003) Biology 499 Honors Student; “Sub-cellular localization of CDKs during HSV infection”. *Camille is now a professor at the Icahn School of Medicine in Mount Sinai Hospital.*
2. Lazear (né MacGraw), H (2002–2003) Biochem 499 Honors Student; “Accessibility of HSV genomes”. (NSERC summer studentship). *Helen is now an Assistant Professor at the University of North Carolina, Chapel Hill, NC.*
3. Virgen, C (2004–2005) Cell Biology 498 Honors Student; “TAF250 and HSV-1 replication”. *César is now an international fellow of the CDC-Hubert Global program.*

4. Patterson-Fortin, J (2004–2005) Biol 499 Honors Student; “CDK involvement in HSV-1 replication”. *Jeffrey is an M.D, training in the Department of Medicine at Johns Hopkins, Baltimore, MD.*
5. MacDonald, M (2004–2005) Biol 499 Honors Student; “siRNAs against HSV-1”. *Megan completed her Ph.D. at the University of Alberta, Edmonton, AB.*
6. DeFabbro, V (2006–2007) Biol 499 Honors Student; “Selection for HSV drug-resistant mutants”. *Vanessa completed her M.Sc. at the University of Alberta and is now a physiotherapist.*
7. Laxton, B (2008–2009) Summer and then Biochem 499 Honors Student; “RAFIs do not inhibit eukaryotic vesicle fusion”. *Brewster is an M.D completing his residency at Memorial University, St. John’s, NL, Canada.*
8. Robinson, K (2008–2009) Summer and then Biochem 499 Honors Student; “Generation of HSV-1 mutants”. (AHFMR summer studentship) *Kelly is now an engineer.*
9. Elliot, M (2010) Summer student; “Analyses of potential toxicities of RAFIs”. (NSERC USRA summer studentship) *Mark completed his M.D. at the University of Alberta.*
10. Appanah, C (2010–2011) Summer and then Biology Honors student; “Protein kinases in the pathogenesis of prion diseases”. *Cathy is now an R.N.*
11. Gibeault, RL (2011) Summer student “Histone dynamics in HSV-1 infected cells”. *Becca is now a Ph.D. student at University of Alberta, Edmonton, AB, Canada.*
12. Xiao, J (2012–2013) Undergraduate Honors student; “Dynamics of HSV-1 chromatin in HSV replication compartments”. *Jack is now an engineering student at the University of Alberta, Edmonton, AB, Canada.*
13. Thyssen, B (2015) Undergraduate 399 student; “Epigenetic inhibitors of HSV-1 replication”. *Brandon is completing his B.Sc. at the University of Alberta, Edmonton, AB, Canada.*
14. Todd, B (2015) Summer student; “Composition of HSV-1 chromatin”. *Brendan is now a graduate student at the University of Alberta, Edmonton, AB, Canada.*

High school students (2)

1. Hrybouski, S (2005). HYRS high school student. “Construction of a shuttle for recombination into HSV genomes.” *Stan is now a Ph.D. student in Neuroscience at the University of Alberta.*
2. Koriyama, H (summer 2002). High school summer student performing a summer internship under the WISEST program. *Hiromi is now a Pharmacist, she earned the highest marks in the country in the Pharmacy Examining Board of Canada examination in 2009.*

Membership in Graduate Students Supervisory Committees (43)

Current (7)

1. Mr. G. Vankatraman, Ph.D. candidate, Biochemistry; Advisor, Dr. D. Brindley (2010).
2. Mr. C. Duque, Ph.D. candidate, Agricultural, Food and Nutritional Sciences, Faculty of Agriculture, Life and Environmental Sciences; Advisor, Dr. J. Aiken (2011).
3. Ms. S. Hou, Ph.D. candidate, Cell Biology; Advisor, Dr. Tom Hobman (2012).
4. Mr. A. Mohamed, Ph.D. candidate, MMI; Advisor, Dr. Maya Shmulevitz (2012).
5. Mr. J Wong, Ph.D. candidate, MMI; Advisor, Dr. Michael Houghton (2012).

6. Ms. C Acevedo-Morantes, Ph.D. candidate, Biochemistry; Advisor, Dr. Holger Wille (2012).
7. Ms. S Eskandari Sedigui, Ph.D. candidate, Biochemistry; Advisor, Dr. David Westaway (2013).

Completed (36)

1. Dr. R. Bekele, Ph.D., Biochemistry; Advisor, Dr. D. Brindley (2009-2015).
2. Ms. Ana Rieger, Ph.D. candidate, Biological Sciences, Faculty of Sciences; Advisor, Dr. D. Barreda (2010–2015).
3. Ms. Megan Desaulniers, M.Sc., MMI; Advisor, Dr. David Evans (2011–2015).
4. Mr. Mark Kneteman, M.Sc., MMI; Advisor, Dr. Andrew Mason (2012–2015).
5. Ms. Catalina Mesa-Prince, Ph.D., MMI; Advisor, Dr. Michael Houghton (2013–2015).
6. Ms. Tamara Skene, Ph.D., Biochemistry; Advisor, Dr. C. Holmes (2006–2013).
7. Mr. Xian Wang, Ph.D., Biochemistry; Advisor, Dr. C. Fernandez-Patron (2008–2013).
8. Ms. Amelia Walker, M.Sc. Biochemistry; Advisor, Dr. M Schultz (2010–2012).
9. Ms. Kristen Miller, M.Sc. MMI; Advisor, Dr. DLJ Tyrrell (2010–2011).
10. Dr. Nick van Büren, Ph.D., MMI; Principal Advisor, Dr. M. Barry (2006–2010).
11. Ms. Jacqueline Mewes, M.Sc. Biological Sciences, Faculty of Sciences; Advisor, Dr. J. Stafford (2009–2010).
12. Dr. Boripont Manmontri, Ph.D., Biochemistry; Principal Advisor, Dr. D. Brindley (2006–2010)
13. Dr. Don Gammon, Ph.D., MMI; Principal Advisor, Dr. D. Evans (2005–2008).
14. Dr. Meaghan Hancock, Ph.D., MMI; Principal Advisor, Dr. JR. Smiley (2005–2008).
15. Ms. Carolina Ilkow, Ph.D., Cell Biology; Principal Advisor, Dr. T. Hobman (2005–2009).
16. Mr. Lei Liu, M.Sc. Cell Biology; Advisor, Dr. Z. Wang (2005–2009)
17. Dr. Ming Ye, Ph.D., Cross Cancer institute; Principal Advisor, Dr. M. Hendzel (2005–08).
18. Dr. Kim Zimmerman, Ph.D., MMI; Principal Advisor, Dr. L. Tyrrell (2005–2008)
19. Dr. Sheetal Raithatha, Ph.D., Biochemistry; Principal Advisor, Dr. D. Stuart (2005–2008)
20. Dr. James DeCesare, Ph.D., Biochemistry; Principal Advisor, Dr. D. Stuart (2005–2008)
21. Dr. Mathew Rawluk, Ph.D., Biochemistry; Principal Advisor, Dr. D. Stuart (2005–2008)
22. Dr. Chifundo Mataya, Ph.D., Biochemistry; Principal Advisor, Dr. D. Brindley (2004–2008).
23. Mr. Magnus Friis, Ph.D., Biochemistry; Principal Advisor, Dr. M. Schultz (2003–2006).
24. Mr. Vitali Petrouneviych, M.Sc., Biochemistry; Principal Advisor, Dr. D. Brindley (2002–2006).
25. Ms. Andrea Sara Fong, Ph.D. candidate, Biochemistry; Principal Advisor, Dr. CFB. Holmes (2002–2008).
26. Dr. Kerry Lavender, Ph.D., MMI; Principal Advisor, Dr. KK. Kane (2002–2007).
27. Dr. Tara Lyshechko, Ph.D., MMI; Principal Advisor, Dr. H. Oostergard (2002–2006).
28. Dr. Graeme Quest, M.Sc., MMI; Principal Advisor, Dr. JR. Smiley (2003–2006).
29. Dr. Katherine Morris (née Buri), Ph.D., Biochemistry; Principal Advisor, Dr. D. Brindley (2002–2006).

30. Ms. Sha Huang, M.Sc., Biological Sciences; Faculty of Sciences; Principal Advisor, Dr. S. Campbell (2003–2005).
31. Ms. Tara Stewart, M.Sc., MMI; Principal Advisor Dr. M. Barry (2003–2004).
32. Dr. Rajeet Singh Pannu, Ph.D., Biochemistry; Principal Advisor Dr. M. Ellison (2002–2002).
33. Ms. Rosalyn Doepker, M.Sc. MMI; Principal Advisor Dr. JR. Smiley (2002–2004).
34. Dr. Xaralabos (Bobby) Varelas, Ph.D., Biochemistry; Principal Advisor Dr. M. Ellison (2002–2004)
35. Dr. John Law, Ph.D., Cell Biology; Principal Advisor, Dr. T. Hobman (2001–2005).
36. Ms. Henrietta Zanzoto, M.Sc., MMI; Principal Advisor, Dr. JR. Smiley (2001–2004).

Graduate Students Evaluation Committees, excluding supervisory committees (37)

1. Dr. Meera Ajitsinh Raj (Ph.D. Defense, University of British Columbia. Advisor, Dr. Francoise Jean) External examiner, December 2013 and June 2015.
2. Dr. Brent Hofmann (Ph.D. Defense, University of Saskatchewan; Advisor, Dr. Qiang Liu). April 2015
3. Ms. Jessica Sacher (candidate, Department of Biological Sciences; Faculty of Sciences. Advisor, Dr. Christine Szymanski). February 2015.
4. Ms. Summera Iqbal (Ph.D. Candidate, Faculty of Agriculture, Life and Environmental Sciences; Advisor, Dr. B Ametaj). External examiner (2013)
5. Dr. Ran Chen (Ph.D. Candidate, MMI, Advisor, Dr. DLJ Tyrrell). External examiner, February 2011.
6. Dr. Dominik Mansman (Ph.D. Candidate, Faculty of Agriculture, Life and Environmental Sciences; Advisor, Dr. B. Ametaj). External examiner, December 2010
7. Dr. Laura Kathleen Cole (Ph.D. Defense, Biochemistry; Advisor, Dr. D. Vance). Chair, October 2010.
8. Dr. Vesna Nguyen (Ph.D. Defense, Biochemistry; Advisor, Dr. M. Schultz). External examiner, September 2010.
9. Dr. Kim Zimmerman (Ph.D. Defense, MMI; Advisor, Dr. DLJ Tyrrell). External examiner, July 2010.
10. Dr. Laura Kathleen Cole (Ph.D. Defense, Biochemistry; Advisor, Dr. D. Vance). Chair, May 2010.
11. Dr. Randy Gombos (Ph.D. Candidate, Obstetrics and Gynaecology; Advisor, Dr. D. Hemmings). External examiner, April 2010.
12. Dr. Myles Poulin (Ph.D. Candidate, Chemistry, Faculty of Sciences; Advisor, Dr. T. Lowry). External examiner, January 2010.
13. Mr. Brett Clelland (Ph.D. Candidate, Biochemistry; Advisor, Dr. M. Schultz). External examiner, December 2008.
14. Dr. Vesna Nguyen (Ph.D. Candidate, Biochemistry; Advisor, Dr. M. Schultz). External examiner, September 2006.
15. Dr. Leslie Ian Grad (Ph.D. Defense, Biochemistry; Advisor, Dr. BD. Lemire). Chair, September 2005.
16. Dr. Kirstin K Veugelers (Ph.D. Defense, Biochemistry; Advisor, Dr. RC. Bleackley). Chair, March 2005.
17. Dr. LaiTee Teoh (Ph.D. Defense, MMI; Advisor, Dr. D. Evans). External examiner, February 2005.
18. Dr. Jason Coughlin (Ph.D. Candidate, Biochemistry; Advisor, Dr. J. Stone). External examiner, December 2004.

19. Dr. Eric Saude (Ph.D. Candidate, Biochemistry; Advisor, Dr. B. Sykes). External examiner, December 2004.
20. Dr. Bindi Ferguson (Ph.D. Candidate, MMI; Advisor, Dr. H. Oostergard). External examiner, November 2004.
21. Dr. Trevor Moraes (Ph.D. Defense, Biochemistry; Advisor, Dr. M. Ellison). Chair, September 2004.
22. Dr. Mark Williams (Ph.D. Defense, MMI; Advisor, Dr. DLJ Tyrrell). External examiner, July 2004.
23. Ms. Nathalie AB MacLean Lewis (M.Sc. Defense, Cross Cancer Center; Advisor, Dr. M. Hendzel). External examiner, June 2004.
24. Dr. Martin Beatch (Ph.D. Defense, Cell Biology; Advisor, Dr. T. Hobman). External examiner, June 2004
25. Dr. Zhaoyu Li (Ph.D. Candidacy examination; Biochemistry; Advisor, Dr. D. Vance). Chair, February 2004.
26. Dr. Gary Chan (Ph.D. Candidate, MMI; Advisor, Dr. L. Guilbert). External examiner, September 2003.
27. Dr. J.T. Huzil (Ph.D. Thesis defense, Biochemistry; Advisor, Dr. M Ellison). Chair, August 2003.
28. Dr. Kathie-Ann Walters (Ph.D. Thesis defense, MMI; Advisor, Dr. L. Tyrrell). External examiner, July 2003.
29. Dr. Sachin Katyal (Ph.D. Candidate, Cross Cancer Institute; Department of Oncology; Advisor, Dr. R. Godbout). External examiner, August 2002.
30. Dr. Anna Noga (Ph.D. Thesis defense, Biochemistry; Advisor, Dr. D. Vance). External examiner, March 2002.
31. Mr. Irfan Ahsan, M.Sc. (M.Sc. Thesis defense, Biochemistry; Advisor, Dr. M. Michalak). Chair, December 2001.
32. Dr. Katherine Buri (Ph.D. Candidate, Biochemistry; Advisor, Dr. D. Brindley). External examiner. November 2001.
33. Dr. Eric Labonté (Ph.D. Candidate, Biochemistry; Advisor, Dr. L. Agellon). External examiner, November 2001.
34. Dr. Vernon Dolinsky (Ph.D. Candidate, Biochemistry; Advisor, Dr. D. Vance). Chair, October 2001.
35. Dr. Helen Everett (Ph.D. Defense, Biochemistry; Advisor, Dr. C. Bleackley). External examiner, October 2001.
36. Dr. Mark Williams (Ph.D. Candidate, MMI; Advisor, Dr. DLJ Tyrrell). External examiner, June 2001.
37. Dr. A.J. Ma (Ph.D. Defense, MMI; Advisor, Dr. DLJ Tyrrell). External examiner, March 2001.

Professional development training

1. Invited Lecturer at the Alberta Dental Hygienists Association (ADHA) continuing education courses; October 25 and 27, 2004, Calgary and Edmonton, AB.
2. Invited Speaker at the continuous education course “An Update on Herpes Viral Infections” (2007), Harvard Medical School, Boston, MA, USA.
3. Invited Lecturer at the ADHA continuing education courses; March 21, 2012, Edmonton, AB.
4. Panel member at the 14th NIH-Merial BWF workshop for Veterinary researchers “Becoming a Faculty”; August 1-4, 2013; Michigan State University, East Lansing, MI.

5. Panel member at the 15th NIH-Merial BWF workshop for Veterinary researchers “Becoming a Faculty”; July 31, August 2, 2014; Cornell University, Ithaca, NY.
6. Panel member at the 16th NIH-Merial BWF workshop for Veterinary researchers “Becoming a Faculty”; July 31, August 2, 2015; University of California - Davis, Davis, CA.
7. Invited Speaker at the Canadian Association for HIV Research (CAHR) New HIV Researcher workshop. Edmonton, AB; November 14, 2014.
8. Invited Speaker at the CAHR workshop for Mid-Career investigators. Ottawa, ON; February 4-6, 2015.
9. I have mentored two trainees in the start to their teaching careers
10. I have informally but effectively mentored four new investigators.

VI. FUNDING

Current support (Direct costs reported; PI role, except where indicated)

1. Helmholtz Institute - Helmholtz-Alberta Initiative Infectious Disease Research. International collaboration Grant - New (€1,920,000 consortium, €50,000 to my lab; October 2013–October 2016) [Roles: Consortium Coordinator for group grant with 4 PIs in Alberta and 4 in Germany, and PI.]
2. Canadian Institutes for Health Research (CIHR) Operating Grant. Chemical Biology to Study Virus Entry. New (CAD\$668,424; November 1, 2013–October 20, 2018).
3. Li Ka Shing Institute of Virology (LKSIOV) Proof of Principle grant. Development of inhibitors of infectivity of enveloped and non-enveloped viruses. New (CAD\$100,000; June 2014–June 2016) [Role:co-PI with Dr. Frederick West.]

Contracts

1. Defense Research and Development Canada (DRD-C)/ Public Works. Characterization of RAFIs (CAD\$175,000, including 25% indirect costs; February 1, 2014–May 31, 2016).
2. Private investors. Private investors have supported the early development of our broad spectrum antivirals (I am not at freedom to disclose specific times, amounts, or names of investors).

Past support (Direct costs reported; PI role, except as indicated)

1. CIHR Canadian Institutes for Health Research - Virology and Viral Pathogenesis. Regulation of transcription of herpes virus by cyclin-dependent kinases. New (CAD\$89,458; April 1, 2001–March 31, 2002).
2. CIHR Canadian Institutes for Health Research - Virology and Viral Pathogenesis. Regulation of viral transcription by cyclin-dependent kinases. New (CAD\$267,165; October 1, 2001–September 30, 2004).
3. CIHR Canadian Institutes for Health Research - Virology and Viral Pathogenesis. Regulation of viral transcription by cyclin-dependent kinases. Renewal (CAD\$359,890; October 1, 2004–September 30, 2007).
4. BWF Burroughs-Welcome Fund - Investigators in Pathogenesis of Infectious Disease. New (US\$450,000; July 1, 2006–June 31, 2013).
5. APRI Alberta Prion Research Institute. Protein kinases in the pathogenesis of prion diseases. Proof of Principle program (CAD\$200,000; September 15, 2006–September 14, 2008).
6. Alberta Heritage Foundation for Medical Research (AHFMR). Inhibitors of Viral Infectivity (CAD\$20,000; July 14, 2007–July 13, 2008).

7. PrioNet Protein kinases as potential therapeutic targets in prion diseases. (CAD\$351,496; April 1, 2008–March 31 2011).
8. APRI Alberta Prion Research Institute. Protein kinases as potential therapeutic targets in prion diseases. Co-founding (CAD\$61,070; April 1, 2008–March 31, 2011).
9. CIHR (Canadian Institutes for Health Research - Biology and Molecular Biology B). Chromatin regulation of extra-chromosomal gene expression- New (CAD\$100,000; April 1, 2009–March 31, 2011).
10. The China Institute. “University of Alberta-Zhejiang University Collaboration” New (CAD\$200,000 project; CAD\$40,000 to my lab; February 1, 2012–March 31, 2013).
11. CIHR (Canadian Institutes for Health Research - Proof of Principle). Novel Inhibitors of Viral Infectivity - New (CAD\$150,000; July 1, 2009–June 30, 2011).
12. CIHR (Canadian Institutes for Health Research – Operating Grant). Regulation of viral transcription- New (CAD\$578,885; October 1, 2010–September 30, 2015).
13. FoMD Innovative targeted approaches to identify inhibitors of HCV replication, infection or pathogenesis- New (CAD\$40,000; March 20, 2012–March 19, 2013).

Equipment

1. AHFMR Independent/Establishment Award. Regulation of viral transcription by inhibitors of cyclin-dependent kinases (CAD\$260,000; June 1, 2002–May 31, 2004).

VII. SCIENTIFIC PRESENTATIONS

1. “Virus-cell interactions and latency of Bovine Herpesvirus-1”. Guest speaker at the Federal Research Center for Virus Diseases of Animals, Tübingen, Germany. April 2–4, 1997.
2. “Herpes simplex virus type 1 (HSV-1) replication and transcription requires cellular cyclin-dependent kinases (cdks)”. Extended talk at the *23rd International Herpesvirus Workshop*, York, England. August 1–7, 1998.
3. “Inhibitors of Cyclin-dependent kinases repress replication of herpes simplex virus”. Invited speaker at the seminar series of Smith-Kline Beecham, King of Prussia, PA. August 10, 1998.
4. “Herpes simplex transcription and replication requires cellular cyclin-dependent kinases”. Recruitment talk at the Department of Microbiology, U.T. Southwestern Medical Center, Dallas, TX. January 21, 1999.
5. “Requirement for CDKs in HSV replication, transcription, and DNA synthesis: A virus that replicates in neurons uses cellular cell-cycle proteins”. Recruitment talk at the Department of Microbiology and Immunity University of Arizona, Tucson, AZ. June 24, 1999.
6. “Requirement for CDKs in HSV proliferative functions: A virus that replicates in neurons uses cellular cell-cycle proteins”. Recruitment talk at the Department of Microbiology School of Medicine, University of Washington, Seattle, WA. November 2, 1999.
7. “Involvement of cyclin-dependent kinases in the replication of HSV-1”. Recruitment talk at Department of Epidemiology and Public Health, Yale University School of Medicine, New Haven, CT. February 11, 2000.
8. “Requirement for cdks in HSV proliferative functions: A virus that replicates in neurons uses cellular cell-cycle proteins”. Recruitment talk at the Department of Biochemistry University of Alberta, Edmonton, AB, Canada. February 17, 2000.

9. "Requirement for cyclin-dependent kinases in replication of herpes simplex virus". Guest speaker at the seminar series of the Department of Microbiology, Dartmouth Medical School, Lebanon, NH. March 6, 2000.
10. "Inhibitors of cyclin-dependent kinases repress transcription of herpes simplex virus". Invited speaker at the seminar series of Pharmacia and Upjohn Company, Kalamazoo, MI. July 9, 2000.
11. "Essential cellular proteins as targets for antiviral drugs". Invited plenary speaker at the *Eighth International Antiviral Symposium and Workshop*, Kagoshima, Japan. November 18–21, 2000.
12. "HSV, just another nuclear DNA virus (...but excitingly unique)". McMaster University; Molecular Biology/Signal Transduction Seminar Series, Hamilton, ON, Canada. February 6, 2002.
13. "HSV, anticancer drugs, the cell cycle, neurons and HIV: how they all came together (and may lead to novel antivirals)". Mount Sinai School of Medicine, New York, NY. March 8, 2002.
14. "Pharmacological kinase inhibitors and viral replication". Invited speaker at the "*David Shugar 3rd International Conference on Inhibitors of Protein Kinases*", Warsaw, Poland. June 23–27, 2003.
15. "Genome-specific inhibition of viral transcription and replication by pharmacological inhibitors of CDKs (PCIs)". Invited speaker at the Seminar Series of the Department of Neurology, Johns Hopkins University. Baltimore, MD. April 19, 2004.
16. "The genomic effects of pharmacological CDK inhibitors (PCIs) on viral transcription are a desirable activity for antiviral drugs". Invited speaker at the Seminar Series of the National Institutes of Health and National Cancer Institute (NIH/NCI). Frederick, MD. April 20, 2004.
17. "Regulation of viral transcription by cyclin-dependent kinases". Invited speaker at the Seminar Series of the Department of Veterinary Medicine; University of Maryland, College Park, MD. April 21, 2004.
18. "The unique antiviral activities of the pharmacological cyclin-dependent kinase inhibitors (PCIs)". *First New Investigators Forum of the Institute of Infection and Immunity of the CIHR*. The Kingbridge Centre, King City, ON, Canada. April 15–17, 2005.
19. "Chemical virology, from regulation of viral gene expression to potential antiviral drugs". Seminar series of the INRS-Institut Armand-Frappier (Université du Québec), Montreal, QC, Canada. November 22, 2006.
20. "Novel inhibitors of viral fusion". Guest speaker in the continuous education course, "An Update on Herpes Viral Infections". Harvard Medical School, Boston, MA. June 15, 2007.
21. "Broad Spectrum Inhibitors of Viral Infectivity". Guest Speaker at the Symposium on Biodefense and Emerging Diseases. 2008 Western Regional Meeting of the American Chemical Society, Las Vegas, NV. September 24–27, 2008.
22. "Broad spectrum inhibitors of viral infectivity". Invited speaker at *Epiphany Biosciences*, San Francisco, CA. May 14–15, 2009.
23. "Proteomic analyses of prion diseases". Invited speaker at Prion Canada 2010. Ottawa, ON, Canada. March 8–10, 2010.
24. "The road from pseudorabies vaccines to the histone code runs through cattle and cyclin-dependent kinases (with a detour on antivirals and lipid membranes)". Invited speaker at

- the Department of Veterinary and Biomedical Sciences, University of Nebraska-Lincoln, Lincoln, NE. March 28–29, 2010.
25. “Innovative approaches to antiviral therapies”. Invited speaker at the First Biomedical Symposium Zhejiang University/University of Alberta, Hangzhou, China. November 19, 2011.
 26. “Innovative approaches to antiviral therapies”. Invited speaker at the France-Alberta Science and Technology Initiative (FAST!), Paris, France. December 16, 2011.
 27. “Innovative antiviral approaches target novel targets shared by unrelated viruses”. Invited speaker at the first International Workshop of the Helmholtz-Alberta Initiative-Infectious Diseases Research HAI-IDR. “Fighting Infections”. Braunschweig, Germany. February 28, 2012.
 28. “Dynamics of histone mobilization during HSV-1 infection and its implications in latency and reactivation”. Invited speaker at the second Colorado alphaherpesviruses latency symposium (CALs), Vail, CO. May 16–18, 2012.
 29. “Rigid amphipathic fusion inhibitors, RAFIs, innovative antivirals against influenza, HCV, herpes simplex and other enveloped viruses”. Invited speaker at the first Li Ka Shing Institute of Virology - Gairdner Virology Symposium. “Meeting the Challenge of Emerging, Acute and Persistent Viral Diseases”. Edmonton, AB, Canada. May 31–June 1, 2012.
 30. “Locking all doors, innovative approaches to broad spectrum antivirals”. Invited speaker at the Division of BioMedical Sciences, Memorial University, St. John’s, NB, Canada. November 30, 2012.
 31. “Novel approaches to antiviral discovery lead to compounds with novel targets and mechanisms of action which are active against influenza, hepatitis C, herpes simplex and other viruses”. Sino-Canada Workshop on Persistent Viral Infections; Shanghai Medical University, Shanghai, China. December 17, 2012.
 32. “Differential dynamics of histone variants during HSV-1 infection”. Invited speaker at the Second Colorado alphaherpesviruses latency symposium (CALs), Vail, CO. May 15–17, 2013.
 33. “The RAFIs, novel inhibitors of the infectivity of HCV, influenza, herpes and other viruses, target envelope lipids by biophysical mechanisms”. Westmead Millennium Institute, Sydney, Australia. October 11, 2013.
 34. “Novel approaches to Broad spectrum antivirals”. Bio Threat Defence Section, Suffield Research Centre. Defence R&D Canada, Suffield, AB, Canada. November 5, 2013.
 35. “Chemical Virology, from discovery science to drug development”. Nebraska Centre for Virology, Lincoln, NE. December 12, 2013.
 36. “The major activator of herpes simplex virus 1 gene expression, ICP4, induces the mobilization of core and linker histones during infection”. Nebraska Centre for Virology Annual Retreat, Nebraska City, NB. March 23–24, 2014.
 37. “The essential transcription activator ICP4 induces histone mobilization”. Invited speaker at the Third Colorado alphaherpesviruses latency symposium (CALs), Vail, CO. May 15–17, 2014.
 38. “Histone Dynamics in Herpesvirus Infected Cells”. Invited Speaker at the 2nd Canadian Conference on Epigenetics: Epigenetics Eh!, London, ON, Canada. June 24–27, 2014.
 39. “Chromatin dynamics in the regulation of herpes virus replication and its implications for latency and reactivation”. Invited Speaker at the seminar series of the Friedrich-Loeffler-

- Institut Bundesforschungsinstitut für Tiergesundheit (Federal Research Institute for Animal Health. Insel Riems, Germany, February 23, 2015.
40. “Chemical Virology to study viral infectivity, egress and spread of infection”. Invited speaker at the seminar series of VIDO (Vaccine and Infectious Diseases Organization) University of Saskatchewan. Saskatoon, SK, Canada. April 24, 2015.
 41. “From partially naked to totally unstable, the dynamics of herpes chromatin in lytic infections”. Invited speaker, seminar series of the Department of Molecular Biosciences. The University of Kansas, Lawrence, KS. May 4, 2015.
 42. “Chemical Virology, from discovery science to the search for solutions”. Cornell University, College of Veterinary Medicine, Ithaca, NY. July 22, 2015.
 43. “The HAI-IDR Mission and Vision, from Discovery to Solutions”. HAI International Research Partnership Symposium - Embassy of Canada, Berlin, Germany. September 9, 2015.
 44. “Chromatin silencing as an antiviral innate immune response”. Intercollegiate Faculty of Biotechnology Seminar Series; Miedzyuczelniany Wydział Biotechnologii Uniwersytetu Gdańskiego i Gdańskiego Uniwersytetu Medycznego. Gdansk, Poland. October 16, 2015.
 45. “Chemical Virology, from discovery science to the search for solutions”. Nebraska Center for Virology, University of Nebraska-Lincoln, Lincoln, NE. November 2, 2015
 46. “Arf but no dog”. Baker Institute for Animal Health Seminar Series, Cornell University, Ithaca, NY. September 20, 2016.
- 46-60. Fifteen other invited lectures at the Provincial, Regional or Institutional level
Does not keep track of presentations at scientific meetings.

VIII. PUBLICATIONS

Peer-Reviewed Publications

1. Trinchero, GD, Affranchino, MA, **Schang, LM** and Beconi, MT (1990). Antioxidant effect of bovine spermatozoa on lipid peroxidation. *Comunicaciones Biológicas (Argentina)* **8 (4)**: 339–350.
2. Affranchino, MA, Trinchero, GD, **Schang, LM** and Beconi, MT (1990). Antioxidant effect of bovine spermatozoa on lipid peroxidation; importance in cryo-preservation of semen. *Revista de Medicina Veterinaria (Argentina)* **71 (3)**: 138–142. (*This publication is not indexed in the electronic databases; neither are these early issues of the journal available online yet*).
3. Beconi, MT, Affranchino, MA, **Schang, LM** and Beorlegui, N (1991). Influence of antioxidants on SOD activity in bovine sperm. *Biochemistry International (Australia)* **23 (3)**: 545–553.
4. Affranchino, MA, Trinchero, GD, **Schang, LM** and Beconi, MT (1991). Bovine spermatozoa as lipoperoxidation inhibitor. *Comunicaciones Biológicas (Argentina)* **9 (3)**: 261–274.
5. **Schang, LM** And Osorio, FA (1993). A quantitative technique for the study of the latency of Aujeszky virus. *In Scientific And Technical Review: Biotechnology Applied To The Diagnosis Of Animal Diseases*; 505–521 (J. Blancou, *ed.*) Office International Des Épizooties, Paris, France.
6. **Schang, LM** and Osorio, FA (1994). Quantitation of latency established by attenuated strains of pseudorabies (Aujeszky's disease) virus. *Journal of Virological Methods* **50 (1–3)**: 269–180.

7. **Schang, LM**, Kutish, G and Osorio, FA (1994). Correlation between precolonization of trigeminal ganglia by attenuated strains of pseudorabies virus and resistance to wild-type virus latency. *Journal of Virology* **68** (12): 8470–8476.
8. Hossain, A*, **Schang, LM*** and Jones, C (1995). Identification of the gene products encoded by the latency-related gene of bovine herpesvirus 1. * **Equal contribution.** *Journal of Virology* **69** (9): 5342–5352.
9. **Schang, LM**, Hossain, A and Jones, C (1996) The latency related gene of bovine herpesvirus 1 encodes a product which inhibits cell cycle progression. *Journal of Virology* **70** (6): 3807–3814.
10. **Schang, LM** and Jones, C (1997) Analysis of bovine herpes virus-1 (BHV-1) transcripts during a primary infection of trigeminal ganglia of cattle. *Journal of Virology* **71** (9): 6786–6795.
11. **Schang, LM**, Phillips, J and Schaffer, PA (1998) Requirement for cellular cyclin-dependent kinases in herpes simplex virus replication and transcription. *Journal of Virology* **72** (7): 5626–5637.
12. **Schang, LM**, Rosenberg, A and Schaffer, PA (1999) Transcription of herpes simplex virus (HSV) immediate-early and early genes is inhibited by Roscovitine, an inhibitor specific for cellular cyclin-dependent kinases (cdks). *Journal of Virology* **73** (3): 2161–2172.
13. Jordan, R, **Schang, LM** and Schaffer, PA (1999) Transactivation of HSV-1 IE gene expression by virion-associated factors is blocked by an inhibitor of cyclin-dependent protein kinases. *Journal of Virology* **73** (10): 8843–8847.
14. **Schang, LM**, Rosenberg, A, and Schaffer, PA (2000) Roscovitine, a specific inhibitor of cellular cyclin-dependent kinases, inhibits herpes simplex virus DNA synthesis in the presence of viral early proteins. *Journal of Virology* **74** (5): 2107–2120.
15. **Schang, LM**, Hwang, G-JH, Dynlacht, BD, Speicher, DW, Bantly, A, Schaffer, PA, Shelatifard, A, Ge, H, and Shiekhattar, R (2000) Human PC4 is a substrate-specific inhibitor of RNA Polymerase II phosphorylation. *Journal of Biological Chemistry* **275** (9): 6071–6074.
16. Winkler, MT, **Schang, LM**, Doster, A, Hold, T, and Jones, C (2000) Analysis of cyclins in trigeminal ganglia of calves infected with bovine herpesvirus 1. *Journal of General Virology* **81** (12): 2993–2998.
17. **Schang, LM***, Bantly, A, Knockaert, M, Shaheen, F, Meijer, L, Malim, M, Gray, N, and Schaffer, PA (2002) Pharmacological cyclin-dependent kinase inhibitors inhibit replication of wild type and drug-resistant strains of HSV and HIV-1 by targeting cellular, not viral proteins. *Journal of Virology* **76** (15): 7874–7882. * **Corresponding author.**
18. **Schang, LM**, Bantly, A and Schaffer, PA (2002) Explant-induced reactivation of herpes simplex virus occurs in neurons expressing nuclear cdks2 and 4. *Journal of Virology* **76** (15): 7724–7735.
19. Banchio, C, **Schang, LM**, and Vance, DE (2003) Activation of CTP: Phosphocholine cytidyltransferase alpha expression during the S phase of the cell cycle is mediated by the transcription factor Sp1. *Journal of Biological Chemistry* **278** (34): 32457–32464.
20. Diwan, P, Lacasse, JJ, and **Schang, LM** (2004) Roscovitine inhibits activation of promoters in the HSV-1 genome independently of promoter-specific factors. *Journal of Virology* **78** (17): 9352–9365.

21. Banchio, C, **Schang, LM**, and Vance, DE (2004) Phosphorylation of Sp1 by cyclin-dependent kinase 2 modulates the role of Sp1 in CTA regulation during the S phase of the cell cycle. *Journal of Biological Chemistry* **279** (38): 40220–40226.
22. Lacasse, JJ, Provencher, VMI, Urbanowski, M, and **Schang, LM** (2005) Purine and non-purine pharmacological CDK inhibitors target initiation of viral transcription. *Therapy* **2** (1): 77–90. *This paper was submitted on request to the first issue of an “Open Publication” journal, which eventually turned out to be not too open, or successful.*
23. Morris, KE, **Schang, LM** and Brindley, DN (2006) Lipid phosphatase-2 activity regulates S-phase entry of the cell cycle in rat2 fibroblasts. *Journal of Biological Chemistry* **281** (14): 9297–9306.
24. Conn, K, Hendzel, MJ and **Schang, LM** (2008) Linker histones are mobilized during infection with herpes simplex virus type 1. *Journal of Virology* **82** (17): 8629–8646.
25. Lacasse, JJ, and **Schang, LM** (2010) During lytic infections, Herpes Simplex Virus Type 1 DNA is in nucleoprotein complexes with the properties of unstable nucleosomes. *Journal of Virology* **84** (4): 1920–1933.
26. Rieger, AM, Hall, BE, Luong, LT, **Schang, LM**, Barreda, DR (2010) Conventional apoptosis assays using propidium iodide generate a significant number of false positives that prevent accurate assessment of cell death. *Journal of Immunological Methods* **358** (1–2): 81–92.
27. StVincent, MR, Colpitts, C, Ustinov, AV, Muqadas, M, Joyce, M, Barsby, N, Epand, R, Epand, R, Khramyshev, AS, Valueva, OA, Korshun, VA, Tyrrell, L; and **Schang, LM** (2010) Rigid amphipathic fusion inhibitor, RAFI, small molecule antiviral compounds active against HCV, HSV, and other enveloped viruses. *Proceedings of the National Academy of Sciences, USA (PNAS)* **107**(40): 17339–17344.
28. Samadi, N, Bekele, R, Goping, IS, **Schang, LM** and Brindley, D (2011) Lysophosphatidate Induces Chemo-resistance by Releasing Breast Cancer Cells from Taxol-induced Mitotic Arrest. *PLoS ONE* **6**(5): e20608–17344.
29. Ciesek, S, von Hahn, T, Colpitts, CC, **Schang, LM**, Friesland, M, Steinmann, J, Manns, MP, Ott, M, Wedemeyer, H, Meuleman, P, Pietschmann, T, and Steinmann E (2011) The green tea polyphenol epigallocatechin-3-gallate (EGCG) inhibits 1 hepatitis C virus (HCV) entry. *Hepatology* **54**(6):1947–1955. (*impact factor 12.003*)
30. Conn, K, Hendzel, M, and **Schang, LM** (2011) Core histones H2B and H4 are mobilized during infection with herpes simplex virus type 1 (HSV-1). *Journal of Virology* **85** (24): 13234–52.
31. Lacasse, JJ, and **Schang, LM** (2012) Herpes Simplex Virus 1 DNA Is in Unstable Nucleosomes throughout the Lytic Infection Cycle, and the Instability of the Nucleosomes Is Independent of DNA Replication. *Journal of Virology* **86** (20): 11827–11300.
32. Gombos, R, Brown, J, Teefy, J, Gibeault, R, Conn, K, **Schang, LM** and Hemmings, D (2013) Vascular Dysfunction in Young, Mid-aged and Aged Mice with Latent Cytomegalovirus Infections. *Am J Physiol Heart Circ Physiol* **304** (2): H183–H194.
33. Colpitts, CC, Ustinov, A, Epand, RA, Epand, RM, Korshun, VA and **Schang, LM** (2013) 5-(Perylen-3-yl)ethynyl-arabino-uridine (aUY11), an arabino-based rigid amphipathic fusion inhibitor, targets virion envelope lipids to inhibit fusion of influenza, hepatitis C and other enveloped viruses. *Journal of Virology* **87** (7): 3640–3654.
34. Conn, KL, Hendzel, M, and **Schang, LM** (2013) The Differential Mobilization of Histones H3.1 and H3.3 by Herpes Simplex Virus 1 Relates Histone Dynamics to the Assembly of Viral Chromatin. *PLOS Pathogens* **9**(10): e1003695.

35. Colpitts, CC, and Schang, LM (2014) A small molecule inhibits attachment to heparan sulfate- or sialic acid-containing glycans. *Journal of Virology* **88** (14): 7806–7817.
36. Anggakusuma, Colpitts, CC, LM Schang, Rachmawati, H, Frentzen, A, Pfaender, S, Behrendt, P, Brown, RJP, Bankwitz, D, Steinmann, J Ott, M, Meuleman, P, Pietschmann, T, Steinmann, E (2014) Turmeric curcumin inhibits entry of all hepatitis c virus genotypes into human liver cells. *Gut* **63**(7):1137–1149.
37. Shott, RH, Meijer, Frost, K, Booth, SA, and Schang, LM (2014) Activation of Pro-survival CaMK4 β /CREB and Pro-death MST1 Signaling at Early and Late Times during a mouse model of prion disease. *Virology Journal* **11**:160–180.
38. Shott, RH, Appanah, C, Grenier, C, Tremblay, G, Roucou, X, and Schang, LM (2014) Development of Kinomic Analyses to Identify Dysregulated Signaling Pathways in Cells Expressing Cytoplasmic PrP. *Virology Journal* **11**:175–195.
39. Tsai, K, Chan, L, Gibeault, R, Conn, K, Dheekollu, J, Domsic, J, Marmorstein, R, Schang, LM and Lieberman, P (2014) Viral Reprogramming of the Daxx-Histone H3.3 Chaperone During EBV Early Infection. *Journal of Virology* **88** (24): 14350–14363.
40. Anggakusuma, Romero-Brey, I, Berger, C, Wieland, S, Colpitts, CC, Todt, D, Monteiro, P, Perin, P, Behrendt, P, Vondran, FWR, Xu, S, Goffinet, C, Schang, LM, Heim, MH, Bartenschlager, R, Pietschmann, T, Steinmann, E (2015) Interferon-inducible cholesterol-25-hydroxylase restricts hepatitis C virus via blockage of membranous web formation. *Hepatology*, **62**(3):702–714.
41. Perin, PM, Haid, S, Richard J. P. Brown, Doerrbecker, J, Schulze, K, Zeilinger, C, von Schaeuwen, M, Heller, B, Vercauteren, K, Luxenburger, E, Baktash, YM, Vondran, FWR, Speerstra, S, Awadh, A, Mukhtarov, F, Schang, LM, Kirschning, A, Müller, R, Guzman, CA, Kaderali, L, Randall, G, Meuleman, P, Ploss, A, Pietschmann, T. (2016) Flunarizine Prevents Hepatitis C Virus Membrane Fusion in a Genotype-dependent Manner by Targeting the Potential Fusion Peptide within E1. *Hepatology* **63**(1): 49–62.
42. Gibeault, RL, Conn, KL, Bildersheim, MD, Schang, LM. (2016) An Essential Viral Transcription Activator Modulates Chromatin Dynamics. *PLoS Pathogens* 2016 Aug 30;12(8):e1005842.

Review Articles

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Japanese Patent Application Serial No. 2009-551286; European Union Patent Application serial number 08762936.6 (2132215).

Current status

- Issued in the US (US patent No. 8,633,308) January 21, 2014 (expires on December 7 2030).
- Issued in China (patent No. 1,430,585), March 11, 2014.
- Issued in Japan (patent No. 5,539,735), April 1, 2014.
- Issued in the EU (patent No. 2,132,215), September 23, 2015.
- Undergoing examination in Canada