

Yves A. Lussier, MD

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Academic Training

- 1985 B. Engineering, Faculty of Applied Sciences, University of Sherbrooke, PQ, Canada
- 1989 M.D., Faculty of Medicine, University of Sherbrooke, PQ, Canada

Licensure

- 1985 Quebec Professional Engineering License
- 1989-present License of the Medical Council of Canada
- 1991-present Full Medical License, College of Physicians of Quebec
- 1998-present Full Medical License, College of Physicians and Surgeons of Ontario
- 2001-2006 Full Medical License, Office of the Professions, State of New York

Post-Doctoral Training (traineeship)

- 1989-1990 Internship, CHUL (Laval University Hospital and affiliates), Quebec, PQ, Canada
- 1990-1992 Resident in Family Medicine, CHUS (University of Sherbrooke Hospital), PQ
- 1998-2001 Post-Doctoral Research Fellowship, Department of Biomedical Informatics, College of Surgeons and Physicians, Columbia University, New York, New York.

Board Certifications

- 1991 Board Certified, College of Family Physician of Canada (License # 206070)
- 1998 Recertification, College of Family Physician of Canada (License # 206070)

Professional Activities, Organizations and Societies

NIH/ National Library of Medicine Long Range Planning Panels

- 2005-2006 Member, Planning Panel on NLM Support for Genomic Science of the 21st Century, National Library of Medicine.

Editorial Board Positions

- 1993-1995 Canadian Medical Informatics Journal.
- 2003-present SNOMED International Standards Board / College of American Pathologists
- 2005-2007 Associate Editor on the Editorial Board of Computers in Biology and Medicine (CBM)
- 2006-present Editorial Board member, Journal of Biomedical Informatics
- 2007-present Reviewing Editor on the Editorial Board of Computers in Biology and Medicine (CBM)

Scientific Board Positions

- 2002-2004 Advisory Board of the “Infostructure de recherche intégrée en santé du Québec” (IRIS-Project / McGill).
- 2003-2005 Biomedical Informatics Advisory Board, First Genetic Trust
- 2004-2006 Scientific Advisory Board for the Clinical Bioinformatics Ontology, Cerner Corp.
- 2005-2006 Primary Academic Partner, IBM Center for Computational Medicine, IBM Healthcare and Life Sciences.

Grant Review Committees:

- 2002-2005 CAT Grant Review Committee, Columbia Center for Advanced Technology
- 2002-2004 Advisory Board of the “Infostructure de recherche intégrée en santé du Québec” (IRIS-Project / McGill)
- 2003 NSF Grant Review Panel, “Information Technology Research” Medium Panel, TATRC Grant Review Committee, National Science Foundation, Bethesda, April 28-30 2003.
- 2003 Homeland Security Product Line Review, *Telemedicine and Advanced Technology Research Center (TATRC)*, Aug 5, 2003
- 2003 NIGMS Grant Review Committee, “Pilot projects for models of infectious disease agent study (MIDAS)” grant application review, National Institute for General Medical Sciences in Bethesda, Nov 12-3 2003.
- 2006-present NIH Center for Scientific Review, Biodata Management and Analysis (BDMA), June 12-13, 2006; June 4th – 5th, 2007.
- 2007 The Israel Science Foundation (ISF), Phenomic Applications
- 2007 Science Foundation Ireland (SFI), Strategic Research Clusters in Clinical genomics and Proteomics

Conference Organizing

- 2005 Program Committee for the Workshop on Biomedical Ontologies and Text Processing, 4th Europ. Conf. on Comput. Biology (ECCB), Madrid 28th Sept.
- 2005 Session Chair: Session: S28 - Papers Natural Language Processing Methods, American Medical Informatics Association 2005 Annual Symposium, Washington DC, 10/24.
- 2006 Program committee and Co-Chair for the Sessions "Towards a Semantic Web for Biology", Pacific Symposium in Biocomputing, Hawaii.
- 2006 Scientific Program Committee, Biomedical Ontology in Action, November 8, 2006, Baltimore, Maryland, USA. Workshop organized by the National Center for Ontology Research (NCOR) and the Working Group on Formal Bio-Medical Knowledge Representation of the American Medical Informatics Association (AMIA).
- 2007 Member of the Scientific Program Committee, “Bioinformatics and Disease”, 15th Annual International Conference on Intelligent Systems for Molecular Biology (ISMB)& 6th European Conference on Computational Biology (ECCB) Vienna, Austria: July 21-25, 2007.
- 2007 Member of the Scientific Program Committee, Foundations Track Chair for the 2007 American Medical Informatics Association Fall Symposium, Foundations of Informatics Track, Chicago, October 10-14, 2007.
- 2007 Member of the Programme Committee. Language in Biology and Medicine co-located with the 18th Genome Informatics Workshop, Singapore December 5 - 6, 2007 <http://lbn2007.biopathway.org/>
- 2007 Member of the Scientific Program Committee, Chair of the session 'Translational Medicine'; 'International Conference on Biomedical Ontologies (ICBO)' – renamed “Standards and Ontologies for Functional Genomics (SOFG) conference”. July 2007.
- 2008 Session Chair and head of the Scientific Review Committee for “ Molecular Bioinformatics for Diseases: Protein Interactions and Phenomics” , Pacific Symposium on Biocomputing Session, January 4-8, 2008
- 2008 Founding Session Chair, AMIA Translational Bioinformatics, march 12-15 San Francisco.

Service to Professional Societies, Conference Committees and Chair

- 2003-present Director, Genetic and Genomics Working Group, SNOMED Editorial Board /

- 2005 College of American Pathologists.
Session Chair, S28 - Papers - Natural Language Processing Methods, American Medical Informatics Association (AMIA).

Workshops

- 2004 Faculty. The fMRI Data Center Summer Workshops in fMRI Informatics, *Dartmouth College*, Hanover, July 12 - July 14, 2004. ("Phenotypic Networks and the art of Neuroinformatics")
- 2004-
NIH/NLM Multimodal Bio-Medical Systems, An IEEE/NLM Workshop 2004. Workshop Organizers: Wong S, Harvard Medical School, Dr. Chung Sheng Li, IBM, Professor Jie Chen, Brown University, The Lister Hill Auditorium, National Library of Medicine, Bethesda, Maryland, USA (October 22, 2004).
- 2005 Buffalo-Columbia Workshop on Ontologies and Cancer Bioinformatics. Friday Oct 14th, University of Buffalo. "Bio-ontologies and Database Integration".
- 2006 Biomedical Ontology in Action (KR-MED International Workshop); November 8, 2006, Baltimore, Maryland, USA. Workshop organized by the National Center for Ontology Research (NCOR) and the Working Group on Formal Bio-Medical Knowledge Representation of the American Medical Informatics Association (AMIA), co-sponsored by the AMIA Formal (Bio)Medical Knowledge Representation Working Group.

Special Committees Appointments

- 1991-present Member of the PSG-06 Committee of the Computerized Patient Record Work Group of the American Medical Informatics Association (AMIA).
- 1994-present Member of the Family Medicine Informatics Committee of American Medical Informatics Association (AMIA).
- 1999-present Member of the Informatics Working Party the World Organization of National Colleges, Academies and Academic Associations of Family Physicians (WONCA).
- 2003-present Member of the clinical genomics working group, American Medical Informatics Association (AMIA)

Manuscript Reviewer

- American Medical Informatics Association Fall Symposium
- BMC Medical Informatics and Decision Making
- BMC Bioinformatics
- Briefings in Bioinformatics
- Canadian Journal of Medical Informatics
- Drug Discovery Today
- European Conference on Computational Biology (ECCB)
- Expert Review of Molecular Diagnostics
- Genome Biology
- Genomics
- International Journal of Medical Informatics
- Annual International Conference on Intelligent Systems for Molecular Biology (ISMB)
- Knowledge Representation in Medicine (KR-MED)
- Journal of Biomedical Informatics
- Journal of the American Medical Informatics Association
- Journal of Decision Support Systems
- Medinfo Proceedings
- Pacific Symposium on Biocomputing
- Pharmacogenetics and Genomics

Memberships

- 1985-1989 Canadian Council of Professional Engineers (CCPE).

- 1985-1996 Club de recherches cliniques du Québec (CRCQ).
- 1991-1998 Canadian Medical Informatics Association (COACH).
- 1993-1995 Institute of Electrical and Electronics Engineers (IEEE).
- 1989-present Canadian Medical Association (CMA).
- 1990-present American Medical Informatics Association (AMIA).
- 2005-present American College of Medical Informatics (ACMI)
- 2007-present International Society for Computational Biology (ISCB)

Academic Appointments

- 1994-2001 Adjunct Professor, Department of Family Medicine, Faculty of Medicine, *University of Sherbrooke*, Canada. (in sabbatical leave from 1998-2001)
- 1995-2001 Associate Researcher, Clinical Research Center of the “Center Hospitalier Universitaire,” *University of Sherbrooke*, Canada. (in sabbatical leave from 1998-2001)
- 2001-2006 Assistant Professor, Department of Biomedical Informatics, College of Physicians and Surgeons, *Columbia University*, New York, New York.
- 2002-2006 Assistant Professor, Department of Medicine, College of Physicians and Surgeons, *Columbia University*, New York, New York.
- 2004-2006 The Columbia Center for Computational Biology and Bioinformatics (C2B2) and the Joint Center for Systems Biology of *Columbia University*, NY, NY.
- 2006 -present Associate Professor, Department of Medicine (Section of Genetic Medicine), Division of Biological Sciences, *The University of Chicago*, Chicago, IL.
- 2006 -present Fellow, Computation Institute of The University of Chicago and Argonne National Laboratory, Chicago, IL.
- 2007 -present Fellow, Join the Institute for Genomics & Systems Biology (IGSB) of The University of Chicago. Areas of investigation: Computational Biology and Informatics (CBI) and Clinical Genomics (ClinG).

Clinical Appointments

- 1992-2000 Attending Physician, Centre Hospitalier Universitaire de Sherbrooke (CHUS - integrated the Hôtel-Dieu Hospital of Sherbrooke in 1997), QC, Canada – ER, Intensive Care Unit and Wards. (in sabbatical leave 1998-2000)
- 1992-1999 Medical Staff, Vimy Clinic ('92-96), St-Vincent Clinic ('96-99), Sherbrooke, Canada.
- 2001 Attending Physician, Emergency Medicine Department, Windsor Hospital, QC, Canada.
- 2002-2005 Attending Physician, Department of Medicine, Columbia University Medical Center in affiliation with the New York Presbyterian Hospital, New York.

Honors and Scholarships

- 1981 Mention Mention for outstanding contribution to the social and cultural activities of the English Immersion Program, *York University*
- 1983 Merit of Excellence Engineering work term, *IBM*.
- 1984 Merit of Excellence Engineering student excellence merit, *Quebec Iron and Titanium Inc.*
- 1986 Graduate Student Research Scholarship Fond de Recherche en Santé du Québec (*FRSQ*).
- 1986 Merit of Excellence Best research of a graduate student, Faculty of Medicine, *University of Sherbrooke* and *FRSQ*
- 1987 Merit of Excellence Best research of a graduate student, Faculty of Medicine,

- 1987 Research Scholarship *University of Sherbrooke and FRSQ.* Graduate Student in Medicine , The Kidney Foundation of Canada
- 1987 Research Scholarship Graduate Student in Medicine, Fond de Recherche en Santé du Québec (*FRSQ*).
- 1991 Merit of Excellence Best presentation, Scientific Meeting of the Department of Family Medicine, University of Sherbrooke
- 1994 Innovation “Octas” Researchers of Purkinje Inc. for the Innovation and excellence of a
- 1994 Excellence “Octas” Computerized Patient Record. From the *Federation of Computer Scientists of Quebec*. <http://www.fiq.qc.ca/octas2000/index.htm>
- 2003 IBM Faculty Award *IBM Faculty Award (\$12,000), June 15, 2003*
- 2003 IBM Faculty Award *IBM Faculty Award (\$28,000), Dec 22, 2003*
- 2004 IBM Faculty Award *IBM Faculty Award (\$20,000), June 9, 2004*
- 2004 Faculty Mentoring Award, *Columbia University* First Awardee, Columbia University Faculty Mentoring Award (FMA) for faculty member in the Biomedical Sciences and GSAS affiliated professional schools
- 2005 Inducted Fellow American College of Medical Informatics (elected by members) <http://www.amia.org/college/>

Commencement and Keynote Lectureships

- 2001 Commencement Speaker Medical Information Systems Technology (MIST) Program, *SUNY Downstate Medical Center*, New York, Oct 16,2001.
- 2002 Keynote Speaker Annual Meeting of the *Canadian Institute for Health Information (CIHI)*, Spring 2002 Symposium: Partnerships for Health Information Standards, “Genomic Medicine and Terminological Standards.” June 15th.
- 2003 Keynote Speaker *Special Libraries Association Conference*. 3:30 p.m. - 4:30 p.m. at the Hilton New York on the Avenue of the America’s. Knowledge Technologies, Proteomics Genomics, Part I: (Dr. Donald Lindberg, NLM) Proteomics Genomics, Part II: (Dr. Stuart Brown, NYU) Information Hubs for Molecular Biology, Databases and Software Keynote speaker on Monday, June 9, 2003 (The Honorable Madeleine Albright)
- 2004 PhD Convocation Faculty Address *Columbia University PhD Convocation*, “The Subculture of One’s Specialty in Graduate Studies”, 5/17/2004.
- 2006 Annual Investigator’s Address Collecting Phenotypic Information from Multiple Databases for Correlation with Genomics. *Board of Regents, National Library of Medicine – NIH, NLM Board Room*, Feb7-8, 2006. <http://www.nlm.nih.gov/od/bor/2-06bor.pdf>

Other Prestigious Lectureships

- 2001 Columbia Seminar Speaker Decision Making at the Moments of Individual and Collective Survival Crisis. University Seminar on Computers, Man and Society, *Columbia University*, March 2*, 2001. .
- 2002 NIST Workshop Speaker “Clinical Genomic Systems and Related Clinical Standards”. Workshop on Information Technologies for Healthcare: Barriers to Implementation. *National Institute of Standards and Technology (NIST)*, Washington, Aug. 1-2., 2002.
- 2002 IBM Research Seminar Speaker "Knowledge Technologies for Clinical and Post-Genomics IT Interoperability". *IBM Watson Research Center*, Computational Biology Seminar. Yorktown, NY, June 19,2002.

- 2003 International Guest Speaker First Technical Theme-Biomedical Informatics, *Agency for Science, Technology and Research (A*Star)* in Singapore, Feb 10th, 2003.
- 2003 NIH Seminar Speaker Desiderata for Original and Classical Data Sharing and Reuse. *NIH/ NCI Center for Bioinformatics*, Seminars, Ontologies and Terminologies in Biomedical Research. Washington. March 31, 2003.
- 2003 Invited SFN Panelist Automating Terminological Networks to Link Heterogeneous Biomedical Databases Sharing Compatible Schemas Panel on Neuroscience Ontologies. Special Interest Social: Human Brain Project Social: Creating a Shared Neuroscience Ontology—The Pros and Cons of Different Requirements and Approaches in a Nutshell. *Soc for Neuroscience (SFN)* New Orleans, Nov 10, 2003.
- 2005 NSF Workshop Speaker From Single Gene Diseases to genomic Diseases, an Informatics Perspective. *NSF & MITRE Corporation*. Disease Modeling and Prediction workshop, March 17th-18th, 2003, McLean Virginia.
- 2005 SOFG Guest Speaker Computational Ontologies for High Throughput Visualization and Analysis of the Phenome. *Standards and Ontologies for Functional Genomics 2*. Oct 23, 2004 - Oct 26, 2004, University of Pennsylvania School of Medicine, Philadelphia, Pennsylvania.
- 2005 International Guest Speaker 3rd International Symposium of the *National Institute of Informatics of Japan*, “e-Biology Initiative: Towards New Frontiers of Biology”, Computational approaches to high throughput analyses of non-molecular phenotypes, Tokyo, March 10-11, 2005. <http://www.nii.ac.jp/intsympo/03/03.html>
- 2005 Rockefeller Seminar Speaker Seminars in Clinical Research series at The *Rockefeller, University*. Computational Methods for Systems Biology and Medicine: Approaches to high throughput analyses of phenotypes”, March 30th 2005.
- 2005 Harvard Seminar Speaker Computational approaches for high throughput analyses of phenotypes: bridging the gap between clinical medicine and genome biology, Computational Biology Group at the Bauer Center for Genomics Research, *Harvard University*, May 20th.
- 2005 International Guest Speaker Knowledge-Based Bioinformatics Workshop, Ontologies, the semantic web and intelligent systems for genomics. *Concordia University*. Sept 21-23, Montreal, Canada. <http://www.cs.concordia.ca/FungalWeb/KBB.html>
- 2007 International Guest Lecturer *DAGSTUHL Seminar 07132*–“Ontology Interoperability: All you need is statistics” / “Toward Interoperability of Biomedical Ontologies”, 27.03.2007-30.03.2007 <http://www.dagstuhl.de/07132>
- 2007 Highlights of 2007 (ISMB) Lussier YA*, Liu Y, Sam L, Li J. Emerging Systems Properties in a Comprehensive Genomic Network of Prokaryotic Traits. (213 submissions, 10% acceptance rate) . 15th Annual International Conference on Intelligent Systems for Molecular Biology (ISMB) & 6th European Conference on Computational Biology (ECCB)

Grants, Fellowship Support and Contracts

- 1991-1993 Senior VP of Research and Development and of International Affairs, Purkinje.com. Conceived, promoted and established three R&D-based fiscal shelter investments totaling \$18,000,000 (2nd, 3rd and 4th rounds of funding in the R&D of Purkinje). Managed \$4,000,000 of the total R&D budget over four years.
- 1995 PI- *Medical Research Council of Canada*, Funds of the Health Evidence and Application Linkages Network (*HEALNet-RELAIS*). Advanced Electronic Health Data Structure (phase I).
- 1996 PI- *Medical Research Council of Canada*, Funds of the Health Evidence and Application Linkages Network (*HEALNet-RELAIS*). Advanced Health Electronic Data Structure, Research on Advanced Symbolic Nomenclature-Based Retrieval and Encoding of Health Concepts (phase II).
- 1997 Co-Investigator, *Medical Research Council of Canada*, Funds of the Health Evidence and Application Linkages Network (*HEALNet-RELAIS*). Development of a Clinical Data Model and System for Home-Based Care.
Principal Investigator: T. Freeman, M.D.,
Co-Inv.: Y.A. Lussier, R. Bernstein, J. Anderson, R. Smuckler
- 1997 PI- *Medical Research Council of Canada*, Funds of the Health Evidence and Application Linkages Network (*HEALNet-RELAIS*). Advanced Health Electronic Data Structure, Research on Evidence-Based Queries of Health Databases (phase III).
- 1998-2001 Postdoctoral Research Fellowship - *Medical Research Council of Canada*
- 2001-2003 Co-investigator, NIH Grant from NLM (R01 LM06274), “Unlocking data from medical records with text processing”, (Carol Friedman overall PI - \$878,193 total award)
- 2001-2002 Co-PI, NASA Grant (VCU-528753/PO P417322, HRSA / Office of Advanced Telemedicine Grant, “VigiLENS Patient Health Monitoring”, (Edward H. Shortliffe PI - \$1,266,000 total award)
- 2002-2003 Co-PI, NASA Grant (HRSA / Office of Advanced Telemedicine Grant, “VigiLENS Patient Health Monitoring- Phase II”, (Ted Shortliffe overall PI - \$850,000 total award)
- 2002-2003 PI – NYSTAR Center for Advanced Technology Grant # 21240026, “Knowledge Base of Clinical Traits for Human Disease Genes” (\$19,000)
- 2002-2003 PI – NYSTAR Center for Advanced Technology Grant # C020054- , “Clinical-Genomics Knowledge-Bases for High Throughput Drug Discovery” (\$44,471)
- 2003/8-2007/7 Co-PI, NIH Grant from NLM (R01 LM007659-01), “Capturing and Linking genomic and clinical information” (Carol Friedman PI - \$1,400,000 total award)

The long-term aim of this project is to use natural language processing (NLP) to build a high throughput tool for facilitating cancer research by automatically extracting and organizing clinical and genetic information from the Electronic Medical Record (EMR) and from journal articles. Our research involves advanced NLP techniques to: 1) enable the mining of phenotypic and genotypic data in the EMR; 2) automatically amass knowledge concerned with cancer and biomolecular relationships from journals; 3) develop a WEB-enabled visualization tool for researchers that will present diverse views of the knowledge
- 2003-2004 PI – NYSTAR Center for Advanced Technology Grant # - , “Intelligent Cooperative Communications for Cross-Organization and Real-Time Responsiveness” (\$43,140)
- 2003-2007 5U54 AI057158-02 “Ian Lipkin (PI) 2003/09 – 2008/02 \$59,872,920 (Informatics Core / Lussier \$5,117,861)
NIAID Northeast Research Center of Excellence for Biodefense and Emerging Infections Diseases
This regional Center of Excellence has major basic and translational programs in six thematic areas: B-Cell related Prophylaxis and Therapeutics, Bacterial Pathogenesis and

Therapeutics, Vaccine Platform, Viral Pathogenesis and Therapeutics, Smallpox Vaccine and Pathogen Detection and Diagnosis. These programs will intersect with cores that provide support in Informatics, Proteomics, Protein Expression, Monoclonal Antibodies, Animal Models and Administration.

Role: Director of the Biomedical Informatics Core

- 2004-2006 PI 1K22 LM008308-01 –2004/5 – 2007/4 \$433,445
NLM Semantic Approaches to Phenotypic Database Analysis
The long-term goal of this project is to build innovative informatics tools, capable of automatically querying and organizing phenotypic data (traits, syndromes, etc.) across Phenotype databases, to facilitate phenotypic research that aims to unlock the gene-disease-relationships.
- 2004 5G08 LM007198-03 – Lois Blaine (PI) 2002/2 – 2005/1 \$450,000
NLM ICTVdb: The Universal Virus Information System, (Lussier: subcontract of \$80,000)
- 2004-2005 PI- John Wiley and Sons (Sponsored Research) \$200,000,
Ontology-Anchored Methods for Computable Biomedical Excerpts.
This project is designed to research and develop innovative computational methods, capable of automatically querying and organizing excerpts of scientific publications pertaining to evidence-based medicine and cancer. The long-term goal of this research is to significantly improve the recall and precision of personalized queries of the excerpts, with focus on cellular and clinical phenotypes.
- 2004-2005 PI - NYSTAR/CAT UPN: 04240001 5-67725) \$89,811
Ontology-based Retrieval of Individualized Excerpts
- 2005-2010 1U54CA121852-01A1 (9/2005 – 7/2010) Califano (PI) \$18,500,000
National Center for the Multiscale Analysis of Genomic and Cellular Networks (MAGNet) (Phenotypic NLP and Ontology / Lussier \$600,000)
Mapping transcriptional, structural, signaling, metabolic, and drug interactions is still fragmented and a homogeneous framework for the comprehensive organization and analysis of molecular cellular interactions, while still elusive, constitutes a highly relevant scientific goal. We thus propose elucidating biological function and framing quantitatively related health or disease processes using knowledge-based and physics-based methods.
Role: Lead Investigator on Phenotypic Natural Language Processing and Ontology
- 2007 PI, caBIG Master Agreement (Modification #10)- 79581CBS10
- 2007 Co-investigator (Grassi M PI) I- The International Retinal Foundation
Role of Canonical Wnt Signaling in Diabetic Retinopathy (\$99,835)

Departmental, University and Hospital Committees

- 1986 Member, Undergraduate Medical Studies Revision Committee, Faculty of Medicine, University of Sherbrooke, Canada.
- 1991-1992 Planning and Evaluation Committee of project FAMUS (Computerized Patient Record) of University of Sherbrooke, Canada.
- 2001-2003 Member, New York Presbyterian Hospital (NYPH) Patient Safety Committee
- 2002-2005 Member, NYPH/Columbia Presbyterian Medical Center IT Clinical Informatics Operations Committee
- 2003-2005 Member, NYPH Clinical Alert Committee
- 2006 Committee on Appointments and Promotions (CAOP), promotion of Dr. Paul Chang.
- 2006-present Member, Committee on Clinical Pharmacology and Pharmacogenomics, University of Chicago
- 2006-present Member, Biological Science Division Information Services Advisory Committee, University of Chicago
- 2006-present Investigator, University of Chicago Cancer Research Center
- 2006-present *Chair*, Velos Advisory Committee, Biological Science Division, University of Chicago
- 2006-present *Chair*, Biomedical Informatics Facility Advisory Committee, Biological Science Division, University of Chicago

Teaching Experience and Responsibilities

Clinical

- 1991-1996 Clinical Instructor to residents in Family Medicine, Centre Hospitalier Hôtel-Dieu de Sherbrooke, *University of Sherbrooke*, Canada
- 1994-1998 Clinical Instructor, Department of Medicine, *University of Sherbrooke*, PQ, Canada.
- 2002-2005 Clinical Instructor, Department of Medicine, *Columbia University*.

Informatics Courses

- 1986 Tétreault L, Lussier YA, Biostatistics Course - Masters in Experimental Medicine, Faculty of Medicine, *University of Sherbrooke*.
- 1992 Lussier YA . Faculty of Medicine, *University of Bangui*, Central African Republic(Invited Professor in Medical Informatics), Feb 1992.
- 1995 Côté RA; Rothwell DJ; Lussier YA; Rector A: "SNOMED International and the Computerized Patient Record". Tutorial, Proceedings of the Eighth World Congress on Medical Informatics MEDINFO '95, Vancouver, July 25.
- 1995 Rothwell DJ; Côté RA; Lussier YA; Brochu L: "*A Data Structure for Medical Language: the Extended SNOMED Model*". Tutorial, Symposium on Computer Applications in Medical Care (SCAMC), New Orleans, Oct. 28 - Nov. 1.
- 1995-1997 Lussier YA. Annual Scientific Conference of the Royal College of Physician and Surgeons of Canada. Years 1995,1996, 1997.
- 1996 Côté RA; Rothwell DJ; Lussier YA; Brochu L: "*A Data Structure for Medical Language: the Extended SNOMED Model*". Tutorial T40, Annual Fall Symposium on Computer Applications in Medical Care (SCAMC), Washington, D.C., Oct. 27.

- 1997 Lussier YA: "Advanced Relational and Object-Oriented Database using the Systematized Nomenclature of Human and Veterinary Medicine - SNOMED International". Tutorial, Canada's Health Informatics Association COACH Conference 22 / Scientific Program, Vancouver, April 14-16.
- 1997 Lussier YA; Campbell K; Spackman K: "Using SNOMED in Relational and Object-Oriented Database Designs". Tutorial, American Medical Informatics Association (AMIA) Annual Fall Symposium, Nashville, TN, October 25-29.
- 1998 Spackman K, Lussier YA, Campbell K: "Recording, Storing, and Retrieving Clinical Information Using SNOMED-RT". Tutorial, American Medical Informatics Association (AMIA) Annual Fall Symposium, Orlando, FL, Nov. 7-11.
- 1999 Lussier YA: "History of standard coding systems", G4020 Representation and Coding of Medical Data, Department of Medical Informatics and Columbia Genome Center, School of Physicians and Surgeons, *Columbia University*, Jan. 29 1999
- 1999 Lussier YA: "Software Project Management", G4098 Topics In Medical Informatics, Department of Medical Informatics and Columbia Genome Center, School of Physicians and Surgeons, *Columbia University*, Nov. 1999.
- 1999 Lussier YA: "Basic Web Design Techniques", G4030 User Interfaces in Medicine, Department of Medical Informatics and Columbia Genome Center, School of Physicians and Surgeons, *Columbia University*, Oct 4 1999.
- 1999 Lussier YA: "Advanced Web Design Techniques", G4030 User Interfaces in Medicine, Department of Medical Informatics and Columbia Genome Center, School of Physicians and Surgeons, *Columbia University*, Oct. 11.
- 2001 Lussier YA. "Pen-based Computing", G4030 User Interfaces in Medicine, Department of Medical Informatics and Columbia Genome Center, School of Physicians and Surgeons, *Columbia University*, April 27
- 2001-2004 Course Director, G4099. Research Seminars, Department of Biomedical Informatics, Columbia University (50 students).
- 2003-2004 Module Instructor: "Intro to Biomedical Informatics" in BMEN E1001x Engineering In Medicine, Dept. of Biomedical Engineering, Fu Foundation School of Engineering and Applied Sciences, *Columbia University*, Oct. 27 2003, Nov. 8 2004..
- 2003-2005 Course Director, G4055 Decision Support in Biomedicine, Department of Biomedical Informatics, *Columbia University* (24 students).
- 2004 Module Instructor: G4099. "Computational approaches to high throughput analyses of non-molecular phenotypes" Research Seminars, Department of Biomedical Informatics, Columbia University (55 students), Feb 17th.
- 2004-2005 Methods in Biomedical Informatics (G4002), 4 modules: Department of Biomedical Informatics, Columbia University (25 students). Modules: Theories on Biological Data, Reasoning and Logic, Biological Ontologies, Knowledge Engineering, *Columbia University*.
- 2006 Module Instructor: "Computations with Biomedical Ontologies in Medical Applications", Advanced Biotechniques, University of Chicago (April 19th).
- 2007 Module Instructor: "Genomic approaches to accelerate the discovery and translation of biomedical knowledge" 10/4/07, BIOS 25406 "Translational Biomedical Research, from bench to patient bedside".

Faculty Advisory Committee or Faculty Mentorship for

- Sangeeta M. Bhorade, MD, Associate Professor of Medicine, Medical Director, Lung Transplant Program, 2006-present
- Savitri E. Fedson, MD, Assistant Professor of Medicine, UC, 2006-present
- Andi Minn, MD, PhD, Instructor of Radiation & Cellular Oncology, UC, 2007-present

- Michael Grassi, MD, Assistant Professor of Ophthalmology, 2006-present (redaction of grants, mentor on future K award)

Graduate Research Advisor for

- Ying Tao, M.D., Ph.D (completed 2006). –Analyses and visualization of gene-phenotype relationship networks 2001-6, Columbia University
- James Chen, MD, Resident in Internal Medicine Georgetown University ,Rotations 11-12/2006 (subintern) –Information theoretic Distances in Phenotypic Ontologies, 2004
- Spiro P. Pantazatos, M.Sc., Ph.D. Candidate – Cross-Scale Mapping of Gene Expression to Neuroimaging Datasets via Semantic Decomposition, Columbia University 2004-2006 (one year rotation and follow-up)
- Lee Sam, M.A., Multistrategy Approaches to Retrieving Medical and Biological Evidence from Excerpts including Knowledge Extraction using Natural Language Processing, Ontologies-Anchored Classification and Case Based Reasoning. 2004-2006
- James Deitzer, Bioengineer, M.A. candidate, 2005, Columbia University ,Genomic Ontologies in SNOMED.
- Daniel Rappaport, M.A. candidate, 2004-2005, Columbia University, Natural Language Processing and Ontological Approaches to Assigning the Cellular and Anatomical Context of Genetic Expression and Case Base Reasoning of Evidence Based Medicine.
- Tzu-Lin Hsiao, M.D., PhD candidate (rotation) – Ontology-Anchored Phenomics & Anatomic, 2005, Columbia University
- Chintan Patel, M.Sc., PhD candidate (rotation) – Graph theoretic approaches to phenotypic integration, 2004, Columbia University
- Aylit Schultz, MD, (subintern) – Clinical Phenotypes of Disease Genes, 2002-2003, Columbia University
- Tara Borlawsky, M.Sc. – Distributed Knowledge Management for Clinical Alerts, 2004, Columbia University.
- Xiaoyan Wang, M.Sc. – Pathway Analysis of Phenotypic Networks, 2003-4, Columbia University
- Matthew A. Neimark, M.D.Ph.D. candidate (rotation) – Terminologies & Individualized Medicine, 2002, Columbia University
- Te-Hui Kuo, M.D., M.A. (Post-Doctoral Fellowship) – Mining Drug-Disease Contraindications, 2001-2003, Columbia University
- Chani Weinreb PhD candidate (rotation) – Biomedical Database Interoperability, 2001, Columbia University
- Huinar Quek, M.A. – Biomedical Database Interoperability, 2002-2003, Columbia University- currently Senior Medical Informatics Consultant, Ministry of Health (Singapore), Visiting Lecturer, Biomedical Engineering Program, Nanyang Technological University

Fellowship advisor for

- Tanguy Seiwert, MD (Microarray Analysis), Pulmonary Fellow, 2006-present.
- Chern-Sing Goh, Ph.D. (Post-Doctoral Fellowship) – Prokaryotic Phenome -2004-2005, Currently post-Doctoral Fellow at Gerstein Laboratory – Yale University.
- Hedi Hegyi, Ph.D., (Post-Doctoral Fellowship) , Columbia University – Design of Microarray for Molecular Medicine, 2004-2005 –Currently Fellow at the Institute of Enzymology, Hungary
- Michael Cantor, M.D. M.Sc. (Post Doctoral fellowship) – Genomic Medicine, 2001-2004, Columbia University – Currently Chief Medical Officer in Bellevue Hospital of New York University
- Vincent Delbago, M.D., M.A. (rotation) – Business Informatics, 2004, Columbia University

Academic advisor for

- Pallav Sharda, M.A., 2002-2003, Columbia University
- Vincent M. Delbago, M.D., M.Sc., 2002-2004, Columbia University

- Jianbo Lei, M.D., M.Sc., 2002-2004, Columbia University
- Kwok-Tim Chan, M.D., M.Sc., 2003-2004, Columbia University; currently Senior Medical Officer (Communicable Disease Information System), Surveillance and Epidemiology Branch, Centre for Health Protection, Department of Health, Hong Kong.
- Sameer Malhotra, M.B.B.S., M.A., 2003-2004, Columbia University.

Other graduate research advisory roles for

- Ankit Desai, MD, 2006-present, Resident in Medicine, University of Chicago (preliminary studies, K-award revisions, scientific manuscript and statistics)
- Sascha Goonewardena, MD, 2007-present, Rotation, Resident in Medicine, (review of literature and microarray analysis)
- Michael Bales, Ph.D. Candidate, 2005-present, Columbia University
- Jeeyai Choi, Ph.D., 2002-2003, Columbia University
- Paola Karina Tulipano, M.A., Ph.D. Candidate, 2003-2004, Columbia University
- Neil Sarkar, Ph.D., 2002-2004, Columbia University

Other Professional Activities

Board of Directors Positions

- 1983-1984 Council of the Faculty of Engineering, University of Sherbrooke (two mandates), Canada.
- 1985-1986 Council of the Faculty of Medicine, Université de Sherbrooke, Canada.
- 1992-1995 Board of Directors, Purkinje Inc. (advanced electronic medical records), <http://www.Purkinje.com>
- 1994-1997 Council of Physicians, Dentists and Pharmacists of the Centre Hospitalier Hôtel-Dieu de Sherbrooke (CMDP-HDS).
- 1996-1997 Council of Physicians, Dentists and Pharmacists of the University of Sherbrooke Hospitals and Medical Centers (CMDP, CUSE-CHUS-HDS-HSVP).
- 2002-2004 Board of Directors, Medical Informatics and Technology Applications Consortium (MITAC), a NASA Space Partnership Development.
- 2003-2006 Governance Board, Northeast Research Center of Excellence in Biodefense and Emerging Infectious Diseases. <http://www.nbc.columbia.edu/>
- 2006 Scientific Advisory Board, UC Lung SPORE application

Senior Management Positions

- 1982-1983 President, Engineering Student Association (AGEG) of the University of Sherbrooke, Canada.
- 1983-1998 Founder and President, YAL Inc.
- 1990-1994 Co-instigator, Inventor, Senior Director of Research, Medical Development of Purkinje Inc., <http://www.purkinje.com/>
- 1994-1997 Director of Quality of Health Care, University of Sherbrooke Hospitals and Medical Centers (CHUS), Canada (CMDP).
- 2001-2006 Clinical Director, Center for Advanced Technology and Information Management – Columbia Genome Center, Department of Biomedical Informatics and Department of Computer Science, Columbia University.
- 2003-2006 Director, Biomedical Informatics Core, Northeast Research Center of Excellence in Biodefense and Emerging Infectious Diseases. <http://www.nbc.columbia.edu/>
- 1993-present Co-Founder and President, Accurate Informatics and Medicine Inc.
- 2006-present Associate Director for Informatics, University of Chicago Cancer Research Center
- 2006-present Director, Center for Biomedical Informatics, Dept. of Medicine, University of Chicago

Professional Positions

- 1982-84 Computer Analyst & Programmer (part time) to Dr. Léon Tétrault, M.D. PhD., developed a comprehensive clinical trial and analytic information system used in three consecutive trials phase 3a and 3b.
- 1982,83,84 Computer Analyst, three four-month internships, Québec, IBM Canada.
- 1984 Product Engineer, one four-month internship, IBM Canada, Toronto, Canada.
- 1985-1989 Research assistant (part time) in renal physiology, Dr Gérard E. Plante MD, PhD, Director of Department of Physiology, Faculty of Medicine, Université de Sherbrooke, Canada.
- 1995-2001 Associate Researcher, Clinical Research Center of the “Center Hospitalier Universitaire de l’Université de Sherbrooke”.

Consultantship

- 1994-1995 Scientific advisor, Hoechst Marion Roussel, Clinidata Division
- 1997-1998 Scientific advisor, Purkinje.com
- 1983-1998 Consultant, medical and pharmaceutical informatics, YAL, Inc. (1983-1993), Accurate Informatics and Medicine Inc. (1993-1998).
- 1999-2001 Consultant, Center for Advanced Technology and Information Management – Columbia Genome Center, Department of Medical Informatics and Department of Computer Science, Columbia University.
- 2000-2001 Consultant, Columbia Innovation Enterprise / Columbia Technology Transfer / Columbia Venture Partnerships, Columbia University.

Intellectual Property

- Provisional Patent Application: methods for Extracting Phenotypic Information from the Literature via natural Language processing (Carol Friedman, Yves A Lussier) -2007
- Patent: 20060074991 - System and method for generating an amalgamated database. Clinigene. International Patent Application No. PCT/US03/35470, filed on November 6, 2003, published as WO 2004/044818 on May 27, 2004, which claims priority to provisional U.S. application No. 60/424,728, filed November 6, 2002. Lussier YA, Cantor M, Sarkar IN.
- Terminological Mapping. Continuation-In-Part of International Patent Application No. PCT/US03/35470. Lussier YA, Li J (2003).
- Invention report on DynaTreeviewer, Liu HF, Lussier YA, Friedman A (2002).
- Invention report on Phenogene Discovery System, Friedman A, Lussier YA, (2004).
- Invention report on viral database for comprehensive detection of vertebrate viruses. Palacios G, Liu Y, Jabado O, Briese T, Hegi H, Lussier YA, Lipkin WI. (2004). Invention on an oligonucleotide microarray for the detection of all known vertebrate viruses (GreeneChip). Palacios G, Liu Y, Briese T, Lussier YA, Lipkin WI (2005).
- Invention report on Phenogene Viewer, Tao Y, Lussier YA, Friedman C (2004).
- Invention report on Nondeterministic Model Theoretic Mapping between Heterogeneous Databases, Lussier YA, Li J (2004).
- Invention report on Flat Treeviewer. Sam L, Lussier YA. (2005)
- Invention report on User-Directed Pearls of Knowledge. Lussier YA, Sam L, Borlawsky T. (2005).
- Invention report on VigiLENS server-based and ontology-driven event monitor (2005), Lussier YA, Shortliffe EH, Li J, Kamasumadram N, Hripcsak G, Cimino J, Forman B, Wajngurt D, Johnson J, Sengupta S.

Refereed Journal Publications

- 1 Lussier A*; Arseneault A; Varady A; De Médicis R; **Lussier Y**; Lebel E: "The use of a ⁵¹Cr Technique to Detect Gastrointestinal Microbleeding Associated with Nonsteroidal Anti-inflammatory Drugs". *Semin Arthritis Rheum*. 1988;17(3);40-45.
- 2 Lussier A*; Davis A; **Lussier Y**: "Comparative Gastrointestinal Blood Loss Associated with Placebo, Aspirin and Nabumetone as Assessed by Radiochromium (⁵¹Cr)". *J Clin Pharmacol* 1989;29(3);225-228.
- 3 **Lussier YA***: "Le Dossier Patient Informatisé sur ardoise électronique: le défi de Développement Purkinje". *Canadian Medic Inform*, vol.1, no. 1, May/June 1994, pp.46-47.
- 4 **Lussier YA***: "Scientific Medicine in Need of a Standardized, Coded Nomenclature". *Canadian Medic Inform* 1994;1(4)Nov./Dec52-53.
- 5 **Lussier YA***; Côté RA: "Are We Closer to Standard Medical Coding?". *Canadian Medic Inform* 1995;2(5) sept19.
- 6 **Lussier YA***; Rothwell DJ; Côté RA: "The SNOMED Model: A Knowledge Source for the Controlled Terminology of the Computerized Patient Record". *Methods Inf Med* 1998;37;160-164.
- 7 Cantor MN, Sarkar IN, Gelman R, Hartel F, Bodenreider O, **Lussier YA***. An evaluation of hybrid methods for matching biomedical terminologies: mapping the gene ontology to the UMLS. *Stud Health Technol Inform*. 2003;95:62-7.
- 8 Liu H, **Lussier YA**, Friedman C*. "Disambiguating Ambiguous Biomedical Terms in Biomedical Narrative Text: An Unsupervised Method". *J Biom Inform* 2001;34,249-261.
- 9 Friedman C*, Shagina L, **Lussier YA**, Hripcsak G. Automated Encoding of Clinical Documents Based on Natural Language Processing. *J Am Med Inform Assoc*. 2004 Sep-Oct;11(5):392-402. Epub 2004 Jun 7.
- 10 Tao Y, Friedman C, **Lussier YA***. The Use of Information Visualization Techniques in Bioinformatics during the Postgenomic Era. *Biosilico* 2004; Vol. 2, No. 6.
- 11 Williams R*, Jalan S, Stern E, **Lussier YA***. Cascading Policies Provide Fault Tolerance for Pervasive Clinical Communications. Proceedings of Third IEEE International Conference on Pervasive Computing and Communications Workshops, (PerCom 2005 Workshops), *IEEE Computer Society* 2005:209 – 212.
<http://ieeexplore.ieee.org/iel5/9593/30313/01392833.pdf?tp=&arnumber=1392833&isnumber=30313>
- 12 Tao Y, Friedman C*, **Lussier YA***. "Visualizing information across multidimensional post-genomic structured and textual databases" *Bioinformatics*. 2005 Apr 15;21(8):1659-67. Epub 2004 Dec 14.
- 13 **Lussier YA***, Williams R, Jalan S, Borlawsky T, Li J, Stern E. Partitioning Knowledge Bases Between Advanced Notification and Clinical Decision Support Systems. *Decision Support Systems*. Available online, Epub 17 April 2006.
- 14 Choi J, Bakken S*, **Lussier YA***, Mendonca EA*. Improving the Human Readability of Arden Syntax Medical Logic Modules Using a Concept-oriented Terminology and Object-oriented Programming Expressions. *Comput Inform Nurs*. 2006 Jul-Aug;24(4):220-5.
- 15 Goh CS, Gianoulis TA, Liu Y, Li J, Pacanaro A, **Lussier YA***, Gerstein M*. Integration of Curated Databases to Identify Genotype-Phenotype Associations. *BMC Genomics* 2006, 7:257.
http://www.biomedcentral.com/imedia/2786589029096597_article.pdf
- 16 Tulipano KP, Tao Y, Zanzonico P, Kolbert K, Millar WS, Xu H, Yu H, Chen L, **Lussier YA***, Friedman C*. Natural Language Processing and Visualization in the Molecular Imaging Domain. *Journal of Biomedical Informatics*, Epub 26 September 2006.
- 17 Friedman C*, Borlawsky T, Xing HR, **Lussier YA***. Bio-Ontology and Text: Bridging the Modeling Gap. *Bioinformatics*, 2006 Oct 1;22(19):2421-9.
<http://bioinformatics.oxfordjournals.org/cgi/content/abstract/22/19/2421>

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- 18 Liu Y, Li J, Sam L, Goh CS, Gerstein M*, **Lussier YA***. From phenotypes to genotypes: A meta-genomic approach to uncover the molecular mechanisms of prokaryotic traits. *PLoS Computational Biology*, 2006 2(11): 1419-1435 (**Editor's Pick**). http://compbiol.plosjournals.org/archive/1553-7358/2/11/pdf/10.1371_journal.pcbi.0020159-L.pdf
- 19 Zhou L, Tao Y, Cimino JJ, Chen ES, **Lussier YA**, Hripcsak G, Friedman C. Terminology Model Discovery Using Natural Language Processing and Visualization Techniques. *J Biomed Inform. Epub* 2005 Dec 14, 2006 Dec;39(6):626-36.
- 20 Palacios G; Quan P-L; Jabado O; Hirschberg D.; Liu Y; Zhai J; Renwick N; Canlon S; Hui J; Heygi H; Grolla A; Towner J; Sanchez-Seco MP; Büchen-Osmond C; Nichol S; Jahrling P; **Lussier YA**; Feldmann H; Briese T; Lipkin WI*. Differential Diagnosis of fatal Hemorrhagic Fever by Pan-Microbial DNA Array. *Emerging Infectious Diseases*, 2006 13(1):73-81. <http://www.cdc.gov/ncidod/EID/13/1/pdfs/73.pdf>
- 21 Chen JL, Sam L, Tao Y, Liu Y, **Lussier YA***. High-throughput functional classification of human disease genes. *BMC Bioinformatics* 2007, 8(Suppl 3):S7 doi:10.1186/1471-2105-8-S3-S7. <http://www.biomedcentral.com/1471-2105/8/S3/S7>
<http://www.biomedcentral.com/1471-2105/8/S3/S7>
- 22 **Lussier YA***, Liu Y. Computational Approaches to Phenotyping: High-Throughput Phenomics. *Proc Am Thorac Soc* Vol 4. pp 18-25, 2007. <http://pats.atsjournals.org/cgi/reprint/4/1/18>
- 23 Tao Y, Li J, Friedman C*, **Lussier YA***. Information Theory Applied to the Sparse Gene Ontology Annotation Network to Predict Novel Gene Function. (in press, *Bioinformatics*).
- 24 Nonas SA, Moreno Vinasco L, Ma S, Jacobson JR, Desai AA, Dudek J, Flores C, Hassoun P, Sam L, Ye SQ; Moitra J, Barnard J, Grigoryev DM, **Lussier YA**, Garcia JG*. Use of Consomic Rats for Genomic Insights into Ventilator-Associated Lung Injury. *Am J Phys, Lung Cellular and Mol Physiol*, Epub 2007 Apr 27.
- 25 Bales M, **Lussier YA***, Johnson SB*. Topological analysis of large-scale biomedical terminology structure. (Accepted with minor revisions, *J Am Med Inform Assoc*).
- 26 Moreno-Vinasco L, Gomberg-Maitland M, Maitland M, Collins K, Desai AA, Singleton PA, Sammani S, Liu Y, Sam L, Hussein A, **Lussier YA**, Lang RM, Ratain M, Garcia JGN. Genomic Assessment of the Attenuating Effects of the Multi- Kinase Inhibitor, Sorafenib, in a Rodent Model of Pulmonary Hypertension. (in preparation).
- 27 **Lussier YA***, Friedman C*. Automated Encoding of Scientific Biomedical Documents Based on Natural Language Processing. (In preparation for *Bioinformatics*).
- 28 Hansen JJ, Liu Y, **Lussier YA**, Sartor RB. Gene Expression Patterns in Experimental Colitis in IL-10 Deficient Mice. (in preparation).

Refereed Conference Papers

- 29 **Lussier YA***; Maksud M; Yale PP; St-Arneault R: "PureMD: A Computerized Patient Record Software for Direct Data Entry by Physicians Using a Keyboardless Pen-Based Portable Computer". 16th Annual Symposium on Computer Applications in Medical Care SCAMC 92, Baltimore, November 8-11, 1992; *American Medical Informatics Association (AMIA), McGraw-Hill* 1992, pp.261-264.
- 30 Grant AM*; **Lussier YA**; Déglise E; Dubois S; Bernier R: "The TEAM Evaluation Approach to Project FAMUS". 16th Annual Symposium on Computer Applications in Medical Care SCAMC 92, Baltimore, November 8-11, 1992; *American Medical Informatics Association (AMIA), McGraw-Hill* 1992, pp.734-738.
- 31 Moehr JR*; Chute C, **Lussier YA**, Cimino J, Rossi-Mori A, Kluge E: "Advanced Patient Records and Medical Concepts Representation". Proceedings on the Eighth World Congress on Medical Informatics *MEDINFO '95*, Vancouver, July 23-27, 1995.
- 32 **Lussier YA***; Côté RA: "SNOMED Encoding of Symptoms, Signs and the Patient Record Structure: The Core of Advanced Medical Records". Proceedings of the Eighth World Congress on Medical Informatics *MEDINFO '95*, Vancouver, July 25, 1995.

§ These authors have contributed equally to the work.

- 33 Moehr J; **Lussier YA**; Côté RA: "Issues for Classification, Coding in Clinical Documentation in Canada". *Canada's Health Informatics Association COACH Conference 22 / Scientific Program*, Vancouver, April 14-16, 1997.
- 34 Lussier A; De Médicis R; **Lussier YA**: "Musculoskeletal System: From the snap diagnosis to the semiologic algorithm". *VI Meridian Days on Rheumatology*, Meridas, Venezuela, Sept 18-20, 1997.
- 35 **Lussier YA***; Bourque M: "Comparing SNOMED and ICPC Retrieval Accuracies Using Relational Database Models". American Medical Informatics Association (AMIA) Annual Fall Symposium, Nashville, TN, October 25-29, 1997; *Proc AMIA Annu Fall Symp. Proceedings*, 1997, pp.514-518.
- 36 Spackman KA*, **Lussier YA**, Campbell KE. Implementing SNOMED in Clinical Databases and Applications. *Journal of Health Information Management. Annual Healthcare Information and Management Systems Society (HIMSS) 1998 Annual Conference Proceedings*, 4p . February 22-26, 1998.
- 37 Kukafka R[§], **Lussier YA**[§], Cimino JJ: "Modeling Patient Response to Acute Myocardial Infarction: Implications for a Tailored Technology-Based Program to Reduce Patient Delay". *Proc AMIA Annu Fall Symp.* 1999;:570-4.
- 38 **Lussier YA***, Kukafka R, Patel VL, Cimino JJ: "Formal Combinations of Guidelines: A Requirement for Self-Administered Personalized Health Education". *Journal of the American Medical Informatics Association (JAMIA)*. supplement 2000:522-6.
- 39 **Lussier YA**, Shagina L, Friedman C. Automating SNOMED coding using medical language understanding: a feasibility study. *Proc AMIA Annu Fall Symp.* 2001;:418-22.
- 40 Liu H, **Lussier YA**, Friedman C. A study of abbreviations in the UMLS. *Proc AMIA Symp.* 2001;:393-7.
- 41 Kukafka R[§], **Lussier YA**[§], Patel VL, Cimino J. 2001. Developing Tailored Theory-Based Educational Content for WEB Applications: Illustrations from the MI-HEART Project. *Medinfo* 2001. 10(2):1474-8.
- 42 Kukafka R[§], **Lussier YA**[§], Patel VL, Cimino JJ. Web-Based Tailoring and its Effect on Self-Efficacy. Results of the MI-HEART Randomized Controlled Trial. *Proc AMIA Annu Fall Symp.* 2002;:410-4.
- 43 Cantor MN, **Lussier YA***. A knowledge framework for computational molecular-disease relationships in cancer. *Proc AMIA Annu Fall Symp.* 2002;:101-5.
- 44 Tao Y, Wang D, Shortliffe EH, **Lussier YA***. Extended Attributes of Event Monitor Systems for Criteria-Based Notification Modalities. *Proc AMIA Annu Fall Symp.* 2002;:762-6.
- 45 **Lussier YA***, Sarkar IN, Cantor MN. An Integrative Model for In-Silico Clinical-Genomics Discovery Science. *Proc AMIA Annu Fall Symp.* 2002;:469-73.
- 46 Sarkar IN, Cantor MN, Gelman R, Hartel F, **Lussier YA***. Linking biomedical language information and knowledge resources: GO and UMLS. *Pac Symp Biocomput*, 2003;:439-50.
- 47 Cantor MN, **Lussier YA***. Putting Data Integration into Practice: Using Biomedical Terminologies to Add Structure to Existing Data Sources. *AMIA Annu Symp Proc.* 2003:125-9.
- 48 **Lussier YA***, Li J. Terminological Mapping For High Throughput Comparative Biology of Phenotypes. *Pac Symp Biocomput.* 2004;:202-13.
- 49 Tao Y, Mendonca EA, **Lussier YA***. "A tool for Abstracting Relevant Classes of Concepts: the Common Ancestry Summarizer". *Medinfo.* 2004;11(Pt 1):449-53.
- 50 Wang A, Quek HN, Cantor MN, Kra P, Schultz A, **Lussier YA***. "Automating Terminological Networks to Link Heterogeneous Databases". *Medinfo.* 2004;11(Pt 1):555-9.
- 51 Cantor MN, **Lussier YA***. "Mining OMIM for Insight in Complex Diseases". *Medinfo.* 2004;11(Pt 2):753-7.
- 52 Cantor MN, Sarkar IN, Bodenreider O, **Lussier YA***. Genestrace: Phenomic Knowledge Discovery Via Structured Terminology. *Pac Symp Biocomput.* 2005;:103-14.

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- 53 Stevens R*, Bodenreider O*, **Lussier YA***. Semantic webs for life sciences. *Pac Symp Biocomput.* 2006;:112-5.
- 54 **Lussier YA***, Borlawsky T, Rappaport D, Friedman C*. PhenoGO: a Multistrategy Language Processing System Assigning Phenotypic Context to Gene Ontology Annotations. *Pac Symp Biocomput.*, 2006;:64-75.
- 55 Borlawsky T, Friedman C, **Lussier YA***. Generating Executable Knowledge for Evidence-Based Medicine Using Natural Language and Semantic Processing. *AMIA Annu Symp Proc.* 2006, pp.56-60.
- 56 Sam L, Li J, Liu Y, Friedman C*, **Lussier YA***. Discovery of Protein Interaction Networks Shared by Diseases. *Pac Symp Biocomput.* 12:76-87(2007). <http://psb.stanford.edu/psb-online/proceedings/psb07/sam.pdf>
- 57 Pantazatos SP, Jianrong Li, Pavlidis P, Van Horn JD, **Lussier YA***. Cross-Scale Mapping of Gene Expression to Neuroimaging Datasets via Semantic Decomposition. *MEDINFO 2007 (in press)*.
- 58 Chen ES, Stetson PD, **Lussier YA**, Markatou M, Hripcsak G, Friedman C. Detection of Practice Pattern Trends through Natural Language Processing of Clinical Narratives and Biomedical Literature. *AMIA Annu Symp Proc.* 2007 (in press).
- 59 Tao Y, Patel C, Friedman C, **Lussier YA***. PIE: A Phenotype Interface Engine for Automated Representation in PATO and “Semantic Web”-Based Exchange of Clinical Data and Narratives. *AMIA Annu Symp Proc.* 2007 (in press).

Invited Conference Papers

- 60 **Lussier YA**. "Remote Product Engineer Function in a Product Development Cycle". *IBM Canada Administrators and Engineers Work Term Meeting*, Toronto, August 1984.
- 61 **Lussier YA***; Rothwell DJ: "Coding panel on SNOMED". Moving Toward International Standards in Primary Care Informatics: Clinical Vocabulary, American Medical Informatics Association (AMIA) Family Practice / Primary Care Working Group, *International Medical Informatics Association (IMIA) Working Group V*, New Orleans, November 1-2, 1995.
- 62 **Lussier YA**. General Overview of SNOMED and Applications to Primary Care. Moving Toward International Standards in Primary Care Information: Clinical Vocabulary, Conference Summary Report, *AMIA Primary Care Working Group*, New Orleans, November 1995.

Reviews, Chapters and Editorials

- 63 Côté RA; **Lussier YA**: "Glossary of signs and symptoms". American College of Pathology, Secretariat of the Systematized Nomenclature of Veterinary and Human Medicine. *SNOMED* vers 3.2, (CD), 1995.
- 64 **Lussier YA**[§], Jenders R[§], Mendonça EA[§]: "Clinical Decision Support Systems." *Healthcare Information Systems*, 2nd Ed. Best Practices Series, Auerbach, Beaver K ed. 2003:221-36.
- 65 Kukafka R, **Lussier YA**, Cimino JJ. Chapter# 19 "The MI-HEART Project" p.227-238 in "Social Informatics and Consumer Health: Opportunities and Issues" in Lewis, D., Eysenbach, G., Kukafka, R., Stavri, Z., and Jimison, H. *Consumer Health Informatics*. Springer-Verlag, New York. 246p. (2005)
- 66 **Lussier YA***: Chapter 99 on "Ontologies and Natural Language Processing". Russ Altman, Shankar Subramaniam. Volume 4: Bioinformatics. *Encyclopedia of Genetics, Genomics, Proteomics and Bioinformatics*, John Wiley & Sons, (2005 pp. 1-17 specialist review).
- 67 **Lussier YA***, Shortliffe EH: Chapter 22 (Final Chapter): IT-Related Grand Challenges in Medicine and Health".pp.441-452 Harold P Lehmann, Patricia A Abbott, Nancy R Roderer, Adam Rothchild, Steven Mandell, Jorge A Ferrer, Robert E Miller, Marion J Ball, Editors, "Aspects of the Computer Patient Record", 2nd Ed. Springer-Verlag, 2006 483p.

[§] These authors have contributed equally to the work.

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- 68 **Lussier YA***, Bodenreider O*., Clinical Ontologies for Discovery Applications. P.101-119 Christopher Baker and Kei Cheung, Editors. *Semantic Web: Revolutionizing Knowledge Discovery in the Life Sciences*. Springer Verlag 2007, XXII, 450 p.

Published Refereed Abstracts and Refereed Conference Panels

- 69 Lussier A; Lebel E; Davis A; **Lussier YA**: "⁵¹Cr Quantitative Evaluation of the GI. Microbleeding with the Administration of Nabumetone, Aspirin and Placebo". XIth European Congress of Rheumatology, Athens, June 1987; *Clinical and Experimental Rheumatology*, vol. 5, no. S-2, p.107, supplemental issue 1987.
- 70 **Lussier YA**; Plante GE: "Influence de l'alcalose sur la réponse rénale à une surcharge saline". *Club de recherches cliniques du Québec*, XXIXth Annual Meeting, Montebello, October 30-31 1987; *Médecine sciences*, vol. 3, no. 9, suppl. 1987, p.37a.
- 71 Turcotte R; **Lussier YA**; Plante GE: "L'appétit pour le sodium". *Club de recherches cliniques du Québec*, XXIXth Annual Meeting, Montebello, October 30-31, 1987; *Médecine sciences*, vol. 3, no. 9, suppl. November 1987, p.33a.
- 72 Plante GE; **Lussier YA**: "Contrôle humoral des volumes de l'organisme". Annual Congress, *Société Québécoise de Néphrologie*, Orford, April 29-30, 1988.
- 73 **Lussier YA**; Plante GE: "Proximal Reabsorption: A Regulator of Glomerular Filtration Rate". *Federation of American Societies for Experimental Biology (FAZEB)*, 72nd Annual Meeting, Las Vegas, May 1-5, 1988.
- 74 Plante GE; Prévost C; **Lussier YA**; Braquet P; Sirois P: "Hormonal Control of Body Fluid Volumes: Evidence Supporting the Role of the Atrial Peptide (ANP), Ouabain-like Material (OUAB) and the Platelet Activating Factor (PAF)". 12th Scientific Meeting of the *International Society of Hypertension*, Tokyo, May 21-28, 1988.
- 75 Turcotte R; **Lussier YA**; Plante GE: "L'appétit pour le sodium". Congress of the *Ordre des Chimistes du Québec and the Corporation professionnelle des diététistes du Québec*, Montréal, May 26-28, 1988.
- 76 **Lussier YA**; Plante GE: "La réabsorption proximale contrôle la filtration glomérulaire". *Club de recherches cliniques du Québec*, XXXth Annual Meeting, Pointe-au-Pic, October 6-8, 1988; *Médecine sciences*, no. 4, 1988, p.45a.
- 77 **Lussier YA**; Plante GE: "Effets de l'acidose métabolique chronique sur la pression artérielle". *Club de recherches cliniques du Québec*, XXXth Annual Meeting, Pointe-au-Pic, October 6-8, 1988; *Médecine sciences*, no. 4, 1988, p.41a.
- 78 Marineau Y; **Lussier YA**; Plante GE: "Particularités des effets physiologiques rénaux de l'indapamide". *Club de recherches cliniques du Québec*, XXXth Annual Meeting, Pointe-au-Pic, October 6-8, 1988; *Médecine sciences*, no. 4, 1988, p.41a.
- 79 Marineau Y; **Lussier YA**; Plante GE: "Effets de l'acidose métabolique sur la production rénale d'eau libre". *Club de recherches cliniques du Québec*, XXXth Annual Meeting, Pointe-au-Pic, October 6-8, 1988; *Médecine sciences*, no. 4, 1988, p.41a.
- 80 Prévost C; **Lussier YA**; Plante GE: "Réponse rénale et extrarénale à une charge saline isotonique chez le rat". *Club de recherches cliniques du Québec*, XXXth Annual Meeting, Pointe-au-Pic, October 6-8, 1988; *Médecine sciences*, no. 4, 1988, p.45a.
- 81 Plante GE; Prévost C; **Lussier YA**; Braquet P; Sirois P: "Hormonal Control of Body Fluid Volumes: Evidence Supporting the Use of the Atrial Peptide (ANP), Ouabain-like Material (OUAB) and the Platelet Activating Factor (PAF)". *Internat. Soc. Hypertension*, Japan, 1988.
- 82 **Lussier YA**; Plante GE: "Contrôle tubulaire de la filtration glomérulaire". Annual Congress of the *Société Québécoise de Néphrologie*, Val-David, April 21-22, 1989.
- 83 Lussier A; De Médicis R; **Lussier YA**; Lebel E: "Gastrointestinal Microbleeding Caused by Soluble and Plain Aspirin: Influence of Local and Systemic Factors". 58th Annual Assembly of the Royal College of Physicians and Surgeons of Canada, Edmonton, September 22-25, 1989; *Clinical and Investigative Medicine*, vol. 12, no. 4, August 1989, supp.B96.

- 84 Lussier A; De Médicis R; **Lussier YA**; Lebel E: "Gastrointestinal Microbleeding Caused by Aspirin: Influence of Local and Systemic Factors". XVIIth *International Congress in Rheumatology (ILAR)*, Rio de Janeiro, September 17-23, 1989.
- 85 Lussier A; Lebel E; Gervais P; **Lussier YA**; De Médicis R: "Gastrointestinal Microbleeding Induced by Flurbiprofen: Effect of Sulcratfate". XVIIth *International Congress in Rheumatology (ILAR)*, Rio de Janeiro, September 17-23, 1989.
- 86 **Lussier YA**; Prévost C; Braquet P; Plante GE: "Progression de l'insuffisance rénale: rôle du facteur d'aggrégation plaquettaire (PAF)". Club de recherches cliniques du Québec, XXXIth Annual Meeting, Sainte-Adèle, October 12-14, 1989; *Médecine sciences*, suppl. no 3, 1989, p.47a.
- 87 **Lussier YA**: "Vers une meilleure gestion de l'information médicale". *Journée scientifique de médecine familiale de l'Université de Sherbrooke*, Sherbrooke, December 1990. (Award winning presentation)
- 88 **Lussier YA***: "Les nouvelles recommandations de l'American Heart Association pour le traitement de l'infarctus du myocarde". *Journée scientifique de médecine familiale de l'Université de Sherbrooke*, Centre des Congrès de Sherbrooke, May 1991.
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Grand Rounds and Invited Clinical Lectures

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- 153 **Lussier YA.** "Introduction à l'Internet pour la médecine interne et spécialisée". *Seminar, Department of Medicine, Faculté de Médecine, Université Laval, Quebec City, PQ, February, 1997.*
- 154 **Lussier YA.** "Introduction à l'Internet pour le médecin omnipraticien". *Continuous Medical Education, Fédération des Médecins Omnipraticiens du Québec, Sherbrooke, May 1, 1997.*
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- 156 **Lussier YA.** "Introduction to the Internet and Related Software: Medical Terminologies : from ICD to SNOMED and its Use in Computerized-Patient Records for Research and Office Use". *Postgraduate course on Computers in Medicine from the Royal College of Physicians and Surgeons of Canada, Vancouver, Sept. 25, 1997.*
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- 158 **Lussier YA.** "Clinical Genomics." *Grand Rounds, NYPH Allen Pavilion. 3/20/2003.*
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- 161 **Lussier YA.** "Clinical Genomics Technologies, Updates." *Grand Rounds, NYPH Milstein Hospital, New York. Nov 2nd 2004.*
- 162 **Lussier YA.** Computational Systems Biology and Medicine: Approaches to high throughput and large scale analyses of phenotypes. *Conference Series of General Internal Medicine of the Dept of Medicine, Columbia University, 11/05/2005.*
- 163 **Lussier YA.** "Predicting the Molecular Underpinnings of Complex Phenotypes with High Throughput Phenomics". *Grand Rounds of Rheumatology, The University of Chicago, Feb 13 2007.*
- 164 **Lussier YA.** "Computational Approaches to Unveiling Novel Protein-Protein Interactions in Diseases". *Emergency Resuscitation Center, The University of Chicago, Feb 22 2007.*
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- 168 **Lussier YA.** "Remote Product Engineer Function in a Product Development Cycle". *IBM Canada Administrators and Engineers Work Term Meeting, Toronto, August 1984.*
- 169 **Lussier A; Arseneault A; Varady J; Lussier YA; Lebel E:** "Safety of NSAIDs". *Syntex Round Table, Paris, July 12, 1987.*
- 170 **Lussier A; De Médicis R; Lussier YA:** "Appareil locomoteur: du coup de foudre diagnostique à l'algorithme sémiologique". *Rheumatology Service, Centre Hospitalier Universitaire de Rangueil, Toulouse, March 15, 1991.*
- 171 **Lussier YA*;** Côté RA: "La SNOMED: l'assise de la recherche médicale informatisée". *Seminars, Université de Sherbrooke, QC, June 5, 1995. (Invited lecturer)*
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- 173 **Lussier YA.** "Meet the Early Adopters: Lessons Learned and Benefits Gained". *American College of Pathology - SNOMED Users' Group Conference, Los Angeles, CA, Nov. 3, 2000.*

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- 175 **Lussier YA**. Database Schema for Clinical Genomics. First Genetic Trust, Sept. 2003, New Jersey.
- 176 **Lussier YA**. “Phenotypic Networks and the Art of Bioinformatics” University of Buffalo Center of Excellence in Bioinformatics. 5/6/2004.
- 177 Friedman C, **Lussier YA**. Biomedical Informatics Tools for Curators. *Jackson Laboratories*, Mouse Genome Informatics, June 29, 2004, Bar Harbor.
- 178 **Lussier YA**. Phenomic Program of the Lussier Research Group. *IBM Watson Laboratories*, Hawthorne.. Nov 3rd 2004.
- 179 **Lussier YA**. “Hypothesis-Driven Computational Methods for Molecular Medicine and Systems Biology: Genome Scale Integrative Analyses of Phenotypes”. School of Health Information Science in *The University of Texas Health Science Center at Houston*, 6/8/2005.
- 180 **Lussier YA**. “Computational approaches for genome scale analyses of phenotypes: bridging the phenotypic gap between clinical repositories and model organism databases”. Center for Genetic Medicine and Dept. of Cell and Molecular Biology, *Northwestern University Medical School*, Chicago, June 13th 2005.
- 181 **Lussier YA**. “Research Technical Discussions on Ontologies in Biomedicine”, Industry Solution Laboratory, *IBM Watson Research Center*, Hawthorne, NY, July 8th, 2005.
- 182 **Lussier YA**. “Computational approaches for genome scale analyses of phenotypes: improving the understanding of biological systems and the diagnosis of diseases” Department of Pathology, Division of Biological Sciences, *University of Chicago*, July 12th 2005.
- 183 **Lussier YA**. “Systems Biology approaches to the Metagenomic Analysis of Phenotypes”. Department of Biomedical Informatics, *Vanderbilt University*, Nashville, August 11th 2005.
- 184 **Lussier YA**. “Bridging the Phenotype Gap: Ontology-Anchored Computational Methods for Biomedicine”. Knowledge-Based Bioinformatics Workshop Hosted by the *Genome Québec* funded project: Ontologies, the semantic web and intelligent systems for genomics. September 21st - 23rd 2005; Montréal, Québec, Canada.
- 185 **Lussier YA**. Bio-ontologies and Database Integration. Buffalo-Columbia workshop on ontology and cancer bioinformatics. *New York State Center of Excellence in Bioinformatics and Life Sciences*. Friday, October 14 2005, 280 Park Hall, University at Buffalo.
- 186 **Lussier YA**. "Collecting and Integrating Phenotypic Information from Multiple Databases for Correlation with Genomic Databases. *Toyota Technological Institute* at Chicago, 4/10/2006.
- 187 **Lussier YA**. Systems Properties in a Comprehensive Genomic Netwots. Computation Institute, University of Chicago, July 2006.
- 188 Kann M, Ofra Y, Punta M, Radijovac P, **Lussier YA**, Panelists. Discussion Session: Protein Interactions in Diseases. Pacific Symposium in Biocomputing, Jan 4th 2007, Maui.
- 189 **Lussier YA**. Phenomic Data and its Valuation Chain. *Computational Biology Seminar, Division of Molecular and Computational Biology, Dept. Computational Biology & Bioinformatics, University of Southern California*,
- 190 **Lussier YA**. Emerging Systems Properties in High Throughput Phenomic Studies. *Annual CI Fellows meeting*, Computation Institute, University of Chicago, February 21, 2007.
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- 193 **Lussier YA**. Ontology Similarity Networks and Database Interoperability. *Interface 2007*, May 23-26, Philadelphia.