



presents

7TH ANNUAL NEW BRUNSWICK HEALTH RESEARCH CONFERENCE



BY FORGING RESEARCH PARTNERSHIPS

NOVEMBER 3 & 4, 2015

DELTA FREDERICTON | FREDERICTON | NEW BRUNSWICK



CONFERENCE SPONSORS

The University of New Brunswick and NBHRF wish to acknowledge the support, through educational grants and/or sponsorships, of the following organizations, whose contributions helped make this event possible.

DIAMOND



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As innovators in your industry, the ideas and research you generate have the potential to revolutionize the healthcare system in New Brunswick.

As a province we must foster innovation to spur economic growth, create jobs, and make life better for families.

It is imperative that we find smarter and more efficient ways for government to deliver sustainable social programs and services. This will ensure that New Brunswickers have access to the highest quality health care, seniors' care, and education both today and in the future.

As Premier, I took on the role of Minister responsible for Innovation to ensure that our government supports researchers, academics, and entrepreneurs to help create the conditions for economic growth. Adopting innovative practices in government is one of the ways we can achieve greater efficiencies in service delivery.

This issue is more pressing within our healthcare system. Here, we have the opportunity to raise the standard of living and quality of life of friends and neighbours across our province, all the while finding important savings.

Our government is committed to fostering an environment where health researchers can embark on projects that create economic opportunities to benefit the entire province. Each of your discoveries contributes to the greater good, be it through research on mental health, aging and dementia, cancer, improved primary health delivery, and more. The amazing researchers and ideas that we recognize during this conference speak to the power of health research to transform lives.

I want to thank the New Brunswick Health Research Foundation and its partners for their leadership. Their success in attracting new partnerships and investments in our province are noteworthy, allowing us to accelerate our discovery process and bring tangible solutions to citizens.

The 7th Annual New Brunswick Health Research Conference brings together some of the best minds in our province to reflect on these opportunities and celebrate our growing capacity for health research and innovation.

I am pleased to welcome you to Fredericton, our capital city, for this gathering. I know that my colleague, Health Minister Victor Boudreau, joins me in wishing you a great conference. We thank you for your passion and contribution to the healthcare system.

En tant qu'innovateurs dans votre industrie, vous avez des idées et vous menez des recherches qui pourraient révolutionner le système de santé du Nouveau-Brunswick.

Le Nouveau-Brunswick doit encourager l'innovation afin de stimuler la croissance économique, la création d'emploi et d'améliorer la qualité de vie des familles.

Le gouvernement doit absolument trouver des moyens plus efficaces et intelligents d'assurer la prestation de ses programmes sociaux et services afin de maximiser la qualité des soins de santé, y compris les soins aux aînés, et d'offrir la meilleure éducation possible à la population du Nouveau-Brunswick d'aujourd'hui et de demain.

En ma qualité de premier ministre, j'ai accepté d'assumer le rôle de ministre responsable de l'Innovation afin de m'assurer que le gouvernement appuie les chercheurs, les universitaires et les entrepreneurs dans leurs efforts en vue de créer des conditions propices à la croissance économique. L'une des façons d'assurer une prestation hautement efficace des services gouvernementaux est d'adopter des pratiques novatrices.

C'est encore plus pressant en ce qui concerne le système de soins de santé, où nous avons la possibilité d'améliorer le niveau et la qualité de vie de nos amis et de nos voisins partout dans la province, tout en trouvant des moyens de réaliser des économies substantielles.

Le gouvernement est déterminé à favoriser un environnement où nos chercheurs en santé peuvent se lancer dans des projets qui créent des possibilités économiques au profit de l'ensemble du Nouveau-Brunswick. Qu'il s'agisse entre autres de recherches sur la santé mentale, le vieillissement et la démence, le cancer, l'amélioration de la prestation des soins de santé primaires, chaque nouvelle découverte contribue au mieux-être de la collectivité dans son ensemble. Les chercheurs et les idées remarquables que nous reconnaitrons en fin de semaine témoignent de la capacité de la recherche en santé à transformer des vies.

Je tiens à remercier la Fondation de la recherche en santé du Nouveau-Brunswick ainsi que ses partenaires pour le leadership dont ils font preuve. Elle remporte beaucoup de succès dans l'établissement de nouveaux partenariats et de nouveaux réseaux dans divers domaines de recherche ainsi que l'attraction de nouveaux investissements. Ces initiatives nous permettent d'accélérer le processus de découverte et de proposer des solutions tangibles à la population.

Le 7e Congrès annuel sur la recherche en santé du Nouveau-Brunswick rassemble certains des meilleurs cerveaux de la province pour examiner ces possibilités et célébrer notre capacité grandissante en matière de recherche et d'innovation en santé.

Je suis donc heureux de vous accueillir à Fredericton, notre capitale, à l'occasion de ce rassemblement. Je me joins à mon collègue et ministre de la Santé, Victor Boudreau, pour vous souhaiter un congrès fructueux. Nous vous remercions de votre passion et de votre contribution à l'égard du système de soins de santé.

Honourable Brian Gallant, Premier

L'honorable Brian Gallant, premier ministre



Message from the Chairperson NBHRF Board of Directors



Ms. Monique Imbeault

Chair, NBHRF

Dear Community of Health Researchers:

As the new Chair of the Foundation, it gives me great satisfaction to join you for this 7th annual conference. This multifaceted 2 day program should attract many participants.

The quality of the keynote speakers as well as the excellent representation from the community itself demonstrates that health research in our Province has reached a level that will allow us to prosper in the years to come. We must however maintained our momentum by investing into capacity building of our leaders and the recruitment of new ones.

I am familiar with the collective health research enterprise, as I have been myself engaged in the development of health-related activities and devices. This year's theme QUEST is fundamental as new knowledge and the deployment of evidence-based best practices will lead to new discoveries. We cannot do all by ourselves; partnering is the best way for us to achieve desirable outcomes.

I take this opportunity to thank the local organizing committee for their work in assembling this programs, I include the President of the 2015 Annual Conference, Dr. Kevin Englehart, also Director-Professor at UNB-IBME, assisted by Dr. Colleen O'Connell, Dr. Chris McGibbon, Dr. Lucia O'Sullivan, Dr. Erik Scheme, Dr. Kathleen Valentine, and Ms Donna Leggatt. Thank you of course to Dr. Battistini and the NBHRF team who provided the guidance for leading this conference to completion in time yet again, for this November 3-4 here in Fredericton.

As Chair of NBHRF, we also acknowledge the participation of our Sponsors from the private sectors without whom such an annual event could not be taking place yearly around the province. I welcome the participation of UNB as co-institution organizer and thank the Premier, who's also the Minister of Innovation, for his welcoming message to us all.

Participate, listen, learn, and enjoy.

Ms. Monique Imbeault,
Chair, NBHRF



Message from NBHRF President, CEO & Scientific Director



Dr. Bruno Battistini

CEO, NBHRF

Another year, another annual conference might you say. This 2015 is our lucky 7, and the third time's the charm for the Gala of Excellence, this year about clinician health researchers: The White Coats, the art of health research at the heart of healthcare.

The theme is the QUEST, the quest to identify the means to do research, that research will lead to discovery and new evidence, that those will be further developed, to become real innovations and that knowledge will be duly and effectively transferred for better healthcare.

In the galaxy of pictograms, health research goes from the bench to bedside, becoming best practice. The others represents our circle-of-life, our stakeholders, the patients, the communities in which they live, the academic and clinician researchers, other healthcare providers, and policy-makers that oversee deployment of strategies, that include biopharma new medicines.

In this present day-and-age, such a quest can only be achieved by forging partnerships. NBHRF leads by examples with strategic partnerships with federal agencies, national biopharma and health charities and foundations.

NBHRF has a new Chair and with her, 8 new Board Members. Welcome to the renewed team, which will open-up the annual state-of-the-foundation address.

A different LOC (local organizing committee) has done it again, led by Dr. Kevin Englehart (UNB-IDME), with the support of the NBHRF team, a solid job to assemble this program. There are always challenges and deadlines with such a task and they were overcome. The mostly Fredericton-based team has expected flavored this year theme and also its programing: Biomedical research, MedTech and startups, from Millenials anxiety to deliver human care to Seniors in aging, forging health research partnerships, and our usual all-around NB tour of hot topics in which we do best, and reporting on SPOR-vaganza.

Quick final notes mentioning that student prizes are back as previous years and that this year keynote address from the Canada Gairdner Foundation Award Recipient is to be outstanding.

Health and medical research is the Foundation, the Foundation for knowledge, the Foundation for evidence-based best practice and new medicines' safety and efficacy, and the Foundation for job growth in the knowledge economy. Thank you for joining us and partnering in our quest.

Enjoy. It is for ALL of you, New Brunswick.

Dr. Bruno Battistini,
President, CEO & Scientific Director, NBHRF



<p>0730 - 0845 Mezzanine</p>	<p>REGISTRATION – COFFEE AND TEA</p>
<p>0845 - 0900 Ballroom A/B</p>	<p>OPENING REMARKS</p> <ul style="list-style-type: none"> – Ms. Monique Imbeault, Chairperson, New Brunswick Health Research Foundation (NBHRF) Board of Directors – Dr. David Burns, Vice-President Research, University of New Brunswick (UNB) – Dr. Kevin Englehart, President of the 2015 Local Organizing Committee, Professor, Electrical and Computer Engineering, Director, Institute of Biomedical Engineering, UNB – Dr. Bruno Battistini, President, CEO & Scientific Director, NBHRF
<p>0900 - 0930 Ballroom A/B</p>	<p>PLENARY SESSION #1 – STATE OF THE FOUNDATION ADDRESS</p> <div data-bbox="316 688 490 884" data-label="Image"> </div> <div data-bbox="516 695 1263 762" data-label="Section-Header"> <p>Fiscal year 2014-15: We have turned the corner toward a brighter healthier research enterprise in New Brunswick</p> </div> <div data-bbox="516 772 756 863" data-label="Text"> <p>Dr. Bruno Battistini President, CEO and Scientific Director, NBHRF</p> </div> <div data-bbox="1019 793 1182 856" data-label="Image"> </div> <div data-bbox="1198 787 1268 863" data-label="Image"> </div> <div data-bbox="1289 793 1511 856" data-label="Text"> <p>Fondation de la recherche en santé du Nouveau-Brunswick</p> </div> <div data-bbox="310 905 461 940" data-label="Section-Header"> <p>Abstract</p> </div> <div data-bbox="310 905 1523 1016" data-label="Text"> <p>The NBHRF CEO will present and release the previous fiscal year's Annual Impact Report, profiling the activities and vitality of the health research enterprise in New Brunswick. The address will also showcase ongoing and future programming proposed in its five year strategic investment plan (2013-2018) planned to energize health research and innovation in our province, and contribute to significant growth of the knowledge economy.</p> </div>
<p>0930 - 1015 Ballroom A/B</p>	<p>PLENARY SESSION #2 – KEYNOTE ADDRESS</p> <p>Introduced by: Dr. Bruno Battistini, PhD, President, CEO & Scientific Director, NBHRF</p> <p>Keynote Speaker:</p> <div data-bbox="316 1192 490 1388" data-label="Image"> </div> <div data-bbox="516 1199 857 1234" data-label="Section-Header"> <p>Hot Topics in Medical Devices</p> </div> <div data-bbox="516 1241 954 1388" data-label="Text"> <p>Dr. Geoff Fernie PhD, Senior Scientist & Director, Toronto Rehabilitation Institute (TRI) Professor, Dept. of Surgery, Faculty of Medicine, University of Toronto</p> </div> <div data-bbox="1122 1255 1455 1325" data-label="Image"> </div> <div data-bbox="310 1419 488 1455" data-label="Section-Header"> <p>Biography</p> </div> <div data-bbox="310 1419 1484 1640" data-label="Text"> <p>Dr. Fernie has maintained a focus on the reduction of falls through the development of innovative mobility products, non-slip winter footwear and improvements to accessibility and building codes. He has made significant advances in preventing hospital acquired infections by improving hand hygiene. His recent involvement in the development of a disposable instrument for home diagnosis of sleep apnea has the potential to significantly reduce the prevalence of cardiovascular complications resulting from untreated sleep apnea. Geoff has been responsible for many products that assist people's independence, including innovative wheelchairs and bathroom aids. Many of his inventions have reduced the physical burden of caring for people, including the prevention of back and shoulder injuries in professional nurses and family caregivers caused by lifting and moving people.</p> </div> <div data-bbox="310 1671 461 1707" data-label="Section-Header"> <p>Abstract</p> </div> <div data-bbox="310 1671 1495 1948" data-label="Text"> <p>I will illustrate the role that elegant and affordable devices can play in preventing disease and disability. My contribution will emphasize the challenges of introducing disruptive medical technologies into the healthcare system. Two examples will be given of technologies developed in our labs that have the potential of saving vast numbers of lives and misery. Approximately 10% of adults have sleep apnea and the consequences of failing to diagnose and treat this condition include approximately four-fold increases in the risk of stroke, heart failure and road accidents and a doubling of falls in seniors. Sadly, around 90% of these cases are not diagnosed. We have developed a game-changing device that can replace complex, inconvenient and uncomfortable sleep lab tests with a simple and accurate test that can be done at home. My second example is the need to reduce the estimated 1,000 deaths that are caused every week in North America by inadequate hand hygiene in hospitals. This is a low-cost badge that reminds staff to wash their hands if they miss an opportunity when hand hygiene should probably be performed. Our studies to date have shown an approximate doubling of hand hygiene compliance.</p> </div>



DAY 1 – TUESDAY, NOVEMBER 3, 2015 – continued

1015 - 1045
Mezzanine

NUTRITION BREAK, POSTER VIEWING AND JUDGING

1045 - 1215
Ballroom A/B

PLENARY SESSION #3 – HOT TOPICS IN BIOMEDICAL RESEARCH & MEDICAL DEVICES

Moderator: **Dr. Kevin Englehart**, PhD, P.Eng. Professor, Electrical and Computer Engineering, Director, Institute of Biomedical Engineering (IBME), UNB

Speakers:



Start-Up Road Map

Mr. Stéphane Bédard

President & CEO, B-TEMIA Inc.



Biography

Mr. Stéphane Bedard has more than 20 years of experience in the creation and management of high-tech companies. Mr. Bédard is recognized within the orthotic and prosthetic community as the inventor of the Power Knee™, the first motorized leg prosthesis for above-knee (AK) amputees. The Power Knee™ is seen as the new generation of AK prosthesis and has dramatically changed the way to design, to fit and to use a leg prosthesis. Mr. Bedard expanded into the field of exoskeletons by inventing and developing a new generation of assistive devices for human mobility called a "Dermoskeleton". He founded and established "B-Temia" in 2010, a new medical device company focusing on the development and the marketing of dermoskeletons in the growing market of "Human Augmentation Systems". This led to a collaboration with colleagues from University of New Brunswick to form the Center of Research in Dermoskeletonics – a pure industry-institution entity fully dedicated to the evolution of dermoskeletonics. Mr. Bedard is an electrical engineer and holds a master's degree in mechanical engineering in addition to doctoral studies in biomechanics and is the author or co-author of over 25 patents in the field of biomechanics and exercisers, granted over six (6) countries.

Abstract

What is the roadmap to resourcefully materializing something that doesn't even exist in someone's wildest imagination into something that could forever change the way people live? For high-tech startups, we are all aware of those numerous recipes that recommend successful ways to market a technological innovation throughout the world. Unfortunately, we know at the same time that these guidelines cannot be systematically and directly applied to a new startup. When something is "really" new, and does not exist – it becomes impossible to efficiently apply conventional thinking. Based on my own experiences, I have to believe that there is something out there that characterizes or truly distinguishes a successful business from an aborted venture for high-tech startups. In my opinion, at a time when Return on Investment means "below 12 months" and web applications mean everything in high-tech business, intuitiveness and sensibility are probably the most distinctive elements we should discuss in order to light the path along the entrepreneurial journey with true beneficial outcomes for the society.



The "Pulsewave" Health Monitor

Mr. Robert Kaul

Founder, President & CEO, Cloud DX Inc.

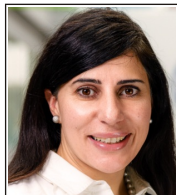


Biography

Robert Kaul is a serial entrepreneur with extensive startup experience. In particular, he has focused on bringing innovative Canadian technologies to the US market since 2005. He founded and exited the predecessor company to Cloud DX in less than nine months, with a 4x return to investors. He then led the publicly traded acquirer Biosign Technologies Inc (TSXV: BIO) as CEO from 2012 - 2014, when he and his team acquired the medical device division of that company to form Cloud Diagnostics (aka Cloud DX).

Abstract

Cloud DX manufactures the Pulsewave® Health Monitor, a virtual medical device that records a pulse wave signal from the wrist, uploads it to the cloud and derives medically accurate biological readings that can be securely accessed from any browser. Pulsewave® is currently being studied by Dr Keith Brunt & Dr Sohrab Lutchnial at UNB Saint John Translational Science Lab, the UNB Heart Centre and Dal Med, to determine its level of blood pressure accuracy against the gold standard inter-arterial catheter.



**The Case to focus more on Health Technology
"Scale-Ups" not "Start-Ups"**

Dr. Zayna Khayat
Lead, MaRS Health and
Director, MaRS EXCITE



Biography

Zayna Khayat is a senior advisor in health system innovation at MaRS Discovery District, an innovation hub in Toronto with a major focus on the health sector. At MaRS, Zayna plays a critical role in helping get health technology innovations adopted by healthcare systems in Ontario, Canada and around the world. Zayna is also an adjunct professor in the Health Sector Strategy stream at the University of Toronto's Rotman School of Management. Zayna was previously director of development at the Ivey International Centre for Health Innovation. Prior to this, she had an 11-year career in strategy consulting in the global health and life sciences sector, first with the Boston Consulting Group's Toronto office from 2001 to 2010, and then as an associate principal with SECOR Consulting. She holds a PhD in biochemistry from the University of Toronto and the Hospital for Sick Children, with a focus on insulin action and diabetes. She lives in Toronto with her husband and three children. – Twitter: @ZaynaKhayat E-mail: zkhayat@marsdd.com

Abstract

Several jurisdictions and health institutions in Canada are entering the medical technology space, trying to build a local or regional biocluster of sorts. Nearly all are focusing on the upstream activities required to commercialize discoveries and build / spin out health tech startups. However, that's not what Canada or health systems or the new health economy need more of. We have ample supply of incredible made-in-Canada technologies ... but they are not getting used at a meaningful extent; and so value is being destroyed, not created. That is, the resources required to go from an idea to a startup are largely on the back of public resources, yet if those startups do not scale up to reach patients in Canada and globally, no value accrues back to our own health systems (in the form of better outcomes, lower costs) and our economy (in the form of indigenous jobs, foreign sales). Dr. Zayna Khayat, head of the health system innovation platform at MaRS Discovery District will share examples of key ways innovators, adopters and intermediaries are beginning to work together to optimize the adoption side of the health technology development lifecycle.

OPEN PANEL DISCUSSION Q&A

Panelists:

- **Mr. Stéphane Bédard**, President & CEO, B-TEMIA Inc.
- **Mr. Robert Kaul**, Founder, President & CEO, Cloud DX Inc.
- **Dr. Geoff Fernie**, PhD, Senior Scientist & Director, Toronto Rehabilitation Institute (TRI)
- **Dr. Zayna Khayat**, Lead, MaRS Health and Director, MaRS EXCITE

1215 - 1245
Ballroom C

BUFFET LUNCH

1245 - 1330
Mezzanine

POSTER VIEWING & JUDGING

1330 - 1500
Ballroom A/B

**CONCURRENT SESSION – WORKSHOP #1:
HOT TOPICS IN BIOMEDICAL AND CLINICAL CANCER RESEARCH IN NEW BRUNSWICK**

Moderator: Dr. Rodney Ouellette, MD, PhD, President & Scientific Director,
Atlantic Cancer Research Institute (ACRI); Adjunct Professor of Biochemistry,
Université de Moncton; Adjunct Professor of Biology, UNB



DAY 1 – TUESDAY, NOVEMBER 3, 2015 – continued

Speakers:



**Incorporating Values in Patient-centred Care:
The Case of Breast Cancer Care in NB**

Dr. Erin Fredericks, PhD
Assistant Professor, Dept. of Sociology,
St. Thomas University



Abstract

While patient-centredness has become one measure of quality care provision in New Brunswick, we have little information about how health care providers actually provide patient-centred care or what patients expect from this care. In particular, it is unclear how patient values and beliefs are or are not incorporated into care. Drawing on qualitative interviews with individuals with breast cancer and their health care providers in New Brunswick, I argue that we must reconceive patient-centred care to deprioritize knowledge of patient values and reprioritize interpersonal interaction that supports providers and patients in understanding illness and health care experiences in social context.



**Elucidating the interaction between Pax5
and miRNA's in breast cancer**

Dr. Jason Harquail
PhD (c), Dept. of Chemistry and Biochemistry,
Université de Moncton
(Supervisor: Dr. Gilles Robichaud)



UNIVERSITÉ DE MONCTON
EDMUNDSTON MONCTON SHIPPAGAN

Abstract

Micro-RNAs (miRNAs) are small RNA molecules that control gene expression and are often expressed abnormally in cancer cells. We found that miRNAs 484 and 210 are abnormally expressed in certain cancers and regulate the expression of the Pax-5 transcription factor. Pax-5 expression deregulation is known to cause cancer progression; thereby linking these Pax-5-regulating miRNAs to cancerous processes.



**microRNA profiling by next-generation
sequencing: Identification of VHL-regulated
miRNA in Renal Cell Carcinoma**

Dr. Sandra Turcotte
PhD, Assistant Professor, Dept. of Chemistry and
Biochemistry, Université de Moncton and Researcher, ACRI



UNIVERSITÉ DE MONCTON
EDMUNDSTON MONCTON SHIPPAGAN



INSTITUT ATLANTIQUE DE RECHERCHE SUR
LE CANCER ATLANTIC CANCER RESEARCH
INSTITUTE

Abstract

Kidney cancer is the eighth most common diagnosed cancer in the country. Despite the growth in therapeutic options, complete and durable response in metastatic RCC remains rare and 5-year survival rates are still very low (10-20%). Tumor heterogeneity is particularly challenging in Renal Cell Carcinoma due to the variability in mutations in these tumors. One approach to develop targeted therapeutic option is to target mutations present early in tumor development. It is estimated that up to 85% of RCC are due to mutations that inactivate the von Hippel-Lindau (VHL) tumor suppressor gene. We have previously shown the feasibility to target the loss of VHL and specifically renal cancer cells using small molecules. To further understand VHL-inactivated tumors, we performed a microRNA (miRNA) signature in RCC cells using next-generation sequencing. The Cancer Genome Atlas was used to find clinical relevance of these miRs. Target prediction of these miRNAs has been performed by bioinformatics and correlation with transcriptomic data. Omics and profiling could have a profound effect on our understanding of kidney RCC and may improve study outcomes and potentially serve as biomarker or target in RCC.



Novel biomarkers to personalize the selection of cancer drug therapy

Dr. Anthony Reiman
MD, Assistant Dean, Research, Dalhousie Medicine New Brunswick (DMNB),
Canadian Cancer Society Research Chair, Professor, Dept. of Medicine,
Dalhousie University, Senior Scientist, Beatrice Hunter Cancer Research
Institute, Medical Oncologist, Saint John Regional Hospital





DAY 1 – TUESDAY, NOVEMBER 3, 2015 – continued

Abstract

Dr. Reiman will provide an overview of selected research projects being conducted by his group in the area of biomarker-driven selection of cancer therapies. In multiple myeloma and lung cancer we have evaluated biomarkers related to cancer drug mechanisms of action, metabolism and toxicity using specimens from multicentre clinical trials as well as local biorepositories; results will be presented that inform our quest to find biomarkers that could be used to select the best treatment for a given patient.



Use of a novel extracellular microvesicle capture method for the enrichment and identification of pancreatic cancer biomarkers

Dr. Stephen Lewis

PhD, Adjunct Professor, Dept. of Chemistry and Biochemistry, Université de Moncton, Adjunct Professor, Dept. of Biology, UNB and Assistant Scientific Director, ACRI



Abstract

Pancreatic Ductal Adenocarcinoma (PDAC) is an extremely lethal disease due to its resistance to currently-available therapeutics, as well as the fact that PDAC is often asymptomatic until it has progressed to the metastatic stage. Surgical resection of all or part of the pancreas is the best treatment; however, many patients present with late-stage, metastatic disease (~80%) and surgery is not a viable option. Therefore, there is a need for sensitive and specific biomarkers that permit the detection of PDAC in high-risk populations (e.g. family history, chronic pancreatitis) at its earliest stage, thereby increasing the possibility of successful surgical management. Extracellular vesicles (EVs) are small membrane-bound compartments that are shed from cells, which contain a sample of the cells' contents, including proteins, mRNAs, and miRNAs, which can serve as biomarkers for disease detection. Tumor-derived EVs circulate in the bloodstream and can be isolated from body fluids. We have developed a synthetic peptide (Vn96) that efficiently captures EVs from body fluids, thereby allowing us to enrich for biomarkers from samples obtained by minimally-invasive methods. We are using our EV-capture method with plasma samples from PDAC patients (at all stages) and healthy controls to increase the sensitivity and/or specificity of biomarkers associated with PDAC (e.g. KRAS mutation, Smad4 loss, p16INK4A loss, etc.). We are also subjecting RNA from Vn96-captured EVs derived from PDAC cell lines to next-generation sequencing in order to identify novel biomarkers associated with PDAC. The combination of EV capture and next-generation sequencing will allow us to discover new biomarkers associated with PDAC that have not been previously detected due to limits of sensitivity. The results of our research could potentially lead to new clinically-relevant PDAC biomarkers for screening high-risk populations.

1330 - 1500
Ballroom A/B

CONCURRENT SESSION – WORKSHOP #2: MILLENIALS' ANXIETY AND DEPRESSION

Moderator: Dr. Lucia F. O'Sullivan, PhD, Professor, Dept. of Psychology, Faculty of Arts, Tier 2 Canada Research Chair in Adolescents' Sexual Health Behaviour, UNB

Speakers:



Integrated Service Delivery for Children and Youth in New Brunswick

Mr. Bob Eckstein

Director, Integrated Service Delivery for Children at Risk, GNB – Dept. of Education and Early Childhood Development



Abstract

The Province of New Brunswick has adopted a child- and youth-centered Integrated Service Delivery (ISD) framework, intended to improve services and programs to children and youth deemed at-risk or having complex social, emotional, physical and/or mental-health needs. The development of this framework began with the acknowledgment of province-wide need to enhance services for youth with emotional/behavioural and mental-health concerns. The vision of ISD is to ensure the positive growth and development of at-risk children and youth as well as those with complex needs, through the collective impact of its partners working together in an integrated manner and with a child or youth-centered approach to develop and implement appropriate interventions based on the strengths, needs and risks of identified children and youth.

DAY 1 – TUESDAY, NOVEMBER 3, 2015 – continued



The Millennials in the "Age of Despair"

Dr. David A. Clark

Professor, Clinical Psychology,
Dept. of Psychology, Faculty of Arts, UNB



Abstract

Depression is the second most common mental health condition, affecting approximately one in five Canadians. Clinical depression is on the rise, especially among teens and young adults; an age cohort known as the millennials. Despite its frequency and far-reaching negative impact, only a minority of individuals receive effective treatments for the condition. This address examines the nature of depression in the millennials, its causes, consequences and treatment. The focus is specific to New Brunswick, with particular emphasis on how changes in mental health policy and practice could address this "mental health epidemic" that affects thousands of New Brunswickers in the most important social and economically productive years of their life.



Millennials' Anxiety and Depression

Dr. Rice Fuller

Director, Counselling Services, Senior Director,
Health and Wellness, Student Services, UNB



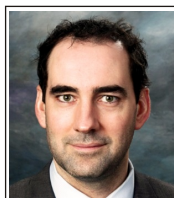
Abstract

There is conflicting and inconclusive evidence regarding the existence of increased rates of anxiety and depression in millennials. There is little doubt that economic and social changes have been occurring in Canada and elsewhere over the past few decades which have significantly delayed and complicated the transition from adolescence to adulthood. These changes have occurred at a population-wide level and are associated with diminished prospects for young adults and increasingly ambiguous pathways to adulthood. These economic and social structure changes may provide a better and more comprehensive basis for explaining perceived increased rates of anxiety and depression than others that have been put forward to date.

OPEN PANEL DISCUSSION Q&A

Panelists:

- **Dr. David A. Clark**, Professor, Clinical Psychology, UNB
- **Dr. Rice Fuller**, Director, Counselling Services, Senior Director, Health and Wellness, Student Services, UNB
- **Dr. Ryan Hamilton**, PhD, Assistant Professor, Dept. of Psychology, Faculty of Arts, UNB



Biography

Dr. Hamilton is an associate professor in the department of psychology at the University of New Brunswick. He conducts research in two main streams: 1) performance enhancement in sport and exercise, and 2) cancer survivorship. Ryan's recent work with cancer survivors has focused on the development and testing of hope-based interventions for those survivors with lymphedema. In addition to his research, Ryan has been recognized for his consulting and teaching, including winning the Faculty of Arts Teaching Excellence Award in 2011.



– Mr. John Sharpe, Partners For Youth



Biography

John has worked with youth and youth at risk for over 20 years. He is educated in youth work from Holland College in Prince Edward Island and in Family Violence Issues from the University of New Brunswick. John has served on various provincial boards and agencies. He has been the executive director of a number of not for profits and has worked for a number of provincial government departments. He has spoken at numerous conferences and events and he has been the Chief Executive Officer of Partners for Youth Inc. since 2006.

1330 - 1500
Governors A/B

CONCURRENT SESSION – WORKSHOP #3: THE SCIENCE OF HUMAN CARE IN AGING

Moderator: Dr. Chris McGibbon, PhD, UNB Research Chair – Rehabilitation Biomechanics, Professor, Faculty of Kinesiology, UNB

Speakers:



**Improving Care for frail older adults:
Where do we start?**

Dr. Melissa Andrew

MD, PhD, FRCPC, Geriatrician, QEII Health Sciences Centre, Associate Professor, Dept. of Medicine and Geriatric Medicine, Faculty of Medicine, Dalhousie University



Abstract

In this session we will discuss various approaches to defining and measuring frailty. We will see that frailty is not a single problem; frail older adults have many things wrong at once. We will discuss how social circumstances and systems of care are particularly important for frail older people, and review the implications of these foundational ideas for our health care system.



**The Science of Human Care in Aging:
Building Services which Address “What Matters Most “**

Dr. Kathleen Valentine

RN, BS, MScN, PhD, Dean, Professor, Faculty of Nursing, UNB



Abstract

Caring is a complex and multi-dimensional concept. As it relates to health care, its core is comprised of who the provider is (attributes, affect) what the provider knows (cognitive knowledge) and how that is put into action (competence, professional vigilance) in interactions intended for health, healing, wellbeing, or teaching/learning. The quality of interaction in patient care encounters is affected by philosophical beliefs that shape practice design and delivery, as well as structural aspects of the practice environment such as economic resources, technology and staffing (Valentine, 1997). This paper will describe the structure, process and outcome dimensions used to establish academically affiliated clinics focused on the delivery of services to elders. The substantive knowledge of caring science guided the design and delivery of a Memory and Wellness Center which served as a vibrant learning laboratory in which faculty teach, conduct research and students learn to practice caring from a substantive theoretical framework.

DAY 1 – TUESDAY, NOVEMBER 3, 2015 – continued



**Wheeled Mobility to enhance the Activity
and Participation of Older People**

Dr. François Routhier

Assistant Professor, Dept. of Rehabilitation,
Université Laval



Abstract

Mobility impairment is the number one form of disability for Canadians 60 years of age and older and, with the aging baby boom population, the number of older Canadians living with mobility impairments will grow exponentially over the next decades. The wheelchair is among the most important of rehabilitation interventions. Wheelchair users, however, face many mobility and participation barriers and are at risk. To improve wheeled mobility of older adults, the CanWheel Research Team addressed questions such: How are wheelchairs used now? How can wheelchairs be used better? How can wheelchairs be better? This talk will present some recent research done in Canada in regards to wheeled mobility.

OPEN PANEL DISCUSSION Q&A

Panelists:

- **Dr. Melissa Andrew**, MD, PhD, FRCPC, Geriatrician, QEII Health Sciences Centre, Associate Professor, Dept. of Medicine and Geriatric Medicine, Faculty of Medicine, Dalhousie University
- **Dr. Kathleen Valentine**, RN, BS, MScN, PhD, Dean, Professor, Faculty of Nursing, UNB
- **Dr. François Routhier**, Assistant Professor, Dept. of Rehabilitation, Université Laval
- **Ms. Barbara Burnett**, Executive Director, Atlantic Institute on Aging



Biography

Barbara Burnett has been the Executive Director of the Atlantic Institute on Aging since its creation in 2009. During her previous years working for the Province of New Brunswick, she demonstrated leadership in a number of capacities, the last role being Director of Nursing Homes Services. Her focus at the Institute is to highlight and promote activities that support the emotional, spiritual and physical well-being of people as they age including people at all points along the continuum from independent to dependent living. She has lead the Institute as a member of a number of research projects partnering with universities in several provinces. She believes strongly in the need to make public policy decisions based on evidence. Barbara holds a Bachelor of Business Administration degree from the University of New Brunswick (Fredericton campus).

- **Dr. Suzanne Dupuis-Blanchard**, PhD, Associate Professor, School of Nursing, Université de Moncton, CNFS Research Chair in Population Aging, Director, Centre for Aging Research, President, Canadian Association on Gerontology



Biography

Dr. Suzanne Dupuis-Blanchard holds a research chair in population aging CNFS-Université de Moncton and is an associate professor at the School of Nursing at Université de Moncton. She earned a PhD in Nursing at the University of Alberta, a Master of Nursing at the University of New Brunswick and a Bachelor of Nursing Science at Université de Moncton. She is also Director of the Centre for Aging Research at the Université de Moncton. She was elected President of the Canadian Association on Aging in October 2014. She began her career as a public health nurse working with older adults in health promotion and disease prevention in the city of Ottawa. Her program of research seeks to understand the different facets of aging-in-place including the influence of language (French/English) in receiving services.



DAY 1 – TUESDAY, NOVEMBER 3, 2015 – continued

1500 - 1600
Mezzanine

NUTRITIONAL BREAK, POSTER VIEWING & JUDGING

1600 - 1700
Ballroom A/B

PLENARY SESSION #4 – GAIRDNER AWARD RECIPIENT LECTURE

Moderator: Mr. John Dirks, President and Scientific Director,
The Gairdner Foundation



Speaker:



**RNA and the New Genetics:
From Bench to Therapeutics**

Dr. Lynne Maquat, PhD

Recipient of the Canada Gairdner International Award 2015,
J. Lowell Orbison Endowal Chair, Professor of Biochemistry,
Biophysics and Oncology, Director of the Centre for RNR Biology,
Chair of Graduate Women in Science, University of Rochester



Biography

Lynne Elizabeth Maquat is the J. Lowell Orbison Endowed Chair and Professor of Biochemistry & Biophysics, Director of the Center for RNA Biology, and Chair of Graduate Women in Science at the University of Rochester in Rochester, New York, USA. After obtaining her PhD in Biochemistry from the University of Wisconsin-Madison and undertaking post-doctoral work at the McArdle Laboratory for Cancer Research in Madison, she joined the Roswell Park Cancer Institute in Buffalo, New York before moving her laboratory to the University of Rochester. Professor Maquat is known for her mammalian-cell studies of nonsense-mediated mRNA decay (NMD), which she first reported in 1981 through studies of the anemia β^0 -thalassemia and from which she subsequently discovered the pioneer round of protein synthesis, the exon-junction complex (EJC), and how the EJC marks messenger (m)RNAs for a first quality-control round of protein synthesis that largely occurs as newly synthesized mRNAs leave the nucleus in which they are synthesized and enter the cytoplasm. She continues to make seminal contributions on mechanisms of NMD and another pathway she discovered and named Staufen-mediated mRNA decay (SMD). Her work on SMD has defined new roles for long non-coding RNAs and short interspersed elements (SINEs) in humans and rodents, unveiling the complexities of RNA interactions with other RNAs that comprise important post-transcriptional gene regulatory pathways during mammalian-cell development and differentiation. Professor Maquat has served on editorial boards including *RNA*, *Mol. Cell Biol.*, *RNA Biol.*, and *Methods*, as an elected Director, Treasurer/Secretary and President of the international RNA Society, as a member of the Public Information Committee of the American Society for Cell Biology, and as chair of U.S. National Institutes of Health study section. She is an elected Fellow of the American Association for the Advancement of Science (2006), an elected Member of the American Academy of Arts and Sciences (2006) and the National Academy of Sciences (2010), and a Batsheva de Rothschild Fellow of the Israel Academy of Sciences and Humanities (2012). Professor Maquat was awarded the William C. Rose Award from the American Society for Biochemistry and Molecular Biology (2014) for research and mentoring, in particular advocacy for women in science. This year (2015), she received a Canada Gairdner International Award for uncovering the mechanism of NMD and its importance to normal and disease-associated gene expression.

Abstract

Our genetic material is stored in our genes, which are chains of DNA. The instructions in our DNA are carried out by chains of RNA, and RNA is simply amazing! We have many types of RNA because RNA plays many roles in our cells. Some RNAs are not only part of the cellular machine that makes our proteins, but one RNA in particular catalyzes protein synthesis per se. Other RNAs serve as templates from which proteins are made. Still others are regulatory, directly controlling the expression of our genes or of other RNAs. New disease therapies that target RNA, the importance of RNA biology to developing personalized medicine, and (last but certainly not least) the importance of women to science will be among topics discussed.



DAY 1 – TUESDAY, NOVEMBER 3, 2015 – continued

1830 - 1900
Mezzanine

PRE-GALA RECEPTION

Sponsored by: University of New Brunswick



Dr. David Burns, PhD
Vice-President Research,
UNB



1900 - 2100
Ballroom A/B/C

**GALA OF EXCELLENCE BANQUET: THE WHITE COATS –
THE ART OF MEDICAL RESEARCH AT THE HEART OF HEALTH**

Sponsored by: Sanofi

Guest:



The Honorable Victor Boudreau
Minister, Health, Minister, Regional Development
Corporation, Government of New Brunswick



2100 - 0100

SOCIAL GATHERING



0730 - 0830
Mezzanine

REGISTRATION – BREAKFAST

0830 - 1000
Ballroom A/B

PLENARY SESSION #5 – FORGING HEALTH RESEARCH PARTNERSHIPS

Moderator: **Dr. Colleen O'Connell, MD, FRCP**, Physical Medicine & Rehabilitation Physician, Stan Cassidy Centre for Rehabilitation (SCCR), Horizon Health Network, and Assistant Professor, Faculty of Medicine, Dalhousie University and Faculty of Medicine, Memorial University

Speakers:



Promoting international collaborations in Spinal Cord Injury: Lessons Learned and Emerging Opportunities

Dr. Vanessa Noonan

PhD, PT., Director, Research and Best Practice Implementation, Rick Hansen Institute



Biography

Dr. Vanessa Noonan is the Director of Research and Best Practice Implementation for the Rick Hansen Institute (RHI). She has been actively involved with the Rick Hansen Spinal Cord Injury Registry, both nationally and internationally. In addition, she is part of the International SCI Data Set Committee that has overseen the development of over 18 data sets and is a collaborator on the National Institutes of Health (NIH) Common Data Elements project for SCI.

Abstract

The need for international collaborations to advance knowledge and enhance spinal cord injury (SCI) care has become increasingly evident. This presentation will describe the development of a growing international SCI network, highlighting consumer priorities and the barriers/facilitators of conducting international SCI research. Emerging initiatives to enhance collaboration by creating common data elements and a SCI data network will be described.



Forging Health Research Partnerships: A CIHR Perspective

Dr. Robyn Tamblyn

PhD, Scientific Director, CIHR – Institute of Health Services and Policy Research (IHSPR), James McGill; Professor, Department of Epidemiology, Biostatistics and Occupational Health, Faculty of Medicine, McGill University



Biography

Dr. Robyn Tamblyn, MSC, PhD, is a Professor, Department of Medicine and Department of Epidemiology and Biostatistics, McGill University, Faculty of Medicine, James McGill Chair, a Medical Scientist at the McGill University Health Center Research Institute, and Scientific Director of the Clinical and Health Informatics Research Group at McGill University. As of January 2011, Scientific Director, CIHR – Institute of Health Services and Policy Research. Her work appears in the *Journal of the American Medical Association*, *Annals of Internal Medicine*, *British Medical Journal*, *Medical Care*, and *Health Services Research* among others. She has been awarded the CHSRF KT award for research in improving the use of medication, the ACFAS Bombardier award for innovation in the development of a computerized drug management system as well as the recipient of the John P. Hubbard Award for outstanding achievement in contributing to the assessment of professional competency in healthcare and medical education.

Abstract

Over the last few years, the approach to health research funding has evolved. As we move away from the traditional, researcher-driven and directed grants, we shift towards funding opportunities that are more patient and policy relevant and led by multidisciplinary teams that include, researchers, clinicians, policy makers and patients. Key to funding these types of grants are national and international partnerships. This talk will explore the non-traditional approach taken by CIHR's Institute of Health Services and Policy Research for the eHIPP program, the health system partnerships required for SPOR, and the lessons learned from the Partnerships for Health System Improvement (PHSI) program.



A Healthy Authority Perspective

Dr. Édouard Hendriks

VP Medical, Academic and Research Affairs, Horizon Health Network





DAY 2 – WEDNESDAY, NOVEMBER 4, 2015 – continued

Biography

Dr. Édouard Hendriks has been the Vice President, Medical, Academic and Research Affairs for Horizon Health Network since 2008. From 1997 to 2008, he worked with the Regional Health Authority 4, first as the Vice President for Medical Affairs and from 2001 as the President and CEO of the organization. Dr. Hendriks has a clinical background in emergency medicine and practiced in various emergency rooms for over 25 years. Dr. Hendriks has been and is involved in many national and provincial organizations. Among other things, he is a Surveyor for Accreditation Canada since 1993, has, for 5 years, been a member of the EXTRA Advisory Council of the Canadian Health Services Research Foundation, has been a Board member of the Canadian Patient Safety Institute (CPSI) for 6 years, is currently a Board member of the Canadian Agency for Drugs and Technology in Health (CADTH), Chair of the NB Utilization Management Committee, Chair of the NB Patient Safety and Quality Improvement Advisory Committee, Vice Chair of the New Brunswick Health Research Foundation, and he represents Horizon Health Network on the VP Research Advisory Committee of HealthCareCan and on the Collaborative for Excellence in Healthcare Quality.

Abstract

Created in 2008, Horizon included from the beginning research as one of the core components of its “raison d’être”. Since then, Research Services Department has the mandate to promote and support researchers and research activities within the organization. But it is through partnering with various organizations, either formally (for example with Dalhousie Medicine New Brunswick, NB Health research Foundation, HealthCareCan, ...) or informally (for example with Foundations, national organizations, pharmaceutical companies,...) that Horizon makes itself known as a credible emerging research organization.

OPEN PANEL DISCUSSION Q&A

Panelists:

- **Dr. Vanessa Noonan**, PhD, Director, Research, Rick Hansen Institute
- **Dr. Robyn Tamblin**, PhD, Scientific Director, CIHR – Institute of Health Services and Policy Research
- **Dr. Édouard Hendriks**, VP Medical, Academic and Research Affairs, Horizon Health Network
- **Mr. Chirfi Guindo**, President and Managing Director, Merck Canada Inc.



Biography

Mr. Chirfi Guindo was appointed to the position of President and Managing Director of Merck Canada Inc., one of Canada's leading healthcare companies, effective September 29, 2014. Based in Kirkland, Québec, the company employs approximately 975 employees and markets more than 250 pharmaceutical and animal health products across Canada. Mr. Guindo brings to his new role deep experience in the Merck business around the world, including Managing Director for South Africa and the Netherlands. While in South Africa, as the Chair of Innovative Medicine South Africa (IMSA), he helped forge stronger partnerships between the government and industry; while in the Netherlands, he led the integration of the Merck and Schering-Plough pharmaceutical businesses, as well as having a leadership role in the Dutch industry association for innovative pharmaceutical companies (Nefarma). In both countries, he was recognized for his collaborative approach with governments on finding sustainable ways to expand access to innovation in healthcare. Most recently, as Vice President and General Manager for the Global HIV franchise, Mr. Guindo led a successful growth strategy across the Merck world, while also collaborating with the Merck Research Labs to advance and expand the company's HIV research pipeline. Mr. Guindo began his career at Merck in 1990 with the Finance department, and subsequently accepted a position as a sales representative in the U.S. Mr. Guindo is a member of Canada's Research-Based Pharmaceutical Companies (Rx&D) Board of Directors. He graduated with a degree in Engineering from École Centrale de Paris (France) and obtained an MBA in Finance and Economics from New York University's Stern School of Business.

- **Mr. Rick Blickstead**, President and CEO, Canadian Diabetes Association





DAY 2 – WEDNESDAY, NOVEMBER 4, 2015 – continued

Biography

Rick specializes in strategic organization revitalization, governance, stakeholder management, complex systems thinking, and executional excellence within healthcare, population health, and consumer-centric organizations. He is the President and CEO of the Canadian Diabetes Association, a national health charity and President of Clothesline, one of Canada's largest social enterprises. Rick is the past CEO of the Wellesley Institute, a national applied research and policy think tank focused on advancing population health. Rick is an Adjunct Professor at the University of Toronto, a Fellow of MaRS-Social Innovation Generation, and was latterly a President of RONA Retail, Wal-Mart FJ USA, Dylex- BW Stores, and Peoples Jewellers amongst others. Rick is a Governor of Centennial College, a Director and Past Chair of Imperial Manufacturing Group, Board Treasurer of Regis College at the University of Toronto, a Director of World Presidents Organization: Ontario Chapter, and Young President Organization, Toronto Chapter, and a Director of the Harvard Club of Toronto. He is a Past-Director of the Toronto Central LHIN, Past Chair of Centennial College's Centre for Applied Research and Innovation, Past Governor of the Canadian Centre for Diversity, and a past-Director of the Toronto Board of Trade and past Chair of its Policy and Advocacy Committee. Rick has an Honours Bachelor of Commerce from Carleton University, an MBA from the University of Toronto, and is a graduate of the joint Non-Profit Management Certificate program at the Harvard Business and Kennedy Schools. He is also an alumnus of Bishop's University.

1000 - 1030
Mezzanine

NUTRITION BREAK, POSTER VIEWING AND JUDGING

1030 - 1200
Ballroom A/B

CONCURRENT SESSION – WORKSHOP #4: PROFILE OF MEDTECH STARTUPS

Moderator: **Dr. Erik Scheme**, PhD, NBIF Innovation Research Chair in Medical Devices and Technologies, Institute of Biomedical Engineering, Adjunct Professor, Dept. of Electrical and Computer Engineering, Faculty of Engineering, UNB

Speakers:



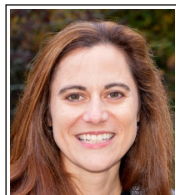
Tech Tales From Behind the Green Gown

Dr. Andrew Reddick
Principal Facilitator,
Trust Bridge International



Abstract

Drawing on experiences in the not-for-profit, government research and private sectors, Dr. Reddick discusses some lessons learned relating to innovation/invention, clinical and non-clinical health IT opportunities and challenges and, research and market experiences and approaches.



ViTrak – Profile of a MedTech Startup

Ms. Crystal Lavallée
President & CEO, ViTrak



Abstract

ViTRAK Systems Inc. (ViTRAK) is a federally incorporated Research and Development company dedicated to the development and commercialization of its two patents in the field of movement tracking and analysis. The company's first product is a pressure sensitive flooring system with sophisticated footprint analytic software for gait research and analysis. Branded Stepscan™ the technology is able to measure a subject's or patient's under foot pressure distribution as well as many other movement parameters such as a subject's stride and speed of movement. The technology has many applications including security, sports training and medicine, clinical drug trials and various forms of applied biomechanics research.



Discovery, Validation and Commercialization of a Canadian MedTech Innovation

Mr. Todd D. Gray
Chairman & CEO, Autonomous_ID





DAY 2 – WEDNESDAY, NOVEMBER 4, 2015 – continued

Abstract

In this session, autonomous_ID will present the road from discovery, to validation to the commercialization of its Canadian innovations. autonomous_ID is credited with the founding of a new discipline in the field of biometric sciences that has broad application in identity security, access management, mobile health and technology enabled care. The session will also highlight the failings and short-sightedness of Canadian Federal and Provincial research and granting programs as well as the lack of “real” investment capital to fund and support “Made in Canada” innovation.

OPEN PANEL DISCUSSION Q&A

Panelists:

- **Dr. Andrew Reddick**, Principal Facilitator, Trust Bridge International
- **Ms. Crystal Lavallée**, President & CEO, ViTrak
- **Mr. Todd D. Gray**, Chairman & CEO, Autonomous_ID
- **Mr. Robert Kaul**, Founder, President & CEO, Cloud DX Inc.
- **Ms. Irene Gaudet**, President, in2Healthcare Inc.



Biography

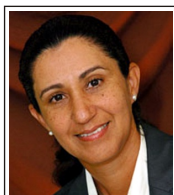
Irene Gaudet is the President of In2 Healthcare Inc.; a medical device commercialization company. Ms. Gaudet provides the strategic direction and overall leadership for the successful commercialization and market adoption of medical device technologies, for early stage medical device companies in Atlantic Canada. She began her career as a medical device representative where she had a track record of success pioneering new technologies and rose through the ranks to be the Director of the Minimally Invasive Cardiac and Vascular Surgery Division of the Guidant Corporation. She is an experienced business executive with 25+ years management experience, extensive clinical knowledge and skills sets in sales, marketing and finance.

1030 - 1200
Governors A/B

**CONCURRENT SESSION – WORKSHOP #5:
NEW BRUNSWICK RESEARCHERS PRESENTATIONS**

Moderator: **Ms. Jenn Tuttle**, Manager, Research Services, Horizon Health Network,
Dr. Everett Chalmers Regional Hospital, Fredericton, NB

Speakers:



**Mind the Heart: Best Practices for Prevention,
Early Identification and Treatment of Mood and
Anxiety Disorders in Men with Heart Disease**

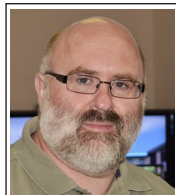
Dr. Jalila Jbilou

MD, PhD, Research Professor, Centre Formation Médicale
du Nouveau-Brunswick, Université de Moncton



Abstract

Mood disorders, anxiety disorders, and trauma-related disorders (MD\AD\TRD) are common among men, particularly those suffering from Heart Disease (HD). MD\AD\TRD is significantly related to exacerbation of HD symptoms that often lead to death. Unfortunately, men are significantly less likely than women to seek and receive appropriate treatment for their mental health problems including MD\AD\TRD. The overarching goal of this interventional program is therefore to prevent, early detect and treat MD\AD\TRD in men living with HD. This Participatory Action Research aims to implement an integrated intervention for MD\AD\TRD in men in New Brunswick, Ontario, and Québec. Major outcomes are improved access/ utilization of integrated interventions for MD\AD\TRD in the context of HD in men. We present here the study protocol, the governance structure and the integrated knowledge translation plan (iKTA).



Connected Voices – Bouctouche

Dr. Michel Johnson

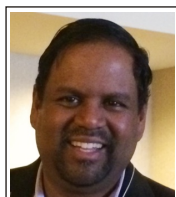
PhD, Professor, School of Kinesiology and Recreation,
Faculty of Health Sciences and Community Services,
Université de Moncton



UNIVERSITÉ DE MONCTON
EDMUNDSTON MONCTON SHIPPAGAN

Abstract

Telehealth services provide an innovative opportunity to offer interprofessional care to patients with chronic conditions, with the aim of improving patient access to more convenient and coordinated care closer to home. Interprofessional teams need to shift away from practicing in silos to working creatively (e.g. using mHealth interventions) and collaboratively with patients to develop a shared plan of care. Despite the opportunities in this area, there is virtually no research that has explored the use of Telehealth technologies in the delivery of interprofessional care. Research is urgently needed to advance our understanding of interprofessional practice related to Telehealth service delivery, particularly in remote, rural, and underserved areas. The purpose of this project is to establish a model to provide an innovative interprofessional mobile Telehealth health strategy (termed mHealth) smoking cessation intervention for individuals suffering from cardiopulmonary disease.



Geographic disparities in access to care and clinical outcomes among patients with cardiovascular disease in New Brunswick

Dr. Ansar Hassan

MD, PhD, Attending Cardiac Surgeon, Saint John Regional Hospital,
Horizon Health Network, Associate Professor, Dept. of Surgery,
Faculty of Medicine, Dalhousie University, NBHRF Clinical Scholar



Abstract

Although the Canadian health care system is mandated to provide equitable access to medical services, previous studies have shown that disparities in access exist across Canada due to socioeconomic status (SES), language, and geographic barriers. The purpose of this study was to examine the effect of these non-clinical factors on access to invasive cardiac services in NB, including cardiac catheterization, percutaneous coronary intervention and cardiac surgery.



The NB Virtual Health Centre for Children with complex health conditions: Laying the very first stones

Dr. Shelley Doucet

PhD, Jarislowsky Chair in Interprofessional Patient-Centred Care,
Assistant Professor, Faculty of Nursing and Health Services,
University of New Brunswick Saint John, Adjunct Professor,
Faculty of Medicine, Dalhousie Medicine New Brunswick



and

Dr. Rima Azar

Associate Professor & CIHR/RPP; New Investigator,
Developmental Psychoneuroimmunology, Dept. of
Psychology, Faculty of Science, Mount Allison University



Abstract

Childhood is a time of happiness and good health for most children; however, approximately 5%-18% of children have a chronic health condition (physical, emotional, developmental, neurological or behavioural) that affects their daily lives. In December 2014, we were awarded a \$750,000 four-year grant from the New Brunswick Children's Foundation to assist in implementing the New Brunswick Virtual Health Centre for Children. This centre aims to: (1) ensure the integration of health, education, and social services for children with complex health conditions; (2) advocate for children with complex health conditions and their families; and (3) offer families (the experts of their own lives) a setting to voice their needs and to mentor/support other families. We will present the preliminary findings from our needs assessment and share our plans for next steps.



DAY 2 – WEDNESDAY, NOVEMBER 4, 2015 – continued



Proteotoxic Basis for diabetic cardiomyopathy

Thomas Pulinilkunnil

PhD, Assistant Professor, Dept. of Biochemistry and Molecular Biology, Faculty of Medicine, Dalhousie University, Adjunct Professor, University of New Brunswick, Associate Member, Beatrice Hunter Cancer Research Institute



Abstract

Using a multispecies approach (rodents, yeast and zebrafish) Pulinilkunnil lab is examining how glucose, fatty acid and amino acids influence lysosomal signaling and function. The master regulator of lysosomal biogenesis, transcription factor EB (TFEB), is an important lysosomal nutrient sensor regulating autophagy. Our data demonstrate that glucolipototoxicity induces lysosomal stress by negatively targeting TFEB to inhibit autophagy, thereby promoting proteotoxicity and cardiomyopathy. TFEB regulation could be therapeutically targeted to attenuate metabolic cardiomyopathy.

1030 - 1200
Ballroom D

**CONCURRENT SESSION – WORKSHOP #6:
SUMMER STUDENTSHIP AWARDEES PRESENTATIONS**

Moderator: Ms. Diane Burt, Director of Applied Research and Innovation,
New Brunswick Community College (NBCC)

Speakers:



**Endocannabinoid and nitric oxide interactions in the rat hypothalamus:
potential implications for stress-induced obesity**

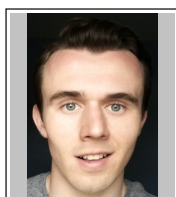
Ms. Alexandra Smithers

Dept. of Biology, Faculty of Science,
Mount Allison University
(Mentor: Dr. Karen Crosby)



Abstract

Recent evidence suggests that in *in vitro* brain slices, nitric oxide (NO) is required for endogenous cannabinoid (eCB) signalling; however, the impact of this interaction on food intake *in vivo* and the underlying molecular mechanism remains unknown. Our goal is to examine whether eCBS and NO interact in the dorsomedial hypothalamus (DMH) to regulate food intake and to examine the underlying mechanisms that enhances this signaling by using adult male Sprague-Dawley rats and activating or inhibiting eCB and NO pathways through the implantation of a bilateral cannulae.



**Role of Amino Acid Metabolizing Enzymes
in Muscle Insulin Resistance**

Mr. Luke Duffley

Dalhousie Medicine New Brunswick,
Faculty of Science, UNB
(Mentor: Dr. Thomas Pulinilkunnil)



Abstract

In the liver, insulin maintains metabolic homeostasis by regulating glucose and fatty acid utilization. During obesity, hepatic insulin resistance precedes cardiometabolic disorders and therefore examining and attenuating metabolic maladaptation in the liver is a novel strategy to counter obesity related commodities. In obese individuals, elevated levels of branch chain amino acid (BCAA) are associated with insulin resistance and glucose intolerance. My research in the Pulinilkunnil laboratory was aimed at discerning whether alterations in branch chain amino acid signaling and utilization modulates hepatic insulin sensitivity during obesity, rendering susceptibility to type 2 diabetes.



**Characterization of the expression of Sox factors
by in situ hybridization in mice testis**

Ms. Josée Hachée

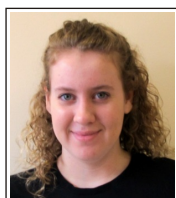
Dept. of Biology, Faculty of Science,
Université de Moncton
(Mentor: Dr. Luc Martin)





Abstract

Testosterone is a hormone mainly produced by Leydig cells located in the testis, and is essential for development and sexual function in men. Sox transcription factors could potentially regulate the expression of genes involved in the production of testosterone in Leydig cells, due to the presence of potential regulation sites for Sox transcription factors on the promoters of these genes. In this project, an analysis of the expression of transcription factors of the SoxD group, as well as Sox9 and Sox30, in the different testicular cell populations was carried out by fluorescence in situ hybridization in paraffin sections of mice testes.



Heme Regulatory Enzymes are Altered in Hypertension-Induced Models of Heart Failure

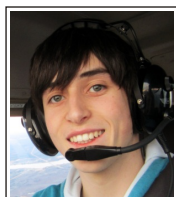
Ms. Hannah Law

Dalhousie Medicine New Brunswick,
Faculty of Science, UNB
(Mentor: Dr. Keith Brunt)



Abstract

Heme is essential to oxygen-dependent life through its roles in cellular respiration, formation of cytochromes and globins, such as hemoglobin and myoglobin, as well as in cellular metabolism and communication. How heme is regulated in heart failure remains to be understood. This study investigated heme regulatory enzyme levels (anabolic and catabolic) in mouse models of hypertension-induced heart failure from 4 to 24 weeks of trans-aortic constriction (TAC). ALAS1, one of two rate-limiting enzymes responsible for heme synthesis, was significantly increased with TAC. In a non-canonical response, HMOX1, the stress-inducible and cytoprotective enzyme responsible for heme catabolism, was significantly increased in TAC mice. To facilitate the translation of new pharmacological approaches targeting its cytoprotective properties, further understanding of the heme-regulatory network is required in models of heart failure.



Enhanced X-Ray Spectrometry for Arsenic and Selenium Detection

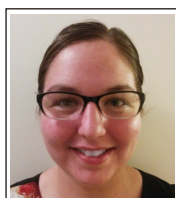
Mr. Craig Groskopf

Dept. of Physics, Faculty of Science,
Mount Allison University
(Mentor: David Fleming)



Abstract

With the arrival of a new X-Ray Fluorescence (XRF) System at Mount Allison University, a comparison between the new and old systems was made with a medical focus in mind. A series of experiments was conducted to evaluate the ability of each system to detect trace elements in the human body. The experiments were designed to detect lead in bone phantoms, arsenic and selenium in skin phantoms, and zinc and manganese in nail phantoms. These elements were selected due to their presence in the human body and their health effects, as well as the broad range of energies required to detect the elements. The results demonstrate the capabilities of XRF technologies, and how they can be applied to the medical field.



Supportive Care for Cancer Survivors in the Parish Nursing Context

Ms. Kayla Beck

Faculty of Nursing,
University of New Brunswick
(Mentor: Dr. Krista Wilkins)



Abstract

Community-based care providers, including parish nurses, are assuming greater responsibility for the ongoing supportive care sought by cancer survivors. Parish nurses can help cancer survivors strive towards wholeness of mind, body and spirit. This unique holistic perspective may help cancer survivors normalize their lives and increase control over their health. A qualitative study was conducted to describe parish nurses' perspectives on their roles in delivering community-based supportive care to cancer survivors. Parish nurses described their experiences in caring for cancer survivors, their professional responsibilities, and their information needs and preferences. Study findings served as a starting point for dialogue around best practices in establishing community-based initiatives for cancer survivors.

1200 - 1300
Ballroom C

BUFFET LUNCH AND POSTER VIEWING AND REMOVAL



DAY 2 – WEDNESDAY, NOVEMBER 4, 2015 – continued

1300 - 1430
Ballroom A/B

**CONCURRENT SESSION – WORKSHOP #7:
EVIDENCE-BASED MEDICINE FOR NEW DRUGS**

Moderator: Mr. Martin McNeil, Sr Manager, External Relations, AstraZeneca Canada Inc.

Speakers:



**The Basis of New Drug Approval:
Bedtime Stories, Unmet Needs, and Scientific Humility**

Dr. Cait O'Sullivan

BScPharmacy, BA, PharmD, Clinical Pharmacist, Island Health Clinical
Pharmacy Programs, BC Provincial Academic Detailing Service

Abstract

The U.S. Food and Drug Administration (FDA) Drug Approval Packages contain substantial amounts of clinical trial data compared to the published literature and are publicly accessible. Yet, this source of drug information is neglected in systematic reviews and clinical practice guidelines. Using a new drug therapy example, this session will compare the quantity and quality of drug information that can be accessed in a U.S. FDA Drug Approval Package, Health Canada's Summary Basis of Decision Documents, and a clinical practice guideline. Looking carefully at the drug approval process, which directly shapes the evidence available to us, we can enrich the sharing of drug information with patients to whom clinicians may (or may not) recommend new drug therapies.



Patient Reported Outcomes in Clinical Trials: What Matters Most

Dr. Colleen O'Connell

MD, FRCP, Physical Medicine & Rehabilitation Physician, SCCR,
Horizon Health Network, Associate Professor, Faculty of Medicine,
Dalhousie University and Faculty of Medicine, Memorial University,
NBHRF Clinical Scholar



Abstract

Randomized double blinded placebo controlled trials are considered essential to providing the highest level of evidence in clinical research. However, significant barriers limit the ability to conduct such trials, including resources, patient numbers, appropriate controls and importantly meaningful and sensitive outcome measures. In the absence of such levels of evidence, potential treatments fail to advance or progress to clinical practice and patient care. Increased recognition of the importance of patient reported outcomes can change the way clinical trials are conducted, with greater emphasis on outcomes that are relevant and experienced by patients. This session will review experience with “failed” and successful clinical trials in spinal cord injury and multiple sclerosis, and the critical need to ensure appropriate patient reported outcomes.



Evidence-based Medicine for New Drugs

Mr. Chirfi Guindo

President and Managing Director,
Merck Canada Inc.



Abstract

Bringing important medicines and vaccines to people around the world through breakthrough science is at the heart of what we do at Merck. People count on us to make medicines and vaccines that have well documented safety and effectiveness profiles and offer value. Clinical trials are a critical step in this process. Merck is committed to innovating science through clinical research to develop and manufacture solutions in areas of high unmet medical need. Each clinical trial is designed to answer certain research questions following strict, predefined protocols to ensure safe and accurate results. Each phase has a different purpose in the development of a medicine or vaccine. Chirfi Guindo, President and Managing Director, Merck Canada Inc., will share how Merck's clinical trial programs are designed to ensure the appropriate evidence for breakthrough medications are prepared for submission to Health Canada.



DAY 2 – WEDNESDAY, NOVEMBER 4, 2015 – continued

OPEN PANEL DISCUSSION Q&A

Panelists:

- **Dr. Cait O'Sullivan**, BScPharmacy, BA, PharmD, Clinical Pharmacist, Island Health Clinical Pharmacy Programs, BC Provincial Academic Detailing Service
- **Dr. Colleen O'Connell**, M.D., FRCP, Physical Medicine & Rehabilitation Physician, SCCR, Associate Professor, Faculty of Medicine, Dalhousie University and Memorial University
- **Mr. Chirfi Guindo**, President and Managing Director, Merck Canada Inc.
- **Ms. Leanne Jardine**, Executive Director, GNB Dept. of Health, Pharmaceutical Services



Biography

Leanne Jardine is the Executive Director of NB Pharmaceutical Services which includes the NB Prescription Drug Program and Regional Health Authorities, as well as supporting the development of the Drug Information System and Prescription Monitoring Program. She is the current chair of the Pharmaceutical Directors' Forum and the former chair of CADTH's Advisory Committee on Pharmaceuticals, Pharmaceutical Advisory Committee and Common Drug Review Committee. She also served on CADTH's Canadian Optimal Medication Prescribing and Utilization Service Advisory Committee. Leanne holds a Bachelor of Science in Pharmacy from Dalhousie University and a Master in Business Administration from UNB.

1300 - 1430
Governors A/B

**CONCURRENT SESSION – WORKSHOP #8:
ALL HEALTH RESEARCH INITIATIVES (HRI) UPDATES: SPOR AND OTHERS**

Moderator: Ms. Nancy Roberts, Executive Director, GNB-Dept. of Health, Unit of Health Intelligence & Planning

Speakers:



Maritime SPOR Support Unit (MSSU) – NB Node

Dr. Ted McDonald
PhD, Professor, Dept. of Economics, Director, Institute of Research Data & Training, UNB



Abstract

This presentation will review the current status and ongoing initiatives of the Maritime SPOR SUPPORT Unit in New Brunswick and across the Maritime Provinces. As the first SPOR program launched and the most mature of the various SPOR networks, the SUPPORT Unit program in the Maritimes offers useful lessons about multi-sector multi-provincial collaborations. As well, the presentation will highlight what is next for the MSSU as it continues to establish itself in the health research infrastructure in the Maritimes. Finally, the presentation will review on recent developments in the NB-Institute for Research, Data and Training, the administrative data platform for the MSSU in New Brunswick.



ACCESS NB

Dr. Ann Beaton
Professor and Tier 2 Canada Research Chair, Dept. of Psychology, Faculty of Health Sciences and Community Services, Université de Moncton





DAY 2 – WEDNESDAY, NOVEMBER 4, 2015 – continued

Abstract

The goal of this presentation is to provide an overview of the ACCESS Canada initiative and the progress that has been made. It should be noted that the ACCESS Canada network comes within the framework of Canada's Strategy for Patient-Oriented Research (SPOR), having received funding from CIHR and the Graham Boeckh Foundation (GBF). The objective of the national ACCESS network is to develop and implement, within five years, a mental health care system aimed at facilitating access to quality services for young people aged 11 to 25. The initiatives of the New Brunswick provincial demonstration site will be reviewed. ACCESS NB has special status, being the only site where mental health is designated as a priority in terms of provincial policy.



Creating a New Brunswick Strategic Patient Oriented Research (SPOR) Network for Primary and Integrated Primary Health Care Innovations

Dr. Baukje Miedema

PhD, Professor and Director of Research, Dalhousie Family Medicine
Teaching Unit, Adjunct Professor, Dept. of Sociology, Faculty of Arts, UNB



Abstract

The *New Brunswick (NB) SPOR Network: Primary and Integrated Community Health Care* seeks to facilitate the conduct of quality primary health care research with an initial focus on improving outcomes and satisfaction with care for individuals with complex needs. We will create a platform to engage and connect citizens, clinicians, policy makers, social and medical organizations, and academic researchers. The NB Network will be the primary health care research hub in NB and will facilitate the advancement of evidence-based health care and research. Capacity building and knowledge translation strategies are also embedded in this network. Additionally, our network will serve both of NB's linguistic communities. This network will help stakeholders to pose research questions, find research partners, carry out their research, and disseminate results. Ultimately, the most important function of the network will be the opportunity to answer research questions and promptly disseminate findings/results that have the potential to transform health care in the province both for the short-term and the longer-term.



**Alzheimer disease and related disorders:
interdisciplinary clinical process in primary care**

Dr. Sarah Pakzad

PhD, Associate Professor, Dept. of Psychology, Faculty of Health Sciences and Community Services, Director, Laboratory of Cognitive Neuropsychology, Université de Moncton



Abstract

Alzheimer's disease along with other related diseases form a significant concern in our society due to the lack of accessibility concerning evaluation, treatment and support. To address this gap, collaboration is needed between family doctors, nurses and other health care professionals working in family medicine groups. Such collaborating health care models implemented around the world have demonstrated promising results in terms of feasibility, participation and satisfaction. Dr. Pakzad will provide an update on her research to understand, improve and facilitate the diffusion of and large scale setting of collaboration health care models in New Brunswick.



e-Health Innovations – NB

Dr. Chris McGibbon

PhD, UNB Research Chair – Rehabilitation
Biomechanics, IBME, Professor,
Faculty of Kinesiology, UNB



Abstract

Polypharmacy (five or more medications) has a strong association with falls incidence in senior citizens. Although falls are a multi-factorial problem, falls due to polypharmacy are preventable but continue to be a leading cause of fall-related injury in seniors, both in the community and residential care environments. This proposal aims to reduce falls in at-risk seniors in nursing homes by using a smart-phone app for monitoring medications and a "smart insole" device for reporting falls risk level in real-time. The technology will be evaluated in three nursing homes in NB, but will also have applications for falls reduction in community dwelling seniors.

7TH ANNUAL NEW BRUNSWICK HEALTH RESEARCH CONFERENCE



DAY 2 – WEDNESDAY, NOVEMBER 4, 2015 – continued

1430 - 1545
Ballroom A/B

STUDENT PRIZES – 5-MINUTE PRESENTATIONS FROM POSTER COMPETITION WINNERS

- Undergraduates and Medical Students 3 Prizes
- Master's Students: 3 Prizes
- PhD Candidates and Post Doctoral Fellows: 3 Prizes
- Health Professionals: 2 Prizes

Chair-Moderator:



Dr. Kevin Englehart

PhD, P.Eng. Professor, Electrical and Computer Engineering,
Director, Institute of Biomedical Engineering (IBME), UNB



1545 - 1600
Ballroom A/B

CLOSING REMARKS BY NBHRF CHAIRPERSON OF THE BOARD

Speaker:



Ms. Monique Imbeault

Executive Chairperson, XL-ID Solutions,
CEO, General Financial Corporation Ltd.,
Chairperson, Board of Directors, NBHRF

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