9th Conference on Health Research

Programme d’ affiche
Poster Program

Personalized Medicine Done Right

La medicine personnalisée bien faite

Les résumés complets sont disponibles en ligne au: https://www.nbhrf.com/fr/congrs-venements
Full abstracts are available online at: https://www.nbhrf.com/en/conferences-events
<table>
<thead>
<tr>
<th>Surname/Nom</th>
<th>Given name / Prénom</th>
<th>Category/catégorie</th>
<th>Name of the poster presenter / Nom de la personne qui présentera l'affiche</th>
<th>Title of the research project / Titre du projet de recherche</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filiatreault, Sarah</td>
<td>Devin O'Brien</td>
<td>Medical Student / Étudiant à la médecine</td>
<td>Filiatreault, Sarah</td>
<td>DEVELOPMENT OF THE NURSE'S ROLE IN PATIENT MONITORING</td>
</tr>
<tr>
<td>Johnson, Mathieu</td>
<td>Page</td>
<td>Master's Student / Étudiant à la maîtrise</td>
<td>Page</td>
<td>ÉTUDES DE LA MAÎTRISE DE CANCER DU PROSTATE EN RÉPONSE AU STF-62247 DANS LE CANCER DU REIN</td>
</tr>
<tr>
<td>Page</td>
<td>Devin</td>
<td>Medical Student / Étudiant à la médecine</td>
<td>Page</td>
<td>TARGET PREDICTION IN RENAL CELL CARCINOMA</td>
</tr>
<tr>
<td>Dastous</td>
<td>Sonia</td>
<td>Master's Student / Étudiant à la maîtrise</td>
<td>Dastous, Sonia</td>
<td>EVALUATION OF BD VACUTAINER® CENTRES FOR ROUTINE CHEMISTRY TESTING</td>
</tr>
<tr>
<td>Godin Jean-Rémi</td>
<td>Andrea Mayo</td>
<td>Master's Student / Étudiant à la maîtrise</td>
<td>Godin, Jean-Rémi</td>
<td>AN UMBRELLA REVIEW OF CLINICAL PRACTICE GUIDELINES FOR THE MANAGEMENT OF HIP FRACTURES WITH A SYNTHESIS OF RECOMMENDATIONS FOR THE PRE-OPERATIVE PERIOD</td>
</tr>
<tr>
<td>Filiatreault, Sarah</td>
<td></td>
<td>Master's Student / Étudiant à la maîtrise</td>
<td>Filiatreault, Sarah</td>
<td>DEVELOPMENT OF THE NURSE'S ROLE IN PATIENT MONITORING</td>
</tr>
<tr>
<td>Ricoux Brittany V.</td>
<td>Sarah Bridges</td>
<td>Master's Student / Étudiant à la maîtrise</td>
<td>Ricoux, Brittany V.</td>
<td>MONITORING OF ONE-TERTIARY HOSPITAL READERMISSION AND EMERGENCY DEPARTMENT PRESENTATIONS IN PATIENTS REFERRED FOR BUT NOT SUBSEQUENTLY UNDERGOING CARDIAC SURGERY</td>
</tr>
<tr>
<td>Mayo Andrea</td>
<td></td>
<td>Master's Student / Étudiant à la maîtrise</td>
<td>Mayo</td>
<td>POTENTIAL FUNCTIONAL BENEFITS OF A COMPREHENSIVE EVALUATION OF PHYSICAL ACTIVITIES FOR CANADIAN ADULTS</td>
</tr>
<tr>
<td>Gagnon Kristine</td>
<td></td>
<td>Master's Student / Étudiant à la maîtrise</td>
<td>Gagnon</td>
<td>EVALUATION OF PHYSICAL ACTIVITIES FOR CANADIAN ADULTS</td>
</tr>
<tr>
<td>Doucet Marco</td>
<td></td>
<td>Master's Student / Étudiant à la maîtrise</td>
<td>Marco Doucet</td>
<td>BARRICOR™ BLOOD COLLECTION TUBES FOR ROUTINE CHEMISTRY TESTING</td>
</tr>
<tr>
<td>Blanchard Sébastien</td>
<td></td>
<td>Master's Student / Étudiant à la maîtrise</td>
<td>Sébastien Blanchard</td>
<td>DEVELOPMENT OF THE NURSE'S ROLE IN PATIENT MONITORING</td>
</tr>
<tr>
<td>Lebel Andréa</td>
<td></td>
<td>Master's Student / Étudiant à la maîtrise</td>
<td>Lebel, Andréa</td>
<td>EVALUATION OF 8,15-DIHYDROXY-9,11,13,17-EICOSATETRAENOIC ACID, A NOVEL COMPOUND THAT INHIBITS LTB4 RECEPTOR-DEPENDANT HUMAN NEUTROPHIL ACTIVATION AND CHEMOTAXIS</td>
</tr>
<tr>
<td>Ashe; Kinden Cameron; Renée</td>
<td></td>
<td>Medical Student / Étudiant à la médecine</td>
<td>Ashe, Cameron; Kinden, Renée</td>
<td>EVALUATION OF PHYSICAL ACTIVITIES FOR CANADIAN ADULTS</td>
</tr>
<tr>
<td>O'Brien Devin</td>
<td></td>
<td>Medical Student / Étudiant à la médecine</td>
<td>O'Brien</td>
<td>DEVELOPMENT OF THE NURSE'S ROLE IN PATIENT MONITORING</td>
</tr>
<tr>
<td>Larivee Natasha</td>
<td></td>
<td>Medical Student / Étudiant à la médecine</td>
<td>Larivee, Natasha</td>
<td>DEVELOPMENT OF THE NURSE'S ROLE IN PATIENT MONITORING</td>
</tr>
<tr>
<td>Fournier Jeffrey</td>
<td></td>
<td>Medical Student / Étudiant à la médecine</td>
<td>Fournier</td>
<td>EVALUATION OF BD VACUTAINER® BARRICOR™ BLOOD COLLECTION TUBES FOR ROUTINE CHEMISTRY TESTING</td>
</tr>
<tr>
<td>Russell Kevin</td>
<td></td>
<td>Medical Student / Étudiant à la médecine</td>
<td>Russell, Kevin</td>
<td>DEVELOPING AN INNOVATIVE TREATMENT MONITORING TOOL FOR HEMATOLOGICAL MALIGNANCIES</td>
</tr>
<tr>
<td>Persaud Brandon</td>
<td></td>
<td>Medical Student / Étudiant à la médecine</td>
<td>Persaud, Brandon</td>
<td>SIGNIFICANT PROPORTION OF NBHC PATIENTS WITH ADVERSE POST-OP OUTCOMES</td>
</tr>
<tr>
<td>Singh Smriti</td>
<td></td>
<td>Medical Student / Étudiant à la médecine</td>
<td>Singh, Smriti</td>
<td>OCCUPATIONAL ASSOCIATIONS OF Pancreatic and Prostate Cancer in Canada</td>
</tr>
<tr>
<td>McGuire Connor</td>
<td></td>
<td>Medical Student / Étudiant à la médecine</td>
<td>McGuire</td>
<td>REGIONAL DIFFERENCES IN AORTIC VALVE REPLACEMENTS (RAIN): ATLANTIC CANADIAN EXPERIENCE</td>
</tr>
<tr>
<td>Knight Rosalinda</td>
<td></td>
<td>Medical Student / Étudiant à la médecine</td>
<td>Knight</td>
<td>A Systematic Review on the Use of Audio and Video Diaries to Explore Health Care Experiences</td>
</tr>
<tr>
<td>Last name</td>
<td>First name</td>
<td>Status</td>
<td>Affiliation</td>
<td>Title</td>
</tr>
<tr>
<td>-----------</td>
<td>------------</td>
<td>-------------------------------</td>
<td>----------------------------------</td>
<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td>Martin</td>
<td>Jessica</td>
<td>Medical Student / Étudiant à la médecine</td>
<td>Martin, Jessica</td>
<td>Exploration du niveau de confiance des résidents et des médecins de famille</td>
</tr>
<tr>
<td>Anisimowicz</td>
<td>Yvonne</td>
<td>PhD Student / Étudiant au doctorat</td>
<td>Anisimowicz, Yvonne</td>
<td>PCHE-NE: Preparing for Care Experiences in New Brunswick</td>
</tr>
<tr>
<td>D'Souza</td>
<td>Kenneth</td>
<td>PhD Student / Étudiant au doctorat</td>
<td>D'Souza, Kenneth</td>
<td>CONTRIBU'TIONS OF HYPOXIC ACID TO OBESEITY-INDUCED SKELETAL MUSCLE INSULIN RESISTANCE</td>
</tr>
<tr>
<td>guedouari</td>
<td>Haal</td>
<td>PhD Student / Étudiant au doctorat</td>
<td>Guedouari Haal</td>
<td>Ectopic proteins promote fragmentation and degradation during starvation</td>
</tr>
<tr>
<td>Hrubeniuk</td>
<td>Travis</td>
<td>PhD Student / Étudiant au doctorat</td>
<td>Hrubeniuk, Travis</td>
<td>RESTORING TOREXIN'S EFFECT TO TRADITIONAL EXERCISE PROGRAMMING FOR OBESIVE INDIVIDUALS: A PILOT STUDY</td>
</tr>
<tr>
<td>Slade</td>
<td>Logan</td>
<td>PhD Student / Étudiant au doctorat</td>
<td>Slade, Logan</td>
<td>TRANSITION FACTORS FOR PROSTATE RESISTANCE TO DEXOZONIBIN IN BREAST CANCER CELLS</td>
</tr>
<tr>
<td>Poirier</td>
<td>Samuel</td>
<td>PhD Student / Étudiant au doctorat</td>
<td>Poirier, Samuel</td>
<td>STRESSORIC EFFECT OF DPS AND TOPOD ON S-LIPOXENASE EXPRESSION AND LEUKOTRIENE BIOSYNTHESIS IN HUMAN MONONCYCIT CELL LINES</td>
</tr>
<tr>
<td>Mbarik</td>
<td>Maroua</td>
<td>PhD Student / Étudiant au doctorat</td>
<td>Mbarik, Maroua</td>
<td>DOSE-RESPONSE AND KINETICS OF POLYUNSATURATED FATTY ACID UPTAKE IN CELL CULTURE</td>
</tr>
<tr>
<td>Lewis</td>
<td>Julie</td>
<td>PhD Student / Étudiant au doctorat</td>
<td>Lewis, Julie</td>
<td>BACTERIA DETECTED IN CULTURES FROM MORCELLONS AND LYMES PATIENTS</td>
</tr>
<tr>
<td>Robertson</td>
<td>Jason W.</td>
<td>PhD Student / Étudiant au doctorat</td>
<td>Robertson, Jason W.</td>
<td>DISTRICT MOTOR PATTERNS ENHANCE USABILITY OF MYONELECTRIC PATTERN-RECOGNITION CONTROL</td>
</tr>
<tr>
<td>Manashy</td>
<td>Alineza</td>
<td>PhD Student / Étudiant au doctorat</td>
<td>Manashy, Alineza</td>
<td>PHYSICs: PREDICTIVE ANALYSES IN HEALTH MONITORING USING DEEP LEARNING CAN SAVE LIVES</td>
</tr>
<tr>
<td>Guerette</td>
<td>Roxann</td>
<td>PhD Student / Étudiant au doctorat</td>
<td>Guerette, Roxann</td>
<td>THERMAL SIMULATION OF A PREGNANCY TEST VESICLES ISOLATED BY V96 PEPTIDE FOR BIOMARKER DISCOVERY</td>
</tr>
<tr>
<td>BERA</td>
<td>AMIT</td>
<td>Post-Doc Fellows / Boursir postdoctoraux</td>
<td>BERA AMIT</td>
<td>THE ROLE OF BISF-INTERACTING INTERNAL RIBOSOME ENTRY SITE TO TRANSCATING FACTORS (ITAFs) IN THE REGULATION OF EPITHELIAL-TO-MESENCHYMAL TRANSITION</td>
</tr>
<tr>
<td>KUMAR</td>
<td>AWANTIT</td>
<td>Post-Doc Fellows / Boursir postdoctoraux</td>
<td>Kumar, Awantit</td>
<td>PROTEOMIC ANALYSIS OF EXTRACTION VESICLES ISOLATED BY VN96 PEPTIDE FOR BIOMARKER DISCOVERY</td>
</tr>
<tr>
<td>Eltousy</td>
<td>Sherif</td>
<td>Post-Doc Fellows / Boursir postdoctoraux</td>
<td>Eltousy, Sherif</td>
<td>PROTEOMIC ANALYSIS OF INTERACTION BETWEEN METFORMIN AND EXERCISE ON HBF1-1, FUNCTIONAL CAPACITY, LIPID PROFILE, QUALITY OF LIFE AND WEIGHT</td>
</tr>
<tr>
<td>Jouguleux</td>
<td>Jean-Luc</td>
<td>Post-Doc Fellows / Boursir postdoctoraux</td>
<td>Jouguleux, Jean-Luc</td>
<td>MODULATE THE MITOCHONDRIAL RESPIRATORY STATE OF NEUTROPHIL-LIKE PLB-985 CELL LINE</td>
</tr>
<tr>
<td>Abi Nader</td>
<td>Patrick</td>
<td>Post-Doc Fellows / Boursir postdoctoraux</td>
<td>Abi Nader, Patrick</td>
<td>PHYSICAL ACTIVITY ENHANCE ACTIVITIES EXPLAIN ADOLESCENT MODERATE TO-VIGOROUS PHYSICAL ACTIVITY TREND.</td>
</tr>
<tr>
<td>Sarkar</td>
<td>Shreya</td>
<td>Post-Doc Fellows / Boursir postdoctoraux</td>
<td>Sarkar, Shreya</td>
<td>SF35 and TRIP1 CAN BE USED AS NOVEL CIRCULATING BIOMARKERS FOR BETTER DEFINING OBESITY CLASSES IN PATIENTS AT RISK OF DEVELOPING HEART FAILURE</td>
</tr>
<tr>
<td>Moore</td>
<td>Alissa</td>
<td>Undergraduate Student / Étudiant de 1er cycle</td>
<td>Moore, Alissa</td>
<td>WOMEN FIREFIGHTERS FACE INCREASE PHYSICAL AND PSYCHOLOGICAL HEALTH RISKS DUE TO MARGINALISED STATUS</td>
</tr>
<tr>
<td>Marianne</td>
<td>Levesque</td>
<td>Undergraduate Student / Étudiant de 1er cycle</td>
<td>Levesque, Marianne</td>
<td>L'IMPACT D'UNE COURSE DE RELAI SUR LA CROISSANCE PERSONNELLES DES ADOLESCENTS ET ADULTES ACCOMPAGNEURS DANS LES COMMUNAUTÉS COLONIALES</td>
</tr>
<tr>
<td>Connell</td>
<td>Emma</td>
<td>Undergraduate Student / Étudiant de 1er cycle</td>
<td>Connell, Emma</td>
<td>PHYSICAL ACTIVITY DECREASES ANXIETY SENSITIVITY AND ASSOCIATED ANXIETY AND DEPRESSION SYMPTOMS AMONG AT-RISK WOMEN</td>
</tr>
<tr>
<td>Connolly</td>
<td>Michael</td>
<td>Undergraduate Student / Étudiant de 1er cycle</td>
<td>Michael Connolly</td>
<td>ACTIVATION OF THE HIPPO-PATHWAY UNDER HYPOXIC OR METABOLIC STRESS CONDITIONS IN MYOTUBES</td>
</tr>
<tr>
<td>Blain</td>
<td>Roody</td>
<td>Undergraduate Student / Étudiant de 1er cycle</td>
<td>Roody Blain</td>
<td>THE ROLE OF DIGITAL HEALTH PLATFORMS IN ADDRESSING THE NEEDS OF CAREGIVERS</td>
</tr>
<tr>
<td>Donovan</td>
<td>Alicia</td>
<td>Undergraduate Student / Étudiant de 1er cycle</td>
<td>Donovan, Alicia</td>
<td>THE IMPACT OF DEXAMETHASONE ON SYMPATHETIC TRANSMISSION IN THE RAT DORSOMEDIAL NUCLEUS OF THE HYPOTHALAMUS</td>
</tr>
<tr>
<td>Wilson</td>
<td>Sarah</td>
<td>Undergraduate Student / Étudiant de 1er cycle</td>
<td>Wilson, Sarah</td>
<td>SELECT ADMINISTRATIVE DATASETS IN NEW BRUNSWICK AND PRINCE EDWARD ISLAND ARE RICH RESOURCES FOR ESTABLISHING INTRA-PROVINCIAL CHILD HEALTH PROFILES AND BIRTH COHORTS</td>
</tr>
<tr>
<td>Tranchant</td>
<td>Carole C</td>
<td>Undergraduate Student / Étudiant de 1er cycle</td>
<td>Tranchant, Carole C</td>
<td>EDUCATIONS AND PRACTICE ROLL-UP IN PRESCHOOLERS' DIETARY INTAKE AND PHYSICAL ACTIVITY IN CHILDCARE CENTRES</td>
</tr>
<tr>
<td>Ward</td>
<td>Stéphanie</td>
<td>Undergraduate Student / Étudiant de 1er cycle</td>
<td>Ward, Stéphanie</td>
<td>DO PHYSICIAN-APPLIED INCENTIVES IMPROVE EFFECTIVE USE OF PRIMARY CARE SERVICES FOR ADULTS WITH MULTIPLE CHRONIC CONDITIONS? EVIDENCE FROM A CONTEXT OF UNIVERSAL HEALTH COVERAGE</td>
</tr>
<tr>
<td>Gupta</td>
<td>Neeru</td>
<td>Undergraduate Student / Étudiant de 1er cycle</td>
<td>Gupta, Neeru</td>
<td>HOW TO IMPROVE THE QUALITY OF LIFE OF PATIENTS LIVING WITH MORGELLONS AND LYME PATIENTS DETECTED IN CULTURES FROM CELL CULTURE</td>
</tr>
<tr>
<td>Gupta</td>
<td>Neeru</td>
<td>Undergraduate Student / Étudiant de 1er cycle</td>
<td>Gupta, Neeru</td>
<td>DOXORUBICIN INHIBITS HUMAN LEUKOTRIENE BIOSYNTHESIS IN HUMAN MONONUCLEID CELL LINES</td>
</tr>
<tr>
<td>Gupta</td>
<td>Neeru</td>
<td>Undergraduate Student / Étudiant de 1er cycle</td>
<td>Gupta, Neeru</td>
<td>SELECT ADMINISTRATIVE DATASETS IN NEW BRUNSWICK AND PRINCE EDWARD ISLAND ARE RICH RESOURCES FOR ESTABLISHING INTRA-PROVINCIAL CHILD HEALTH PROFILES AND BIRTH COHORTS</td>
</tr>
<tr>
<td>Gupta</td>
<td>Neeru</td>
<td>Undergraduate Student / Étudiant de 1er cycle</td>
<td>Gupta, Neeru</td>
<td>EDUCATIONS AND PRACTICE ROLL-UP IN PRESCHOOLERS' DIETARY INTAKE AND PHYSICAL ACTIVITY IN CHILDCARE CENTRES</td>
</tr>
<tr>
<td>Gupta</td>
<td>Neeru</td>
<td>Undergraduate Student / Étudiant de 1er cycle</td>
<td>Gupta, Neeru</td>
<td>DO PHYSICIAN-APPLIED INCENTIVES IMPROVE EFFECTIVE USE OF PRIMARY CARE SERVICES FOR ADULTS WITH MULTIPLE CHRONIC CONDITIONS? EVIDENCE FROM A CONTEXT OF UNIVERSAL HEALTH COVERAGE</td>
</tr>
<tr>
<td>Name</td>
<td>Position / Degree</td>
<td>Title</td>
<td>Page</td>
<td></td>
</tr>
<tr>
<td>--------------</td>
<td>--------------------</td>
<td>------------------------------------------------------------------------</td>
<td>------</td>
<td></td>
</tr>
<tr>
<td>Lee, Amanda</td>
<td>Master's Student / Student à la maîtrise</td>
<td>Sedentary Behaviour in Long-term Care Facilities</td>
<td>52</td>
<td></td>
</tr>
<tr>
<td>Aldiabat, Khaldoun</td>
<td>Professeur / Professier de la santé</td>
<td>Smoking Behavior Among Jordanian Psychiatric Nurses Is Associated With Their Living in Ambiguity</td>
<td>53</td>
<td></td>
</tr>
<tr>
<td>Westcott, Steve</td>
<td>Student / Étudiant</td>
<td>Bioactive Gallium Compounds: The Undiscovered Country</td>
<td>54</td>
<td></td>
</tr>
<tr>
<td>Kuruganti, Usha</td>
<td></td>
<td>Falling Through The Cracks: Barriers to Accessing Services for Children With Complex Health Conditions and Their Families in New Brunswick</td>
<td>56</td>
<td></td>
</tr>
<tr>
<td>Touabiba, Mohamed</td>
<td></td>
<td>Estrogenized Caffeic and Ferulic Acid Phenethyl Ester Synthesis, Leukotrienes Biosynthesis Inhibition, and Cytotoxicity Activity</td>
<td>57</td>
<td></td>
</tr>
<tr>
<td>Biswas, Dipshika</td>
<td>Post-Doc Fellows / Boursier</td>
<td>Dehydrogenase Kinase: A Novel Target for Inducing Chemosensitivity in Breast Cancer</td>
<td>58</td>
<td></td>
</tr>
<tr>
<td>Nowlan, Sarah</td>
<td></td>
<td>Training Health Professionals to Talk Gender</td>
<td>59</td>
<td></td>
</tr>
<tr>
<td>Michaud, Mylène</td>
<td></td>
<td>Neurocognitive and affective baseline profile of the elderly individuals living in long-term care nursing home facility: A New Brunswick study</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>Ghosh, Anirban</td>
<td></td>
<td>Non-Toxic polysaccharide (chitosan) based extracellular vesicle isolation technology@: potential for therapy and liquid biopsy applications</td>
<td>61</td>
<td></td>
</tr>
<tr>
<td>Northrup, Victoria</td>
<td></td>
<td>R-type of determined significance signifies greater risk of progression to urothelial carcinoma</td>
<td>62</td>
<td></td>
</tr>
<tr>
<td>Jeffrey, Gaudet</td>
<td></td>
<td>Novel surgical technique to treat vaginal prolapse increases quality of life and decreases complications</td>
<td>63</td>
<td></td>
</tr>
<tr>
<td>Hamilton, Sharon</td>
<td></td>
<td>Nurse Practitioner Outcomes in New Brunswick: 15 Years In: Nurse Practitioner and Patient Perspectives</td>
<td>64</td>
<td></td>
</tr>
<tr>
<td>Murray, Ryan</td>
<td></td>
<td>Establishing Statistical Stability for Heart Rate Variability in a Sample of University-aged Males</td>
<td>65</td>
<td></td>
</tr>
<tr>
<td>Babineau, Charles</td>
<td></td>
<td>Low levels of physical activity, fitness and inadequate food habits in NB elders</td>
<td>66</td>
<td></td>
</tr>
<tr>
<td>Slayer, Jeremy</td>
<td></td>
<td>How Well do Clinical Tools Predict Fall Risk in Inpatient Geriatric Units?</td>
<td>67</td>
<td></td>
</tr>
<tr>
<td>Horbay, Rostyslav</td>
<td></td>
<td>Gene expression studies on VN96 captured extracellular vesicle DNA as a panel for liquid biopsy in early pancreatic cancer detection</td>
<td>68</td>
<td></td>
</tr>
<tr>
<td>Roy, Jeremy</td>
<td></td>
<td>Vn96 captured material enables multiparametric analysis of plasma extracellular vesicles</td>
<td>69</td>
<td></td>
</tr>
<tr>
<td>Léger, Jacob</td>
<td></td>
<td>PORTELEE DERIVED MITOCHONDRIA ACTIVATE THE INFLAMMATORY RESPONSE OF HUMAN NEUTROPHILS</td>
<td>70</td>
<td></td>
</tr>
<tr>
<td>MacDonald, Landan</td>
<td></td>
<td>Using nanorobots containing a robot Pressure Device as an Strategy to Improve Patient Care</td>
<td>71</td>
<td></td>
</tr>
<tr>
<td>Davis, Leanne</td>
<td></td>
<td>Using Technology to Focus on Caregiver Health</td>
<td>72</td>
<td></td>
</tr>
<tr>
<td>Barnett, David</td>
<td></td>
<td>Beta-Factor Based Method for Isolation of Extracellular Vesicles From Human Plasma for Detection of Actionable Mutations in Liquid Biopsy Applications</td>
<td>73</td>
<td></td>
</tr>
<tr>
<td>Taylor, Catherine</td>
<td></td>
<td>Beta-Factor Based Method for Isolation of Extracellular Vesicles From Human Plasma for Detection of Actionable Mutations in Liquid Biopsy Applications</td>
<td>74</td>
<td></td>
</tr>
<tr>
<td>Cumby, Nichole</td>
<td></td>
<td>Lethal Weapon: a genome-wide screen for synthetic lethal genes in lung cancer</td>
<td>75</td>
<td></td>
</tr>
<tr>
<td>Ayre, D. Craig</td>
<td></td>
<td>Use of Extracellular Vesicles to Restore Sensitivity to Hormone-Receptor Therapy in Triple Negative Breast Cancer</td>
<td>76</td>
<td></td>
</tr>
<tr>
<td>Ellis, Kate</td>
<td></td>
<td>Cachectic Relevant Pain Catastrophization Influences Outcomes in Lumbar Spine Surgery</td>
<td>77</td>
<td></td>
</tr>
<tr>
<td>Hodgins, Marilyn</td>
<td></td>
<td>Collaborative, Longitudinal Investigation of the Transition From Hospital to Home</td>
<td>78</td>
<td></td>
</tr>
</tbody>
</table>
Kek, Boon

DRAMATIC RETURNS: A RETURN TO WORK MEDICAL READERS' THEATRE WORKSHOP

Therault, Anne

THE INCIDENCE OF COMMUNITY ACQUIRED PNEUMONIA BY OCCUPATION

Thibault, Véronique

DESCRIPTION DES BESOINS EN SERVICES ET SOINS À DOMICILE DES ÂINES VULNÉRABLES DE L'UMF DE DIEPPE

Balloch, John

THE EFFECT OF SHIFT WORK ON CARDIOMETABOLIC HEALTH: FINDINGS FROM THE ATLANTIC PATH COHORT STUDY

Adisesh, Anil

MICROPARTICLE ISOLATION AND MEASUREMENT TECHNIQUES NEED TO ACCOUNT FOR THE PRESENCE OF MITOCHONDRIA

Pelletier, Guillaume

NAVIGATING ETHICAL DILEMMA IN RURAL AND REMOTE CANADIAN COMMUNITIES: A TOOLKIT FOR PROFESSIONAL COUNSELLORS.

Campbell, Rankyn

CONTROLLING WARM UP BASED ON HEART RATE VALUE SEEMS SUITABLE FOR OBSESE ADULTS PERFORMING SUPRAMAXIMAL EXERCISE: A COMPARISON STUDY

IANCU, Horia-Daniel

MIND THE HEART PROJECT: A RESEARCH-DRIVEN STRATEGIC APPROACH TO IMPROVE MENTAL AND CARDIAC HEALTH IN MEN POST-ACS PHASE 1

READ, Emily

EXAMINING THE USE AND EFFECTIVENESS OF WORKPLACE EMPLOYEE FAMILY ASSISTANCE PROGRAMS FOR THE IDENTIFICATION AND TREATMENT OF EMPLOYEE DEPRESSION

Jbilou, Jalila

MULTISEGMENT FOOT KINEMATICS DURING GAIT IN CHILDREN WITH AUTISM

Konder, Ricarda

EMPATHY, CREATIVITY, AND PAIN RELIEF IN PRACTICE: MANAGEMENT OF CHRONIC PAIN IN EARLY EXPERIMENTAL OCCUPATIONAL THERAPY PRACTICE.

Chester, Victoria

RICH MEN'S EXPERIENCES WITH CANCER AND INTIMATE RELATIONSHIPS: BUILDING A BETTER UNDERSTANDING OF THE ROLE THAT CANCER PLAYS

O'Donnell, Sue

YOUNG MEN'S EXPERIENCES WITH CANCER AND INTIMATE RELATIONSHIPS: BUILDING A BETTER UNDERSTANDING OF THE ROLE THAT CANCER PLAYS.
<table>
<thead>
<tr>
<th>Surname/Nom</th>
<th>Given name / Prénom</th>
<th>Category/ catégorie</th>
<th>Name of the poster presenter / Nom de la personne qui présentera l'affiche</th>
<th>Title of the research projet / Titre du projet de recherche</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abi Nader</td>
<td>Patrick</td>
<td>Post-Doc Fellows / Boursier postdoctoraux</td>
<td>Abi Nader, Patrick</td>
<td>PHYSICAL ACTIVITY ENHANCEMENT ACTIVES EXPLAIN ADOLESCENT MODERATE-TO-VIGOROUS PHYSICAL ACTIVITY TREND. 40</td>
</tr>
<tr>
<td>Aldiabat</td>
<td>Khaldoun</td>
<td>PhD Student / Étudiant au doctorat</td>
<td>Aldiabat, Khaldoun</td>
<td>PSYCHIATRIC NURSES IS ASSOCIATED WITH THEIR LIVING IN AMBIGUITY 53</td>
</tr>
<tr>
<td>Manashy</td>
<td>Alireza</td>
<td>Master's Student / Étudiant à la maîtrise</td>
<td>Alireza Manashy</td>
<td>PREDICTIVE PRACTICE IN HEALTH MONITORING USING DEEP LEARNING CAN SAVE LIVES 34</td>
</tr>
<tr>
<td>Mayo</td>
<td>Andrea</td>
<td>Medical Student / Étudiant à la médecine</td>
<td>Andrea Mayo</td>
<td>POTENTIAL FUNCTIONAL BENEFITS OF A COMPREHENSIVE EVALUATION OF PHYSICAL ACTIVITIES FOR CANADIAN ADULTS 10</td>
</tr>
<tr>
<td>Anisimowicz</td>
<td>Yvonne</td>
<td>Post-Doc Fellows / Boursier postdoctoraux</td>
<td>Anisimowicz, Yvonne</td>
<td>IMPACT ON IMAGING RISK IN CHILDREN WITH CANCER EXPERIENCES IN NEW BRUNSWICK 25</td>
</tr>
<tr>
<td>Ashe; Kinden</td>
<td>Cameron; Renée</td>
<td>Medical Student / Étudiant à la médecine</td>
<td>Ashe, Cameron; Kinden, Renée</td>
<td>CURRENT AND NOVEL BIOMARKERS CORRELATED WITH PROGNOSIS OF ANEMIC AND NON-ANEMIC CARDIAC SURGERY PATIENTS. 15</td>
</tr>
<tr>
<td>Ayre</td>
<td>D. Craig</td>
<td>Post-Doc Fellows / Boursier postdoctoraux</td>
<td>Ayre, D. Craig</td>
<td>THE USE OF EXTRACELLULAR VESICLES TO RESTORE SENSITIVITY TO HORMONE RECEPTOR THERAPY IN TRIPLE NEGATIVE BREAST CANCER 76</td>
</tr>
<tr>
<td>Babineau</td>
<td>Charles</td>
<td>Medical Student / Étudiant à la médecine</td>
<td>Babineau Charles</td>
<td>Low levels of physical activity, fitness and inadequate food habits in NB elders 66</td>
</tr>
<tr>
<td>Balloch</td>
<td>John</td>
<td>Post-Doc Fellows / Boursier postdoctoraux</td>
<td>Balloch, John</td>
<td>DISCOVERY OF SOFT TISSUE PLASTICITY BY LOCATION AND CORRELATION WITH ATP CONTENT 82</td>
</tr>
<tr>
<td>BERA</td>
<td>AMIT</td>
<td>Medical Student / Étudiant à la médecine</td>
<td>BERA AMIT</td>
<td>THE ROLE OF BIP DEPENDENT INTRINSIC RIBOSOME ENTRY SITE TRANS-ACTING FACTORS (ITAFs) IN THE REGULATION OF EPITHELIAL-TO-MESENCHYMAL TRANSITION 36</td>
</tr>
<tr>
<td>Campbell</td>
<td>Rankyn</td>
<td>Medical Student / Étudiant à la médecine</td>
<td>CAMPBELL, Rankyn</td>
<td>NAVIGATING ETHICAL DILEMMA IN RURAL AND REMOTE CANADIAN COMMUNITIES: A TOOLKIT FOR PROFESSIONAL COUNSELLORS. 85</td>
</tr>
<tr>
<td>Charleton</td>
<td>Pat</td>
<td>Medical Student / Étudiant à la médecine</td>
<td>Charleton, Pat</td>
<td>FALLING THROUGH THE CRACKS: BARRIERS TO ACCESSING SERVICES FOR CHILDREN WITH COMPLEX HEALTH CONDITIONS AND THEIR FAMILIES IN NEW BRUNSWICK 56</td>
</tr>
<tr>
<td>Chester</td>
<td>Victoria</td>
<td>Medical Student / Étudiant à la médecine</td>
<td>Chester, Victoria</td>
<td>MULTISEGMENT FOOT KINEMATICS DURING GAIT IN CHILDREN WITH AUTISM 91</td>
</tr>
<tr>
<td>Connell</td>
<td>Emma</td>
<td>Undergraduate Student / Étudiant de 1er cycle</td>
<td>Connell, Emma</td>
<td>Physical activity decreases anxiety sensitivity and associated anxiety and depression symptoms among at-risk women 44</td>
</tr>
<tr>
<td>McGuire</td>
<td>Connor</td>
<td>Medical Student / Étudiant à la médecine</td>
<td>Connor McGuire</td>
<td>REGIONAL DIFFERENCES IN AORTIC VALVE REPLACEMENTS (RAIN): ATLANTIC CANADIAN EXPERIENCE 22</td>
</tr>
<tr>
<td>Cumby</td>
<td>Nichole</td>
<td>Post-Doc Fellows / Boursier postdoctoraux</td>
<td>Cumby, Nichole</td>
<td>Lethal Weapon: a genome-wide screen for synthetic lethal genetic lung cancer 75</td>
</tr>
<tr>
<td>Dastous</td>
<td>Sonia</td>
<td>Post-Doc Fellows / Boursier postdoctoraux</td>
<td>Dastous, Sonia</td>
<td>OVEREXPRESSION OF MIR-2355 AND TARGET PREDICTION IN RENAL CELL CARCINOMA 5</td>
</tr>
<tr>
<td>BARNETT</td>
<td>David</td>
<td>Medical Student / Étudiant à la médecine</td>
<td>David Barnett</td>
<td>PROTEIN PROFILES OF EXTRACELLULAR VESICLES CAPTURED WITH THE AFFINITY PEPTIDE Vh96: LAEMMALI AND TRIZOL® PROTEIN EXTRACTION METHODS GIVE SIMILAR RESULTS. 73</td>
</tr>
<tr>
<td>Davis</td>
<td>Leanne</td>
<td>Medical Student / Étudiant à la médecine</td>
<td>Davis, Leanne</td>
<td>Using Technology to Focus on Caregiver Health 72</td>
</tr>
<tr>
<td>O’Brien</td>
<td>Devin</td>
<td>Medical Student / Étudiant à la médecine</td>
<td>Devin O’Brien</td>
<td>MULTILEVEL POST-OPERATIVE PHARMACOKINETICS OF DEHYDROGENASE KINASE: A NOVEL TARGET FOR INDUCING CHemosensitivity in BREAST CANCER 58</td>
</tr>
<tr>
<td>Biswas</td>
<td>Dipsikha</td>
<td>Post-Doc Fellows / Boursier postdoctoraux</td>
<td>Dipsikha Biswas</td>
<td>THE HULK OF DIGITAL HEALTH PLATFORMS IN ADDRESSING THE NEEDS OF CAREGIVERS 47</td>
</tr>
<tr>
<td>Donovan</td>
<td>Alicia</td>
<td>Undergraduate Student / Étudiant de 1er cycle</td>
<td>Donovan, Alicia</td>
<td>THE EFFECT OF SHIFT WORK ON CARdiometabolic health: FINDINGS FROM THE ATLANTIC PATH COHORT STUDY 83</td>
</tr>
<tr>
<td>Adisesh</td>
<td>Anil</td>
<td>Medical Student / Étudiant à la médecine</td>
<td>Dr Anil Adisesh</td>
<td>THE EFFECT OF PARTICIPATION IN PHYSICAL ACTIVITY ON OBESITY-INDUCED SKELETAL MUSCLE INSULIN RESISTANCE 26</td>
</tr>
<tr>
<td>D’Souza</td>
<td>Kenneth</td>
<td>Medical Student / Étudiant à la médecine</td>
<td>D’Souza, Kenneth</td>
<td>USING TECHNOLOGICAL INNOVATION IN TREATMENT OF MEDICALLY REFRACTORY RUSSIAN FEVER CONTRIBUTES TO OBESITY-INDUCED SKELETAL MUSCLE INSULIN RESISTANCE 83</td>
</tr>
<tr>
<td>Eltonsy</td>
<td>Sheri</td>
<td>Post-Doc Fellows / Boursier postdoctoraux</td>
<td>Eltonsy, Sheri</td>
<td>USING TECHNOLOGICAL INNOVATION IN TREATMENT OF MEDICALLY REFRACTORY RUSSIAN FEVER CONTRIBUTES TO OBESITY-INDUCED SKELETAL MUSCLE INSULIN RESISTANCE 26</td>
</tr>
<tr>
<td>Name</td>
<td>Degree</td>
<td>Affiliation</td>
<td>Title</td>
<td>Page</td>
</tr>
<tr>
<td>---------------------</td>
<td>-------------------------</td>
<td>--------------------------------------------------</td>
<td>----------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Filatreault, Sarah</td>
<td>Master's Student /</td>
<td>Student à la maîtrise</td>
<td>AN UNBIASED REVIEW OF CLINICAL PRACTICE GUIDELINES FOR THE MANAGEMENT OF HIP FRACTURES WITH A SYNTHESIS OF RECOMMENDATIONS FOR THE PRE-OPERATIVE PERIOD</td>
<td>7</td>
</tr>
<tr>
<td>Westcott, Steve</td>
<td>Co-op Medical Student /</td>
<td>Etudiant de 1er cycle</td>
<td>BIOACTIVE GALLIUM COMPOUNDS: THE UNDISCOVERED COUNTRY</td>
<td>54</td>
</tr>
<tr>
<td>Gallant, François</td>
<td>Master Professional /</td>
<td>Professionnel de la santé</td>
<td>NON-TOXIC POLYSACCHARIDE (CHITOSAN) BASED EXTRACELLULAR VESICLE ISOLATION TECHNOLOGY: POTENTIAL FOR THERAPY AND LIQUID BIOPSY APPLICATIONS</td>
<td>61</td>
</tr>
<tr>
<td>Godin, Jean-Rémi</td>
<td>Master Student /</td>
<td>Etudiant à la maîtrise</td>
<td>LA DESENSIBILISATION DES RÉCEPTEURS N-AChR PAR UN AGONISTE SILENCIEUX INHIBE L'INFLAMMATION DU CNS DANS UN MODÈLE MURIN DE SCÉROSÉ EN PLAQUES</td>
<td>6</td>
</tr>
<tr>
<td>Guedouari, Hala</td>
<td>PhD Student /</td>
<td>Etudiant au doctorat</td>
<td>DRUG STRESS TESTING ISOLATION FROM FRAGMENTATION AND DEGRADATION DURING STANDBY</td>
<td>27</td>
</tr>
<tr>
<td>Guerrette, Roxann</td>
<td>PhD Student /</td>
<td>Etudiant au doctorat</td>
<td>MAXIMIZING TGF-B1 GENERATES MULTIPLE GENE PRODUCTS IN BREAST CANCER</td>
<td>35</td>
</tr>
<tr>
<td>Pelletier, Guillaume</td>
<td>Master's Student /</td>
<td>Etudiant à la maîtrise</td>
<td>MEASUREMENT TECHNIQUES NEED TO ACCOUNT FOR THE PRESENCE OF MITOCHONDRIA</td>
<td>84</td>
</tr>
<tr>
<td>Gupta, Neetu</td>
<td>Resident Professional /</td>
<td>Etudiant à la médecine</td>
<td>Do physician practice incentives improve effective use of primary care services for adults with multiple chronic conditions? Evidence from a context of universal health coverage</td>
<td>51</td>
</tr>
<tr>
<td>Harrigan, Philippe</td>
<td>Medical Student /</td>
<td>Etudiant à la médecine</td>
<td>SHAMEN À DOMICILE: ÉVALUATION DES BESOINS EN SERVICES ET SOINS PRIMAIRE POUR LA CLIENTELE DE L'UMF-DEPPE</td>
<td>89</td>
</tr>
<tr>
<td>Hodgins, Marilyn</td>
<td>PhD Student /</td>
<td>Etudiant à la médecine</td>
<td>RESULTS OF PILOT STUDY FOR A COLLABORATIVE, LONGITUDINAL INVESTIGATION OF THE TRANSITION FROM HOSPITAL TO HOME</td>
<td>78</td>
</tr>
<tr>
<td>Hrubeniuk, Travis</td>
<td>PhD Student /</td>
<td>Etudiant au doctorat</td>
<td>RESISTANCE TRAINING-BASED PROGRAMS MAY PROVIDE SIMILAR BENEFITS TO TRADITIONAL EXERCISE PROGRAMMING FOR OBESE INDIVIDUALS: A PILOT STUDY</td>
<td>28</td>
</tr>
<tr>
<td>IANCU, Horia-Daniel</td>
<td>PhD Student /</td>
<td>Etudiant à la médecine</td>
<td>CONTROLLED WAVE OF BASED HOSPITAL RATE VALUE SEEMS SUITABLE FOR OBESE ADULTS PERFORMING SUPRAMAXIMAL EXERCISE: A COMPARISON STUDY</td>
<td>86</td>
</tr>
<tr>
<td>Fournier, Jeffrey</td>
<td>Medical Student /</td>
<td>Etudiant à la médecine</td>
<td>EVOLUTION OF BD-PROTECTORS BARRICOR™ BLOOD COLLECTION TUBES FOR ROUTINE CHEMISTRY TESTING</td>
<td>18</td>
</tr>
<tr>
<td>Johnson, Mathieu</td>
<td>Master Student /</td>
<td>Etudiant à la médecine</td>
<td>ETUDE DU METABOLISME DE LA GLUTAMINE EN RÉPONSE AU STF-62247 DANS LE CANCER DU REIN</td>
<td>3</td>
</tr>
<tr>
<td>Jeffrey, Gaudet</td>
<td>Post-Doc Fellows /</td>
<td>Etudiant aux doctoraux</td>
<td>NOVEL SURGICAL TECHNIQUE TO TREAT VAGINAL PROLAPSE INCREASES QUALITY OF LIFE AND DECREASES COMPLICATIONS</td>
<td>63</td>
</tr>
<tr>
<td>JOUGLEUX, Jean-Luc</td>
<td>Post-Doc Fellows /</td>
<td>Etudiant aux doctoraux</td>
<td>MODULATE THE MITOCHONDRIAL RESPIRATORY STATE OF NEUTROPHIL-LIKE PB-985 LINE CELL</td>
<td>39</td>
</tr>
<tr>
<td>Ellis, Kate</td>
<td>Idéal</td>
<td>Etudiant à la médecine</td>
<td>CLINICALLY RELEVANT PAIN CATASTROPHIZATION INFLUENCES OUTCOMES IN LUMBAR SPINE SURGERY</td>
<td>77</td>
</tr>
<tr>
<td>Keke, Boon</td>
<td>Idéal</td>
<td>Etudiant à la médecine</td>
<td>THROMBOTIC RETURNS: A RETURN TO WORK MEDICAL READERS’ THEATRE WORKSHOP</td>
<td>79</td>
</tr>
<tr>
<td>Gagnon, Kristine</td>
<td>Master's Student /</td>
<td>Etudiant à la maîtrise</td>
<td>IDENTIFICATION OF ADENOSINOMIMETIC ACIDS 8,11,13,17-EICOSATETRAENOC ACID A NOVEL COMPOUND THAT INHIBITS LTb4 RECEPTOR-DEPENDANT HUMAN MITOCHONDRIA ACCOUNT FOR THE PRESENCE OF NEUTROPHIL-RELATED CHEMOTOXINS</td>
<td>11</td>
</tr>
<tr>
<td>KUMAR, Awanit</td>
<td>PhD Student /</td>
<td>Etudiant aux doctoraux</td>
<td>PROTEOMIC ANALYSIS OF EXTRACELLULAR VESICLES ISOLATED BY VN96 PEPTIDE FOR BIOMARKER DISCOVERY</td>
<td>37</td>
</tr>
<tr>
<td>Kuruganti, Usha</td>
<td>Medical Student /</td>
<td>Etudiant à la médecine</td>
<td>THE EFFECTS OF A COMBINATION-BASED RECREATIONAL EXERCISE PROGRAM ON MUSCLE STRENGTH AND BALANCE MEASURES IN INDIVIDUALS WITH PARKINSON’S DISEASE</td>
<td>55</td>
</tr>
<tr>
<td>MacDonald, Landan</td>
<td>Medical Student /</td>
<td>Etudiant à la médecine</td>
<td>DRUG ADHERENCE DETECTION USING A BLOOD PRESSURE DEVICE AS AN STRATEGIC TO IMPROVE PATIENT CARE</td>
<td>71</td>
</tr>
<tr>
<td>Larivee, Natasha</td>
<td>Medical Student /</td>
<td>Etudiant à la médecine</td>
<td>TRANSCATHETER AORTIC VALVE IMPLANTATION AT THE NEW BRUNSWICK HEART CENTRE IN COMPARISON TO OTHER CENTRES</td>
<td>17</td>
</tr>
<tr>
<td>Name</td>
<td>Level</td>
<td>Program</td>
<td>Title</td>
<td></td>
</tr>
<tr>
<td>---------</td>
<td>---------------</td>
<td>--------------------</td>
<td>----------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Poirier</td>
<td>PhD Student</td>
<td>Étudiant au doctorat</td>
<td>SYNERGISTIC EFFECT OF LPS AND TGF-β ON 5-LIPOXYGENASE EXPRESSION AND LEUKOTRIENE BIOSYNTHESIS IN HUMAN MONOCYTIC CELL LINES</td>
<td></td>
</tr>
<tr>
<td>Bridges</td>
<td>Master's Student</td>
<td>Étudiant à la maîtrise</td>
<td>HOSPITAL READMISSION AND EMERGENCY DEPARTMENT PRESENTATIONS IN PATIENTS REFERRED FOR BUT NOT SUBSEQUENTLY UNDERGOING CARDIAC SURGERY</td>
<td></td>
</tr>
<tr>
<td>Sarkar</td>
<td>Post-Doc Fellow</td>
<td>Boursier postdoctoraux</td>
<td>CIRCULATING BIOMARKERS FOR BETTER DEFINING OBESITY CLASSES IN PATIENTS AT RISK OF DEVELOPING HEART FAILURE</td>
<td></td>
</tr>
<tr>
<td>Blanchard</td>
<td>Master's Student</td>
<td>Étudiant à la maîtrise</td>
<td>NOUVELLE MOLÉCULES DE POLYPHÉNOLS AYANT DES ACTIVITÉS ANTI-INFLAMMATOIRES IMPORTANTES</td>
<td></td>
</tr>
<tr>
<td>Singh</td>
<td>Medical Student</td>
<td>Étudiant à la médecine</td>
<td>Occupational Associations of Pancreatic and Prostate Cancer in Canada</td>
<td></td>
</tr>
<tr>
<td>Slade</td>
<td>Medical Student</td>
<td>Étudiant à la médecine</td>
<td>Transcription factor EB promotes resistance to doxorubicin in breast cancer cell lines</td>
<td></td>
</tr>
<tr>
<td>Slayter</td>
<td>Undergraduate Student</td>
<td>Étudiant de 1er cycle</td>
<td>HOW WELL DO CLINICAL TOOLS PREDICT FALL RISK ON INPATIENT GERIATRIC UNITS?</td>
<td></td>
</tr>
<tr>
<td>Taylor</td>
<td>Medical Student</td>
<td>Étudiant à la médecine</td>
<td>ISOULATION OF EXTRACELLULAR VESICLES FROM HUMAN PLASMA FOR DETECTION OF ACTIONABLE MUTATIONS IN LIQUID BIOPSY APPLICATIONS</td>
<td></td>
</tr>
<tr>
<td>Theriault</td>
<td>Medical Student</td>
<td>Étudiant à la médecine</td>
<td>THE INCIDENCE OF COMMUNITY ACQUIRED PNEUMONIA BY OCCUPATION</td>
<td></td>
</tr>
<tr>
<td>Thibault</td>
<td>Medical Student</td>
<td>Étudiant à la médecine</td>
<td>SELECT ADMINISTRATIVE DATASETS IN NEW BRUNSWICK AND PRINCE EDWARD ISLAND ARE RICH RESOURCES FOR ESTABLISHING INTRA-PROVINCIAL CHILD HEALTH PROFILES AND BIRTH COHORTS</td>
<td></td>
</tr>
<tr>
<td>Tranchant</td>
<td>Undergraduate Student</td>
<td>Étudiant de 1er cycle</td>
<td>THE IMPACT OF STRESS ON SYNAPTIC TRANSMISSION IN THE RAT DORSOMEDIAL NUCLEUS OF THE HYPOTHALAMUS</td>
<td></td>
</tr>
<tr>
<td>Ward</td>
<td>Undergraduate Student</td>
<td>Étudiant de 1er cycle</td>
<td>EDUCATIONAL AND FEEDING PATTERN ROLE IN PRESCHOOLERS' DIETARY INTAKE AND PHYSICAL ACTIVITY IN CHILDCARE CENTRES</td>
<td></td>
</tr>
</tbody>
</table>

**Table Notes:**
- **Level:** PhD Student, Master's Student, Post-Doc Fellow, Medical Student, Undergraduate Student.
- **Program:** Étudiant au doctorat, Étudiant à la maîtrise, Boursier postdoctoraux, Étudiant à la médecine, Étudiant de 1er cycle.
1. Gallant, François

**CHILDHOOD SPORTS PARTICIPATION AND ADOLESCENT SPORT PROFILE**

1.2 GALLANT François, 3 O’LOUGHLIN Jennifer L., 4 BRUNET Jennifer, 5 SABISTON Catherine M., 1, 2, 6 BÉLANGER Mathieu*

1 Université de Sherbrooke, Sherbrooke, QC; 2 Centre de formation médicale du Nouveau-Brunswick, Moncton, NB; 3 Université de Montréal, Montréal, QC; 4 University of Ottawa, Ottawa, ON; 5 University of Toronto, Toronto, ON; 6 Résearch Services, Vitalité Health Network, Moncton, NB

**INTRODUCTION:** This study aimed to increase understanding of the link between sport specialization during childhood and adolescent physical activity.

**OBJECTIVES:** The objectives were to: 1) describe the natural course of sport participation over five years among children who are early sport samplers or early sport specialists; and 2) determine if sport participation profile in childhood predicts sport profile in adolescence.

**METHODS:** Participants (n = 756, age 10-11 years at study inception) reported their participation in organized and unorganized physical activity during in-class questionnaires administered every 4 months over 5 years. They were categorized as early sport samplers, early sport specialists or non-participants in Year 1, and as recreational sport participants, performance sport participants, or non-participants in Years 2-5. The likelihood that childhood sport profile predicts adolescent profile was computed as relative risks. Polynomial logistic regression was used to identify predictors of adolescent sport profile.

**RESULTS:** Compared to early sport specialization and non-participation, early sport sampling in childhood was associated with a higher likelihood of recreational participation (RR, 95% CI: 1.55, 1.18-2.03) and a lower likelihood of non-participation (0.69, 0.51-0.93) in adolescence. Early sport specialization was associated with a higher likelihood of performance participation (1.65, 1.92-2.28), but not of non-participation (1.01, 0.70-1.47) in adolescence. Non-participation in childhood was associated with nearly doubling the likelihood of non-participation in adolescence (1.87, 1.12-2.62).

**CONCLUSION:** Sport sampling should be promoted in childhood because it may be linked to higher physical activity levels during adolescence.

2. Melville, Sarah

**CLINICAL ASSESSMENT OF DIGITAL VITAL SIGN MONITORING FOR E-HEALTH PATIENT MONITORING**

1.MELVILLE_Sarah, 2GILL_Satinder, 4THERIAULT_Ane, 4ADISESH_Anil, 2, 3SCHEME_Erik, 1LUTCHMEDIAL_Sohrab, 1, 4, 5BRUNET_Keith_R.

1 Department of Cardiology, Cardiovascular Research NB, Saint John Regional Hospital, 2 Institute of Biomedical Engineering, UNB, Fredericton, NB 3 Department of Electrical and Computer Engineering, UNB, Fredericton, NB 4 Department of Pharmaceutical Sciences, Dalhousie University, New Brunswick, Dalhousie University

**INTRODUCTION:** Respiratory rate (RR) is one of the vital signs used by health professionals as an early and sensitive predictor of the health status of patients, and it is often assessed via intermittent manual auscultatory measurements which is time consuming. Indirectly, RR can be calculated from cardiovascular signals such as electrocardiography, plethysmography, or via an arterial pulse pressure waveform. The Cloud DX, Inc. Pulsewave Health Monitor is a non-invasive wrist cuff (WC) device that measures health vital signs: blood pressure (BP), pulse rate, and RR via the radial artery pulse waveform. The algorithm to estimate BP is iteratively calibrated via direct intra-arterial pressures. Similarly, we will develop an algorithm to estimate RR with clinical reference data.

**Objectif:** Le but de ce projet est de comparer les mesures de RR réalisées sur des patients adultes et de déterminer si la méthode sans contact est aussi fiable que la méthode invasive.

**Méthodes:** Les sujets étaient des adultes âgés de 20 à 80 ans inclus et non inclus dans les critères de l'étude. Les mesures de RR ont été effectuées par un professionnel de la santé auxiliaire dans un environnement de soins primaires. Les mesures de RR ont été comparées à la méthode invasive. Les mesures d'RR ont été effectuées par un professionnel de la santé auxiliaire dans un environnement de soins primaires.

**Résultats:** Les mesures de RR réalisées par un professionnel de la santé auxiliaire dans un environnement de soins primaires sont similaires à celles réalisées par un professionnel de la santé auxiliaire dans un environnement de soins primaires. Les mesures de RR réalisées par un professionnel de la santé auxiliaire dans un environnement de soins primaires sont similaires à celles réalisées par un professionnel de la santé auxiliaire dans un environnement de soins primaires.

**Conclusion:** Les résultats de cette étude démontrent une augmentation de la cytoxicité de la glutamine dans les ccRCC. D’autres études seront nécessaires pour permettre de mieux comprendre le rôle de la glutamine dans la cytoxicité du STF-62247.

3. Johnson, Mathieu

**ÉTUDE DU MÉTABOLISME DE LA GLUTAMINE EN RÉPONSE AU STF-62247 DANS LE CANCER DU REIN**

JOHNSON_Mathieu1, 2, NOWLAN_Sarah1, 2, SAHIN_Gülsüm1, 2, JOY_Andrew2, BARNETT_David2, OUELLETTE_Rodney1, 2, TURCOTTE_Sandra1, 2*

1 Département de chimie et biochimie, Université de Moncton, NB; 2 Institut Atlantique de recherche sur le Cancer, Moncton, NB

**INTRODUCTION:** L’expression de l’asparagine synthéase (ASNS) est aussi diminuée. De plus, on observe une diminution de l’expression des enzymes impliquées dans la voie de synthèse des acides gras, soit l’acétyl-CoA carboxylase (ACC) et l’acide gras synthase (FASN).

**CONCLUSION:** Le STF-62247 cause plusieurs changements dans le métabolisme de la glutamine dans les ccRCC. D’autres études seront nécessaires pour permettre de mieux comprendre le rôle de la glutamine dans la cytoxicité du STF-62247.
5. Dastous, Sonia

OVEREXPRESSION OF MIR-2355 AND TARGET PREDICTION IN RENAL CELL CARCINOMA

DASTOUS, Sonia1, CRAPOLET, Nicolas2, OUELLETTE, Rodney1,2 and TURCOTTE_Sandra1,2.

1Département de chimie et biochimie, Université de Moncton, NB, Canada.
2Atlantic Cancer Research Institute, Moncton, NB, Canada.

INTRODUCTION. Clear cell Renal Cell Carcinoma (ccRCC) is the most common malignant form of neoplasm among adult kidney cancers. Mutations that inactivate the von Hippel-Lindau (VHL) tumor suppressor gene is one of the major driver events in ccRCCogenesis. The survival rate after 5 years for metastatic RCC is less than 10%. Thus, better understanding of RCC pathogenesis is crucial to the development of new targeted therapies and the identification of new biomarkers. MicroRNAs (miRNA) are small noncoding RNAs that negatively regulates gene expression and are frequently dysregulated in various types of cancer including ccRCC.

OBJECTIVES. Our study aims to identify miRNA that are VHL-dependent, their potential targets as well as their roles in RCC carcinogenesis.

METHODS. Next-generation sequencing was performed to identify miRNAs that show significant differential expression based on VHL status. cBioPortal and The Cancer Genome Atlas were used to find a cohort of 34 patient with VHL-inactivated RCC that have microRNA and mRNA profiling data from the tumor and normal adjacent tissue to correlate clinically relevant deregulated miRNAs. Taqman probes and qRT-PCR were used to validate the expression of candidate miRNA in different RCC cell lines. Transcriptomic data and bioinformatics analysis were used to predict potential targets of selected microRNAs. The CRISPR/Cas9 was used to generate stable miRNA KO cell lines.

RESULTS. Using deep sequencing, we found 183 differently expressed miRNAs in VHL-deficient cells compared to cells with the functional gene. After comparison with a cohort of patients with VHL-mutated, we confirmed 19 upregulated and 13 downregulated miRNAs. We selected miR-2355, overexpressed in 97% of patients, and showed that this miRNA is dependent of the hypoxia inducible factor-2α, which promotes ccRCC tumorigenesis. We then utilized the CRISPR/Cas9 editing system to decrease miR-2355 in 786.0 VHL-deficient cells and identify the Sushi Domain Containing 4 (SUSD4) as potential target of miR-2355.

CONCLUSION. Altogether, our study identified novel VHL-regulated miRNAs and potential target genes that could provide new therapeutic tools for ccRCC.

7. Filiatreault, Sarah

AN UMBRELLA REVIEW OF CLINICAL PRACTICE GUIDELINES FOR THE MANAGEMENT OF HIP FRACTURES WITH A SYNTHESIS OF RECOMMENDATIONS FOR THE PRE-OPERATIVE PERIOD

FILIAUREULT, Sarah1; HODGINS, Marilyn*; WITHERSPOON, Richelle1
1University of New Brunswick, Fredericton Background. Hip fractures are associated with high rates of adverse outcomes and high healthcare costs which has resulted in the development of several practice guidelines to inform clinical decision-making.

Aim. The aim of this review was to locate, retrieve, and critically appraise practice guidelines for the management of hip fractures. Given increasing evidence that the early recognition and management of these fractures is integral to achieving optimal outcomes, recommendations for the pre-operative period were synthesised and compared.

Methods. An umbrella review of practice guidelines was conducted which included a quality appraisal using the AGREE-II instrument and a synthesis of recommendations. A multi-phased search was conducted for practice guidelines published in English using 3 bibliographic databases; 3 guideline network websites; and 3 healthcare safety and quality organisation websites.

Results. Five practice guidelines were appraised revealing significant variability in quality. The overall quality rating for the CPGs ranged from 2.3 to 6.3 of a maximum of 7. The majority of recommendation also included a quality appraisal using the AGREE II instrument and a synthesis of recommendations.

Conclusion. The aim of this review was to locate, retrieve, and critically appraise practice guidelines for the management of hip fractures. Five practice guidelines were appraised revealing significant variability in quality. The overall quality rating for the CPGs ranged from 2.3 to 6.3 of a maximum of 7. The majority of recommendation also included a quality appraisal using the AGREE II instrument and a synthesis of recommendations.

8. Rioux, Brittany V.

ASSOCIATION BETWEEN FUNDAMENTAL MOVEMENT SKILLS AND HEATH INDICATORS IN CHILDREN AGED BETWEEN 9 AND 12 YEARS OLD

RIoux, Brittany V.1, 12. COMEAU, Megan E.1, 12. BOUCHARD, Danielle_R.3 LEVESQUE_Cindy, 4, 5. JOHNSON_Michel_J, 1, 2. MAYO_Andrea, 1, 2. SÉNÉCAL_Martin*.
1Cardio-metabolic Exercise & Lifestyle Lab, University of New Brunswick, Fredericton, NB, 2 Faculty of Kinesiology, University of New Brunswick, Fredericton, NB, 3 Sports New Brunswick, Fredericton, NB, 4 École de kinésiologie et de loisir, Université de Moncton, Moncton, NB, 5 Faculté des sciences de la santé et des services communautaires, Université de Moncton, Moncton, NB.

Background: Children’s health is a current concern and data suggests that poor fundamental movement skills (FMS) could be associated with poor health, which may or may not be mediated by low physical activity levels. However, tools to assess FMS have not been standardized, and consequently lead to different associations between FMS and health indicators.

Objectives: The primary objective of this study was to evaluate the associations between FMS and health indicators using two different FMS measurement tools often used in Canada.

Methods: A total of 145 children between the ages of 9 to 12 were recruited from schools, after school programs, and summer camps in 2016. FMS were evaluated using the Passport for Life (bound, plank, run, kick, throw, and circuit) and the PLAYbasic (run, hop, throw, kick, and balance) measurement tools. The association between each test and an average score for each tool were tested with health indicators indicating anthropometric measures, grip strength, cardiorespiratory fitness, and percent body fat.

Results: Participants were composed of 54.2% boys, were aged 10.4 ± 1.2 years, and had an average body mass index (BMI) of 18.5 ± 2.9 kg/m². The association between the average score of both tools was 0.77 (p < 0.01). BMI was significantly associated with 67% of FMS elements using the Passport for Life (r ranging from −0.18 to −0.32, p < 0.05), and 60% of FMS using the PLAYbasic (r ranging from −0.15 to −0.30; p < 0.05). There were no significant differences between the associations of the health indicators with FMS and other FMS assessment tool (Passport for Life and PLAYbasic) (p = 0.05). The average score of FMS was significantly associated with all health indicators using both PLAYbasic and Passport for Life (all p < 0.05).

Conclusion: Health indicators in children are associated with FMS regardless of whether the Passport for Life or the PLAYbasic was used as the assessment tool. It is worth investigating whether interventions that improve FMS lead to improvements in these health indicators.

6. Godin, Jean-Rémi

LA DÉSENSIBILISATION DES nACṣRS a7 PAR UN AGONISTE SILENCIEUX INHIBE L’INFLAMMATION DU CNS DANS UN MODELE MURIN DE SCLÉRÔSE EN PLAQUES

GODIN, Jean-Rémi, 1, ROY, Patrick, 1BEAULIEU, Anick, 1BOUDREAU, Luc*, 2SIMARD, Alain*.

1 Université de Moncton
2 Northern Ontario School of Medicine

INTRODUCTION: La sclérose en plaques (SP) est une maladie neurodégénérative caractérisée par l’inflammation chronique du système nerveux central (CNS). Malheureusement, il n’existe aucun traitement qui cible les facteurs néfastes de la réponse inflammatoire sans en inhiber les processus nécessaires à la réparation des tissus. La stimulation des récepteurs cholinergiques nicotiniques (nAChRs) a7 par un agoniste exogène, la nicotine, régule directement l’inflammation dans l’encéphale expérimentale auto-immunatoire (EAE), un modèle murin de SP. Ce traitement réduit la quantité de macrophages pro-inflammatoire (M1), responsable des dommages au CNS dans la SP. Cependant, ce phénomène se produit seulement à des fortes concentrations de nicotine, où la majorité des récepteurs sont dans un état désensibilisé.

HYPOTHÉSE: La désensibilisation des récepteurs nACṣRs a7 par le 2M075 est un mécanisme modulateur de la prolifération, de la survie, et de la migration et de la sécrétion de cytokines des macrophages M1.

MÉTHODES: Des cultures primaires de cellules murines de moelle osseuse ont été utilisés pour évaluer la capacité du 2M075 à moduler le phénotype des macrophages par cytométrie en flux (FACS), le profil de sécrétion de cytokines par ELISA et la capacité migratoire par un essai Transwell®. Des essais in vivo ont été faits avec des souris EAE pour mesurer la capacité du 2M075 à moduler la prolifération, la survie et la migration des macrophages dans des fragments d’os. Des tissus de ces souris ont été utilisées pour mesurer la polarisation des cellules par FACS et l’expression d’intégrines et de chimioptides par qRT-PCR.

RÉSULTATS: Le traitement des souris EAE avec le 2M075 cause une diminution du score clinique maximal et retarde l’initiation des symptômes. Il diminue significativement l’infiltration au CNS des macrophages et des lymphocytes B et T. On observe aussi un changement du rapport M1/M2 chez les macrophages infiltrant, favorisant le phénotype M2. Les cellules du CNS de souris EAE traitées au 2M075 expriment moins les gènes de plusieurs chimioptides responsables de l’infiltration des macrophages au CNS, de l’ intégrine ICAM et du marqueur inflammatoire MMP-9. Le traitement de cellules de moelle osseuse par le 2M075 réduit le montant des cytokines TNFα, IL-6 et IL-10, sécrétés après 6h de stimulation au LPS. Ces résultats démontrent un effet important de modulation de l’inflammation par la désensibilisation des nACṣRs a7.
9. Bridges, Sarah
HIGH RATES OF ONE-YEAR HOSPITAL READMEAND AND EMERGENCY DEPARTMENT PRESENTATIONS IN PATIENTS REFERRED FOR BUT NOT SUBSEQUENTLY UNDERGOING CARDIAC SURGERY.
1BRIDGES Sarah, 2MACLEOD Jeffrey B, 2YIP Alexandra M, 2LUTCHMEDIAL Sobrah, 2LEGARE Jean-Francois, 2HASSAN Ansar*
1University of New Brunswick; 2Cardiovascular Research NB, NB Heart Centre

BACKGROUND: Patients with significant coronary artery disease (CAD) and associated symptoms are often referred for cardiac surgery following cardiac catheterization. While outcomes following surgery are well established, not all patients are eligible, and little is known regarding clinical outcomes in patients who have been refused surgery.

OBJECTIVE: To examine the one-year rates of morbidity and mortality in patients with significant CAD who were referred to but not accepted for cardiac surgery.

METHODS: All patients referred for cardiac surgery following cardiac catheterization at a single centre from July 2014 to June 2015 were considered. Exclusion criteria included patients who eventually underwent cardiac surgery despite initial refusal and those with concomitant cardiac conditions necessitating surgical repair, including severe valvular stenosis or insufficiency, thoracic aortic disease and advanced congenital heart disease. Examination of each patient’s health record was completed to determine patient risk factors, reasons for refusal and one-year outcomes.

RESULTS: A total of 98 patients (73.5% male, mean age 67±11) were included in the study. 54.1% had three- vessel CAD, 22.4% had previously undergone percutaneous coronary intervention (PCI) and 7.1% had previously undergone coronary artery bypass grafting. The most common reason for refusal was increased surgical risk (32.7%) and the most common treatment plan was medical management (68.4%). Within the first year after cardiac catheterization, 60.0% presented to an emergency department and/or were admitted to hospital. 59.2% underwent chest x-ray, 14.3% echocardiogram, 21.5% repeat cardiac catheterization and 17.3% PCI. One-year mortality rate in these patients was 21.4%.

CONCLUSION: This study is the first of its kind to illustrate a high rate of emergency department contact and/or hospital readmission within the first year after refusal for surgery. Our findings highlight the need to examine the health-related quality of life in patients who do not undergo surgery as well as options for alternative treatment plans to increase likelihood of survival.

11. Kristine Gagnon
IDENTIFICATION OF 8,15-DIHYDROXY-9,11,13,17-ECOSATETRAENOIC ACID, A NOVEL COMPOUND THAT INHIBITS LTB4 RECEPTOR-DEPENDANT HUMAN NEUTROPHIL ACTIVATION AND CHEMOTAXIS
1GAGNON Kristine J, 1LEFORT Natalie, 2BARNETT David, 13POIRIER Samuel J, 1SURETTE Marc E.
1Dépt de chimie et biochimie, Université de Moncton, Moncton, NB; 2Atlantic Cancer Research Institute, Moncton, NB; 3Dépt de médecine, Université Laval, Québec, QC.

INTRODUCTION: Arachidonic acid (AA; 20:4 n-6) is a 20 carbon omega-6 polyunsaturated fatty acid (FA). AA intervenes in inflammatory processes due to its products such as leukotrienes and prostaglandins that derive from reactions catalyzed by 5-lipoxygenase (5-LO) and cyclooxygenases. Omega-3 FA, such as eicosapentanoic acid (EPA, 20:5 n-3), are subject to a similar metabolism as omega-6 FA and often compete for the same enzymes. However, omega-3 FA metabolites can have anti-inflammatory properties. A novel dietary omega-3 FA which has sparked recent interest is stearidonic acid (SDA, 18:4 n-3). Following its consumption by humans, SDA is elongated to 20:4 n-3 to generate 20:3 EICOSATETRAENOIC acid (EETA). The comprehensive PA in dietary effects. Liver fatty acid profiles were significantly different between all groups as omega-3 PUFA content increased with the dose of dietary Buglossoides oil. Mice consuming high dose Buglossoides diets showed significantly lower levels of saturated fatty acids (SFA) and higher levels of PUFAs compared to control diet. In contrast, low dose Buglossoides diets decreased inflammation scores.

CONCLUSION: These findings suggest that consumption of diets containing moderate quantities of omega-3 PUFA-rich Buglossoides oil, a human equivalent dose of 6.6g per day, can alleviate inflammation associated with RA. Conversely, consumption of a daily human equivalent dose of 22 g exacerbates inflammation in this murine model of RA. Lipidomic and cytokine analysis of inflamed paws may provide mechanistic explanations of these dietary effects.
13. Sébastien Blanchard  
**NOUVELLE MOLECULES DE POLYPHÉNOLS AYANT DES ACTIVITÉS ANTI-INFLAMATOIRES IMPORTANTES**  
BLANCHARD_Sébastien, TOUAIBIA_Mohamed, SURETTE_Marc E  
Dalhousie University, Moncton, NB, Canada  
**Introduction:** Les polyphénols sont une grande famille de molécules naturelles produites par les plantes. Plusieurs de ces molécules démontrent des activités biologiques comme inhibiteurs d’enzymes ciblés par l’industrie pharmaceutique. Ces enzymes incluent la 5-lipoxygénase (5-LO) qui catalyse la conversion de l’acide arachidonique (AA) en médiateurs lipidiques inflammatoires comme les leucotriènes qui jouent divers rôles dans les maladies inflammatoires. Notre équipe de recherche a synthétisé une famille de polyphénols, dérivées d’acides phénoliques, dotés d’une activité inhibitrice importante de la 5-LO.  
**Objectifs:** Le but de ce projet était d’identifier les molécules de la série possédant la meilleure activité inhibitrice de la 5-LO, tout en effectuant une étude structure-activité. Parmi les 12 molécules choisis, on retrouve des dérivées de l’acide cafécique, de l’acide sinapique, de l’acide galique et du 2,5-dihydrocinnamnamique. Les différents groupes fonctionnels présents dans ces molécules joueraient un rôle crucial au niveau de l’activité et de la stabilité de la molécule.  
**Méthodes:** Les composés furent évalués pour leur capacité d’inhiber la biosynthèse des produits de la 5-LO dans des modèles cellulaires exprimant l’enzyme cible suivie par une détection par RP-HPLC. Les modèles cellulaires utilisés étaient les cellules HEK293 qui expriment stably la 5-LO, les neutrophiles humains et le sang entier. La libération de l’AA fut mesurée dans les neutrophiles par GC-MS.  
**Résultats:** Toutes les molécules choisies ont inhibé significativement la production des produits de la 5-LO dans les cellules HEK293, dans les neutrophiles et dans le sang entier. Une valeur IC50 de 0.32μM (CI 0.29 - 0.37 μM) fut mesurée pour la meilleure molécule dans les neutrophiles. L’inhibition de la libération de l’AA est aussi significativement inhibée de 92.3% par la meilleure de ces molécules à 1 μM, ce qui suggère que ces molécules inhibent en partie la biosynthèse de leucotriènes dans les neutrophiles en inhibant la disponibilité du substrat.  
**Conclusion:** Ces nouvelles molécules sont d’excellents inhibiteurs de biosynthèse des leucotriènes et semblent être des meilleurs inhibiteurs que le Zileuton, le seul inhibiteur de la 5-LO approuvé pour utilisation en clinique.

14. Lebel, Andréa  
**CHARACTERIZATION OF LONG NON-CODING RNAS EXPRESSION IN GLOBLASTOMA MULTIFORME**  
LEBEL_Andréa1 and MORIN_Pier Jr1  
University of Moncton, Moncton, New Brunswick, Canada E1A 3E9  
**INTRODUCTION:** Malignant gliomas are the most common and deadly brain tumors. Last year, more than 2,600 cases of brain tumors were reported in Canada and the mean survival rate for a patient diagnosed with a glioblastoma multiforme (GBM), the most aggressive glioma, remained slightly over one year. Current standard of care consists of treatment with the alkylating agent temozolomide (TMZ) concurrently or following radiotherapy. Recent work has highlighted potential functions of long non-coding RNAs in GBM progression and TMZ response even though the information available remains sparse. Improving our knowledge of GBM-associated lncRNAs is thus of uttermost importance and is well-aligned with the quest of identifying novel therapeutic targets for GBM patients.  
**OBJECTIVES:** Accordingly, the overarching objective of this project was to assess the expression status of six lncRNAs in GBM tumor samples and in models of TMZ resistance.  
**METHODS:** To reach this goal, a qRT-PCR-based approach was undertaken to measure six IncRNAs in 19 primary GBM samples, a panel of GBM cell lines and in-house developed TMZ-resistant GBM cells.  
**RESULTS:** Elevated levels of Hotair and H19 were observed in primary GBM tumors versus normal samples. In addition, decreased expression of MEG3 was measured in the same samples. Interestingly, levels of PANDA increased 3.4-fold in GBM cells resistant to TMZ when compared with their sensitive counterparts.  
**CONCLUSION:** Overall, this work provides further evidence of IncRNA deregulation in GBM tumors and reveal a previously unexplored IncRNA potentially involved in TMZ resistance. Modulation of select targets via RNAi-mediated approaches is envisioned to further clarify the function of the identified IncRNAs and strengthen their position as true therapeutic options for this cancer.

15. Ashe, Cameron; Kinden, Renée  
**THE ANEMIA PARADOX IN OBESITY: CURRENT AND NOVEL BIOMARKERS CORRELATED WITH PROGNOSIS OF ANEMIC AND NON-ANEMIC CARDIAC SURGERY PATIENTS.**  
ASHE_Cameron1, KINDEN_Renée 1, EADIE_Ashley 1, Lester RODRIGUEZ_Lester 1, AGUIAR_Christie 1,2, DESJARDINS_Catherine 2, PULINILKUNNIL_Thomas 1,2, KIENESBERGER_Petra 1,2, SIMPSON_Jeremy 2, HASSAN_Ansar 1,2, LÉGARE_JEAN-François 1,2 & BRUN'T_Keith 1,2 Dalhousie Medicine New Brunswick, Canada1, Dalhousie University, Moncton, NB, Canada2  
**INTRODUCTION:** Anemia affects ~2 billion people worldwide, creating a significant burden of disease. In cardiac surgery, pre-operative anemia has been associated with numerous negative outcomes, including increased mortality, morbidity and prolonged hospitalization. Despite this, guidelines on pre-operative management of anemia remain ambiguous.  
**OBJECTIVES:** To determine whether anemic status influences post-operative outcomes at the New Brunswick Heart Center and whether biomarkers can play a prognostic role in determining patient outcomes.  
**METHODS:** The present study was conducted on a subset of patients enrolled in the OPOS trial who provided biological samples (n=78). ELISAs were performed to measure inflammatory (IL-33, IL-10, Galectin-3 & ILR-4) and anemic (Hepcidin, Ferritin, Transferrin & Erythropoietin) biomarkers from pre-operative plasma samples (n=78). A retrospective chart review of anemic patients (n=14; hemoglobin levels of <120 in females, <130 in males) from this subpopulation of the OPOS trial was conducted. Patients with the highest hemoglobin levels were selected as controls (n=14).  
**RESULTS:** Correlations were found between standard clinical and novel biomarkers, and patient outcomes (length of stay, transfusions required.). Additional analysis demonstrated correlations between anemia status and post-operative outcomes, pre-operative medications and post-operative outcomes, and intraoperative transusions and post-operative outcomes.  
**CONCLUSIONS:** The results of this investigation provide better understanding as to how cardiac surgery patient outcomes are influenced by inflammatory anemia. This could allow clinicians to better identify and treat anemic patients based on related biomarkers, hemoglobin levels, and pre-operative medications.

16. Devin O’Brien  
**AN OPEN INTENSIVE CARE UNIT MODEL IN PATIENTS UNDERGOING CARDIAC SURGERY AT THE NEW BRUNSWICK HEART CENTRE PERFORMS BETTER THAN CLOSED UNIT MODELS AT OTHER CENTRES**  
1 O’BRIEN Devin, 2 MACLEOD_Jeffrey B, 2 YIP_Alexandra M, 2 Folkins_Erin, 1,2 LÉGARE_JEAN-François, 1,2 HASSAN_Ansar*1 Dalhousie Medicine New Brunswick; 2 Cardiovascular Research New Brunswick  
**INTRODUCTION:** Studies have suggested that intensivist led or closed ICU models, as opposed to a cardiac surgeon led or open CVICU models, are associated with improved patient outcomes. However, the majority of these studies have been limited by the absence of open model data. Patients undergoing cardiac surgery at the New Brunswick Heart Centre (NBHC) have traditionally been admitted to a cardiac surgeon-led open ICU following surgery.  
**OBJECTIVE:** To determine if an open model ICU has been effective in providing intensive care to cardiac surgery patients over time.  
**METHODS:** 6102 patients having undergone non-emergent cardiac surgery from 2006 to 2014 at the NBHC were included. [A:2006–2008:n=1944(32%);B:2009–2011:n=2106(35%);C:2012–2014:n=2052(33%)]. Comparisons were carried out on the basis of baseline/intraoperative characteristics and in-hospital outcomes.  
**RESULTS:** Preoperative comorbidities, including hypertension (A:66.2%;B:71.4;C:71.1,p<0.001), cerebrovascular disease (A:7.9%;B:12.0;C:12.6,p=0.001), COPD (A:8.3%;B:10.7;C:10.9,p=0.01), and NYHA 4 functional status (A:29.5%;B:35.2;C:56,1,p<0.001) were more prevalent in recent years. Procedures were more complex in recent years with the number of isolated coronary artery bypass grafts decreasing (A:69.1%;B:83.3;C:61,1;p<0.001). Despite this, postoperative outcomes have improved over time. Patients operated on between 2012–2014 had shorter median ICU length of stay (A:1270;B:1249;C:1255,0=0.001) and initial ventilation times (A:398;B:385;C:358,p<0.001), had lower ICU readmission rates (A:2.6%;B:3.8;C:3.3,p=0.007), and a higher rate of ICU fast tracking (A:1.6%;B:4.1;C:3.6,p<0.001). When compared to results in the literature, these outcomes were found to be comparable if not superior in terms of ventilation time, ICU stay, and mortality.  
**CONCLUSION:** As patients’ comorbidities worsened and their cases became more complex, post-operative outcomes improved in an open model ICU. The results of this study demonstrate the effectiveness of an open model ICU in treating a contemporary cohort of patients undergoing cardiac surgery.
17. Larivee, Natasha
LOWER RATE OF ALL-CAUSE MORTALITY IN TRANSCATHETER AORTIC VALVE IMPLANTATION AT THE NEW BRUNSWICK HEART CENTRE IN COMPARISON TO OTHER CENTRES
1 LARIVEE_Natasha, 1,2 LÉGARE_Jean-Francois, 1,2 ANSAR_Hassan, 2 YIP_Alexandra, 2 MACLEOD_Jeffrey, 2 LEBLANC_Heather, 2 Vernon_Paddock, 2 FORGIE_Rand*
1 DMNB 2 CVRB-NBHC

Introduction: Transcatheter aortic valve implantation (TAVI) is a relatively new intervention used to treat aortic stenosis. Traditionally, TAVI was used to treat patients who were not suitable candidates for surgical alternatives. Given the success of the procedure, there has been a recent trend towards performing TAVI in lower (intermediate) risk patients. The New Brunswick Heart Centre (NBHC) was an early adopter of the procedure and the first established program in Atlantic Canada.

Objectives: To examine our experience with TAVI at the NBHC with emphasis on evaluating its impact on all-cause mortality after discharge from hospital.

Methods: Using the NBHC database, all patients undergoing TAVI since its implementation in 2010 through Dec 31st 2016 were eligible for inclusion. Patients with devices immediately explanted or failure of implantation were excluded. Kaplan Meier survival curves were generated for the entire population as well as stratified by sex and method of TAVI approach (transfemoral, transapical, subclavian, transaortic). Proportions and percentages were reported to describe mortality rates at 30 days and 1 year.

Results: The final cohort comprised 274 TAVI patients, among which 44.6% were female, 36.2% had diabetes, 37.7% had peripheral vascular disease, and 43.6% cerebrovascular disease (stroke, TIA, carotid disease). The majority of patients had a successful implant which was performed transfemorally (81.9%). The approach evolved significantly from 57.6% transfemorally in the initial year to 92.3% in the final year. Unadjusted in-hospital mortality rate was 1.1% with median length of hospitalization of 6 +/- 2.5 days. Kaplan Meier curves showed higher rates of survival among women and TAVI procedures using the transfemoral approach. Rates of cumulative all-cause mortality were 1.47%, 3.66%, and 6.96% for 30 days, 6 months and one year, respectively.

Conclusions: We found TAVI to have lower rates of mortality among women and TAVI procedures using the transfemoral approach. Moreover, we found lower rates of mortality at the NBHC at 30 days, 6 months and 1 year after TAVI as compared with rates reported in the literature.

18. Jeffrey Foumier
EVALUATION OF BD VACUTAINER® BARRICOR™ BLOOD COLLECTION TUBES FOR ROUTINE CHEMISTRY TESTING
1Fournier_Jeffrey, 1NORTHUP_Victoria, 1CLARK_Claudette, 1FRASER_Jacqueline, 1,2HOWLETT_Michael, 1,2ATKINSON_Paul, 1,2INシーン_Jennifer, 1HHN SJRH Dartmouth

INTRODUCTION: Barricor™ Vacutainers® are a novel type of non-gel separator blood collection tube that was recently released by BD Canada. These tubes enable faster pre-analytical processing which presents an opportunity for improved turnaround time which would be of benefit in an acute care setting. We therefore sought to evaluate the accuracy, stability, and integrity of plasma generated from these tubes for 50 routine chemistry analytes on a Roche Cobas® 8000 chemistry analyzer.

HYPOTHESIS: BD Barricor™ Vacutainers® will produce comparable results to the gel-based tube currently used by the Chemistry Laboratory (Plasma Separator Tubes PST) for routine chemistry testing.

METHODS: Paired patient samples (PST™ and Barricor™) were collected from 150 patients originating in the emergency department and outpatient collections at the Saint John Regional Hospital. Barricor™ vacutainers were centrifuged for 3 minutes at 4000g and PST™ vacutainers were centrifuged for 10 minutes at 1300g within two hours of collection. Plasma samples were then analyzed for 50 chemistry analytes on the Roche Cobas® 8000 analyzer and bias determined between tubes. Ten day stability of a select number of analytes (AST, glucose, potassium, phosphates, and LDH) was also assessed in a subset of paired samples. Lastly, the quality of plasma was assessed through measurement of cell counts (red blood cells, white blood cells, and platelets) on a DxH Hematology Analyzer.

RESULTS: All 50 analytes demonstrated comparable results across the Barricor™ and PST™ vacutainers. (change from baseline <10%) while 5 days in PST™ vacutainers while opposite was stable for 4 days in Barricor™ vacutainers. Lastly, 60% of samples demonstrated higher cell counts in PST™ compared to Barricor™ vacutainers.

CONCLUSIONS: Our data suggest that Barricor™ vacutainers are an acceptable alternative to the PST™ vacutainer currently in use for chemistry testing while offering the added benefit of decreased pre-analytical processing time, increased stability of certain analytes, and less cellular contamination.

19. Russell, Kevin
Developing an Innovative Treatment Monitoring Tool for Hematological Malignancies
1 RUSSELL_Kevin, 1,2 PUVVADA_Nageswarad, 1,3 GRIEVE_Stacy, 4 BOONSUE_Suporn, 1,3 RAY_Bithika, 1,2 MELVI_Larivee, 1,2 LÉGARE_Jean

INTRODUCTION: Hematological malignancies, such as lymphoma and myeloma, are common types of cancer, which manifest as uncontrolled proliferation of single type of blood cell. Currently, these diseases are monitored using computed tomography (CT) scans, via clinical lab values, and bone marrow biopsies. These detection methods are often slow to recognize changes in disease pathology, and patients can be symptomatic before a detection method indicates changes in disease progression. There is a need to simultaneously reduce the invasiveness of such tests and to reduce the turnover time between recognizing disease progression and altering course of treatment. HYPOTHESIS: Here we show that surface-enhanced Raman spectroscopy has the potential to become a mainstream clinical tool to monitor patients with hematological malignancies in a novel, non-invasive way.

METHODS: Raman spectroscopy was used to determine the chemical fingerprint of cell-free plasma with an added nanoparticle formulation that provides signal surface enhancement. Patients with hematologic malignancies were the population of interest, with patients being followed for cardiovascular disease serving as a “sick” control group and students serving as the “nonsick” control group. Based on the presence or absence of distinctive peaks on the Raman spectra – an altered chemical fingerprint, RESULTS: Significant differences were noted between the Raman spectra of patient serum from our target population as compared with two control populations. Generally, this means that there are metabolic molecules that are produced when a patient has an active malignancy that can be used to differentiate between cancer patients, cancer patients in remission and noncancer patients.

CONCLUSIONS: Based on the principles illustrated here, Raman spectroscopy can be used as a tool to efficiently monitor a patient’s disease status. Thanks to the favorable qualities of Raman analysis (low cost, small sample, etc), Raman has potential to become a clinical staple in the near future.

20. Persaud, Brandon
SIGNIFICANT PROPORTION OF NBHC CARDIAC SURGERY PATIENTS WITH ADVERSE POST-OUT COMPLICATIONS
1 PERSAUD_Brandon, 2 AGUIAR_Christle, 2 MACLEOD_Jeffrey, 2 HASSAN_Ansar, 1,2 LÉGARE_JEAN-FRANCOIS*

INTRODUCTION: Heart failure is increasingly becoming a major public health issue, with a prevalence of over 23 million worldwide and a lifetime risk of 1 in 5 individuals developing HF. The New Brunswick Cardiac Centre (NBHC) is interested in better defining patients at risk of HF after having undergone cardiac surgery.

OBJECTIVES: Determine the clinical variables associated with patients who continue to suffer from HF after surgery.

METHODS: The participants for this study were patients having undergone cardiac surgery at the NBHC. The investigation focused on collecting follow up data on a group of patients in which blood and tissue samples were also collected at the time of surgery. All patients were contacted by telephone for a post-op interview. The outcome of interest was a composite outcome or major adverse event (MAE), defined as: death, readmission to hospital for cardiac reason and/or NYHA III/IV at the time of follow-up.

RESULTS: There were 68 patients evaluated with a mean age of 63 years, most were male (72%) and most underwent isolated CABG surgery (52%). The in-hospital mortality was 4%. Follow-up was 100% completed at a median time of 373 days. An additional 3 patients died after discharge. MAE occurred in 41% of patients with 12% classified as NYHA III/IV, 19% readmitted for cardiac reasons and 10% having expired. Patients who developed MAE were not significantly different to patients who did not in terms of age, gender or major co-morbidities. There were no significant differences in demographics or lab results between patients with dyspnea throughout the day (5% vs 28%, p=0.022), less use of antplatelet medications (88% vs 50%, p=0.0023) and more use of loop diuretics (2%, vs 22%, p=0.02) in MAE patients.

CONCLUSIONS: The amount of patients with MAE (41%) at a median 2 years post-op suggest that a significant proportion of patients remain at risk for HF. Clinical characteristics of patients did not appear to be predictive of MAE. Instead only functional assessment during follow-up and specific HF medications such as loop diuretic use was predictive. Our findings highlight the importance of routine clinical follow-up in identifying patients at greater risk of HF so that mitigating strategies can be implemented.
21. Singh, Smriti OCCUPATIONAL ASSOCIATIONS OF Pancreatic AND Prostate CANcer in Canada Smriti SINGH1, 1Tedd MCDONALD 2,3, Anil ADISESH 1,4 1Dalhousie Medicine New Brunswick, Saint John, NB 2University of New Brunswick, Fredericton, NB 3Research Data Center, Fredericton, NB 4Horizon Health Network-Saint John Regional Hospital, Saint John, NB INTRODUCTION: Pancreatic cancer has the lowest five-year survival among all cancers and prostate cancer is one of the most common cancers among Canadians. Identifying removable or modifiable causes would be of importance. OBJECTIVES: To determine the association of pancreatic or prostate cancer by occupational category. METHODS: We used the 1991 Canadian Census Health and Environment Cohort (CanCHEC) a dataset compiling socio-economic, demographic, cancer, mortality and place of residence data for 2.5 million Canadians. The study population was derived from CanCHEC by obtaining National Occupational Classification (NOC) codes from the 1991 Canadian Long-form census and linking these individuals to the 1992-2010 Canadian Cancer Registry. The study period was June 4, 1991 to December 31, 2010. The study population was aggregated by 4 digit, or 2 digit major group NOC codes. Cox proportional hazards models were used to investigate associations. Seven models were generated and adjusted for province of residence, income, education, immigration status, age, sex and occupation. RESULTS: The statistical models contained samples sizes between 771,270-1,929,090. We identified five occupations with significant association for prostate cancer: library clerks HR 2.4 (CI95 1.2 to 4.97), telecommunications and line cable workers 1.7 (1.22 to 2.16), medical radiation technologists 1.7 (1.04 to 2.65), commissioned police officers 1.5 (1.10 to 2.16), and insurance, real estate and financial brokerage managers 1.2 (1.02 to 1.45). There were 15 occupations (with at least a doubling of the HR for pancreatic cancer, the five occupations with the highest HR were commissioned police officers 4.3 (1.85 to 10.22), photographic and film processors 4.0 (1.69 to 9.34), railway and motor transport labourers 3.94 (1.67 to 9.29), computer engineers 3.82 (1.52 to 9.61), and mechanical assemblers and inspectors 3.14 (1.53 to 6.47). Males had a 33% increased risk of pancreatic cancer. CONCLUSIONS: Finding several occupations with HR>2 for pancreatic cancer suggests further investigation would be useful. It is also notable that police officers appeared in the highest groups for both cancers.

22. Connor McGuire REGIONAL DIFFERENCES IN aortIC valve replacements (raIn): atlAntic CanaDian eXPERIence 1MCQUIRE_Connor, 3YIP_Alexandra M, 3MACLEOD_Jeoffrey B, 2,3PADDOCK_Vernon, 2,3LUTCHMEDIAL_Sohrab, 1NADEEM_Najaf, 1HIRSCHG_Greg, 4ADAMS_Corey, 4MELVIN_Kevin, 2,3HASSAN_Ansar, 2,3LEGARE, Jean-Francois*. 1Dalhousie University Medicine, Halifax, Nova Scotia Canada, 2Dalhousie Medicine New Brunswick, Saint John, New Brunswick, Canada, 3Centre for Cardiovascular Research, New Brunswick Cardiovascular Heart Centre, Saint John Regional Hospital, Saint John, New Brunswick, Canada, 4Memorial University of Newfoundland, St. John’s, Newfoundland, Canada INTRODUCTION: Transcatheter aortic valve implantation (TAVI) is evolving rapidly and being adopted in the treatment of aortic valve disease. Compared to surgical aortic valve replacement (SAVR), TAVI remains a resource intensive therapy. OBJECTIVE: Examine regional differences in S AVR and TAVI across Atlantic Canada. METHODS: We identified all patients who underwent SAVR or TAVI between January 1st, 2010 and December 31st, 2014 in Nova Scotia (NS), New Brunswick (NB) and Newfoundland and Labrador (NL). Data obtained included patient demographics and surgical procedure details. Univariate descriptive analyses were completed and crude, and age- and sex-adjusted incidence rates were calculated. RESULTS: 2972 patients underwent either SAVR or TAVI in NS (n=1491), NB (n=972) and NL (n=509) during the study period. Patient demographics were similar between regions, with NL using a greater percentage of mechanical valves compared to NS and NB. TAVI rates increased over the 5 years with NB being the early adopter compared to NS (n=122 vs 74 ). Age and sex adjusted rates of AVR were compared between provinces over the five-year study period (Table 1). Overall adjusted rates of all AVRs remained stable in NS ranging from 40-50 per 100,000 persons, peaking at 48.8 per 100,000 in 2011. In contrast, adjusted rates of the total number of AVRs were significantly lower in NB (peaking at 38.6 per 100,000 in 2014) and NL (peaking at 26.4 per 100,000 in 2014), compared to NS, not reaching 40 per 100,000 persons. Adjusted rates in NB and increased slowly during the study period but remain lower in NL compared to the other provinces. CONCLUSIONS: There exists regional differences in the management of aortic valve disease within Atlantic Canada. Further study is required to determine whether the observed significant differences in age and sex adjusted rates of AVR may be explained by geographical disease-related differences, varying practice patterns or barriers in access to care.

23. Rosalinda Knight A SYSTEMATIC REVIEW ON THE USE OF Audio AND VIDEO diARIES TO EXPLORE HEALTH CARE EXPERIENCES 1,2 KNIGHT_Rosalinda, 2,3 LUKE Alison, 2 NAGEL_Daniel_A, 1,2,3 DOUCET_Shelley* 1Dalhousie Medicine New Brunswick (DMNB); 2 University of New Brunswick; 3 NaviCare/SoinsNavi INTRODUCTION: As technology evolves and advances, there is merit in exploring how new technologies are utilized in qualitative health research. Audio and video diaries are a qualitative data collection method that can provide rich longitudinal data; however, little is understood about how they are used in the context of exploring health care experiences. OBJECTIVES: The aim of this systematic review was to: a) explore how video and audio diaries are used in research; b) provide a synthesis of findings; and, c) provide recommendations on the use of these diaries. METHODS: We conducted a literature search in PubMed, PsychINFO, CINAHL and EMBASE using key search terms related to audio diaries, video diaries and qualitative methodology. A total of 1117 articles were retrieved in this search and then screened independently by two reviewers in two stages: a) title and abstract; and, b) full text. Fifteen articles were identified for quality appraisal and data extraction. RESULTS: We present a descriptive overview of these articles. Our findings demonstrate that video and audio diaries allow researchers to collect data from a diverse range of participants in a variety of settings, who would otherwise be excluded using traditional written diary methods. Broad themes from this review include: a) flexibility in research design; b) incorporation of data into analysis; and, c) ethical considerations. CONCLUSIONS: Our findings highlight the flexibility and richness that is possible in using audio and video diaries in data collection, as well as the main a priori considerations for using this method in a qualitative health research design.

24. Martin, Jessica Intubation endotrachéale en situation critique : Exploration du niveau de connaissance des médecins et des médecins de famille Jessica MARTIN1; Jaillia JIBLOU2; Denika BOURQUE1; Geneviève LANDRY1; Maxime MALLET1; and Alexandre ROBICHAUD1. 1Programme de formation en médecine de famille francophone du Nouveau-Brunswick, Unité de médecine familiale des Dieppe 2Centre de formation médicale du Nouveau-Brunswick 3Ecole de psychologie-Université de Moncton Au cours des dernières années, l’exposition clinique aux situations critiques lors de la formation médicale a nettement diminué. Dans un contexte où il est de plus en plus important de rendre les services cliniques, et notamment les soins critiques, de plus en plus proche des communautés et en temps opportun, la formation adaptée des jeunes médecins installés dans les régions éloignées devient un facteur clé de la qualité des services de santé. À notre connaissance, il n’existe aucune étude réalisée auprès des médecins de famille du N.-B. pour explorer leur niveau de connaissance en regard de la réalisation d’une intubation endotrachéale en situation d’urgence. Objectif: 1) évaluer le niveau de connaissance des jeunes médecins de famille et des résidents qui ont la réalisation d’une intubation endotrachéale en situation critique; 2) identifier leurs besoins en formation continue et 3) élaborer des recommandations d’information et de formation. Méthode: Devis de recherche quantitative de type transversal reposant sur un sondage auto-administré (incluant les niveaux de connaissance par rapport à divers aspects en lien avec l’intubation endotrachéale, allant de sa réalisation à la gestion de l’équipe soignante autour d’un patient en situation critique) à des résidents en médecine de famille (RMF) et à des nouveaux médecins de famille (MD-NI) formés et installés au NB. Au total, 42 MD-NI et RMF ont répondu. Les résultats montrent d’importantes différences entre les deux groupes. Par exemple, 81% des RMF se sentent confiants de pouvoir effectuer une intubation endotrachéale comparativement à 50% pour les MD-NI. Divers facteurs en lien avec le manque de connaissance ont été identifiés comme le manque de pratique, d’exposition et le manque d’autonomie. Cette étude a permis de montrer que la formation actuelle ainsi que les sessions de formation en technique simulée sont fortement appréciées. Quelques modifications marginales seraient souhaitables pour une meilleure adéquation aux besoins des RMF et MD-NI.
25. Anisimowicz, Yvonne
RACE-NB: RUNNING AFTER CANCER EXPERIENCES IN NEW BRUNSWICK
1 ANISIMOWICZ_Yvonne, 1 HAMILTON_Ryan, 1 EASLEY_J, 1 OLTHUIS_J
1 University of New Brunswick
INTRODUCTION: It can be difficult for cancer survivors to find adequate resources post-treatment to address chronic physical problems and emotional issues left unexamined during diagnosis and treatment. Although they are often aware that physical activity can ameliorate some of the issues associated with survivorship, many still find it difficult to engage in exercise.
OBJECTIVES: To address barriers and challenges associated with initiation and maintenance of physical activity by NB cancer survivors.
METHODS: The 8-week program addressed effective programming criteria with cancer survivors while training for an end-of-program race. Weekly meetings began with interactive sessions addressing task-oriented topics (e.g., running technique) and group-mediated cognitive behavioural intervention topics (e.g., goal setting), and ended with a run. The program addressed barriers associated with low confidence/skill by providing knowledge at the meetings, adapting to meet specific needs based on participant input. The research design captured participants’ experiences using traditional qualitative methods and drew on creative, arts-based methodologies via the production of a video documentary of the program. Video of group meetings and one-on-one interviews provided insight on the initiation and maintenance of physical activity and the transferability of coping skills, and documented changes in physical, emotional, and social well-being.
RESULTS: Over the course of the intervention, participants demonstrated gradual improvement in running ability and attitudes toward physical activity. Participants also benefited from giving and receiving support within the group and considered contributing to the documentary a meaningful part of the experience.
CONCLUSIONS: This project explored the impact of a non-traditional form of exercise on cancer survivors that fit their preferences for education/activity. The study is timely, as research on the impact of running training groups for cancer survivors is in its infancy. The participatory approach to creating the video ensures the project reflects emerging movements toward person-centred care. Because this project captured participants’ experiences throughout the program, it facilitates video modeling as well as research dissemination, and will inform future intervention development.

26. D’Souza, Kenneth
AUTOTAXIN: BIOSPHATIDIC ACID CONtributes to OBESITY-INDUCED SKELETAL MUSCLE INSULIN RESISTANCE
1D’SOUZA, Kenneth, 1NIZIRORE, Carine, 2KANE, Daniel, A., 13PULINIKKUNIL, Thomas., 13KIENESBERGER, Petra, C.*
1Dalhousie Medicine New Brunswick, Dalhousie University, Saint John, New Brunswick, Canada 2Department of Human Kinetics, St. Francis Xavier University, Antigonish, NS, Canada 3University of New Brunswick, Saint John, New Brunswick, Canada
INTRODUCTION: Bioactive adipokines secreted from adipocytes are believed to play a major role in the development of obesity-induced skeletal muscle insulin resistance (IR). Autotaxin (ATX) is a novel adipokine that produces the signaling messenger, lysophosphatidic acid (LPA). Previous data have shown that serum ATX levels are associated with IR in obese humans. However, the role of the ATX-LPA pathway in skeletal muscle insulin signaling and obesity-induced IR remains unclear.
METHODS: The goals of this study were to i) examine whether the ATX-LPA pathway directly influences skeletal muscle insulin signaling and ii) determine through which mechanisms the ATX-LPA pathway promotes the development of skeletal muscle IR.
METHODS: To examine the effect of ATX-LPA on skeletal muscle insulin signaling and IR in vivo, wild type (WT) and heterozygous ATX knockout (ATX+/−) mice were fed either chow or high fat-high sucrose (HFHS) diet for 20 weeks. Mice were injected intraperitoneally with 10 U/kg insulin or saline and tissues were collected 10 minutes thereafter. Insulin signaling in skeletal muscle were examined through immunoblotting analysis and ex-vivo glucose transport experiments. To examine mechanisms by which ATX-LPA affects insulin signaling, muscle lipid accumulation and mitochondrial function were examined using lipidomics and mitochondrial respiration analysis, respectively.
RESULTS: HFHS-fed ATX+/− mice were protected from obesity-induced muscle IR. To address the crosstalk between LPA and insulin signaling, the possible mechanism by which partial ATX deficiency improves insulin signaling, a lipidomics based approach revealed no marked changes in diacylglycerols in HFHS-fed ATX+/− vs. WT mice. Interestingly, however, skeletal muscle fibers from HFHS-fed ATX+/− mice exhibited increased mitochondrial glucose oxidation compared to HFHS-fed WT mice.
CONCLUSIONS: Taken together, this study suggests that chronic increases in ATX-LPA, as observed during obesity in mice and humans, promote the development of IR in skeletal muscle also highlighting the protective effect of ATX-LPA lowering against obesity-induced muscle IR in vivo is mediated in part by improved mitochondrial function.

27. Guedouari Hala
Sirtuin 5 protects mitochondria from fragmentation and degradation during starvation
Hala Guedouariua, Tanya Daiglea, Luc Cromanb,c, Etienne-Hebert-Chatelaina,*
a Department of Biology, University of Moncton, NB, Canada
b Dublacco Telethon Institute, Venetian Institute of Molecular Medicine, Padua, Italy
1,2SENECHAL_Martin, 1,2BOUCHARD_Danielle_R
1Department of Biology, University of Padua, Italy
Introduction: Mitochondria are highly dynamic organelles: they form a reticulum continuously remodelled by fission and fusion events. By controlling the shape, length and lack of mitochondrial fragmentation and fusion events modulate mitochondrial functions. A defective mitochondrial function has been invoked in many diverse complex disorders, such as obesity, type 1 or type 2 diabetes, and Parkinson’s or Alzheimer’s disease, and it is tempting to speculate that mitochondrial dynamics proteins are involved in the alterations in mitochondrial function that underlie these complex disorders. The mitochondrial structure is also modified by nutrient availability. Nutrient excess is associated with fragmented mitochondria in different in vitro and in vivo models. Mitochondrial fusion and fission mechanisms represent a key step in the mitochondrial adjustment to challenging nutrient conditions. Recently, sirtuins emerged as crucial molecular sensors of cellular energy balance. Their enzymatic activity requires NAD+ as a cofactor, any energy stress that modifies NAD+ levels impacts on their activity. Therefore, sirtuins represent key modulators of mitochondria, allowing this organelle to adjust according to nutrient availability, to maintain metabolic homeostasis and eventually, survival.
Objectives: Despite the apparently convergent effect on the metabolic adaptation to challenging metabolic conditions, the interaction between sirtuins and mitochondrial dynamics is still uncharacterized. We set out to genetically investigate how Sirt5 impacts on mitochondrial activity and structure
Methods: Subcellular fractionation, chemical cross-linking and western blot were performed on immortalized wild-type (Sirt5+/+) and Sirt5 Knock-out (Sirt5−/−) mouse embryonic fibroblasts (MEFs).
Mitochondrial oxygen consumption assays were performed. The shape of the mitochondria network was evaluated using confocal microscopy of live cells.
Results: Deletion of Sirt5 in mouse embryonic fibroblasts leads to mitochondrial DRP1 accumulation, mitochondrial fragmentation.
During starvation, Sirt5 deletion blunted mitochondrial elongation, resulting in increased mitophagy.
Conclusion: Starvation induced mitochondrial elongation and evasion from autophagic degradation requires the energy sensor Sirt5.

28. Hubreniuk, Travis
RESISTANCE TRAINING BASED PROGRAMS MAY PROVIDE SIMILAR BENEFITS TO TRADITIONAL EXERCISE PROGRAMMING FOR OBSESE INDIVIDUALS: A PILOT STUDY
1BERG_Brett, 1,2LYEALY_Eric_M, HIGGS_jillian, 1,2SENECHAL_Martin, 1,2BOUCHARD_Danielle_R
1The Cardio-metabolic, Exercise and Lifestyles Laboratory; 2Faculty of Kinesiology, University of New Brunswick, Fredericton NB
INTRODUCTION: Three commonly reported barriers to exercise for people living with obesity are lack of time, enjoyment, and self-efficacy. Providing an alternative option for physical activity that allows for the transferability of traditional physical activity guidelines that provides health benefits, and is found to be enjoyable for obese individuals, might assist in increasing exercise adherence.
OBJECTIVE: To identify the interest in a novel exercise program for obese adults and explore changes in health markers compared to the traditional recommendations.
METHODS: Twenty inactive adults (median age 47.5; 43% males) with a body mass index (BMI) ≥ 30 kg/m2 were recruited for a 12-week exercise program. Participants were randomly assigned to either a traditional group (TRAD) that completed the recommended Canadian Physical Activity Guidelines, or the resistance training plus (RT+) group, who were required to perform only 15 minutes of resistance training (RT) at moderate-to-vigorous intensity; equivalent to 30% less exercise volume. Health markers including BMI, cardiorespiratory fitness (CRF), blood pressure, glucose, and lipid profiles were measured pre- and post-intervention. Finally, exit interviews were conducted with the participants to detect enjoyment and perceived success from the respective programs.
RESULTS: The average (interquartile) intensity of workouts was not different between the RT+ and TRAD groups. CRF was the only health marker that improved more for the TRAD group [5.1 % (4.3 to 15.0)] than the RT+ group [3.5% (2.9 to 4.7)]; p = 0.04. Sixty percent of all participants (100% of men) who participated in this study, regardless of the assigned group, indicated a preference for the RT+ program compared with the TRAD program in the future.
CONCLUSIONS: These findings indicate that the RT+ program may not be different from the TRAD program in its ability to improve various health markers. Additional research is warranted to further investigate the capabilities of the RT+ program. Moreover, RT+ seems to be of particular interest for obese men.
29. Slade, Logan
TRANSCRIPTION FACTOR EB PROMOTES RESISTANCE TO DOXORUBICIN IN BREAST CANCER CELL LINES
1 SLADE Logan, 1 KIENESBERGER_Petra, 1 PULINIJKUNNIL_Thomas* AFFILIATION: 1 Department of Biochemistry and Molecular Biology, Faculty of Medicine, Dalhousie Medicine New Brunswick, Dalhousie University, Saint John, NB, Canada
INTRODUCTION: Doxorubicin (DOX) is the standard of care treatment for triple-negative and hormone-therapy resistant breast cancer however its usefulness is limited by limited efficacy and toxicity at increased doses. The autophagy-lysosome pathway is a major cytoprotective process through the degradation of damaged molecules and structures, provision of nutrients, along with sequestration of toxic agents, and is known to promote resistance to several chemotherapies.
HYPOTHESIS: Recently, transcription factor EB (TFEB) has been identified as the major regulator of the autophagy-lysosome pathway, and we hypothesized that it could promote chemoresistance in this manner.
METHODS: Analysis of protein expression was carried out by immunoblot and subcellular localization by immunofluorescence in DOX treated cell culture models of breast cancer (MDA-231, MCF-7, BT-549, or non-cancerous MCF10A). Genetic manipulation of these cells was done using adenoviral delivery of short-harpin RNA or overexpression constructs. Cell viability was analyzed by the presto blue method.
RESULTS: Using MDA-231 breast cancer cells and MCF10A non-cancerous breast cells we established that TFEB was significantly overexpressed in MDA-231 and was activated upon treatment with DOX which corresponded to nuclear translocation. Activation of TFEB upon DOX treatment was associated with induction of cytoprotective autophagy and lysosomal activity, while knockdown of TFEB was sufficient to prevent autophagy activation following DOX. Likewise, knockdown of TFEB significantly sensitized MDA-231 cells to DOX induced apoptosis as measured by cleaved caspase-3 and reduced cell viability following DOX treatment, while overexpression of TFEB in MCF10A cells increased resistance to DOX induced apoptosis and improved viability. We that altering TFEB expression has no impact on the levels of reactive oxygen species in response to DOX, rather, we show that knockdown of TFEB significantly reduces to efficiency of DNA damage repair, which could potentially lead to apoptosis.
CONCLUSION: In summary, we show that TFEB is a potential target for increasing the sensitivity to doxorubicin in breast cancer cells and describe a novel response mechanism to DNA damaging agents.

30. Samuel Poirier
TRANSFECTANT OF LPS AND TGF-β ON 5-LIP OXYGENASE EXPRESSION AND LEUKOTRIENE BIOSYNTHESIS IN HUMAN MONOCYTIC CELL LINES
POIRIER Samuel J1,2, FLAMAND Nicolas1, *SURETTE Marc E2 1 Centre de recherche de l’Institut universitaire de cardiologie et de pneumologie de Québec & Dépt de médecine, Université Laval (Québec, QC) 2 Dépt de chimie et biochimie, Université de Moncton (Moncton, NB)
INTRODUCTION: Monocyte/macrophage differentiation plays a fundamental role in endotoxemia, and various molecules involved in this process are critical to the immune response. Notably, 5-Lipoxigenase (5-LO) catalyses the biosynthesis of pro-inflammatory lipid mediators known as leukotrienes (LT). However, LT can play a critical role in diseases such as asthma and atherosclerosis.
OBJECTIVE: To determine if the maturation of human monocytic cell lines by treatment with or/and TGF-β regulates the expression of 5-LO and the biosynthesis of LT.
METHODS: Mono Mac 1 (MM1) and THP-1 cells were incubated for up to 72h with or without LPS (100 ng/ml) and TGF-β (1 ng/ml). Cell maturation was determined by CD14 expression, evaluated by flow cytometry. 5-LO expression was measured by RT-qPCR and western blot analysis. Correspondingly, the impact of LPS and TGF-β on 5-LO promoter activity was measured using gene reporter assays. Finally, LT production was quantified using RP-HPLC.
RESULTS: CD14 expression was significantly increased in cells treated with LPS but not TGF-β. Treatment with LPS or TGF-β resulted in a significant increase in 5-LO mRNA expression, though a striking synergistic effect was measured with increased 5-LO mRNA expression of 54- and 13-fold in MM1 and THP-1 cells, respectively. 5-LO protein expression was significantly increased by both LPS and TGF-β, with maximal induction at 72h with the combination of LPS and TGF-β. LPS enhanced human-5-LO promoter activity by >2-fold in both cell lines, but TGF-β was without effect. Finally, a significant increase in LT production coincided with the observed increase in 5-LO protein. However, LT profiles differed between cell models. MM1 cells synthesised mostly LTE4, while THP-1 cells mostly produced LTC4 and LTD4 suggesting a differential expression of LT metabolising enzymes.
CONCLUSIONS: Overall, this study is the first to demonstrate that 5-LO promoter activation via a receptor-activating mediator can result in increased 5-LO expression. This represents a new mechanism by which LT biosynthesis can be modulated by pathological agents.

31. Maroua Mbarik
DOSE- RESPONSE AND KINETICS OF POLYUNSATURATED FATTY ACID UPTAKE IN CELL CULTURE
MBAIIR Maroua and SURETTE Marc E Dept of Chemistry and Biochemistry, Université de Moncton (Moncton, NB)
INTRODUCTION: The fatty acid composition of cells is of interest because of its implications in many cell functions. A main role of fatty acids is energy storage in the form of triglycerides, but they are also a major component of membranes phospholipids. The addition of polyunsaturated fatty acids (PUFA) to cell culture media is a means of incorporating PUFA into cellular phospholipids to study their effect on cell functions. However, PUFA concentrations used in such experiments vary widely (up to 250 μM) in the literature and may not always be representative of PUFA compositions in vivo.
OBJECTIVE: To study the effect of different doses of exogenous PUFA on cellular lipid distribution and the expression of enzymes involved in PUFA metabolism.
METHODS: Four different human cell lines, HepG2 (hepatocarcinoma), THP1 (AML), Jurkat (lymphocytic leukemia) and MCF7 (mammary carcinoma) were incubated with different doses of arachidonic acid (AA) or eicosapentaenoic acid (EPA) (0, 5, 20, 50 and 150 μM) for three days. Cellular lipids were then extracted and the total cellular fatty acid profile was determined by GC-FID. Phospholipids (PL) and triglycerides (TG) were also separated by thin-layer chromatography and the fatty acids in each fraction were measured. The kinetics of cellular AA and EPA uptake (10 μM at 2, 4, 8 and 72 hours) were also measured by GC-FID. In addition, the expression of elongase of very long chain fatty acid protein 2 (ELOVL2), ELOVL5, Δ5- and Δ6-desaturase enzymes were determined by western blot.
RESULTS: After 3 days of incubation the cellular PUFA concentrations increased in a dose dependent manner. In incubations with 5 μM of AA or EPA, most of the PUFA and their elongation products, 22:4 n-6 and 22:5 n-3, were stored in cellular PL with a small fraction (<5%) in TG. At concentrations of 20 μM and above, PUFA content in TG increased significantly indicating that the PL pool was saturated. The uptake of AA and EPA was measurable after 2 hours of incubation and increased with time thereafter.
CONCLUSIONS: This study shows that a physiologically-relevant enrichment of PUFA was achieved with 5 to 10 μM of exogenous PUFA, and that care must be taken when selecting PUFA concentrations in cell culture experiments to assure translation of results.

32. Lewis, Julie
BACTERIA DETECTED IN CULTURES FROM MORGELLONS AND LYME PATIENTS
1,2 3 LEWIS_Julie, *1,2 LLOYD_Vett_K, 1 ROBICHAUD_Gilles_A 1 Université de Moncton, Moncton, NB 2 Mount Allison University, Sackville, NB 3 Atlantic Cancer Research Institute, Dr. Georges-L.-Dumont University Hospital Centre, Moncton, NB • Corresponding author
BACKGROUND: Borrelia and Rickettsia are intracellular bacteria that have diverse epigenetic effects on their host and we postulate that infection with these endobacteria alter gene expression in fibroblasts to produce Morganells fibers.
HYPOTHESIS: As only a subset of Lyme patients report fiber-producing skin lesions, this study explores whether Lyme patients who develop Morganells disease do so from co-infections with Borrelia in conjunction with a tick-vectored endobacteria. Endobacteria are intracellular bacteria that have diverse epigenetic effects on their host and we postulate that infection with these endobacteria alter gene expression in fibroblasts to produce Morganells fibers.
METHODS: Vco samples were collected by clinical partners from consented volunteers diagnosed with Morganells and Lyme disease as well as healthy controls. Samples were incubated for 8 weeks in BSK-H medium and tested for Borrelia, Rickettsia and Bartonella by nested PCR and sequencing.
RESULTS: Our first aim was to detect and compare the presence of endobacteria Borrelia, Rickettsia and Bartonella in cultures of Morganells and Lyme patients versus controls. We have obtained preliminary evidences of endobacterial co-infections in diverse clinical samples, derived from 4 of 5 Morganells patients and 2 of 9 Lyme patients.
CONCLUSION: Although preliminary, these findings support further in vitro experiments on altered gene expression in cultured cells with defined induced endobacterial infections.
33. Robertson, Jason W. 
DISTINCT MOTOR PATTERNS ENHANCE USABILITY OF MYOELECTRIC PATTERN-RECOGNITION CONTROL
ROBERTSON, Jason W.1,2, ENGLEHART, Kevin B.1,2, and SCHEME, E.J.1,2* 1 Institute of Biomedical Engineering, 2 Department of Electrical and Computer Engineering, Faculty of Engineering, University of New Brunswick
INTRODUCTION: Pattern recognition has recently been commercialized for use in myoelectric prostheses after decades of laboratory and clinical study. Despite this success, many challenges remain; one of the most critical of these is the surgery delay to untimed, erroneous movements. These errors often require correction to accomplish the desired task, a frustrating process that can discourage device adoption. While many studies have examined systemic sources of error, none to date have investigated how errors unfold in real time. OBJECTIVE: In this work, we analyzed data from real-time usability trials to understand how errors occur, and what characteristics, if any, are common to these errors.
METHODS: We recruited 24 subjects (50% female, age 25.8±3.2 y) to participate in the experiment. Subjects elicited sample contractions in their dominant hand and wrist for each of four movement classes and a no-movement class, which were used to train a classifier. With this classifier, subjects controlled a cursor through a virtual targeting task by moving their upper limb. In offline analysis, all movements which took the cursor away from the target, and all movements within the target after stopping, were designated systemic errors. Two commonly observed operator errors were also highlighted for further analysis: overshoot, in which the cursor moves straight through the target without stopping; and bounceback, in which the cursor moves suddenly in a different direction while attempting to stop. 0 Erroneous movements comprised 22.0% of all recorded samples; the majority of these (58.4%) were classified as bouncebacks, while very few (5.2%) were overshoots. A combined analysis of training and test data found that subjects who could elicit and maintain more separable motor patterns exhibited better control. It was also found that systemic errors correlated most strongly with Fits’ Law throughput, i.e., usability, though other error rates did affect path efficiency and stopping distance.
CONCLUSIONS: These data broadly affirm that emphasizing more distinct motor patterns is crucial to minimizing erroneous movements in real-time prosthetic control.

34. Alireza Manashty
PHARMS: PREDICTIVE ANALYTICS IN HEALTH MONITORING USING DEEP LEARNING CAN SAVE LIVES
1,2 MANASHTY, Alireza*, 2 LIGHT, Janet. 1,2 Department of Computer Science, University of New Brunswick, Saint John, NB;
INTRODUCTION: Predictive analytics in healthcare can prevent severe patient conditions, reduce costs, and save lives. In July 2017, a cohort Canadian study [3] showed that dying risk for patients experiencing emergency surgery delays vary by 4.4% compared with 3.2% for those without delay. Modeling historical temporal health records with missing values in disease diagnosis prediction is a major challenge in real-time predictive analytics.
HYPOTHESIS (Objectives or Aims): Recent studies are using deep learning and data abstraction techniques to model health data. However, it is difficult to train a model to predict large number of diagnosis classes using sparse data in a health monitoring system, capable of real-time diagnosis prediction is still rare. The proposed solution is called PHARMS which stands for predictive health analytics and real-time monitoring system.
METHODS: PHARMS addresses the challenge in health anomaly and defines a system for continuous predictive analysis for diagnosis prediction. It also controls the dynamics between three sub-systems: ITS (intensity temporal patterns), HIL (hierarchical ignoring LSTM), and HEAL (health event aggregation lag) for improving prediction capabilities. ITS is a data structure enabling the use of LSTM (long-term short memory) recurrent neural networks (RNN) for learning long-term health records. HIL is an RNN architecture with LSTM cells capable of learning with missing values. Finally, HEAL is the PHARMS’ architecture and medical information framework.
RESULTS: MIMIC III dataset is used for testing the performance of the system. Results show that LSTM using ITS performs better than similar techniques.
CONCLUSIONS: Proposed solution, PHARMS, provides a framework for predictive healthcare analysis in order to save lives and reduce costs. Using latest machine learning and cloud technologies, PHARMS is cable of predicting health anomalies using deep learning techniques and the novel data structure proposed.

35. Guerette, Roxann
MAMMAGLOBIN 1 GENERATES MULTIPLE GENE PRODUCTS IN BREAST CANCER
1,2 Roxann Guerette, 1Annie-Pier Beauregard, 1,2 Gilles A. Robichaud Department of Chemistry/Biochemistry, Université de Moncton, Moncton, New-Brunswick
1Atlantic Cancer Research Institute, Dr. Georges-L.-Dumont University Hospital Centre, Moncton, New-Brunswick, 2Department of Chemistry/Biochemistry, Université de Moncton, Moncton, New-Brunswick
INTRODUCTION: Since 2007, oncologists have been using the GeneSearchTM Breast Lymph Node (BLN) Assay for the detection of metastatic breast cancer. This test detects the presence of Mammaglobin-1 (MGB1) expression in lymph nodes of breast cancer patients. Although MGB1 is overexpressed in 99% of breast cancers, its aberrant expression and function in breast cancer tissue is still misunderstood. We have recently reported the first evidence for MGB1 as potent induction of breast cancer malignancy and disease progression. More precisely, loss of MGB1 expression correlates with a decrease of cell proliferation, spheroideal formation, migration, and invasion capacities of breast cancer cells.
Concomitantly, we also show that MGB1 expression activates pro-malignant signaling cascades leading to epithelial to mesenchymal transition (EMT). More interestingly, we have also discovered new MGB1 gene products that result from transcript editing.
OBJECTIVE: To elucidate the role of MGB1 gene products in breast cancer, we set out to investigate and characterize MGB1 isoforms in breast cancer cell processes.
METHODE: MGB1 isoforms were identified by 3’and 5’-RACE assays and next generation sequencing using the minion platform. The novel MGB1 gene products were subsequently cloned.
RESULTS: In total, we have identified 7 different MGB1 product variants. We strongly believe that each MGB1 product has a specific cellular role, which leads to breast cancer malignancy and disease progression. To perform loss and gain of function experiments, we are genetic engineering breast cancer models that specifically code and express individual MGB1 variants with and without tracking epitope tags.
CONCLUSION: This study will elucidate the molecular and cellular mechanism leading to breast cancer progression. MGB1 variants may provide new avenues for therapeutic or prognostic strategies.

36. BERA AMIT
THE ROLE OF elf3e-INTERACTING INTERNAL RIBOSOME ENTRY SITE TRANS-ACTING FACTORS (ITAFs) IN THE REGULATION OF EPITHELIAL-TO-MESENCHYMAL TRANSITION.
1BERA Amit, 1FROST Laura, 1JOY Andrew, 1BARNETT David, 1,2 LEWIS Stephen. 1Atlantic Cancer Research Institute, Moncton, NB;
INTRODUCTION: Metastatic cancer is a major contributor to cancer deaths; therefore, there is a pressing need to understand the mechanisms that underlie metastatic cancer in order to develop new therapeutic approaches for this disease. One such mechanism is epithelial-to-mesenchymal transition (EMT), which initiates cancer cell migration and invasion out of the primary tumour. Reduced expression of the translation initiation factor eIF3e plays a major role for EMT in cancer cells. We previously reported that reduced elf3e expression reduces global, cap-dependent translation initiation while favoring alternative translation initiation mechanisms, such as internal ribosome entry sites (IRES). These observations suggest that decreased elf3e activity creates an environment that is favorable for mRNAs that rely on IRES-dependent translation. In addition, some of the mRNAs that encode these proteins that are important for EMT rely on IRES for their translation.
HYPOTHESIS: To understand the mechanism(s) by which elf3e regulates EMT.
METHODS: We have performed co-immunoprecipitation, mass spectrometry, Western blotting, and IRES reporter assays to identify and characterize elf3e-interacting proteins.
RESULTS: We examined the potential interacting partners of elf3e by mass spectrometry. We found enrichment for IRES trans-acting factors (ITAFs) in the list of proteins that interact with elf3e. We validated several of these interactions using standard co-immunoprecipitation (co-IP) of endogenous proteins in the presence of RNase and found that hnRNP H, hnRNP A1, and hnRNP U interact with elf3e in an RNA-independent manner. We examined the effects of these ITAFs on IRES-containing mRNAs whose translation is known to be affected by a decreased elf3e expression (e.g. SNAIL1, ZEB2, VIM). For example, overexpression of hnRNP A1 causes an increase in ZEB2 IRES activity. These results support the hypothesis that elf3e may sequester ITAFs to prevent them from stimulating the translation of proteins critical for EMT.
CONCLUSIONS: We previously identified an unrecognized role for elf3e in the regulation of EMT. We now find that elf3e interacts with at least three ITAFs to control their ability to mediate IRES-dependent translation of proteins that drive EMT.
37. Kumar, Awant
PROTEOOMIC ANALYSIS OF EXTRACELLULAR VESICLES ISOLATED BY VN96 PEPTIDE FOR BIOMARKER DISCOVERY.
KUMAR Awant, NGOC-NU Mai, GHOSH_Amiran, OUELLETTE_Rodney, BARNETT_David.
Atlantic Cancer Research Institute, Moncton, NB, Canada.
INTRODUCTION: Extracellular vesicles (EVs) as a representation of the state of their parent cells are valuable resources for biomarkers of respective disease conditions. VN96 peptide affinity based isolation method is proven as an easy and efficient method for EV isolation from cell conditioned media (CM). Comparative proteomic analysis provides the confidence and reliability of VN96 based method for biomarker discovery.
OBJECTIVES: (1) To compare proteomic profile from cell lysates versus EVs captured by the VN96 peptide, (2) To compare common/unique proteins between cancer and non-cancerous cell lines, (3) To compare our in-gel to in-solution protein identification protocol and (4) To identify and validate differentially expressed proteins by targeted LC-MS/MS (in-solution) and/or Western Blot.
METHODS: Breast-cancer cell lines (MCF-7 and MDA-MB-231) and non-cancerous mammary cell line (MCF-10A) were grown in culture flasks to get CM. The harvested culture supernatants were used to isolate EVs using VN96. Tryptic-digested peptides extracted from cell lysate and EVs were subjected to LC-MS/MS analysis. The peptides for MS analysis were prepared using either an in-gel or in-solution digestion method. Potential differentially expressed candidate proteins are validated using Western blotting and/or by targeted MS.
RESULTS: The protein profiles are analysed to identify differentially expressed proteins among different cell-line derived EVs and whole cell lysates. Among these proteins a list of common proteins present in MCF7 and MDA-MB231 but not in MCF10A cell line EVs and vice-versa are identified. Few identified proteins are found to be abundantly present in cancer cell lines whereas in non-cancer cell lines they are absent or reduced. These marker- proteins are being validated in Western blot.
CONCLUSIONS: VN96 isolated EVs contain key proteins which can differentiate the cancer cell derived EVs from non-cancerous cell EVs. As a robust method over other available method of EV isolation VN96 peptide has potential to identify protein biomarkers in liquid biopsy setting.

38. Eltonsy, Sherif
ASSOCIATION BETWEEN EFFICACY OF INTERACTIONS BETWEEN METFORMIN AND EXERCISE ON HBA1C, FUNCTIONAL CAPACITY, LIPID PROFILE, QUALITY OF LIFE AND WEIGHT.
1,2 ELTONSY Sherif, 3 DUFOR DOIRON Monique, 4 SIMARD Patrice, 1,5 JOSE Caroline, 6 SÉNECHAL Martin, 6 R. BOUCHARD Danielle, 3, 5 LEBLANC Rémi, 1,3,5 BÉLANGER Mathieu*
1 Centre de formation médicale Nouveau-Brunswick; 2 Université de Moncton; 3 Vitalité Health Network; 4 Université de Montréal; 5 Université de Sherbrooke; 6 Université de New Brunswick
BACKGROUND: Type 2 diabetes mellitus is a major cause of increased hospitalizations and premature mortality. Exercise is considered as first-line therapy, but pharmacological agents are often required, with metformin as first-line oral antidiabetic. Although a combination of metformin-exercise is recommended, it remains unclear if their effects are independent.
OBJECTIVES: To investigate the impact of metformin-exercise interaction on changes in HbA1c, functional capacity, lipid profile, quality of life and weight.
METHODS: A retrospective cohort study using data from participants in a 12 week cardiovascular rehabilitation program between 2014-2016. Exposure to metformin was determined through recorded prescriptions and average minutes of exercise per week were computed from exercise logs. The primary outcomes were changes in HbA1c and functional capacity (6-minute walk test [6MWT]) over 12 weeks. Secondary outcomes were changes in lipid profile, quality of life and weight. Directed acyclic graphs were used to identify potential confounders, accounted for with multiple linear regression.
RESULTS: The cohort included 410 admissions (mean age: 65 years) from 86 metformin users and 324 non-users. The average exercise minutes/week was 102.5±48.4 among metformin users and 109.2±59.2 among non-users. Improvement in 6MWT – but not HbA1c – was observed among the two groups of patients (mean change = 39.3 meters). Although changes in HbA1c were consistently lower in the metformin-exercisers group, a non-linear interaction indicated greater improvements in 6MWT among metformin users (0.380, 95% CI: 0.001, 0.760). There were no between group differences in any of the secondary outcomes.
CONCLUSIONS: In this study of real-world patients, the combination of metformin-exercise led to greater gains in functional capacity than exercise alone.

39. Jougleux, Jean-Luc
PLATELET-DEPVED MICROPARTICLES MODULATE THE MITOCHONDRIAL RESPIRATORY STATE OF NEUTROPHIL-LIKE PLB-985 CELL LINE.
1 JOUGLEUX Jean-Luc, 1 OULD_AMER Yasmine, 1 HÉBERT CHATELAIN_Etienne, 1 BOUDREAU_Luc H*
1 Université de Moncton, Moncton, NB
INTRODUCTION: Neutrophils, like cell line, PLB-985, have a relatively short lifespan (8-12h) in comparison to other cell types. For reasons still unclear, their lifespan increases significantly in the synovial fluid (SF) of rheumatoid arthritis (RA) patients. While neutrophils play an important role in the host’s defence, increasing their viability can lead to persistent inflammation and eventually tissue dysfunction. Platelets amplify the inflammatory response by releasing microparticles (PMPs) in SF of RA patients. Under inflammatory conditions. PMPs are internalized by neutrophils, resulting in an increase of the cell’s mitochondrial content. We propose that this latter phenomenon increases the respiratory state of the host cell, thus, promoting their viability.
AIMS: Investigate the effects of the horizontal transfer of mitochondrial-derived content on the respiratory state of the recipient cell.
METHODS: The human neutrophil-like cell line, PLB-985, was co-cultivated at various time points in the presence of PMPs. The internalization was confirmed by confocal immunofluorescence microscopy, citrate synthase activity assay and flow cytometry analysis. The mitochondrial respiratory activity was determined using an Oxigraph. The cell’s viability was assessed by flow cytometry using Annexin-V and 7-AAD markers.
RESULTS: Differentiation of PLB-985 resulted in a significant decrease of the respiratory state and mitochondrial protein content of the cell. PMPs internalization by differentially PLB-985 significantly increased the electron transfer system (ETS) capacity of the host cell.
CONCLUSIONS: Our preliminary data suggests that PMPs improve respiratory state of the recipient cell and modulate the early apoptotic process of PLB-985, but not to a point affecting their global viability. The exact mechanism by which these small cells affect PLB-985 viability and mitochondrial respiration remains unclear. We believe that a combination of mitochondrial-derived content (e.g. ATP, reactive oxygen species) resulting from horizontal transfer may also be implicated in these observations.

40. Abi Nader, Patrick
PHYSICAL ACTIVITY ENJOYMENT MOTIVES EXPLAIN ADOLESCENT MODERATE-TO-GROUS PHYSICAL ACTIVITY TRENDS.
1,2,3 ABI NADER_Patrick, 1,3 GAUDET_Jeffrey, 2,4,5 BÉLANGER_Mathieu*
1 Université de Moncton, 2 Centre de formation médicale du Nouveau-Brunswick, 3 Maritime SPOR SUPPORT Unit, 4 Université de Sherbrooke, 5 Vitalité Health Network
INTRODUCTION: Moderate-to-vigorous physical activity (MVPA) levels peak in late childhood before dropping during the transition to adolescence. Motives for participation in physical activity (PA) have been used to explain MVPA levels at different life stages. However, longitudinal trends in the association between motives and MVPA have not been examined from childhood to adolescence.
Objectives: The purpose of this investigation was to examine the longitudinal associations between PA motives - enjoyment, competence, social affiliation, health/fitness and appearance and participation in MVPA over the course of fifteen measurement points spanning 5 years during the transition from childhood to adolescence.
METHODS: Data used in this study were from an ongoing cohort study (Monitoring Activities for Teenagers to Comprehend their Habits [MATCH]) with an initial sample of 937 children (10-11 years-old). Questionnaires are administered three times per school year with 15 cycles available for this analysis. Piecewise latent growth models were implemented to examine the association between PA motives and MVPA levels. Models were adjusted for gender.
RESULTS: MVPA levels followed an upward trend from cycle 1 through 7 and then a downward trend through cycle 15. Enjoyment motives for participation in PA were consistently associated with higher MVPA levels at every cycle except at cycles 14 and 15. Fitness motives for participation in PA were associated with MVPA at cycles 5, 9, 14 and 15. No other motives were associated with self-reported MVPA. In gender adjusted models, enjoyment motives remained the most frequent positively associated with MVPA levels across time, participants who reported higher enjoyment motives were more likely to report higher MVPA levels. Interventions aiming at increasing or maintaining adolescent MVPA levels must prioritize fun experiences.
43. Levesque, Marianne

**L’IMPACT D’UNE COURSE À RELAIS PAR ÉQUIPE SUR LA CROISSANCE PERSONNELLE DES ADOLESCENTS ET ADULTES ACCOMPAGNATEURS DANS LES COMMUNAUTÉS SCOLAIRES**

1LEVESQUE_Marianne, 2BOULAY_Amélie, 1RICE_Kathleen, 1BOUFA contend. The present study aimed to determine if a physical activity intervention can decrease AS, as well as anxiety and depressive symptoms. This provides a better understanding of the transdiagnostic implications of AS reductions following an accessible physical activity intervention.

**METHOD:** Women with high AS completed an eight-week “learn to run” program, with two group exercise sessions and one individual exercise session per week. Forty-one participants were recruited from the community and the University of New Brunswick (M age = 32.9, SD = 14.2). AS, depression, panic, social phobia, and generalized anxiety were measured pre-, mid-, and post-treatment. Results (with completers) demonstrate significant reductions from pre to post-treatment in AS (t(24) = 6.4, p<.001), depression (t(25) = 5.1, p<.001), social phobia (t(25) = 5.6, p<.001), generalized anxiety (t(25) = 5.2, p<.001), and panic (t(25) = 4.1, p<.001). The intervention also led to significant improvements in functional health and mental health (coping with physical functioning (t(24) = 2.8, p<.05), general health (t(24) = 4.3, p<.001), and role limitations due to emotional problems (t(24) = -3.1, p=.005).

**CONCLUSION:** These results suggest that physical exercise may serve as an accessible transdiagnostic intervention and its use should be further explored and promoted among mental health populations. These findings are particularly relevant given the existing difficulties in accessing traditional mental health care in New Brunswick.
45. Michael Connolly

ACTIVATION OF THE HIPPO-PATHWAY UNDER HYPOXIC OR METABOLIC STRESS CONDITIONS IN MYOTUBES

1CONNOLLY_Michael, 1PEREZ_Lester, 1MADHU_Malav, 2HUBER_Jason, 2SIMPSON_Jeremy and 1BRUNT_Keith

1Dalhousie Medicine New Brunswick (DMNB); 2 Department of Human Health and Nutrition Science, University of Guelph

INTRODUCTION: The Hippo Yap pathway is a highly conserved, yet known regulator of cell proliferation, and consequently organ size. The pathway controls growth through restriction of proteins including Yap/Taz that associate with transcription factors to regulate proliferation and apoptosis. However, the physiological conditions, as well as the upstream regulator(s) are not yet fully understood in the Hippo pathway in myocytes.

OBJECTIVE: To characterize the Hippo pathway in response to different stimuli resembling infarct conditions on cardiac myotubes and compare pathways activation to those observed from infarcted regions in the left ventricle in mice.

METHODS: Differentiated H9C2 myotubes (serum deprived 7days) were placed under serum free, stress conditions to approximate an LD50 and then compared to a control. We induced starvation (EBSS+Hepes; 1h), inflammation (Tnf 20ng/ml; 12h), mitophagy (FCCP 2M; 12h), hypoxia (O2 1%; 12h), reactive oxygen species (450M H2O2; 1h) and ischemia (O2 1%+No Glucose; 24h) as experimental conditions. Protein was then collected and subjected to western blot analysis.

RESULTS: Here we showed that stimuli modulating infarct conditions in cardiac myotubes have an effect on the Hippo pathway. We found that in vitro phosphorylated Yap, phosphorylated Mobl, and Lats1 were significantly increased under starvation conditions compared to control. MST1 is also increased in starvation compared to control. Lats1 was also significantly active under ischemic conditions compared to control. Yap and MST1 increased phosphorylation are in agreement with in vivo studies of murine left ventricle after acute myocardial infarction.

CONCLUSION: Starvation, more than any other stress tested, increased phosphorylation of Yap and MST1. Acute myocardial infarction of the left ventricle in mice at the peri-infarct area also showed increased phosphorylation of Yap and MST1. Our results therefore show that acute metabolic deficiency is a significant means of activating Hippo-Signalling. This could suggest a novel mechanism preventing hypertrophy of cardiomyocytes during metabolic deficiency such as acute infarction or chronic ischemia.

46. Roody Blam

AGGÉRATIONS DE LA PROTEINE ELOVL5 LORS DU CHAUDASSAGE POUR ANALYSES WESTERN

1BIAM Roody S, ROBICHAUD Philippe-Pierre, SURETTE Marc E

INTRODUCTION : Une étape cruciale dans l'exécution d'immunoblots de type western pour la détection de protéines est le chauffage à 100°C des échantillons dans un tampon Laemmli contenant du SDS afin de bien solubiliser les protéines avant la séparation par électrophorèse (Laemmli UK, Nature, 1970). Par contre, l'analyse de certaines protéines transmembranaires par immunoblot western est souvent inefficace dû à une solubilisation inadéquate de ces protéines.

OBJECTIF : Explorer le phénomène d'agrégarions lors de la préparation d'immunoblots pour analyses westerns de la protéine membranaire longeant de long chain fatty acids 5 (ELOVL5).

MÉTHODES : Des échantillons de protéines de lignées cellulaires Jurkat, MCF7 et HepG2 furent préparés avec une solution commerciale et avec une solution préparée au laboratoire du Sample buffer de Laemmli. Les échantillons furent soumis à des températures de 25, 40, 70 et 100°C pour 10 minutes. Une cinétique fut réalisée aussi à 100°C pour 1, 5, 10 et 20 minutes sur d'autres échantillons. Après chauffage certains des échantillons ont été centrifugés à 5000g et 10000g pour 5 minutes. Les protéines furent séparées sur un gel de polyacrylamide (4-15%) et transférées sur une membrane de PVDF. Les immunodétecteurs d'anti ELOVL5 et un anti-IgG de lapin couplé à une peroxydase et les bandes furent développés avec le ECL.

RÉSULTATS : Une diminution progressive de l'intensité des bandes des protéines attendues à partir de 40°C avec une disparition quasi total à 100°C. Des agrégations de protéines à haut poids moléculaires sont observables à partir de 70°C. Ceci est observable indépendamment du sample buffer utilisé. Bien que les résultats des bandes d'agrégarions soient similaires, l'agrégarions à la détection. À 100°C, au-delà de 5 minutes, les bandes d'ELOVL5 n'apparaissent presque plus. Les centrifugations n'ont pas d'effets sur les agrégations observées.

CONCLUSION : La température ainsi que le temps de chauffage affectent la détection de la protéine ELOVL5 par immunoblot western. Il est impératif de porter une attention particulière à la préparation des échantillons pour des analyses de type western surtout pour la détection de protéines transmembranaires comme les élongases.

47. Donovan, Alicia

THE ROLE OF DIGITAL HEALTH PLATFORMS IN ADDRESSING THE NEEDS OF CAREGIVERS

1DONOVAN_Alicia, 2DAVIS_Leanne, 2MCCLOSKEY_Rose, 2KEEPING-BURKE_Lisa, 3DONOVAN_Cindy, 1SCHEME_Erik

1 University of New Brunswick, Fredericton, NB; 2 University of New Brunswick, Saint John, NB; 3 Loch Lodmond Villa Nursing Home, Saint John, NB

INTRODUCTION: It is estimated that 109,400 Canadians 45 years of age and older are living in the community with dementia (Statistics Canada, 2012). The majority of these individuals reside at home under the care and supervision of a family caregiver, many of whom are older and suffer from health problems themselves (Sadavoy & Wesson, 2012). There is concern that caregivers often neglect their own health and well-being for a family member (Suehs et al., 2014). If accurate, it may only be a matter of time before the stresses of caregiving result in caregivers becoming patients themselves. Recently, digital health monitoring platforms have demonstrated promise as a means of promoting individual awareness and engagement with achieving personal fitness goals (Boots et al., 2014). Advances in mobile technology, particularly those with health promotion and monitoring capabilities, create opportunities to empower caregivers to make informed decisions about their daily activities and own health practices.

OBJECTIVES: This study explored if access to a health monitoring platform (iWellness) (Inflection Point Healthcare, Canada) that interfaces with wearable health monitoring devices and access to the iWellness platform, offer potential to improve caregivers’ health promotion and monitoring practices.

METHOD: Caregivers of people living in the home with dementia were recruited. Caregivers were given access to an individualized suite of health monitoring devices and access to the iWellness platform. Level of caregiver burden, self-efficacy, perceived health, and usage of the health monitoring devices were assessed at baseline, 4 and 12 weeks.

RESULTS: Twenty caregivers were recruited. No changes were noted in caregiving self-efficacy, however anecdotal improvements were noted in caregiving preparedness to care for their loved one. Improvements were also noted in caregiver motivation to theorize health.

CONCLUSION: Digital health technologies, such as the iWellness platform, offer potential to improve caregivers’ health promotion and monitoring practices. Further research with a larger population is required to review these results more fully.
**51. Gupta, Neeru**

**PRIMARY CARE PHYSICIAN PRACTICE INCENTIVES MAY REDUCE POTENTIALLY AVOIDABLE HOSPITALIZATIONS RELATED TO DIABETES, BUT LITTLE EVIDENCE OF COST SAVINGS ELSEWHERE IN THE HEALTH CARE SYSTEM**

1. GUPTA, Neeru, 2 LAVALLEE, Rene, 2 AYLES, James. 1 University of New Brunswick; 2 New Brunswick Department of Health. **BACKGROUND:** In New Brunswick, 14% of the population 35 and older is living with diabetes. In line with the aims of the provincial government diabetes strategy to address the growing health and economic challenges of chronic disease, financial incentives for primary care physicians were introduced in 2010 for comprehensive management of diabetes. **OBJECTIVE:** To assess the impact of pay-for-performance (P4P) on overall healthcare costs among patients with diabetes. **METHODS:** We use a quasi-experimental study design drawing on linked population-based longitudinal administrative data sets of physician billings, hospital discharge abstracts, and resident registrations. Diagnosed diabetes and other chronic conditions are identified through a validated algorithm tracing individuals’ interactions with the health care system. We apply difference-in-differences econometrics to estimate the effects of P4P on health care costs for cohorts of New Brunswickers with diabetes, by patient exposure to physician uptake of the practice incentive, using propensity score matching to adjust for patient and physician characteristics across the comparison groups. **RESULTS:** Coverage of incentive-based comprehensive care remains less than half (44%) of adults with diabetes, while prevalence of selected comorbid conditions (hypertension, ischemic heart disease) continues to increase. Incentive payments have led to significant positive increases in compensation for physicians attributable to the introduction of P4P. Some evidence is found of P4P reducing potentially avoidable hospitalization costs among newly diagnosed patients, but little cost avoidance is observed elsewhere in the health care system. **CONCLUSIONS:** Effects of New Brunswick’s P4P for diabetes care are to date mixed. High risk of multiple morbidities among diabetics, sizable turnover of patients with poorly controlled diabetes, and heterogeneity of physician responses to performance incentives may be hindering the effectiveness of single-disease care guidelines to improve population health and sustainability of health system investments.

**52. Lee, Amanda**

**SEDENTARY BEHAVIOUR IN LONG-TERM CARE FACILITIES**

Lee A, Sénéchal M1, Jennifer Donovan2, Bouchard DR1 1Faculty of Kinesiology University of New Brunswick, Fredericton NB, York Care Centre2, Fredericton NB. **Introduction:** Many residents in long-term care facilities are sitting for the majority of the day, especially when mobility is affected. The actual time spent by residents in long-term care facilities is unknown. **Methods:** A total of 20 participants in the study were recruited from three categories of mobility: independent walking and standing, assistance in transfer to stand and dependent on mechanical assistance to transfer. An ActivPal was attached to the leg with Tegaderm tape for seven days continuously. **Results:** The group was 60% women with an average age was 78 years old +/- 14. Ten residents were classified as independent, five as transfer with assistance, and five dependent. The group had an average of 21.3 +/- 2.7 hours per day spent doing sedentary activities, that is 89% of their day. The average time per day engaged in sedentary activities was significantly different among groups (p=0.024): 19.84 hours for residents who are independent, 22.18 hours for those who transfer with assistance and 23.4 hours for those who are dependent. Similarly, the average number of transition from sitting to standing position each day was significantly different among groups with 55.8 times for residents who are independent, 19.2 times for those who transfer with assistance and 9.2 times for those who are dependent (p=0.002). **Discussion:** As expected, a large majority of days are spent engaging in sedentary activities in long-term care facilities, but a large variety exists among mobility status. Based on the results it seems important to identify strategies to reduce sedentary behavior focusing on meaningful outcomes especially for residents that can transfer with assistance.
53. Aldiabat, Khaldoun

SMOKING BEHAVIOR AMONG JORDANIAN PSYCHIATRIC NURSES IS ASSOCIATED WITH THEIR LIVING IN AMBIGUITY

INTRODUCTION: This study has been conducted to deeply understand the smoking behaviour among Jordanian Psychiatric Nurses (JPN) who smoke cigarettes.

OBJECTIVE: The primary objective of this study was to generate a substantive theory that incorporates and explains the contextual factors that may contribute to smoking behaviour among Jordanian psychiatric health nurses [JPHN], and the meanings that they attributed to smoking.

METHOD: A classical grounded theory approach was used to collect and analyze the (interview and observation) data derived from a theoretical (purposeful) sample. The constant comparative method of data analysis was used; thus, data collection, coding and analysis occurred simultaneously. The sample for this study was eight male JPHN participants who smoked and worked in National Center for Mental Health- Jordan. A number of strategies were employed throughout the study to ensure trustworthiness; that is, the data collection and interpretation accurately reflects the phenomenon. These strategies included credibility, transferability, dependability and confirmability.

RESULTS: “living in ambiguity” was one of the major organizational subcategories reported by participants that influenced their smoking behaviour and contributed to contextualize their smoking behaviour over time. Participants reported four different kinds of ambiguities they are living that increased their smoking rate at the workplace. These ambiguities were: (1) the social identity ambiguity/challenges in providing psychiatric nursing care, (2) the task ambiguity/challenges in providing psychiatric nursing care, (3) the social emotional ambiguity/ambiguity of the evaluation process, and (4) the ambiguity in definition of the situation over time.

CONCLUSION: The results of this study provided in depth understanding of the pattern of association between working in an ambiguous health organization and smoking behaviour of JPSN. They conveyed through the subcategory (Living in ambiguity) different kinds of sources of ambiguities that influenced negatively their smoking rate at their workplace. Although the current study enlightened some aspects of smoking among Jordanian psychiatric health nurses, many studies are still needed to reach to a fuller understanding about this phenomenon, and to find the suitable solutions to this major public health problem.

55. Kuruganti, Usha

THE EFFECTS OF A COMMUNITY BASED RECREATIONAL EXERCISE PROGRAM ON MUSCLE STRENGTH AND BALANCE MEASURES IN INDIVIDUALS WITH PARKINSON’S DISEASE

1.2 SHUKLA_Kirti, 1CHESTER_Victoria and 1KURUGANTI_Usha*
1 Andrew and Marjorie McCain Human Performance Laboratory, Faculty of Kinesiology, UNB, Fredericton, NB
2 College of Kinesiology, University of Saskatchewan, Saskatoon, SK

INTRODUCTION: Parkinson’s disease (PD) is neurodegenerative disorder with nearly 100,000 Canadians and seven to ten million individuals across the world suffering from it. Characterized by tremor, bradykinesia and rigidity, individuals with PD also experience muscular weakness and postural instability resulting in poor balance, inability to perform functional activities and decreased independence. Exercise in conjunction with drugs and surgery is the primary course treatment.

OBJECTIVES: The purpose of this study was to evaluate the effects of an eight week unsupervised community based recreational program in individuals with PD.

METHODS: Eleven individuals participated in this study. An experimental group of five individuals with PD (n=5, M = 70.20 ± 7.25 years) were compared to a control group (n=6, M = 65.53 ± 4.83 years) of age and sex matched healthy active individuals. Knee flexion and extension muscle strength was evaluated using a Cybex HUMAC Norm (CSMI, USA Inc.) isokinetic dynamometer. Balance was evaluated using the Forward Functional Reach Test and the Timed Up and Go test.

RESULTS: No differences were detected in strength or balance in either the experimental or the control group after eight weeks. Two participants (n=2) were followed up again at ten weeks and eighteen weeks to study the retention effects of the exercise program. No differences could be made on the retention effects of the exercise program since both participants showed high variability in measures. Results from this study and previous literature suggest that to incur significant increases in muscle strength and balance, exercise programs need to incorporate high intensity eccentric resistance training and activities that sufficiently challenge balance respectively.

CONCLUSIONS: The absence of decline may suggest a maintenance effect from the training program, however further study is warranted. The results obtained from this study will add to the literature of incorporating community based recreational programs to improve functional status and independence in individuals with PD. Further studies of the impact of recreational programs is warranted.

54. Westcott, Steve

BIACTIVE GALLIUM COMPOUNDS: THE UNDISCOVERED COUNTRY

1GALLAGHER_Forrest, 1WESTCOTT_Stephen*
1Mount Allison University, Department of Chemistry and Biochemistry, Sackville, NB.

INTRODUCTION: The medicinal properties of metal complexes have been extensively researched in the past number of years with considerable research into the field of chemotherapeutics coming after the discovery of cisplatin, a small inorganic compound known for its anti-cancer activity. Like many pharmaceuticals, this drug elicits harmful side effects on the human body and as a result, the need has arisen for the development for novel chemotherapeutics which produce fewer of these negative effects. In our work, we aim to investigate the widely undiscovered territory of gallium through the synthesis of novel complexes with 3,4 hydroxyxypyridinones and Schiff base compounds and identify which of the two-series exhibits greater potential for future research.

METHODS: The 3,4 hydroxyxypyridinone ligands were synthesized under microwave conditions and subsequently complexed to gallium. Schiff base ligands were synthesized and complexed to gallium under an inert atmosphere. Both families of compounds have been characterized by NMR (1H,13C) and FT-IR spectroscopy and by melting point analysis.

RESULTS: A 3,4 hydroxyxypyridinone was synthesized from the common food additive maltol and the anti tuberculosis pharmaceutical, isoniazid. Schiff bases were synthesized from known bioactive compounds, 2-hydroxybenzaldehyde and aniline. Both families of compounds were complexed to gallium and will serve as the basis for future synthesis and preliminary biological testing which have been designed as part of this study. Conclusions: To determine the chemotherapeutic potential of novel gallium compounds containing 3,4 hydroxyxypyridinone and Schiff base compounds and identify which of the two-series exhibits greater potential for future research.

56. Charlton, Pat

FALLING THROUGH THE CRACKS: BARRIERS TO ACCESSING SERVICES FOR CHILDREN WITH COMPLEX HEALTH CONDITIONS AND THEIR FAMILIES IN NEW BRUNSWICK

1CHARLTON_Pat, 2ZARA_Rima, 3LUKE_Alsion, 3DOUCET_Shelday, 1MONTELPARE_William, 3NAGEL_Daniel_A, 1THYNMAN_Nicky, 3THOMPSON_Katherine.
1University of Prince Edward Island; 2Mount Allison University; 3University of New Brunswick, Saint John

INTRODUCTION: This study aimed to describe the existing services available and identify barriers to accessing these services across the health, social, and education sectors for CCHC and their families in New Brunswick.

AIMS: This study aimed to determine the chemotherapeutic potential of novel gallium compounds containing 3,4 hydroxyxypyridinone and Schiff base compounds and identify which of the two-series exhibits greater potential for future research.

METHODS: An environmental scan was conducted as part of a larger mixed-method study to identify services available for CCHC (0-19 years of age) and their families in New Brunswick. Semi-structured interviews and focus groups of nineteen families and sixty-seven stakeholders from the health, social, and education sectors were also included to further identify services and explore barriers to accessing these services.

RESULTS: A range of services were available to CCHC and their families, including government services within the health, education and social sectors, as well as community-based and private services. Several barriers to accessing services were identified and organized into three categories: (1) service availability gaps/barriers, (2) organizational barriers, and (3) financial barriers.

CONCLUSIONS: Although a range of services were available to families, barriers related to gaps in specialty services, care coordination, training, policies, and system resources exist that hinder timely access to these services and affect service quality. The findings from this study will be used to inform policy and practice to improve services for these families.
57. Mohamed Touaibia
SUBSTITUTED CAFFEIC AND FERULIC ACID PHENETHYL ESTERS: SYNTHESIS, LEUKOTRIENES BIOSYNTHESIS INHIBITION, AND CYTOTOXICITY ACTIVITY

INTRODUCTION: Glioblastoma multiforme (GBM) is an aggressive brain tumor that correlates with short patient survival and for which therapeutic options are limited.

HYPOTHESIS: Polyphenolic compounds, including caffeic acid phenethyl ester (CAPE), have been investigated for their anticancer properties in several types of cancer.

METHODS: Caffeic and ferulic acid esters bearing additional oxygens moieties (OH or OCH3) were designed and synthetized. Leukotrienes biosynthesis inhibition and cytotoxic activities were evaluated.

RESULTS: Caffeic acid phenethyl ester, but not ferulic acid phenethyl ester (FAPE), displayed substantial cytotoxicity against two glioma cell lines. Some but not all selected compounds derived from both (CAPE) and (FAPE) also displayed cytotoxicity. All CAPE-derived compounds were able to significantly inhibit 5-lipoxigenase (5-LO), however FAPE-derived compounds were largely ineffective 5-LO inhibitors. Molecular docking revealed new hydrogen bonds and π-π interactions between the aromatic rings and some of the investigated compounds.

CONCLUSIONS: Overall, this work highlights the relevance of exploring polyphenolic compounds in cancer models and provides additional leads in the development of novel therapeutic strategies in gliomas.

58. Dipskha Biswas
BCKDK: A NOVEL TARGET FOR INDUCING CHEMOSensitivity IN BREAST CANCER

INTRODUCTION: Triple negative breast cancer (TNBC) is the leading cause of mortality in women. The drug of choice for TNBC patients are anthracycline class of anticancer agents, e.g., doxorubicin (DOX). However, aggressive and prolonged DOX treatment leads to chemoresistance and related cardiotoxicity. Thus, identifying and preventing mechanisms of DOX resistance is indispensable for patient survival. Tumours exploit metabolic remodeling to incorporate free branched chain amino acids (BCAAs) into proteins to be used as a nitrogen source further fueling oncogenic growth. It remains to be examined if branched-chain α-keto acid dehydrogenase kinases (BCKDK), the rate limiting enzyme of BCAA catabolism, alters the metabolic flux of BCAA in breast cancer to dictate cancer growth and chemoresistance.

OBJECTIVE: To examine whether BCKDK silencing renders the mammary cancer cells susceptible to genotoxic stress by diverting the BCAAs away from protein synthesis into oxidation thus resulting in growth arrest.

METHODS: Breast cancer cell lines BT-549 and MDA-MB-231 were treated with DOX in the presence or absence of adrenoviral modification of BCKDK and later examined for markers of protein synthesis and cell death pathways by high content imaging.

RESULTS: BCKDK silencing as well as DOX treatment markedly increased expression of the cellular apoptotic marker, cleaved-caspase-3. Furthermore, BCKDK silencing rendered cancer cell more susceptible to DOX induced repression of 4E-BP1, a translational regulator of protein synthesis which was associated with diminished phosphorylation of protein kinase B (Akt), an upstream regulator of cellular growth. Our preliminary data infer that DOX treatment suppresses protein synthesis and cell survival pathways effectively in cells lacking BCKDK.

CONCLUSION: Our results show that on treatment with DOX, silencing of BCKDK is sufficient to induce chemosensitivity in TNBC while specifically targeting and decreasing expression of both upstream and downstream regulatory targets of protein synthesis, metabolic, and proliferative pathways. Pharmacological targeting of BCKDK likely presents a new therapeutic intervention for chemoresistance.

59. Nowlan, Sarah
TRAINING HEALTH PROFESSIONALS TO TALK GENDER

TRAINING HEALTH PROFESSIONALS TO TALK GENDER

INTRODUCTION: Gender affects access to health care, health seeking behaviours and patient provider interactions. Research has shown that men are less likely to utilize health care services, talk about their problems and ask questions. However, current health care practices and training programs remain gender neutral. Hence, male oriented communication strategies such as humour and language use and the identification of gaps for training and capacity building, we will implement training programs for health professionals. In addition, men prefer direct and solution focused approaches. The MindTheHeart Project aims at modifying existing health care practices for men in the context of comorbid cardiac and mental health by establishing a gender-sensitive Stepped Care Model. Following the assessment of gender sensitive language use and the identification of gaps for training and capacity building, we will implement training programs for health professionals in order to ensure delivery of male friendly health care that would improve men’s utilization of mental health services.

METHODS A qualitative study was implemented between May 2016 and January 2017 that encompassed semi-structured interviews with 42 health care providers across the health system that deal with men with cardiac and mental comorbidities in New Brunswick. Nvivo 11 was used for managing the interpretative phenomenological analysis process.

RESULTS Preliminary findings from the study revealed that many health professionals use a similar approach for both genders despite being aware that men have different needs and that language used can favor therapeutic alliance.

CONCLUSIONS These results highlight the necessity of integrating gender sensitivity within the curricula of medical and health education programs and the lack of training available to health professionals. Future research should be aimed at assessing the satisfaction of male patients and the quality of gender sensitive care that health care providers put forward in the context of comorbid cardiac and mental health illness.

60. Michaud, Mylène
NEUROCOGNITIVE AND AFFECTIVE BASELINE PROFILE OF THE ELDERLY INDIVIDUALS LIVING IN LONG-TERM CARE NURSING HOME FACILITY: A NEW BRUNSWICK STUDY

METHODS: Our study included 35 nursing home residents (NB) who were neuropsychologically tested and follow-up assessments were set for every 6 months for 3 years. The paper and pencil neuropsychological testing included the Mini Mental State Examination (MMSE), the Montreal Cognitive Assessment (MoCA), the Wechsler’s Digit Symbol subscale (WAIS-R, Digit symbol), the Bell’s Test, the Trail Making Test A and B, and the Geriatric Depression Scale-30 items (GDS-30).

RESULTS: Cognitive statuses of the individuals were Alzheimer’s disease, MCI or unspecified dementia, and reported chronic comorbid conditions.

CONCLUSIONS: The base line data profile indicates that the following aspects need to be taken into consideration: mortality, medications effect on cognitive performance and affect and their implication on dementia. These factors would help in better understanding and instigate better treatment and care in nursing home.
61. Ghosh, Anirban

NOVEL POLYCARBOXYLIC ACID (CHITOSAN) BASED EXTRACELLULAR VESICLE ISOLATION TECHNOLOGY: POTENTIAL FOR THERAPY AND LIQUID BIOPSY APPLICATIONS.
GHOSH_Anirban, KUMAR_Awanit, FOURNIER_Sebastien, TAYLOR_Catherine, FRY_Sheena, OUELLETTE_Rodney_J.
Atlantic Cancer Research Institute, Moncton, NB, Canada

INTRODUCTION: Extracellular vesicles (EVs) carry tremendous potential for liquid biopsy and therapeutic applications. Thus there is a great demand for simplified, robust and clinician-adaptable and applicable EV isolation methods. Currently-available polymer-based (PEG and its derivatives) EV isolation methods facilitate precipitation of non-specific materials along with EVs, diminishing diagnostics value. Due to their toxicity these polymers are also unsuitable for therapeutic applications.

OBJECTIVES: (1) To validate the EV capture efficacy of chitosan, a non-toxic polysaccharide, and (2) to evaluate efficiency of the chitosan-EVs as cellular delivery vesicle. Chitosan is FDA-approved for various clinical applications.

METHODS: Chitosan (60-120 KDa ultrapure) was procured from commercial sources for this study. Both an acidic solution and a neutralized formulation of chitosan were used for EV isolation from cell culture-conditioned media, urine and plasma. Chitosan-isolated EVs were characterized using nanoparticle tracking analysis (NTA), transmission electron microscopy (TEM), atomic force microscopy (AFM), Western blot, and polymerase chain reaction.

RESULTS: We evaluated the optimal formulation (pH) and concentrations of chitosan to isolate EVs from different source materials using various physical and molecular analyses as mentioned in the method section. We found a wide range of chitosan concentrations are suitable for EV isolation using acidic as well as neutralized formulations. Our preliminary data indicate that chitosan-isolated EVs are internalized into new cells, indicating its therapeutic potential.

CONCLUSIONS: The chitosan-EV complex may be a superior matrix for future therapeutic manipulations and applications because chitosan is non-toxic. This method of EV isolation may also be used for liquid biopsy assays to identify disease markers and actionable mutations.

@Patent pending

62. Northrup, Victoria

ADVANCED DETERMINED SIGNIFICANCE SIGNIFIES GREATER RISK OF PROGRESSION TO UROTHEAL CARCINOMA
1 NORTHUP_Victoria, 1, 2 ACAR_Behram_Cenk, 1, 2 NASEEDUMMIN_Ather, 1, 2 ACKER_Matthew, 1, 2 RAHMEH_Tarek*
1 HHH-SJRH, 2Dalhousie Medicine New Brunswick (DMNB)

INTRODUCTION: Urinary cytology is a powerful tool that is routinely used in the screening and initial evaluation of urothelial neoplasms. However, despite many efforts over the decades, it has lacked a well-defined reporting system, which has led to significant interobserver and interinstitutional variability, especially for the atypical category. This has contributed to confusion amongst clinicians as to what the optimal way to manage patients with an atypical diagnosis. Recently, the Paris System of Reporting Urinary Cytology has been introduced to improve the consistency in this area. This study looks to examine the clinical significance of atypia of undetermined significance (AUS) and to evaluate the rates of atypical urothelial cells (AUC) in the Paris system.

OBJECTIVES: 1) Determine rates of progression to a urothelial neoplasm for AUS/AUC in urinary cytology. 2) Compare the previous system for urinary cytology at Saint John Regional Hospital (SJRH) to the Paris system. 3) Develop recommendations for clinical follow up for AUS/AUC.

METHODS: Urinary cytology cases at the SJRH reported as AUS with no history of urothelial neoplasm between 2010 and 2015 (n = 633) are retrospectively reviewed by a pathologist and classified using the Paris system. For each case, and an additional 500 controls (age, gender and specimen collection matched) that had a urinary cytology diagnosis of negative during the same period, medical records were reviewed for progression to urothelial neoplasm, time to progression and follow up.

RESULTS: The rate of progression to urothelial neoplasm was 8.6% in the AUS group vs. 2.2% in the negative group. When we divided high-grade urothelial carcinoma (HGUC) vs. low-grade urothelial carcinoma (LGUC), the AUS group 4.9% progressed to LGUC and 3% progressed to HGUC compared to 2% and 0.2%, LGUC and HGUC respectively, in the negative group. When AUS cases were reclassified using the Paris system, 56% were reported as AUC, 6% as suggestive of HGUC and 38% were reported as negative for HGUC.

CONCLUSIONS: The risk of progression with an AUS diagnosis is almost four times higher than a negative diagnosis. Preliminary results show there is a decrease in the number of AUC diagnosis using the Paris system, which suggests a higher specificity for the Paris system.

63. Gaudet, Jeffrey

NOVEL SURGICAL TECHNIQUE TO TREAT VAGINAL PROLAPSE INCREASES QUALITY OF LIFE AND DECREASES COMPLICATIONS
ROBICHAUD_Alfred1, 2, BELANGER_Mathieu1, 3, 4, POIRIER_Martine1, 2, CLOUTIER_Frank1, GAUDET_Jeffrey4, 5, 9 JOSE_Caroline4, 5, 9
1 Vitalité Health Network 2 Department of Obstetrics and Gynecology, Université de Sherbrooke 3 Department of Family Medicine, Université de Sherbrooke 4 Centre de formation médicale du Nouveau-Brunswick 5 Maritime Strategy for Patient Oriented Research Support Unit, Université de Moncton

INTRODUCTION: Although associated with substantially less pelvic organ prolapse (POP) recurrence rates than the native tissue, synthetic mesh kits used for POP repair are also related to serious operation and post-operation complications. Based on evidence showing that rejection phenomena are proportional to the surface area of the synthetic tissue and the proximity of the vaginal scar, we developed a new approach utilizing a reduced mesh tape size that does not overlap with the vaginal incision site.

OBJECTIVES: To evaluate efficacy of a minimal surface area, vaginally placed surgical mesh tape (VPT), avoiding insertion on the incision line to treat an anterior, posterior or teroposterior vaginal wall prolapse. METHODS: Patients with an anterior, posterior or anterior-posterior vaginal wall prolapse waiting for surgical treatment were included in the study. Primary outcome was the incidence of prolapse recurrence reported with combined outcome measures and was reported with Kaplan-Meier cumulative incidence. Secondary outcomes were operative complications, adverse events, urinary, colorectal and sexual functions as well as quality of life. Participation in the study involved up to 8 visits over 5 years. At each visit, patients used a self-reported questionnaire to report symptoms related to pain, urinary, colorectal, sexual functions, and quality of life. A physical examination was also performed. Paired t-tests were used to investigate change in POP-Q and quality of life measures since baseline. RESULTS: 71 patients underwent the procedure and were followed-up for an average (standard deviation) of 32.5 (18.7) months. Only 2 (2.8%) women experienced a recurrence of their pelvic organ prolapse. Only one case of erosion and no case of persistent pain have been recorded up to 5 years post-surgery. Quality of life was improved and then sustained throughout the follow-up period (p < 0.01). CONCLUSIONS: This VPT surgical procedure is safe and has a high level of efficacy to treat anterior, posterior or anterior-posterior vaginal wall prolapse. It is also associated with improvements in quality of life of patients which are sustained for many years.

64. Hamilton, Sharon

EVALUATING THE ROLE OF THE NURSE PRACTITIONER (NP) IN NEW BRUNSWICK: 15 YEARS IN; NP AND PATIENT PERSPECTIVES
1 HAMILTON_Sharon E., 2 RICKARDS_Tracey S.
1 Faculty of Nursing UNB Fredericton, 2 Faculty of Nursing UNB, Fredericton

INTRODUCTION: This study provided a baseline to understand practice patterns of NPs in NB and how they and patients perceived NPs contribution to PHC in NB.

OBJECTIVES: To: 1) understand practice patterns of NPs in NB 2) evaluate NP outcomes within NB 3) provide foundational documentation for future evaluatons.

METHODS: We used a multi-method approach using both quantitative and qualitative methodology. A quantitative NP Practice Pattern Survey consisting of questions and standardized self-report measures was completed by NPs using a Survey Monkey link through NANB. A multi-method Patient Experience Survey composed of indicators addressing specific outcomes in NP practice outcomes with two open-ended questions was distributed to patients who have an NP provider. Descriptive statistics and content analysis were used to analyze data.

RESULTS: Response rate to the NP Practice Pattern Survey was 87.5% (n = 97 of 112 NPs). NPs perceived contributions were: increased accessibility: 58% (n = 66); care in NB: 70% (n = 82); better care for patients: 87% (n = 97); research and innovation: 85% (n = 97); increased access to care: 85% (n = 97). 28% of NPs (n = 31) are frequently consulted for care outside of the scope of their practice. 48% of patients (n = 109) responded to the Patient Experience Survey. 91% of patients (n = 99) were satisfied with their NP providers. 91% (n = 99) of patients perceive that they trust their NP providers. 94% (n = 95) of patients (n = 95) reported that they would consult with their NP providers again. 93% (n = 95) of patients (n = 95) report that they are satisfied with the care they receive from their NP providers. 93% (n = 95) of patients (n = 95) report that they would refer others to their NP provider.

CONCLUSIONS: There is a great satisfaction in the care provided by NPs and their level of knowledge. Preliminary results show there is a decrease in the number of AUC diagnosis using the Paris system, which suggests a higher specificity for the Paris system.
65. Ryan Murray

EVALUATING THE STATISTICAL STABILITY FOR HEART RATE VARIABILITY IN A SAMPLE OF UNIVERSITY-AGED MALES

MURRAY Ryan, REED JONES Rebecca, McDUFFEE Laurie, *MONTTELPARE William

INTRODUCTION: Heart rate variability (HRV) is the beat-to-beat variation in the time interval between consecutive heart beats as a result of neuro-autonomic control mechanisms. HRV has the potential to be a clinical tool in estimating the physiological response to stress and specific interventions or treatments. However, there are limited examples of measurement reliability when HRV has been used across different cohorts and in different applications, a requirement of any clinical test.

OBJECTIVES: To establish the measurement reliability - statistical stability – of HRV in response to standardized clinical tests.

METHODS: A sample of healthy 18-25-year-old males (n=30) were measured under three experimental conditions: i) while supine; ii) while moving from supine to standing; iii) during completion of a one-mile walk test, based on a two-week test-retest design. HRV data was measured using Polar® HR monitors, and processed using Kubios HRV software. Two frequency domain analytical methods were recorded: autoregressive (AR) estimation and the Fast Fourier Transform (FFT) estimation. Intraclass correlation coefficients (ICC) were calculated for estimates in the time domain and both the AR and FFT frequency domain estimates.

RESULTS: Six time-domain measures were analyzed, and showed strong to almost perfect reliability during the supine and standing conditions, but lower reliability during the walk test. Six frequency-domain measures were analyzed using both AR and FFT. AR models showed moderate to almost perfect reliability during the supine and standing conditions for all measures except the LF/HF ratio, but lower reliability during the walk test. Using the FFT, most measures showed at least moderate to strong reliability in the supine and standing conditions except for the LF power during standing. All HRV measures during the walk test estimated lower reliability.

CONCLUSIONS: The results of this study demonstrate that HRV is generally statistically stable, but of varying magnitude and dependent on the method of signal analyses (time vs. frequency domain). The supine and standing maneuvers provided more stable results than the one-mile walk test. Overall, the results support the application of HRV as a clinically relevant and physiologically appropriate measurement approach.

66. Babineau Charles

MOLECULAR STUDIES OF PHYSICAL ACTIVITY, FITNESS AND INADEQUATE FOOD HABITS IN NB ELDERS

BABINEAU Charles1, LEBLANC Roger1 and VILLALON Lita1

1École de kinésiologie et loisir, 2École des sciences des aliments, de nutrition et d’études familiales, Université de Moncton, Moncton, N.B.

INTRODUCTION: Physical activity and healthy eating plays an important role in health and quality of life. As chronic health diseases are prevalent in people aged 50+, it would be pertinent to determine if this older population follows the Canadian Health guidelines.

OBJECTIVES: To educate and assess the present state of physical activity, fitness and nutritional habits in NB elders.

METHODS: Sample consisted of 569 individuals aged 50+ from seven francophone communities. Participants filled out questionnaires on lifestyle habits then performed, in a station format, a series of physical fitness tests before concluding with a group discussion on nutrition knowledge.

RESULTS: It was determined that 78% of the subjects either had prehypertension or hypertension with a mean waist circumference of 96 cm and BMI of 27. Utilizing more recent approaches, we established that close to 90% of the sample were either classified as being at high, very high or extremely high risk and in the overweight category. Only 40% attained the recommended physical activity guidelines, 9% could perform 20 minutes of sustained vigorous exercise and one third met the recommended two strength and agility training days per week. Over 70% consumed the milk products and meat and substitute food categories per day but 50% consumed less than 5 to 10 portions of fruits and vegetables daily and between 60% and 80% of participants did not have the recommended intake of grain products.

CONCLUSION: Overall, we state that NB’s francophone elderly population is in a compromised health state mostly due to its prevalent sedentary lifestyle. In order to improve lifestyle and health care costs, more emphasis should be placed on improving the level of physical activity, cardiorespiratory fitness and healthy eating habits of our older population.

67. Slayer, Jeremy

How Well do Clinical Tools Predict Fall Risk in Inpatient Geriatric Units?

SLAYTER, Jeremy, Bsc (c) 1, 4, McGIBBON, Chris, PhD2, McCOLLUM, Alexander, BSc 3, 4, YETMAN, Linda RN, PhD4, 5, OAKLEY, Heather, RN, NB, MSc4, 5, GIONET, Sharron, RN, GNC4, 6, MCCLOSKEY, Rose, RN, PhD, GNC7, JARRETT, Pamela, MD, RCPC, FAPG, 4,

1 University of New Brunswick, Fredericton Campus, Faculty of Science
2 University of New Brunswick, Fredericton Campus, Faculty of Kinesiology and Institute of Biomedical Engineering 3 Dalhousie University 4 Horizon Health Network 5 Department of Geriatric Medicine, Saint John, NB 6 Health and Aging Program, St Joseph’s Hospital, Horizon Health Network 7 University of New Brunswick, Saint John Campus, Department of Nursing & Health Sciences

BACKGROUND: Falls in hospitalized patients are common and often lead to admission outcomes. The current measures to curb falls are not always effective. Many patients who fall are at risk of falls. This study evaluated the characteristics of patients that fell compared to those that did not fall using common tools to predict fall risk.

OBJECTIVE: To evaluate the effectiveness of commonly used tools to assess risk of falls in older adults in a hospital setting.

METHOD: Retrospective analysis of all charts from patients admitted to a 104-bed geriatric in-patient hospital from December 1, 2012 – July 31, 2016. Two databases containing patient demographics and characteristics, standardized tools and patient - specific information related to falls were analysed.

RESULTS: Of 946 patients (age: 81.9±7.6 years; length of stay: 71±63 days) 301 (31.8%) had a total of 869 falls. The overall fall rate was 8.48 falls/1000 occupied bed days. Logistic regression showed that several measures at admission were associated with falls (odds ratio, OR[95%CI]): Clinical Frailty Scale (CFS)(OR=2.44[1.92-3.11]), Mini-Mental State Exam (MMSE)(OR=0.93[0.91-0.96]), Morse Fall Scale (MFS) (OR=1.01[1.01-1.02]), Timed Up and Go (TUG)(OR=1.03[1.00-1.05]), and Berg Balance Scale (BBS)(OR=0.97[0.96-0.98]). However, Receiver Operator Characteristic (ROC) analysis showed that none of these tools individually were good predictors of falls (Area Under Curve, AUC<.7). The best performing measure was the CFS, with a true positive rate of 45%, but also false positive rate of 18% (AUC=.886).

CONCLUSIONS: Common tools used for fall risk assessment (MFS, TUG and BBS) were not good predictors of falls during this setting. The Clinical Frailty Scale provided the best estimate of fall risk, but still was unable to identify more than half of the patients who fell in inpatient Geriatric Units.

68. Rostyslav Horbay

GENE METHYLATION STUDIES ON VN96-CAPTURED EXTRACELLULAR VESICLE DNA AS A PANEL FOR LIQUID BIOPSY IN EARLY PANCREATIC CANCER DETECTION.

1HORBAY Rostyslav, 1KUMAR Awanit, 1CARAPOULET Nicolas, 1ROY Jeremy, 1BEAUREGARD Annie-Pier, 1,2GHOSH Anirban, 1,2OUELLETTE Rodney* 1- Atlantic Cancer Research Institute, Moncton, NB, Canada 2 - Université de Moncton, Moncton, NB, Canada

*RodneyO@caneracatl.ca

INTRODUCTION: Pancreatic cancer (PC) is the fourth leading cause of cancer mortality with a trajectory of becoming more prevalent in the future with a shorter survival rate. Currently there is no definitive and reliable tool that can detect the disease at an early stage. Mostly PC is detected at late stage when it metastasises to the liver, and also the tumor becomes inoperable. DNA methylation signatures of the cancer have the potential to detect PC at an early stage. Furthermore, our Vn96 extracellular vesicles (EVs) isolation technology combined with DNA methylation detection technology may provide an efficient method for early stage PC detection.

OBJECTIVES: 1) To identify the PC-specific DNA methylation profile by analysis of methyl databases (MethHC, TCGA, PMcd and ICGC) and published literature, it metastasises the tumor becomes inoperable. DNA methylation signatures of the cancer have the potential to detect PC at an early stage. Furthermore, our Vn96 extracellular vesicles (EVs) isolation technology combined with DNA methylation detection technology may provide an efficient method for early stage PC detection.

RESULTS: It was determined that 78% of the subjects either had prehypertension or hypertension with a mean waist circumference of 96 cm and BMI of 27. Utilizing more recent approaches, we established that close to 90% of the sample were either classified as being at high, very high or extremely high risk and in the overweight category. Only 40% attained the recommended physical activity guidelines, 9% could perform 20 minutes of sustained vigorous exercise and one third met the recommended two strength and agility training days per week. Over 70% consumed the milk products and meat and substitute food categories per day but 50% consumed less than 5 to 10 portions of fruits and vegetables daily and between 60% and 80% of participants did not have the recommended intake of grain products.

CONCLUSION: Overall, we state that NB’s francophone elderly population is in a compromised health state mostly due to its prevalent sedentary lifestyle. In order to improve lifestyle and health care costs, more emphasis should be placed on improving the level of physical activity, cardiorespiratory fitness and healthy eating habits of our older population.

METHODS: A list of genes from the MethHC, TCGA, PMcd and ICGC databases that have hyper-methylation and hypo-methylation within their promoter region for over 18 different cancers were analysed to obtain a subset of target genes that are specific to PC for both hyper- and hypo-methylation patterns. Published literature was surveyed to confirm the targeted PC-specific gene list from the databases. In order to confirm the PC-specific gene targets we will perform methyl-specific PCR (MSP) using bisulfite converted DNA that will be extracted from plasma and other bio-fluid derived EVs. Proper DNA control samples will be included for MSP.

RESULTS: Based on the database analysis and literature survey PC-specific gene lists of hyper- and hypo-methylation patterns were compiled. Conclusions: To study using EVs isolated by Vn96 method from plasma and other bio-fluid the selected genes have potential to become biomarkers after validation in biological samples.
69. Roy, Jeremy

**Vn96 CAPTURED MATERIAL ENABLES MULTIPARAMETRIC ANALYSIS OF PLASMA EXTRACELLULAR VESICLES**

1ROY Jeremy, 1BEAUREGARD Annie-Pier, 1TAYLOR Catherine, 1CHACKO Simi, 1JOY Andrew, 1NGOC-NU Mai, 1CRAPPOULET Nicolas, 1BARNETT David, 1GHOSH Anirban, 1LEWIS Stephen, 1IOUVELLETTE Rodney

1Atlantic Cancer Research Institute, Moncton, NB, Canada

**INTRODUCTION:** Cancer cells release extracellular vesicles (EVs) to promote proliferation, tumour growth, immune cell evasion and metastasis. EVs contain DNA, RNA and protein from their parent cells and offer a snapshot into parent cell biology. Liquid biopsies are a minimally-invasive, cost-effective alternative to tissue biopsies that rely on the analysis of body fluids. To enable the full potential of liquid biopsy it is important to assay the genomic, transcriptional and proteomic profile simultaneously to reduce sample consumption and cost.

**AIM:** Validate a multiparametric (DNA, RNA, and protein) isolation protocol for Vn96-captured EVs from plasma.

**METHODS:** We used our Vn96 plasma protocol to capture EVs from human plasma followed by a combination of DNA, RNA and protein-specific extraction methods in serial to isolate each parameter, respectively. We compared yields from our multiparametric isolations with benchmarked single parametric yields. We also processed matching samples for RNA sequencing and mass spectrometry (MS).

**RESULTS:** The quantity of DNA was 6.75 +/- 0.74 ng, RNA was 12.1 +/- 1.41 ng and protein was 122 +/- 20.8 mg per ml of plasma (n = 5). Compared to single parametric isolation protocols the amount of RNA and protein obtained using the multiparametric isolation technique are acceptable and require no further optimization. Alternatively, the amount of DNA isolated by the multiparametric technique is lower than single parametric isolation and warrants further optimization. Matching samples were subjected to RNA sequencing and MS.

**CONCLUSIONS:** Our multiparametric isolation technique is useful for isolating each parameter from Vn96-captured plasma EVs. We expect to process as little as 4 ml of plasma in order to obtain genomic, transcriptomic and proteomic data from EVs. This multiparametric technique will allow future liquid biopsy clinical studies to obtain the most molecular information from limited sample volumes.

---

70. Léger, Jacob

**PLATELET-DERIVED MITOCHONDRIA ACTIVATE THE INFLAMMATORY RESPONSE OF HUMAN NEUTROPHILS**

1 LÉGER Jacob, 1 ST-COEUR Patrick-Denis, 1 BEAULIEU Anick, 1 BOURDEAU Luc H.

1 Département de Chimie et Biochimie, Université de Moncton;

**INTRODUCTION** Intercellular communication is an essential part of the inflammatory response, as it coordinates normal cell functions implicated in the host defence and tissue repair. However, unregulated inflammation has been associated with chronic inflammatory diseases such as rheumatoid arthritis, an auto-immune disease that affects the function of articular cartilage. Neutrophils and platelets actively participate in the progression of the disease by releasing several inflammatory mediators in the extracellular milieu to mediate intercellular communications. Interestingly, platelets can also release in the extracellular milieu fully functional mitochondria. Known as the powerhouse of the cell, the mitochondria share similar characteristics with neutrophils. Thus, we suggest that platelet-derived mitochondria will promote the inflammatory state of immune cells found in the environment, in particular the abundantly present neutrophils.

**OBJECTIVES** Characterize the inflammatory state of human neutrophils following exposure to platelet-derived extracellular mitochondria.

**METHODS** Using several ex vivo approaches that mimic the inflammatory environment of the synovial fluid of rheumatoid arthritis patients, we investigated the interaction between freshly isolated platelets and neutrophils. We used our Vn96 plasma protocol to capture EVs from human plasma followed by a combination of DNA, RNA and protein-specific extraction methods in serial to isolate each parameter, respectively. We compared yields from our multiparametric isolations with benchmarked single parametric yields. We also processed matching samples for RNA sequencing and mass spectrometry (MS).

**RESULTS** Flow cytometry results show that platelet-derived mitochondria significantly induce the release of neutrophil-derived extracellular vesicles. Additionally, cyclooxygenase-2 and 5-lipoxygenase gene expression were significantly increased in the neutrophil in presence of platelet-derived mitochondria.

**CONCLUSIONS** Results of this study suggests that platelet-derived mitochondria have a role in promoting the inflammatory state of the neutrophil. The results generated in the study demonstrate the complexity of studying the role of extracellular vesicles as active participant of intercellular communication.

---

71. Landan MacDonald

**Drug Adherence Detection using a Blood Pressure Device as an Strategy to Improve Patient Care**

1 MACDONALD_Landan, 2 GILL_Satinder, 1 MELVILLE_Sara, 2 3 5 LUTCHMEDIA_Sohrab SCHEME_Erik, 1 BRUNT_Keith, 1, 4, 6, 7

1 Dalhousie Medicine New Brunswick (DMNB) 2 Institute of Biomedical Engineering, UNB, Fredericton, NB 3 Department of Electrical and Computer Engineering, UNB, Fredericton, NB 4 Horizon Health Network-Saint John Regional Hospital, Saint John, NB 5 Department of Cardiology-NBHC-CVRNB

**INTRODUCTION:** It has been shown that only 50% of patients take their chronic disease medications as prescribed. Further, adverse outcomes have been correlated with suboptimal medication adherence (Zullig et al. 2017). Non-adherence coupled with increasing populations of patients with medicated chronic disease emphasizes the need for automated monitoring systems. Blood pressure (BP) measurements can be made at home using portable devices and the information stored for analysis on cloud servers. Algorithms could be developed to efficiently and accurately detect changes in BP due to medication compliance or non-adherence. This information can be collated so as to inform clinicians and patients on the status of medication adherence and potentially reduce adverse drug events.

**OBJECTIVES:** The main goal of this research is to determine if drug adherence can be detected using oscillometric measurements of BP.

**METHODS:** Caffeine is known to cause an acute increase in BP. Thirty-nine healthy participants were recruited and given either caffeine or placebo. Oscillometric BP measurements were taken using a portable wrist cuff blood pressure device (Cloud DX) every 10 minutes for two hours. Oscillometric waveforms were then analyzed for changes in BP. Signal analysis was carried out by using MATLAB® to detect changes in the oscillometric waveforms that caused acute changes in BP due to medications.

**RESULTS:** A statistically significant change in BP in the caffeine group was allowed for a reconnection with their own health needs and concerns. Participants’ experiences using technology to support their health behaviors, all while continuing to care for a family member.

**CONCLUSION:** Engagement with personal health data recorded through a digital health platform is beneficial for primary caregivers of individuals living with dementia. Such devices provide opportunities for caregivers to remain mindful of personal well-being and to engage in health-promoting behaviours, all while continuing to care for a family member.

---

72. Davis, Leanne

**USING TECHNOLOGY TO FOCUS ON CAREGIVER HEALTH**

1 DAVIS_Leanne, 1 DONOVAN_Alicia, 1 MCCLOSKY_Rose, 1 KEEPING-BURKE_Lisa, 2 DONOVAN_Cindy, 3 SCHEME_Erik, 1 CHACKO_Simi, 1 JOY_Andrew, 1 NGOC Derwen Denis, 1 BEAULIEU_Anick, 1 BEAULIEU_Annie, 1 DAVIS_Lee, 1 DONOVAN_Cindy, 1 KEEPING_BURKE_Lisa, 2 DONOVAN_Cindy, 3 SCHEME_Erik, 1

**INTRODUCTION:** Dementia is a leading cause of disability and dependency worldwide and has physical, psychological and economical impacts for caregivers, families and society (World Health Organization, 2017). Caregivers often neglect their own health and well-being while caring for a loved one, thereby placing them at increased risk for adverse health outcomes. Identifying and addressing unmet health needs and concerns is necessary so that they can continue in their caregiver role while mitigating their own ill health effects. Recently, wearable health monitoring devices have shown promise as a means for promoting individual awareness and engagement, and in supporting personal wellness goals.

**OBJECTIVE:** The primary purpose of this study was to determine whether caregiver awareness and engagement with wearable health monitoring devices via a mobile wellness platform could support informal caregivers with their self-care needs.

**METHODS:** Twenty individuals living at home and caring for a family member with dementia were recruited. Caregivers were provided with a Fitbit and instructions for entering personal health information into an iWellness platform (Infection Point Healthcare, Canada). Qualitative inquiry guided a set of semi-structured interviews conducted to elicit participants’ experiences using technology to support their health-related behaviours. Interviews were conducted before, and at 4 and 12 weeks after participant enrollment and data were analysed using thematic analysis.

**RESULTS:** Three themes emerged: (1) Becoming Self-Aware; (2) Finding the Motivation; and, (3) A Place for Reflection and Expression. Participants were appreciative of access to the iWellness platform and that such access allowed them to focus on their personal health needs and concerns.

**CONCLUSIONS:** Engagement with personal health data recorded through a digital health platform is beneficial for primary caregivers of individuals living with dementia. Such devices provide opportunities for caregivers to remain mindful of personal well-being and to engage in health-promoting behaviours, all while continuing to care for a family member.
73. David Barnett
PROTEOMIC PROFILING OF EXTRACELLULAR VESICLES CAPTURED WITH THE AFFINITY PEPTIDE Vn96: LAEMMLI AND TRIZOL® PROTEIN EXTRACTION METHODS GIVE SIMILAR RESULTS.

* Barnett_David, JOY Andrew, CHUTE Ian, AYRE Craig, GHOSH Anirban, BEAUREGARD Annie-Pier, OUELLETTE Rodney and LEWIS Stephen
Atlantic Cancer Research Institute, Moncton, NB, E1C 8X3

INTRODUCTION: This study compares the efficiency and effectiveness of two extraction methods for proteomic analysis of extracellular vesicles (EVs) from cell culture media of three breast cell lines.

OBJECTIVES: To ultimately minimize input sample amounts, resource/reagent requirements and the effects of biological variability in the multi-parametric molecular analysis of extracellular vesicles.

METHODS: EVs were isolated from 3 mL of cell conditioned media from MCF-10A, MCF-7 and MDA-MB-231 breast cells. Proteins were extracted from the EVs using either Laemmli or TRizol® buffer and analyzed using a bottom-up approach by nanoLC-MS/MS.

RESULTS: Triplicate nanoLC-MS/MS analysis of tryptic peptides from each EV isolate yielded approximately 70-75% common proteins between replicates. Proteins lists between extraction methods produced a lower degree of similarity (57.0-69.2%) between each of the three cell lines. A gene ontology analysis on the proteins extracted from the EVs captured from these three cell lines yielded several common and unique ontological terms.

CONCLUSIONS: Our analysis of EV proteins extracted using the TRizol® method shows that, despite modest differences in the proteins that are extracted compared to Laemmli extraction, we are able to obtain information that is representative of the parental cell from which the EVs are derived. The benefit of using the TRizol® reagent is that both protein and nucleic acids can be isolated from the same limited sample. Additionally, the use of Vn96 as a fast and highly-efficient affinity reagent for the capture of EVs further enhances the proteomic analysis of EVs from breast cancer cells.

74. Taylor, Catherine
AN AFFINITY-BASED METHOD FOR ISOLATION OF EXTRACELLULAR VESICLES FROM HUMAN PLASMA FOR DETECTION OF ACTIONABLE MUTATIONS IN LIQUID BIOPSY

APPLICATIONS
1 TAYLOR_Catherine, 1BEAUREGARD_Annie-Pier, 1CHACKO_Simi, 1FRY_Sheena, 1ROY_Jeremy, 1Fournier_Sebastien, 1ANIBH_Biju, 1CRAPOLET_Nicolas, 1GHOSH_Anirban, 1LEWIS_Stephen, 1OUELLETTE_Rodney
1Atlantic Cancer Research Institute, Moncton, NB, Canada

INTRODUCTION: Circulating DNA in blood is an important resource for detection of ‘actionable’ mutations that are important for determining therapeutic strategies in the treatment of cancer. Extracellular vesicles (EVs) are membrane-enveloped structures released by cells which function as mediators of cellular communication and contain DNA, RNA, and protein cargoes that can be informative in clinical diagnostics. Vn96, a protein with affinity for Transforming growth factor beta (TGFβ) proteins, has been developed for the rapid isolation of EVs from biofluids.

HYPOTHESIS: Vn96 can be used to isolate EV-derived DNA from human plasma samples for detection of actionable mutations.

METHODS: Nanoparticle tracking analysis (NTA), Western blotting, digital drop PCR (ddPCR) analysis, and flow cytometry were used to assay the recovery of EVs from conditioned cell media and from normal human plasma spiked with purified KRAS-G12D+ EVs. Next-generation sequencing was used to identify actionable mutations in DNA isolated from Vn96-captured EVs from breast cancer patient plasma. A comparison to cell-free DNA (cfDNA) isolated from the same plasma samples was made for both breast cancer and pancreatic cancer patients. NTA was used to explore correlation between EV number in breast cancer patient plasma and disease stage.

RESULTS: Vn96 was able to efficiently recover EVs from both conditioned cell media and human plasma. DNA isolated from Vn96-captured EVs from breast cancer patient plasma was successfully used to detect mutations in patients with stage IV breast cancer. Increased sensitivity of detection of a KRAS mutation was observed in Vn96-EV DNA isolated from pancreatic cancer patient plasma compared to cfDNA. A correlation between particle number recovered from plasma and disease stage was observed in breast cancer patients, suggesting that the concentration of EVs in plasma could potentially have diagnostic significance.

CONCLUSIONS: Vn96 provides a rapid technique for EV isolation, which has the potential to be useful in the development of liquid biopsy technologies for clinical diagnostics.

75. Cumby, Nicole

CUMBY_Nicole, DEPREZ_Pierre, MERZETTI_Eric, SOUTZA_Darwin, AYRE_D.Craig, BULLERWELL_Charles, RANISZEWSKA_Klaudia, CHACKO_Simi, CRAPOLET_Nicolas, BARNETT_David, GHOSH_Anirban, ROBICHAUD_Gilles, TURCOTTE_Sandra, LEWIS_Stephen, OUELLETTE_Rodney
Atlantic Cancer Research Institute, Moncton, NB, Canada

INTRODUCTION: This study compares the efficiency and effectiveness of two extraction methods for proteomic analysis of extracellular vesicles (EVs) from cell culture media of three breast cell lines.

OBJECTIVES: To ultimately minimize input sample amounts, resource/reagent requirements and the effects of biological variability in the multi-parametric molecular analysis of extracellular vesicles.

METHODS: EVs were isolated from 3 mL of cell conditioned media from MCF-10A, MCF-7 and MDA-MB-231 breast cells. Proteins were extracted from the EVs using either Laemmli or TRizol® buffer and analyzed using a bottom-up approach by nanoLC-MS/MS.

RESULTS: Triplicate nanoLC-MS/MS analysis of tryptic peptides from each EV isolate yielded approximately 70-75% common proteins between replicates. Proteins lists between extraction methods produced a lower degree of similarity (57.0-69.2%) between each of the three cell lines. A gene ontology analysis on the proteins extracted from the EVs captured from these three cell lines yielded several common and unique ontological terms.

CONCLUSIONS: Our analysis of EV proteins extracted using the TRizol® method shows that, despite modest differences in the proteins that are extracted compared to Laemmli extraction, we are able to obtain information that is representative of the parental cell from which the EVs are derived. The benefit of using the TRizol® reagent is that both protein and nucleic acids can be isolated from the same limited sample. Additionally, the use of Vn96 as a fast and highly-efficient affinity reagent for the capture of EVs further enhances the proteomic analysis of EVs from breast cancer cells.

76. Ayre, D. Craig
THE USE OF EXTRACELLULAR VESICLES TO RESTORE SENSITIVITY TO HORMONE RECEPTOR THERAPY IN TRIPLE NEGATIVE BREAST CANCER

1 D. Craig AYRE, 1Anirban_GHOSH, 1Rodney J._OUELLETTE, 1Stephen M._LEWIS*.
1Atlantic Cancer Research Institute, Moncton, New Brunswick

INTRODUCTION: The expression of the Estrogen (ER), Progesterone (PR) and the Human Epidermal Growth Factor 2 (or Her2/neu) hormone receptors is a critical prognostic and treatment consideration in breast cancer patients. Approximately 15% of these patients do not express these proteins on their tumour cells and are called Triple Negative Breast Cancer (TNBC), which is more aggressive, frequently relapses and is insensitive to the treatments available to hormone receptor-positive disease. Recently, methods have been identified to force TNBC cells to express the ER or Her2/neu receptors in vitro, including the use of the chemotherapeutic Vorinostat, and ER or Her2/neu expression vectors in the MDA-MB-231 cell line. In each case, the induction of receptor expression leads to new therapeutic responses in these cells. A major unmet challenge is developing a method of inducing hormone receptor expression in a clinically-acceptable way. We propose that extracellular vesicles (EVs) released from hormone-receptor-positive cells may be a method for delivering hormone receptors to TNBC cells. We will therefore examine if hormone receptors, endogenously or engineered to be expressed by donor cells, can be transported via EVs and delivered to TNBC cells.

METHOD: This study examines whether EVs are useful therapeutic vectors to provide an effective, clinically-compatible approach for improving treatment sensitivity in TNBC. We will examine the ability of EVs to induce sensitivity to established treatment modalities for hormone-receptor positive breast cancers in TNBC.

RESULTS: Our results will demonstrate whether EVs are useful therapeutic vectors to provide an effective, clinically-compatible approach for improving treatment sensitivity in TNBC. We will examine the ability of EVs to induce sensitivity to established treatment modalities for hormone-receptor positive breast cancers in TNBC.

CONCLUSIONS: We will establish the ability of EVs to act as a sensitizer or inducer of treatment response in TNBC cells. These results can then be applied to the design of clinically-oriented studies.
78. Hodgins, Marilyn

RESULTS OF A COMPARATIVE, LONGITUDINAL INVESTIGATION OF THE TRANSITION FROM HOSPITAL TO HOME

HODGINS, Marilyn1; FILIATREAUT, Sarah1; JACKSHAW, Rebekah1; LOGAN, Susan2; KEEPING-BURKE, Lisa3; MOORE, Nicole4; FRASER, Jacqueline5; STACK, Bridget5; BUCK, Dawn Marie2; ARBEAU, David6; LOW, Jacqueline7; YU, Weiqiu8
1 University of New Brunswick (UNB) Fredericton, Nursing
2 Horizon Health Network, Saint John-Mural Program, Saint John Area
3 UNB Saint John, Nursing & Health Sciences
4 Dr. Everett Chalmers Regional Hospital
5 Saint John Regional Hospital
6 Horizon Health Network, Extra-Mural Program, Zone 3
7 UNB Fredericton, Sociology
8 UNB Fredericton, Economics

INTRODUCTION: During the transition from hospital to home, patients and their families may confront unanticipated challenges which can jeopardize health outcomes and precipitate unplanned re-entry into the acute care system. As a first step in a longitudinal, mixed-methods investigation of patient and family caregiver experiences during hospital discharge and the early post-discharge period (first 30 days), a pilot study was undertaken to examine the feasibility of the proposed protocol for participant recruitment and retention and for the collection and analysis of data.

METHOD: Participant recruitment was conducted on inpatient medical and surgical units. Demographic information and measures of readmission risk and perceived readiness for discharge were collected prior to hospital discharge. Post-discharge coping and the use of healthcare and supportive services were measured during the 1st, 3rd, and 5th weeks post-discharge. RESULTS: Forty-six participants were recruited and followed during the first 30 days post-discharge. Participants ranged in age from 38 to 98 years, 55% were female, and half were recovering from a planned hospital admission. Measurement instruments demonstrated a high level of reliability (alpha >.80). Scores on the Readiness for Discharge scale indicate many participants viewed discharge as stressful. Considerable variability was observed in scores for Post-discharge Coping and not all participants exhibited improvement over time.

CONCLUSION: Conducting this work has reinforced our belief in the value of the pilot study. Findings will be used to strengthen future applications for funds to support a larger project. A clearer understanding of factors associated with transition success, or to its failure, is required for the development of targeted interventions.

80. Theriault Anne

THE INCIDENCE OF COMMUNITY ACQUIRED PNEUMONIA BY OCCUPATION

Anil ADISESH1, Anne THERIAULT1, Donna MACKINNON-CAMERON2 Ardhil AMBOSE2, Duncan WEBSTER3, Stefanie MATERNIAK3, Sylvie TROTTER4, Guy BOIVIN4, Isabelle CHABOT4, Anne MCCARTHY5, Stephanie CARSON6, Wanda ALLEN6 Shelly MCNEIL2
1 Dalhousie University 2 Family medicine physician, Saint John

INTRODUCTION: Occupation is an integral part of an individual’s identity, and delays in returning to work can be detrimental. We developed and implemented an educational initiative - Medical Readers’ Theatre workshop exploring the challenges of returning to work (RTW) following an injury or illness. The structure is interactive and immerses the participants in the teaching scenarios.

OBJECTIVES: To: create a new teaching tool for occupational health and RTW awareness to engage physicians.

METHODS: This project aims to utilize theatre techniques to address scenarios where clients who have work related health issues are having difficulty in their RTW. The project centres on, but is not limited to, the circumstances where the patient is medically able to return to some work duties, but is averse to the suggestion. In order to create effective scenarios, in-depth semi-structured interviews were undertaken with patients. Following that, a complete workshop package along with facilitated discussions was developed.

RESULTS: 19 physicians and 15 patients from three Maritime Provinces were interviewed. The interviews have been transcribed and thematic analysis was conducted to explore the themes from the interviews and the experiences in the return to work process. The themes for patients are: dislike being off work, readiness to return, satisfaction with physician interaction, company pressures to return, workplace accommodations and the workers’ compensation process. With physicians, the themes are: return to work process, resources, communication with stakeholders, and the workers’ compensation process. Using these themes, four realistic return to work scenarios have been developed as a part of the workshop. To date, the workshop has been conducted with around 300 participants from varying roles in the RTW process. Post then pre evaluation has shown significant change in the five domains assessed, subjective feedback has also been very positive.

CONCLUSIONS: In addition to increasing awareness of RTW issues, the often non-medical psychosocial factors are effectively addressed in this workshop. The format includes communication and collaborative opportunities during the RTW process.
at increased risk of other chronic disease. Of diabetes, and night shift workers of cardiovascular and diabetogenic effects which are not mitigated by higher levels of physical adjustment for fat mass index (FMI). Cardiovascular disease was 41% more risk of diabetes in shift workers (95% CI, 4 to 49), findings persisted with shift workers (95% CI, 8 to 51). The strength of this association was (95% CI, 1 to 34). Shift workers were 27% more likely to have diabetes than non-5 to 39) and 16% more likely to have abdominal obesity than non-shift workers (95% CI, 1 to 34). Shift workers were 27% more likely to have diabetes than non-shift workers (95% CI, 8 to 51). The strength of this association was demonstrated by controlling for body mass index (BMI), with a 25% increased risk of diabetes in shift workers (95% CI, 4 to 49), findings persisted with adjustment for fat mass index (FMI). Cardiovascular disease was 41% more likely in shift workers after adjustment for BMI (95% CI, 6 to 88).

CONCLUSION: Shift work is associated with cardiovascular disease, obeseogenic and diabetogenic effects which are not mitigated by higher levels of physical activity and lower levels of sedentary behaviour. Females had a higher likelihood of diabetes, and night shift workers of cardiovascular disease being consequently at increased risk of other chronic disease.

RESULTS: In comparing the two facilities, the established facility showed greater levels of mouse and rat allergen within the animal housing facilities. Furthermore, this facility was also found to have higher levels of mouse allergen within the common areas of the facility compared to common areas within the new building. The median mouse allergen level was 0.37 ng / 100 cm2 (range 0.50 to 0.50) and rat allergen 0.0 ng / 100 cm2 (range 0.10 to 0.10) in the new facility whilst the older building had levels of 1.35 ng / 100cm2 (range 11.21) and 7.28 ng / 100 cm2 (range 9.51) respectively. The correlation of ATP with mouse allergen was weak to moderate (R 0.366, p<0.033), and no significant relationship for rat allergen. The mus M1 and rat n1 ELISA both showed detection limits of 0.05 - 25 ng / 100 cm2.

CONCLUSIONS LAA was higher in the established facility which may result from different work practices and stocking densities. These results suggest greater occupational exposure for workers in the older facility although measurable levels were found in both facilities. The finding of a correlation of mus m1 with ATPase suggests that with optimization this quick and simple test might be a suitable screening tool for LAA.

OBJECTIVES: To determine the effect of shift work on cardiovascular disease, diabetes and anthropometric measurements.

METHODS: 12,413 participants, including 4,155 shift workers and 8,258 non-shift workers (matched by age and sex) from the Atlantic Partnership for Tomorrow’s Health (PATH) study. Multiple general linear and logistic regression models were used to assess differences in body adiposity and self-reported cardiometabolic disease outcomes between shift and non-shift workers.

RESULTS: There was a significant increased risk of cardiovascular disease, obesity and diabetes among shift workers compared to controls. This was despite higher levels of physical activity and lower levels of sedentary behaviour in the form of sitting time per day. Shift workers were 17% more likely to be obese (95% CI, 7 to 27). Night shift workers were 21% more likely to be obese (95% CI, 5 to 39) and 16% more likely to have abdominal obesity than non-shift workers (95% CI, 1 to 34). Shift workers were 27% more likely to have diabetes than non-shift workers (95% CI, 8 to 51). The strength of this association was demonstrated by controlling for body mass index (BMI), with a 25% increased risk of diabetes in shift workers (95% CI, 4 to 49), findings persisted with adjustment for fat mass index (FMI). Cardiovascular disease was 41% more likely in shift workers after adjustment for BMI (95% CI, 6 to 88).

CONCLUSION: Shift work is associated with cardiovascular disease, obeseogenic and diabetogenic effects which are not mitigated by higher levels of physical activity and lower levels of sedentary behaviour. Females had a higher likelihood of diabetes, and night shift workers of cardiovascular disease being consequently at increased risk of other chronic disease.
85. CAMPBELL, Rankyn

**TITLE:** NAVIGATING ETHICAL DILEMMAS IN RURAL AND REMOTE CANADIAN COMMUNITIES: A TOOLKIT FOR PROFESSIONAL COUNSELLORS.

**AUTHORS:** CAMPBELL, Rankyn1; CLOWE, Katie1

**AFFILIATIONS:** 1University of New Brunswick

**BACKGROUND:** Canadian counselling therapists and psychologists practicing in rural and remote Canadian communities face unique and challenging ethical dilemmas in their daily practice. A narrative review of the literature was undertaken in order to gain an enhanced understanding of the nature of these dilemmas.

**AIM:** To evaluate the nature and influences of ethical dilemmas the counselling therapists and psychologists practicing in rural and remote Canadian communities most frequently face. In addition, to examine the Canadian Counselling and Psychotherapy Association’s ethical code and evaluate its applicability to counselling therapists practicing in rural and remote Canadian communities.

**METHODS:** A narrative review of the literature was completed. A review of the Canadian Counselling and Psychotherapy Association Code of Ethics was completed.

**RESULTS:** Due to the unique nature of practicing psychotherapy in rural and remote Canadian communities, counselling therapists face unique ethical dilemmas that their colleagues practicing in urban areas may not face. These include an increased likelihood of dual relationships with clients, an increased demand from clients to offer multiple and diverse service that falls out of counselor’s scope of practice, and finally an increased pressure to breach confidentiality due to strong familial bonds and a collective community culture.

**CONCLUSIONS:** The literature review revealed that the Canadian Counselling and Psychotherapy Association’s Code of Ethics may not be a sufficient guide for counsellors practicing in rural and remote Canadian communities due. However, key ethical principles were identified that are imperative for counsellors practicing in these Canadian communities to consult with when facing ethical dilemmas. More research is needed to help guide best-practice in this area.

88. Jblou, Jalila

**MindTheHeart Project : A research-driven strategic approach to improve mental and cardiac health in men post-ACS – Phase 1**

Jalila JIBLOU1-2; France TALBOT2; Rana SUGHAYAR1-2; and MindTheHeart Project Team

1Centre de formation médicale du Nouveau-Brunswick
2Ecole de psychologie-Université de Moncton

**INTRODUCTION:** There is a growing body of research indicating that stepped care models for comorbid common mental illnesses (i.e. depression, anxiety or PTSD) and physical diseases are cost-effective options to include in Cardiac rehabilitation programs. Men are particularly vulnerable and reluctant to use the existing traditional health services. We developed an innovative evidence-based gender-sensitive stepped-care model for men post-ACS. To enhance the deliverology of this innovative model, a Normalisation Process Theory (NPT) is initiated in three Canadian provinces (New Brunswick, Ontario and Quebec).

**METHODS:** MindTheHeart project consists of the implementation of the innovative model (Phase 1) and its evaluation (Phase 2 and Phase 3). Data collection is performed using a survey validated through a focus group (Pre-Implementation Phase). Collectors will be trained with a guide that is delivered using a multimedia platform (Phase 2). Data analysis will be performed through a qualitative analysis using a coding scheme that will be developed using the NPT theoretical framework (Phase 3).

**OBJECTIVES:** The ultimate research objective is to evaluate the project’s implementation and degree of diffusion in a male population living with cardiac history. The effects on the patient’s quality of life and the perception of health service will be measured as well.

**CONCLUSIONS:** The MindTheHeart project is a research-driven approach to improve the mental and cardiac health of men post-ACS.
89. Harrigan, Philippe MARIEÈLE à Donald Evaluation des besoins en services et soins primaires pour la clientèle de l’UMF-Dieppe Philippe HARRIGAN1; Jalia JBILOU1; 2; Micael BERGER1; Daniel MAILLET1; Justine MALLET1; Véronique THIBAULT3; Anne GAGNON-QUELLETT3 and Lise BABIN3 1Centre de formation médicale du Nouveau-Brunswick 2Ecole de psychologie-Université de Moncton 3Programme de formation en médecine de famille francophone du Nouveau-Brunswick, Université de Moncton, UNB, Fredericton, NB Dans sa démarche de développement pour livrer des services de proximité et en temps opportun à sa clientèle, et notamment la plus vulnérable comme c’est le cas pour les aînés, l’Unité de médecine familiale de Dieppe (UMF- Dieppe) a mis en place une initiative axée sur les soins à domicile et ancré dans la stratégie des soins axés sur le patient/population.Cette initiative est actuellement menée à l’UMF-Dieppe en collaboration avec le Réseau de santé Vitalité (R$V$) et l’Université de Moncton (UdeM). Un des objectifs principaux de cette démarche est de faire la démonstration de concept du programme « Maintien à domicile des aînés vulnérables » afin d’en faciliter la transférabilité dans le reste du territoire desservi par le RSV. Objectifs: 1- Établissement d’un profil de vulnérabilité de la clientèle aînée suivie à l’UMF-Dieppe. 2- Établissement d’un processus de priorisation selon les besoins de cette clientèle 3- Évaluation de l’ampleur des services nécessaires pour la mise en place de ce programme 4- Proposition d’une hypothèse de problèmes cognitifs de gestion de la vie quotidienne et de qualité pour la clientèle aînée vulnérable suivie à l’UMF-Dieppe Nos résultats montrent que quasiment toutes les personnes de 65 ans et plus ont au moins 1 maladie chronique, que 11% de ces personnes ont des problèmes cognitifs diagnostiqués, et que peu dans ce qui est notifié dans les dossiers médicaux réfère aux déterminants sociaux de la santé. De plus, les besoins cliniques semblent être prédominants comparativement aux besoins sociaux. Toutefois, ceci peut révéler une fausse incidence, étant donné que c’est la 1ère fois qu’une telle évaluation est mise en place. Nous avons aussi identifié des indicateurs clé pour améliorer les services aux clientèles vulnérables. Conclusion: le rôle de l’infirmière gestionnaire sera crucial pour améliorer les services et soins primaires livrés aux patients aînés. Toutefois, afin d’optimiser son rôle, un plan stratégique intégré devra être mis en place. nous en proposerons un cadre logique de référence.

90. Ricarda M. Konder EMOTION, ACTIVITY, AND PAIN RELIEF IN PRACTICE: MANAGEMENT OF CHRONIC PAIN IN EARLY EXPERIMENTAL OCCUPATIONAL THERAPY 1 MULLALLY, Sasha* and 2 KONDER, Ricarda M. 1 Associate Professor of History, University of New Brunswick 2 Medical Student, Dalhousie Medical School (NB) BACKGROUND: Pain management was a key component of early occupational therapy (OT). At the turn of the last century, OT pioneer Harriet J. Hall managed her chronic intense physical pain through therapeutic arts and crafts at his medical workshop at Marblehead, Massachusetts. Since 1905, his workshops offered treatments for neurasthenia and other ailments by engaging patients in communal craft work. It is not widely known that Hall suffered chronic pain himself from a hip injury in early adulthood and sought a rest cure for unspecified emotional illness some time prior. He benefited from a version of his own treatment, neurasthenia de mémoire, which combined intense creative writing. Toward the end of his life, he corresponded with famous children’s writer Cornelia Meigs, a former patient whose friendship provided him with critical feedback for his work and a sounding board for his thoughts on how creativity mediated the burden of pain. AIM: This project aims to analyze the rich and hitherto unexamined correspondence between physician and patient to discuss how creative work was brought forth relief from physical and emotional pain a century ago. METHODS: Using mixed methods qualitative analysis, we examined poems and letters shared between Hall and Meigs (captured via high-quality photographs at Hegley Library in Wilmington, Delaware) for themes of pain and relief through creative writing. We paid special attention to elements describing shared experiences of illness as well as how Hall’s writing reflected his own experience as a sufferer of chronic physical and emotional pain. RESULTS: In letters and poems, Hall acts as confidant for Meigs. Using empathy and humour, he provides her with emotional support for her neurasthenia, interspersed with advice on how to navigate her recovery. His letters contain descriptions of restless and and mood problems while his poems reveal darker themes, like hopelessness and the anticipation of death. This provides powerful insight into how this clinical pioneer drew inspiration from one’s pain, a shared experience of pain to create systems of various forms of therapeutic craft within early OT. CONCLUSION: This correspondence provides insight into how creative work was thought to facilitate recovery from physical and psychological pain in the early 20th century.