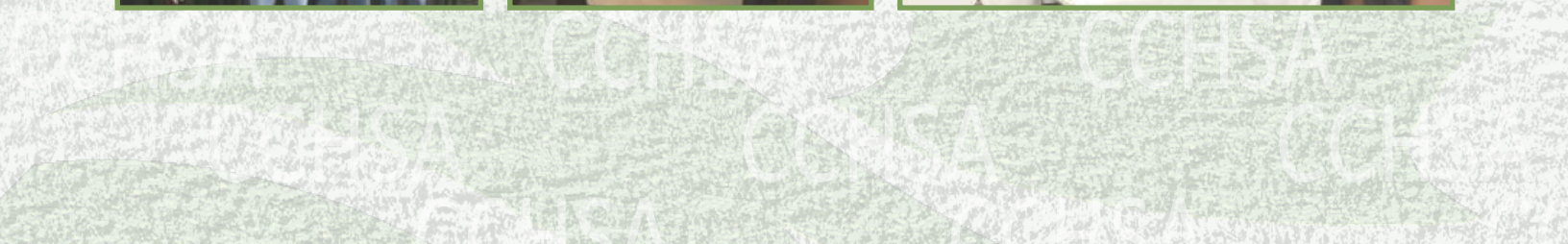


ANNUAL REPORT 2018-2019



CCHSA **CCSSMA**
Canadian Centre for Health and Safety in Agriculture Centre canadien de santé et sécurité en milieu agricole



MESSAGE FROM THE DIRECTOR



This has been a year of great peaks and valleys for me and I want to thank everyone for their support. The Canadian Centre for Health and Safety in Agriculture (CCHSA) has amazing and talented faculty, staff, and students dedicated to research, teaching and service. We are thankful and supported by so many inside and outside of the University of Saskatchewan including our dedicated Boards of Directors and Advisors and the many other dedicated individuals and organizations that we work with, and who support our activities. It was my honour to be the Acting Director as we accomplished the activities outlined here in our annual report.

The year started with our attendance at Ag in Motion. Ag in Motion is something that defies explanation and needs to be attended to appreciate its value and complexity. There is nothing that exemplifies agriculture more than acres of displays, in the middle of a Saskatchewan field, in 38 degree weather. Our Agricultural Health and Safety Network (AHSN) team was there showcasing our products and activities alongside many other interactive exhibits and live field and crop plot demonstrations. In the evening I attended the inaugural Field of STARS, in support of Stars Air Ambulance. The event raised \$656,000 for Stars Air Ambulance, an essential service to people living and working in rural areas.

In November I attended the Canadian Western Agribition in Regina, “the best beef show on the continent and the largest livestock show in Canada”. It was a great opportunity to connect with our many partners in agriculture and livestock.

In January we welcomed 5 individuals from across Saskatchewan who were trained in CCHSA as Discovery Day educators. These educators will be providing the Discovery Days programming in their local areas. The addition of these trainers allows us to expand our training opportunities, which are in high demand within the rural schools of Saskatchewan. Discovery Days have been a great success to date, and we look forward to our continued work with these very talented and dedicated individuals.

The strong relationship between CCHSA and the Saskatchewan farming community was exemplified in the discovery of the Elkow family fund. This fund was established for CCHSA at the University of Saskatchewan in 2012 by the estate of Helen Elkow. From the will of Ms Helen Elkow, it stated that “after the death of both of my brothers, namely Peter and Philip, I direct my Executor to sell my farm land, for the best price available (and my house if it has not been previously sold) as well as all other assets if any, pay up all the loans, and donate the balance of the money in my Estate to the Centre for Agricultural Medicine for research in the name of the Elkow family – Helen, Peter and Philip.” We are revered by the bequest and want to ensure we honour the intent of the Elkow family. The funds will support graduate research in agricultural health, safety programming, and training. The award recipients, their project area, and the results of their projects will be highlighted during the AHSN annual meeting each year at SARM. Bequeaths have power, the power to pay tribute and the power to make change.

In March I presented at the annual meeting of our Agricultural Health and Safety Network (AHSN) and to the SARM delegates at the SARM annual meeting. Last year we celebrated the AHSN’s 30 years. At SARM this year we said Thank You to the 4 RMs that have been with the AHSN for 30 years. The RM of Lumsden #189, the RM of St. Peter #369, the RM of Fish Creek #402, and the RM of Round Valley #410. You are our foundation! You are our rock!!!

I was driving to Melfort in March when I passed the 'Ike Thiessen Road'. This road sign reminded me of how Ike Thiessen, from the RM of Aberdeen and, former SARM president, was instrumental in both the formation and beginnings of the AHSN and the Centre for Agricultural Medicine's (CCHSA) Founding Chairs program 30 years ago. When I saw that sign at Aberdeen, I thought, 'how many people are left that remember how this partnership with SARM started? How can I ensure that we retain that history?' I sent some emails, and we have now, within the Founding Chairs program, established, the 'Ike Thiessen – Building a Foundation Award'. Stay tuned next year, when we will present the first "Ike Thiessen – Building a Foundation award" at the SARM annual meeting.

In May I was honoured to travel to Montreal with Dr. Jim Dosman, his family, and representatives from CCHSA faculty and Boards, UofS leadership, College of Medicine leadership, and friends, to attend the Canadian Medical Hall of Fame (CMHF) Inauguration ceremonies. Dr. James A. Dosman, founder and former Director of the Canadian Centre for Health and Safety in Agriculture (CCHSA) was inducted in to the Canadian Medical Hall of Fame as the Father of Agricultural Medicine in Canada. Dr. Dosman has been much honoured. His research, publications, organizing skill, influence in developing regional and national policy, and contributions to global agricultural health standards constitute an enduring legacy for agricultural workers and farmers in Saskatchewan, Canada and the world. Each laureate chose a song for their entrance. Jim chose to walk into 'Pirate of the Saskatchewan' by the Arrogant Worms. It was the perfect entrance for a man of great vision....

"I used to be a farmer and I made a living fine
I had a little stretch of land along the C. P. Line
But times were hard, and though I tried, the money wasn't there"
.....so I became a doctor to support rural research and care.....

His video reminds us of all he has done for agricultural health and safety. You can find it at: <http://www.cdnmedhall.org/in-ductees/jamesdosman>. Thank you Jim, for all you have done for us.

I continue to be amazed by how much is accomplished within the CCHSA each year. The people and partnerships we have are unique, world renowned, and speak to the nature of how we work in Saskatchewan. Thank you for working with me this year.



Shelley Kirychuk, PhD
Acting Director, Canadian Centre for Health & Safety in Agriculture

OUR MISSION

To conduct and stimulate research, education and health promotion programs aimed at enhancing the health and well-being of agricultural, rural and remote populations

OUR VISION

World leadership in the health of rural people

RURAL DEMENTIA ACTION RESEARCH (RaDAR) TEAM

Dr. Debra Morgan, CCHSA Professor and Chair in Rural Health Delivery, has been leading the interdisciplinary Rural Dementia Action Research (RaDAR) team since 2003. The team's goal is to improve dementia care in rural and remote settings. *Team members: Debra Morgan (PI), and co-investigators Andrew Kirk, Julie Kosteniuk, Megan O'Connell, and Norma Stewart (University of Saskatchewan); Joanne Bracken (Alzheimer Society of Saskatchewan CEO); Vanina Dal Bello-Haas (McMaster University); Anthea Innes (University of Salford, UK); and Edna Parrot (family caregiver).*



THE KNOWLEDGE NETWORK IN RURAL AND REMOTE DEMENTIA CARE

The RaDAR research program is guided by The Knowledge Network in Rural and Remote Dementia Care. The Network includes front-line health care providers and managers, family members of people with dementia, health region representatives, international researchers, and individuals from governmental and community-based organizations. The Network meets at the annual Summit, the RaDAR team's key knowledge exchange event, where Network members provide input into new and ongoing research projects.

The RaDAR team held its 11th Summit in Saskatoon on October 23 & 24, 2018 with 110 people attending the evening poster session and full-day Summit. The keynote speaker was Dr. Stefanie Auer, Professor for Dementia Studies in the Department of Clinical Neurosciences and Preventive Medicine at the Danube University Krems, Austria.



*Dr. Stefanie Auer
Summit keynote presenter*



Summit evening poster session

More information about the Summit, including a report and photos, can be found on the RaDAR team's website under the Summit tab: www.ruraldementiacare.usask.ca

RURAL AND REMOTE MEMORY CLINIC:

The RaDAR team implemented the Rural and Remote Memory Clinic (RRMC) in 2004, to provide diagnosis and management of atypical and complex cases of suspected dementia. The one-stop interdisciplinary clinic streamlines the assessment process by coordinating a complete team assessment on one day, and uses Telehealth videoconferencing for follow-up appointments. The RRMC was started as a research project and now receives funding from the Saskatchewan Ministry of Health to provide clinical services to Saskatchewan residents. Since 2004 over 658 patients have been seen in the clinic.



In December, 2018, Ralph Goodale, Minister of Public Safety and Emergency Preparedness toured the RRMC during a visit to the University campus

The RRMC provides valuable training to psychology graduate students who complete 10-month clinical placements. In addition, more than 20 medical students and other visitors observed a full clinic day last year, to learn about an interdisciplinary approach to working with people with dementia and their family members.

Several CCHSA-affiliated RRMC team members support the RRMC including: Leslie Holfeld (nurse); Duane Minish (psychometrist); Lynette Epp (data entry manager); Allison Cammer (dietitian); and Chandima Karunanayake (data analyst). Other clinic team members include Dr. Andrew Kirk (neurologist), Dr. Megan O'Connell (neuropsychologist), Jennifer Fairbairn (physical therapist), and Rhonda Loeppky (physical therapist).

.....RADAR INITIATIVE.....

CANADIAN CONSORTIUM ON NEURODEGENERATION IN AGING (CCNA) PHASE I (2014-2019)

The CCNA was established by the Canadian Institutes of Health Research in April 2014 to address the growing prevalence of Alzheimer Disease and other dementias in Canada. The CCNA Phase 1 brought together 20 research teams, with over 350 researchers involved. CCNA Team 20 Rural included RaDAR team members and was led by Debra Morgan. As part of CCNA Team 20, RaDAR team members conducted several inter-related projects:

1. Our core project involved collaborating with three primary health care (PHC) teams in the former Sun Country Health Region to adapt PHC dementia care practices to rural settings, and evaluate the adapted interventions and facilitators/barriers of successful adaptation;
2. A pilot project led by Dr. Julie Kosteniuk involved identifying and adapting evidence-based clinical support tools to rural PHC settings;
3. A pilot project led by Dr. Megan O'Connell identified innovative ways that specialists (from the Rural and Remote Memory Clinic) can support and help build dementia care capacity in rural PHC providers, and provide diagnostic support to PHC providers.



*RaDAR Postdoctoral Fellows:
Amanda Froehlich Chow (far left) and
Melanie Bayly (far right) at the CCNA Science Day and
Partners Forum in Montreal*

CCNA hosts an annual Science Day and Partners Forum attended by all 20 CCNA teams. Four primary health care team members from Sun Country Health Region who have been collaborating with the RaDAR team attended this event in October, 2018 in Montreal -- a family physician, nurse practitioner, social worker, and occupational therapist.

CIHR FOUNDATION GRANT

In July 2016, Dr. Debra Morgan was awarded a 7-year CIHR Foundation Grant for the research program "Design and evaluation of integrated primary health care practice for dementia in rural and remote settings". Co-investigators include Julie Kosteniuk, Megan O'Connell, Andrew Kirk, and Norma Stewart, and other Canadian and international experts.

The Foundation program consists of three linked research streams:

1. Interdisciplinary team-based care to support ongoing care management and education/support for patients and caregivers,
2. Remote specialist-to-primary care education and support through technology, and
3. Decision support tools for PHC providers that are embedded in the electronic medical record (EMR). A main research outcome is the new Rural PHC Model for dementia intended for use by rural PHC teams to deliver comprehensive and integrated dementia care.



*The RaDAR team filming part of a video about the
collaboration with three primary health care teams
in southeast Saskatchewan*

The RaDAR team is collaborating with three primary health care (PHC) teams in southeast Saskatchewan to adapt the Rural Primary Health Care Model for Dementia. The PHC teams in Kipling, Weyburn, and Rural West have established 1-day memory clinics to provide initial evaluation and management of individuals with suspected dementia. Clinics are held every second month or as needed and two new patients are seen each clinic day. Participating team members include physicians, nurse practitioners, home care nurses, social workers, occupational therapists, physical therapists, and an Alzheimer Society First Link coordinator.

The RESPECT project team (remote specialist-to-primary care education and support through technology) led by Dr. Megan O'Connell has conducted a systematic review of technology-based dementia education that can be used for remote education with rural PHC teams. Based on our findings, we will spend the summer co-designing technology-based educational methods with rural PHC team members. We explored the accuracy of a computerized neuropsychological testing battery, but based on our findings we decided to not trial this method of assessment. Instead, we are exploring use of a telephone administered neuropsychological battery to be tested with PHC teams as a means of specialist cognitive support for dementia diagnoses. Finally, we developed an alternate method of remote specialist support with the Rural and Remote Memory Clinic-interventions (RRMCi) where we will provide remote interventions for rural PHC providers' patients with dementia and their caregivers who are in need of treatments related to sleep disturbance, maximizing daily function, psychological consequences of driving cessation, increasing social support for caregivers, and app-based caregiver support.

PROJECTS LED BY RADAR POSTDOCTORAL FELLOWS

Dr. Melanie Bayly: is investigating the experiences of patients and families who are assessed for dementia by the three primary health care teams. This will allow us to better understand patient and family perceptions of a collaborative team-based model of dementia care, their needs and whether they are being met, and how the assessment processes could be improved. Additionally, Melanie and the RaDAR team will be collaborating with the Alzheimer Society of Saskatchewan to assess the benefits, challenges, and outcomes associated with the inclusion of a First Link coordinator in this team-based model.

Dr. Amanda Froehlich Chow: is focused on how the same three rural primary health care teams are currently collaborating to deliver care to older adults living with dementia and other chronic conditions. She is exploring the factors influencing team-based care in rural settings, the benefits of team-based care, and how the 1-day primary care memory clinics implemented with the RaDAR team have changed how the primary health care teams collaborate to provide care to those living with dementia.

Dr. Ivan Panyavin: is actively involved with the Rural and Remote Memory Clinic operations in a diagnostic and clinical service delivery capacity, as well as in providing additional supervision to advanced clinical psychology graduate students. He is also working with Dr. Megan O'Connell to innovate a non-pharmacological, cognitive-behavioural therapy-based treatment for chronic insomnia for persons with mild cognitive impairment (MCI) or dementia and use of technology for remote delivery of this treatment to facilitate access for SK residents with dementia or MCI living in rural and remote locations. Sleep disturbance is very common in persons with dementia and their caregivers, and negatively affects mental and physical health, as well as overall quality of life. Adapting this

novel treatment for chronic sleep disturbance in dementia and providing it remotely increases accessibility of this intervention allowing all persons with dementia and their caregivers to age in place, including for those who reside in rural locations.

ONGOING PARTNERSHIP WITH SASKATCHEWAN HEALTH QUALITY COUNCIL

Researchers from RaDAR and Saskatchewan Health Quality Council are planning a new project that involves linkage and analysis of Rural and Remote Memory Clinic data and administrative health data. Research questions will focus on the factors contributing to patient referral to RRMC and variations in health service use before and after the initial RRMC visit.

PLANNING IS UNDERWAY FOR A CANADIAN DEMENTIA STRATEGY

Dr. Morgan was part of a 6-member Canadian Academy of Health Sciences (CAHS) Panel for the Assessment of Evidence and Best Practices for the development of a Canadian Dementia Strategy. The panel was convened in early 2018 to report on the state of knowledge regarding dementia, to inform the upcoming National Dementia Strategy. The report was released January 16, 2019 entitled *Improving the Quality of Life and Care of Persons Living with Dementia and their Caregivers* and can be accessed at <https://www.caahs-acss.ca/wp-content/uploads/2019/04/REPORT.pdf>.

SYNTHESIS REVIEWS

The RaDAR team utilizes a collaborative team-based approach to map, synthesize, and identify gaps in the evidence across several dementia-related areas. Topics related to individuals living with dementia that were explored in the first round of

scoping reviews included: support and education access and needs, team-based primary health care, stigma, and multiple physical care transitions. Published reviews can be found on the RaDAR website at <https://cchsa-ccssma.usask.ca/ruraldementiacare/RaDAR%20Publications.php>. Round two is currently underway and includes scoping reviews in the following areas: use of electronic medical records among interprofessional primary care teams (led by Julie Kosteniuk), facilitators that support team-based primary health care services in rural areas (led by Amanda Froehlich Chow), palliative care for people with dementia in rural areas (led by Valerie Elliot), and a systematic review on interventions for caregivers of people with mild cognitive impairment and early dementia (led by Melanie Bayly). The team is looking forward to contributing further to the field of dementia research and informing future practice and policy.

BILOKRELI FAMILY TRUST FUND



Members of the Bilokreli family were present on October 23rd to recognize the award winning student posters

The Bilokreli family have established the Bilokreli RaDAR Trust Fund and generously committed \$25,000 per year from 2015 through to 2017, and have renewed the funding for another 3-year period. The fund supports RaDAR's research and knowledge exchange activities, including providing support to student researchers by funding the Student Poster Prize at the annual Summit event.

THIS YEAR'S BILOKRELI STUDENT POSTER PRIZES WERE AWARDED TO:

- | | |
|-------------------------|--------------------------------------------|
| 1st Place | Karl Grewal |
| 2ND PLACE (TIED) | Michelle Kushneriuk, Jake Ursenbach |
| 3RD PLACE | August Kortzman |

VISITOR: DR. MICHELE BOARD, BOURNEMOUTH UNIVERSITY, UK

In May 2018, Dr Michele Board visited the RaDAR team and gave a public presentation "Stepping into the Shoes of a Person with Dementia – Using Simulation and 3D Film Immersive/Experience for Training for Health Care Professionals". Dr. Board is a Principal Academic in Nursing Older People at the Faculty of Health and Social Science at Bournemouth University, England.



Dr Michele Board

TRAINEES ASSOCIATED WITH THE RaDAR TEAM

- *Melanie Bayly, PhD, Postdoctoral Fellow with Dr. Morgan. Dr. Bayly is working with RaDAR on needs and supports for individuals with dementia and their caregivers living in rural areas.*
- *Camille Branger, PhD Student, Clinical Psychology with Dr. O'Connell. Camille is exploring informal caregivers' experiences of 'finding meaning' while caring for persons with dementia: a qualitative examination of non-familial caregivers and Indigenous caregivers and a quantitative examination of finding meaning and burden.*
- *Tracy Danylyshen-Laycock, PhD Student, Health Sciences with Dr. Morgan, examined the relationship between facilitation and leadership, and the sustainability of a dementia-specific training program for staff in rural long-term care homes. She successfully defended her dissertation in April 2019.*
- *Virginia Deobald, Masters Student, Nursing, with Dr. Shelley Peacock. Virginia's thesis is focused on non-pharmacological interventions for persons living with dementia while in long term care facilities from the nurse perspective.*
- *Amanda Froehlich Chow, PhD, Postdoctoral Fellow with Dr. Morgan, is working with RaDAR on interprofessional team care for individuals with dementia and their caregivers.*
- *Ben Gould, PhD Student, Clinical Psychology with Dr. O'Connell is exploring Mi'kmaq community Mental Wellness needs, identifying and discovering appropriate approaches to improving aging and quality of Life.*
- *Karl Grewal, Masters Student, Clinical Psychology with Dr. O'Connell is working on integrating sensor technology to measure daily function as an outcome measure for cognitive rehabilitation for persons living with dementia.*
- *August Kortzman, PhD student, Clinical Psychology with Dr. O'Connell, is working on developing a social network intervention that can be remotely delivered to rural caregivers of persons living dementia.*
- *Ivan Panyavin, PhD, Postdoctoral Fellow with Drs. Morgan & O'Connell, is interested in diagnostic and interventional aspects of aging and dementia in the context of rural and remote service delivery, as well as in caregiver and family well-being.*
- *Andrea Scerbe, PhD student, Clinical Psychology with Dr. O'Connell, is working on technology-based methods for remotely delivering dementia education to rural primary care providers.*
- *Jake Ursenbach, PhD candidate, Clinical Psychology with Dr. O'Connell, is working on a method for remote cognitive assessment to support rural primary care providers in making a diagnosis of dementia.*

A COMMUNITY-INFORMED TEAM AND TECHNOLOGY APPROACH TO CHRONIC BACK PAIN MANAGEMENT IN PARTNERSHIP WITH A NORTHERN SASKATCHEWAN CREE FIRST NATION

This project focuses on a community-identified need and builds on a 5-year history of engagement with the Peter Ballantyne Cree Nation and the Northern Saskatchewan community of Pelican Narrows. A research team comprised of researchers, decision makers, and health care providers will be guided by Elders and community members with chronic back pain to implement and evaluate a culturally relevant approach for chronic back pain management. In this project, physical therapists will use remote presence robot technology combined with in-person care to link with other care providers and supports in the community.

Western-based services and evaluation approaches may not reflect Indigenous ways of knowing. Cree perspectives and experiences will inform this project as we engage with community by applying community-based participatory action research methods in order to better support Cree community members who experience chronic back pain. We will co-design and evaluate a way to manage back pain using a team and technology approach with the guidance of community members and Elders throughout the project. This project will inform how technology-assisted models of care may be adapted for enhancing access to culturally relevant services in underserved communities in Saskatchewan and beyond.



Research Team: Brenna Bath, Stacey Lovo Grona, Sarah Oosman, Veronica McKinney, Nazmi Sari, Jim Brown, Sally Sewap, Rose Dorion

Funded by: Saskatchewan Centre for Patient Oriented Research and Saskatchewan Health Research Foundation SPROUT grant.

OCCUPATIONAL HEALTH AND SAFETY IN INDOOR MARIJUANA PRODUCTION (Catherine Trask, Principal Investigator)

Very little research has been published on occupational health and safety issues in indoor marijuana production. We feel that workers with experience in this sector will be a very important source of information. We plan to use the study findings to educate health and safety professionals and help develop prevention strategies that fit the real needs of the industry.



ERGONOMIC EVALUATION OF PASSIVE EXOSKELETONS IN AGRICULTURAL TASKS (This study is being conducted by Ornwipa Thamsuwan, Catherine Trask, and Stephan Milosavljevic)



It may not be possible to eliminate or modify some agricultural work tasks that occur on ground level, but supportive equipment might be a practical solution. An exoskeleton is a structure that allows the back and limbs to be supported and could be a solution to minimize the stress of back bending. Because it can reduce exposure to risk factors, exoskeleton technology may be an appropriate prevention strategy for back pain among farmers.

This study investigates the biomechanics and usability of a prototype exoskeleton for use by farmers during work at ground height. It uses sensors to measure the back and lower limb postures and muscle activities of twelve farmworkers undertaking ground-level tasks and manual lifting tasks, both with and without a prototype exoskeleton. We will also conduct a survey on their experience with the exoskeleton. This study will support intervention design to improve the health, quality of life, and productivity of Saskatchewan farmers and workers with similar ergonomic risks.

TOWARDS IMPROVED CLINICAL EVALUATION OF THE SHOULDER: DEFINING UPPER LIMB MOTION OF BREAST CANCER SURVIVORS DURING FUNCTIONAL EVALUATION TASKS

Breast cancer survivors are known to experience many restrictions in the upper limb. Problems such as reduced range of motion, lymphoedema, reduced strength, and pain are common following surgery and can last for years after curative treatment. The physical changes and presence of arm problems suggest that there are also significant biomechanical changes at the shoulder that can affect abilities and increase risk of future injury. In particular, due to the physical alterations following surgery, it has been hypothesized that breast cancer sur-



vivors are at increased risk of developing rotator cuff disease. This goal of this study is to define kinematics, or motion, of breast cancer survivors during a range of clinically and functionally relevant shoulder-centre tasks. These measured kinematics of breast cancer survivors will be compared to kinematics of non-cancer controls and a rotator cuff injury group to determine the presence of alterations and to help to identify if the alterations are similar to those displayed with rotator cuff injury. This information will enhance the understanding of shoulder movement following breast cancer surgery, particularly for functional, work-related tasks, and will allow for more specific recommendations for clinicians regarding treatment, rehabilitation, and return to work.

SHAKE AND BREAK: THE EFFECTS OF WHOLE-BODY VIBRATION ON FARM MACHINERY EGRESS

Machinery is the most important cause of injury in agriculture and it can expose farmers to both whole-body vibration during operation and to risk of falls during egress. Although both of these hazards have been investigated individually, it is plausible that whole-body vibration impacts the risk of egress injury. Occupational whole-body vibrations have a number of effects on health and performance, and can adversely influence balance, coordination, and perception; all these can increase risk of falls from machinery. Understanding the effects of whole-body vibration on egress performance will allow for the development of preventive interventions that will ultimately enhance the health and economic productivity of Saskatchewan farmers. This study will investigate



the effects of whole-body vibration on egress from agricultural vehicles by: 1) developing an agricultural tractor test paradigm for whole-body vibration and egress; and 2) conducting lab-based experiments comparing lower limb joint angles, standing balance stability, and foot pressure during egress before and after exposure to seated whole-body vibration.

The tractor vibration simulator (TVS) is the key apparatus for this study. It enables us to mimic agricultural mobile machinery operations in the Ergonomics Lab. *(This project is funded by a Saskatchewan Health Research Foundation postdoctoral fellowship awarded to Behzad Bashiri).*

ERGO-VET: ASSESSING THE ERGONOMIC DEMANDS OF LARGE ANIMAL VETERINARIANS

Veterinarians have a substantial scope of practice, and those involved in large animal care play a vital part in food animal production and the economy of Saskatchewan. Veterinary medicine can expose practitioners to many hazards: zoonotic infection, psychosocial stress, noise, radiation, acute traumatic injury, and especially musculoskeletal disorders (MSD). MSD are particularly problematic, impeding work activities in 75% of large animal veterinary practitioners over a 12-month period and leading to work absence in 24%.



There is a consistent suggestion in the literature that MSD is related to physical exposures associated with the large animal veterinary practice, particularly rectal exams.

Ergonomic exposure assessment is vital to investigate the likely mechanisms of MSD, quantify exposure to risk factors, and facilitate the development of appropriate intervention strategies. However, no published ergonomic exposure assessments could be found reporting objective or detailed investigations of these physical exposures.

ANKYLOSING SPONDYLITIS STUDY: A MULTIFACETED APPROACH FOR THE EARLY CLINICAL IDENTIFICATION OF AXIAL SPONDYLOARTHRITIS: A STUDY OF FIRST DEGREE RELATIVES

This study is investigating ways to enhance early clinical diagnosis of ankylosing spondylitis. It is being conducted in conjunction with the School of Physical Therapy and the Division of Rheumatology, at the University of Saskatchewan. It is led by Dr. Stephan Milosavljevic and Dr. Bindu Nair (Principal Investigators).

Ankylosing spondylitis (AS) is a form of Spondyloarthritis that causes inflammation in the sacroiliac joint (the lower back). The current gold standard of early diagnosis of AS is the detection of active inflammation with an MRI. Unfortunately, the cost of MRIs is high, while the availability is low. As such, this exploratory study developed by a team of researchers in the College of Medicine at the U of S is designed to determine if a physical exam test battery of the Sacroiliac Joint (SIJ), in combination with validated self-reported measures, can be used to reliably identify MRI-confirmed SIJ inflammation.

This study will contribute needed evidence about a more accessible, cost-effective strategy to diagnose AS. The results from this study will hopefully enhance clinical capacity to recognize early disease and provide a standard to classify non-radiographic AS. Earlier diagnoses means earlier therapy, reduced potential future disability, and reduced diagnostic costs for the health regions and potential patients.



Sitting from Left-Right: Bindu Nair, Brooke Thompson, Regina Taylor-Gjevre, Brenna Bath, Stacey Lovo-Grona; Standing from Left-Right: George Katselis, Udoka Okpalauwaekwe, Stephan Milosavljevic; Headshots: David Leswick, Catherine Trask, Haron Obaid, and Melanie Bussey

EVALUATING USE OF NEEDLE-LESS INJECTORS IN SWINE PRODUCTION: COMPREHENSIVE EVALUATION OF NEW TECHNOLOGY IN SWINE FARMING

Agriculture in general, and pig farming in particular, have many risk factors for musculoskeletal injury and disorders. Being a production-oriented and economically-driven industry, the rapid intensification in pork production has continually introduced new processes and equipment (such as needle-less injectors), although the pace of developing workplace health and safety evaluation tools has not kept up with progress on the production side. This



study is investigating the implementation of needle-less injectors in terms of cost, productivity, injury rates, biomechanical exposures, and worker preference; and develop a suite of decision-making tools for evaluating the occupational health and safety benefits, as well as business impacts, of new technologies. (This project is funded by the Workers' Compensation Board of Manitoba).

INVESTIGATING THE ROLE OF DIABETIC PREGNANCIES IN KIDNEY DISEASE AMONG TYPE 2 DIABETES MELLITUS ADOLESCENTS USING URINE PROTEOMICS

Diabetes mellitus is one of the most common chronic diseases that affects children and adolescents and is associated with a significant increase in morbidity and mortality due to its short and long-term complications. One of the most important chronic complications is diabetic kidney disease. Type 2 diabetes (T2D) affects children at a steadily increasing rate in Canada, and Saskatchewan is among

the most affected provinces. It is common for adolescents with T2D to experience early diabetic kidney disease and furthermore youth onset T2D carries a higher risk of progressive kidney disease than in adults with T2D who have similar diabetes duration. Urine is a readily available biofluid and a source of protein markers which can be used in proteomics studies to unravel how the renal system functions in both normal and abnormal states. Urine proteomics can contribute in understanding the pathophysiology of diabetic kidney disease in adolescents and particularly the role of diabetic pregnancy exposure. We will study the urine proteome in T2D children/adolescents whose mothers had pre-gestational, gestational, and no maternal diabetes using mass spectrometry (MS)-based clinical proteomics. This will allow us to critically assess how diabetic pregnancies affect normal fetal renal development, and how urine proteomics can identify adolescents at increased risk for the subsequent development of diabetes-related kidney disease. We will develop MS-based proteomics methods for the qualitative and quantitative determination, evaluation, and validation of protein markers as they relate to the onset of kidney disease. (SHRF Collaborative Innovation Development Grant).

MASS SPECTROMETRY (MS) LABORATORY

The Mass Spectrometry (MS) Laboratory of the Canadian Centre for Health and Safety in Agriculture (CCHSA) is part of the National Agricultural-Industrial Hygiene Laboratory and is housed in the Health Sciences Academic Building. The MS lab is equipped with state of the art instrumentation capable of environmental (e.g. air particulates, dust) and agricultural samples analysis, pesticide analysis, global proteomics (e.g. identification of proteins, analysis of protein modification, characterization of protein-protein interaction), quantitative proteomics for discovery and validation of biomarkers, small molecule (drugs) analysis, metabolomics and clinical proteomics. Dr. George Katselis is a faculty member in Clinical Proteomics and Metabolomics in the Department of Medicine, and housed at CCHSA. He is the CCHSA lead faculty in research programs focused on MS-based technologies. Under Dr. Katselis' leadership the CCHSA MS laboratory continues to run at high capacity for CCHSA and collaborating researchers. Dr. Katselis' primary focus is on urinary mass spectrometry-based proteomics for monitoring children's health. In addition, another focus of Dr. Katselis' research is on discovery, identification, characterization and validation of biomarkers which will assist towards discovery of treatment tools in the areas of diabetes, kidney, asthma, arthritis, cystic fibrosis, Parkinson's, cardiovascular, prostate cancer and musculoskeletal disorders. Members of Dr. Katselis' research team include: Dr. Joe Bracamonte (PhD student), Imran Zaib (PhD student), Dr. Roman Koziy (PhD student), Dr. Paulos Chumala (Research Technician), Brooke Thompson (Research Technician), Tess Kelly (Research Technician), James Matheson (Research Technician), Shiming Lin (Research Technician) and Iris Geldenhuys (Summer Student).

NATIONAL AGRICULTURAL INDUSTRIAL HYGIENE LABORATORY (NAIHL)



Dr. Kirychuk's lab continues its work in respiratory exposures and health effects including utilizing the animal exposure chambers (agricultural inhalation exposures and respiratory inflammatory health) and population health activities (Housing and Health). This work includes a Laboratory Manager (Thompson), a Research Assistant (Schneberger) Post-doctoral fellows (Nascimento, Martel) and PhD students (Pandher and Merkowsky). Upkar Pandher (PhD) is studying lung inflammation in male mice after exposure to endotoxin and glyphosate. Kaitlin Merkowsky is studying lung inflammation in female mice after exposure to endotoxin and glyphosate including using the BMIT beamline at the Canadian Light Source. Dr. Amanda Nascimento (Post-doctoral fellow) funded by MITACS is studying the impact of natural products (Resp-Aid) on asthma outcomes using a mouse model. Dr. David Schneberger (Research Assistant) and Brooke Thompson (Laboratory Manager) are working on differential innate immune responses between males and females after exposure to organic dusts from various barn environments using human male and female cell lines.



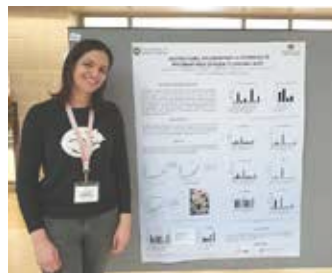
Dr. Zhang and Dr. Kirychuk have received funding from SHRF and ADF to test the effectiveness of engineering technologies in barn environments. Dr. Myra Martel (Post-doctoral fellow) and Jordan Si (MSc) are working on assessing the impact of engineering technologies (ESP and nanospray) on dust reduction and the microbial environment in poultry operations.



On the population health side, Ramsden and Kirychuk continue to look at the impact of in-home smoking on home environmental exposures (CIHR) in First Nations communities. They are currently testing for the levels of endotoxin, mould, and nicotine in the homes using plate based assays and mass spectrometry (in collaboration with Dr. George Katselis). This lab work involves an undergraduate student (Anwar), a laboratory technician (Matheson), a mass spectrometry technician (Chumala) and a laboratory manager (Thompson).



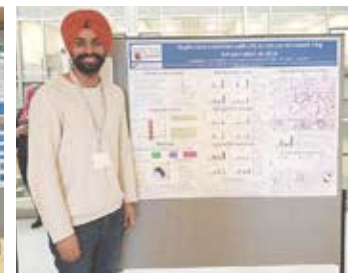
*D. Schneberger
Research Assistant*



*Dr. A. Nascimento
Post-doctoral fellow*



*Dr. Myra Martel
Post-doctoral fellow*



*U. Pandher
PhD students*

CAPACITY BUILDING

THE FOUNDING CHAIRS DEVELOPMENT FUND

The Founding Chairs Program Endowment Fund was established in 1989 to create a secure financial base for CCHSA and provide opportunities for new program initiatives. Annually it provides funds for graduate student scholarships and knowledge translation.

The National Partners Program Enhancement Trust was initiated to provide funds for research projects and new program initiatives.

The Founding Chairs Management Committee administers the funds, invested by the University of Saskatchewan, and makes recommendations regarding expenditures. The six member Committee is comprised of Contributor members: Garnett Volk, Senior Director, Credit Policy & Process Management, Farm Credit Canada; Terry Baker, former Chair, Viterra Board; and U of S members: Dr. Niels Koehncke, Director, Canadian Centre for Health and Safety in Agriculture, Dr. Marek Radomski, Assistant Dean, Research, College of Medicine; Sue Verhille-Long, Financial Services Division.

Maura Gillis-Cipywnyk, Director of Institutional Advancement, coordinates the program in consultation with the Director and the Management Committee.

The focus this year was the Agricultural Health and Safety Network. A National Farm Safety Bilingual Webinar series funded by Farm Credit Canada focused on issues such as Mental Health, Respiratory Health and Equipment Safety.

Saskatchewan Wheat Development Commission and SaskCanola sponsored the Farm Safety Discovery Days. It enabled the staff to educate 1416 school children about farm safety hazards and to train 5 well qualified educators from across the province who will assist in delivering Discovery Days in the future thereby expanding the capability.

We thank all sponsors for their contributions to Farm Safety initiatives.

CANWORKSAFE



CANWORKSAFE offers occupational health surveillance and screening for workplaces in Saskatchewan. Its programs provide an opportunity for workers to have regular health screening focused on their occupational exposures. Workers receive:

- Current health resources and education specific to the workplace that assists to reduce the risk of developing occupational health diseases and disabilities.
- Appropriate personal protective equipment (PPE) is fit-tested and referrals to occupational medicine physicians are arranged.
- Regular occupational health screenings promote healthy lifestyles and productivity that is well received by CANWORKSAFE program participants.

CANWORKSAFE 2018-2019 programs delivered:

1. Hearing loss prevention screening for Saskatchewan rural municipal employees in 16 rural municipalities.
2. Novozymes Bio Ag Limited Saskatoon employees: respiratory health screening, quantitative fit testing and audiometric screening.
3. Periodic referrals of industry workers and medical students for lung function testing, hearing tests and quantitative respirator fit testing.



FOUNDING CHAIRS FELLOWSHIP AWARDEES: 2018 - 2019

POSTDOCTORAL RESEARCH AND CLINICAL FELLOWS AWARD

MELANIE BAYLY

Project title: Supporting Rural Dementia Patients and Their Caregivers: Identification of Rural Team-Based Primary Health Care Approaches for Dementia.

AMANDA FLORENTINA DO NASCIMENTO

Project title: (1) Allergic lung inflammation in offspring of pregnant mice exposed to organic dust, (2) Effects of RESP AID on Asthma.

AMANDA FROEHLICH CHOW

Project title: Understanding How Rural Primary Health Care Teams Collaborate to Deliver Dementia Care Facilitators to Rural Team Based Primary Health Care Delivery for Older Adults Living with Chronic Conditions.

MYRA MARTEL

Project title: Dust Removal by Electrostatic Precipitation Based Technique for Improving Air Quality in Poultry Houses.

OLUWAFEMI OLUWOLE

Project title: Asthma Phenotypes and Severity among Children in Saskatchewan.

ORNWIPA THAMSUWAN

Project title: An ergonomic evaluation of exoskeleton use in agriculture.

DOCTOR OF PHILOSOPHY

ADRIANA ANGARITA FONSECA

Project title: Physical activity and chronic back disorders in Canadian adults: a comparison between rural and urban dwellers.

ULFAT ARA KHANAM

Project title: Predicting and validating asthma among rural and urban children.

MUHAMMAD IMRAN

Project title: Identification and Quantification of Sperm Head Plasma Membrane Proteins Associated with Male Fertility.

SHARLEEN JAHNER

Project title: The Psychologically Traumatic Experiences of Rural Registered Nurses Who Live and Work in the Same Community.

ANDREA SCERBE

Project title: Digital Tools for Delivery of Dementia Education for Health Care Providers of People Living with Dementia.

UPKARDEEP SINGH PANDHER

Project title: Lung inflammation following inhalation of glyphosate and endotoxin.

LIRIS P R SMITH

Project title: The Experience of Physical Activity for Metis Older Adults.

MASTER OF SCIENCE

VIRGINIA DEOBALD

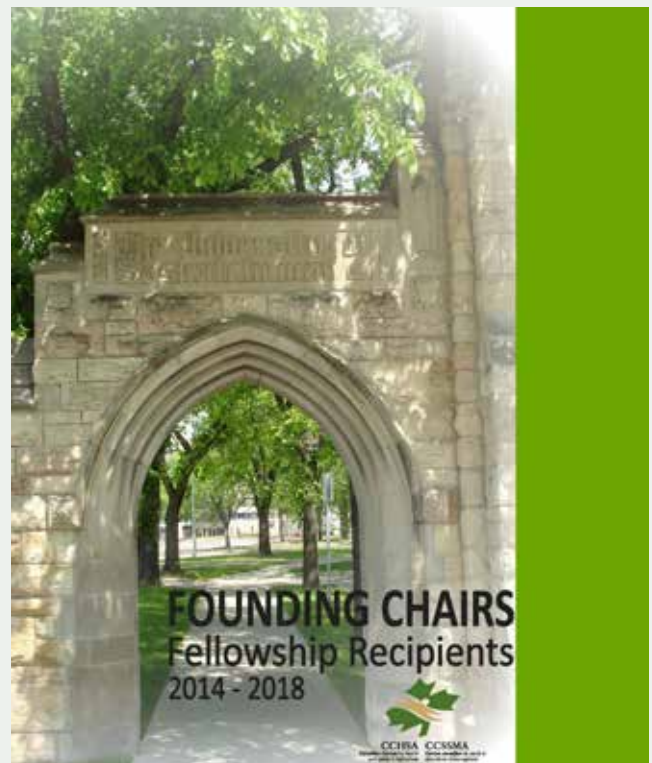
Project title: The Nurse Experience using Non-pharmacological Interventions in Rural Long Term Care Facilities for Persons with Dementia.

ROYA GAVANJI

Project title: Exploring Machine Learning Techniques to Predict WCB claims Severity and Fatality Level in Saskatchewan, Canada.

ROBYN REIST

Project title: Quantifying Primary Risk Factors for Upper Extremity Disorders during Bovine Rectal Palpations.



SERVICES

THE AGRICULTURAL HEALTH AND SAFETY NETWORK



The Canadian Centre for Health and Safety in Agriculture (CCHSA) partnered with the Saskatchewan Association of Rural Municipalities (SARM) and six Rural Municipalities in 1988 to found the Agricultural Health and Safety Network with the mission “to improve health and safety on the farm through education, service, and evaluation research.” The Network is now in its 30th successful year, providing occupational health and safety services to 213 RMs that are members of the Network reaching over 27,000 farm families.

MEMBERSHIP RECRUITMENT AND FUNDING

Currently there are 215 member RMs. These RMs pay an annual fee of \$4.60 per active farm family to benefit from the Network resources and services. The maximum membership fee continues to be capped at \$1,200 per RM. These partnerships are the foundation of the Network and provide leverage to draw additional resources to better serve Saskatchewan farmers, their families and agricultural workers. The Saskatchewan Ministry of Agriculture also provides funding to the Network.

STEERING COMMITTEE

The Steering Committee is an Advisory Group composed of RM Councillors and a Saskatchewan Ministry of Agriculture representative. These committee members, who represent the voice of Saskatchewan farmers, their families and their workers, provide direction and feedback on programs delivered in the Network. Their support and input are invaluable to the Network.

The members of the Steering Committee are as follows:

Division #1:	Ken Aldous, Reeve, RM of Willowdale No. 153
Division #2:	TBA
Division #3:	Mark Hughes Reeve, RM of Miry Creek No 229
Division #4:	Brenda Zemluck, Councillor, RM of Elfros No. 307
Division #5:	Walter Kabaroff, Councillor, RM of Blaine Lake No. 434
Division #6:	Bonnie Mills-Midgley, Reeve, RM of Frenchman Butte No. 501
Angela Hall, Ministry of Agriculture	

AGRICULTURE HEALTH AND SAFETY ALLIANCE



The Gear Up for Ag Health and Safety™ program is designed for post-secondary Ag students attending trade schools, colleges and universities to provide agricultural specific health and safety education. In addition, the Network is looking forward to working with the Alliance to adapt this program to include multi-generational farmers and Ag workers. The program delivery will be a combination of an interactive lecture and hands on demonstrations. Each program will be customized based on available time in the classroom, regional agricultural exposures and results from a standardized pre-survey administered prior to the program presentation. The program will include the distribution of a Gear Up for Ag™ PPE kit to each student and instructor. The PPE kit includes safety glasses, hearing protection, disposable respirators, reusable cartridge respirator, P100 cartridges, coveralls and chemical resistant gloves.

HEALTH & SAFETY CLINICS: EMPOWERING FARMERS TO ENHANCE THEIR HEALTH AND SAFETY

Health and Safety Clinics for Farmers offer the unique opportunity for farm families and farm



workers to meet with a trained agricultural health and safety registered nurse, in a confidential environment. These clinics are offered to the Network RM members in the form of either a Respiratory Health & Safety Clinic or a Hearing Loss Prevention Clinic that is hosted in their local RM community.

Farmers also have the option to book an appointment for hearing testing, lung function testing, and respirator fit testing at the ONE2ONE Network Clinic located at the Canadian Centre for Health and Safety in Agriculture (CCHSA) at the University of Saskatchewan in Saskatoon.

The Network has also offered clinic learning experiences for medical and nursing students at the ONE2ONE Health & Safety Clinic for Farmers.

NETWORK NEWSLETTERS

SPRING ISSUE 2018



The Spring issue highlighted our Mental Health Resources and Rural Stress Toolbox; and also included (a) information on personal protective equipment, (b) Northern Strands Fall Protection systems and (c) the importance of cancer screening.

WINTER ISSUE 2018

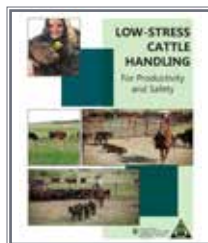


The Winter issue focused on mental health and increasing awareness in the agricultural community through the Do More Ag Foundation. Articles included in this issue are: (a) posture tips for a healthy back from the Saskatchewan Farmers Back Study, (b) resources for living with Multiple Sclerosis in rural Saskatchewan, (c) current research at CCHSA.

RESOURCES

LOW STRESS CATTLE HANDLING

The updated resource focuses on why low stress cattle are important for both producers and livestock, provides information on safe handling and moving cattle.



The Network in partnership with the Canadian Agriculture Safety Association (CASA), updated and revised the “*What Did You Say? How to Prevent Noise Induced Hearing Loss*” resource. These updates include data on noise cancelling headphones, dosimeter Apps for SmartPhones and a section dedicated to protecting the hearing of youth on the farm.



OLDER FARMERS RESOURCE

The Older Farmers resource includes updated information for older farmers.



FOUR PART WEBINAR SERIES ABOUT FARM HEALTH AND SAFETY

This year Farm Credit Canada (FCC) partnered with the Network to deliver a four part webinar series in both English & French about farm health and safety.

- (1) *Stress: Farming and Mental Health*,
- (2) *Rollover Prevention Strategies*,
- (3) *Save your Breath: Respiratory Health on the Farm*,
- (4) *A Good Night's Sleep: Sleep and Farming*

FARMING & MENTAL HEALTH: FARM STRESS INVENTORY CHECKLIST

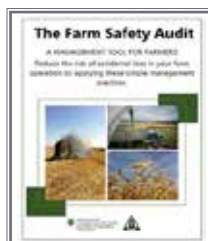
This resource encourages farmers and ranchers to take an inventory of their current situation to assess their unique stressors.



Each webinar was presented live and recorded. The webinar videos are available on the [Network website](#) and also on the CCHSA [Youtube](#) channel. Thank you to FCC for funding this worthwhile pilot project.

FARM SAFETY AUDIT

The Farm Safety Audit was revised and developed into a fillable PDF in addition to being available as a print copy.



KNOWLEDGE TRANSLATION

Bath B.

- Lack of proper pain treatment leads to ‘over-medicalization’: U of S researcher”. CTV News Saskatoon: <https://saskatoon.ctvnews.ca/lack-of-proper-pain-treatment-leads-to-over-medicalization-u-of-s-researcher-1.4300138>.
- Radio interview pertaining to back pain care access gaps.. CBC Radio/ Saskatoon Morning: <https://www.cbc.ca/player/play/1449792579743>.
- Radio interview pertaining to back pain care access gaps. CBC Radio- The Morning Edition- Sask (Regina): <https://www.cbc.ca/listen/shows/the-morning-edition-sask/episode/15673572>

Kosteniuk J, Morgan D. (Co-editors). RaDAR Newsletter available at www.ruraldementiacare.usask.ca under the News tab.

Morgan D. (Editor), Rural Dementia Care: Strategies to Improve the Care of Persons with Dementia in Rural and Remote Areas (www.ruraldementiacare.usask.ca). A website highlighting team-based research in rural and remote dementia care. April 2008 to present.

Trask C. Sitting your way toward a bad back. March 7, 2019. Interviewed by B. Glenn for an article in the Western Producer <https://www.producer.com/2019/03/video-sitting-your-way-toward-a-bad-back/>.

Trask C. Oh, my aching back! Practical tips for preventing farm-related pain. Interviewed by J. Martin for an article in the print magazine Small Farm Canada. March/April 2019 <http://smallfarmcanada.ca/2019/marchapril-2019/>.

Trask C. The Right Moves. September 4, 2018. Interviewed by M May for an article on the website Lab Intelligence. <https://www.labcompare.com/352765-The-Right-Moves/>.

Trask C. Farm Safety. Live radio interview with **Catherine Trask** on the John Gormely Talk Radio Program on CJME/CKOM https://soundcloud.com/980cjme_650ckom/gormley-farm-safety-august-23rd.

TECHNICAL REPORTS

Bath B, Trask C. Back pain? A physiotherapist may offer the most effective treatment, if you can afford it. Lay report on The Conversation Canada, Feb 2019. A web-based research repository. <https://theconversation.com/back-pain-a-physiotherapist-may-offer-the-most-effective-treatment-if-you-can-afford-it-109645> This article was subsequently reprinted by: (a) Ottawa Citizen, February 14, 2019 <https://ottawacitizen.com/pmn/news-pmn/back-pain-a-physiotherapist-may-offer-the-most-effective-treatment-if-you-can-afford-it/wcm/5042dabd-feb0-4460-b42f-afd16ba4ca4d>; (b) The article was also translated into French and published on the Conversation Canada. «Mal de dos? Il vous faut moins de pilules, et plus de physiothérapie... si vous en avez les moyens» <https://theconversation.com/mal-de-dos-il-vous-faut-moins-de-pilules-et-plus-de-physiotherapie-si-vous-en-avez-les-moyens-112093>.

Canadian Academy of Health Sciences. (2019). Improving the quality of life and care of persons living with dementia and their caregivers. Ottawa (ON): The Expert Panel on Dementia Care in Canada, CAHS.

Lovo Grona S, Oosman S, Bath B. Teams, Technology, and Two-Eyed Seeing: Bridging Health Care Access Gaps in a Remote Indigenous Community. Physiotherapy Practice. 2018 Jul. https://rehabscience.usask.ca/documents/Indigenous_CPA_Practice1.pdf.

Morgan D, Minish D. (April 2019). Summit 11 Final Report. Final report from the eleventh annual summit of the knowledge network in rural and remote dementia care, October 23rd & 24th 2018. Report printed at the University of Saskatchewan (20 pages).

Oosman S, Weber G, Bath B. Highlighting the value of physical therapy through a University-Community-Saskatchewan Physiotherapy Association partnership. Physiotherapy Practice. 2018 Oct. https://rehabscience.usask.ca/documents/Saskatchewan_CP_Practice.pdf.

Oosman S, Weber G, Bath B. The Lighthouse Pilot Project: Enhancing Access to Physical Therapy Services for People Experiencing Poverty and Homelessness. Saskatchewan College of Physical Therapists Momentum. 2018 Jun: <https://supt.in1touch.org/uploaded/web/Momentum%20Summer%202018.pdf>.

Trask C. How to improve farm safety for kids. Lay report on The Conversation Canada, a web-based research repository. <https://theconversation.com/how-to-improve-farm-safety-for-kids-99133>.

INVITED PRESENTATIONS

Bath B. Rethinking Front Line Care for Chronic Back Pain: Addressing Access Challenges through Teams and Technology. Invited lecture for O'Brien Institute for Public Health Seminar Series, University of Calgary, Calgary, AB (Oct 2018).

Bath B. Biopsychosocial Approach to Pain: Rethinking Front Line Care for Chronic Back Pain . Invited Plenary presentation. Pain and Therapeutics Conference. Saskatoon, SK. (Oct 2018).

Bath B. Invited Podcast interview. Global Physio Podcast (July 2018): <http://globalphysio.ca/gp019-canadian-underserved-communities-part-2-of-2-with-dr-brenna-bath-and-dr-stacey-lovongrona/>.

Bergman H, Morgan D. Kupka S. Assessment of evidence and best practices for the development of a Canadian dementia strategy. Presentation of CAHS panel report findings to the Ministerial Advisory Board on Dementia, Ottawa, ON [via Zoom], November 29, 2018.

Trask C, Reist R. (2019) Update on the ErgoVet Study. Conference of the Western Canadian Association of Bovine Practitioners, Saskatoon, SK. January 18-20, 2019.

Katselis G. Biomarker Discovery in Chronic Diseases Using Mass Spectrometry-Based Proteomics. Presented: City of Hope National Medical Centre, Los Angeles, California; November 29, 2018.

Koziy R. Diagnostic markers for detection of eradication of joint infection in horses. Presented: Department of Veterinary Pathology Graduate Student Research Seminar, Feb 20th, 2019.

Morgan D. (Interviewee Guest). Ten Canadian Broadcasting Corporation (CBC) radio broadcasts across Canada to discuss the Canadian Academy of Health Sciences (CAHS) National Dementia Care Assessment release outlining priorities for a Canadian Dementia Strategy. January 17, 2019.

Morgan D. The Rural Dementia Action Research Program: Twenty years of community-based research. Presentation to Department of Medicine Research Rounds, University of Saskatchewan, Saskatoon, SK, December 12, 2018.

Morgan D. (Chair & Presenter) Summit 11 - Knowledge Network in Rural and Remote Dementia Care - 11th Annual Summit. Knowledge exchange meeting of research team and Decision-Maker Advisory Council, Saskatoon, SK, October 23 & 24, 2018.

Morgan D. Team 20 Rural: Development, implementation, and scaling up of a Rural Primary Health Care Model for Dementia. Presentation at CCNA Annual Partners Forum and Science Day, Montreal, QC, October 2, 2018.

U. Pandher. Lung inflammation following inhalation of glyphosate and endotoxin. Presented: Respiratory Research Centre Seminar, Jan 15th, 2019.

Pandher U. Respiratory Effects of Exposure to Agricultural Environment Contaminants: Glyphosate and Endotoxin Inhalation Exposure. Presented: College of Medicine Graduate Students Society (CMGSS) Research Night, November 21, 2018.

Pandher U. Inflammatory effects of glyphosate and endotoxin exposure on human alveolar epithelial cells. Presented: International One Health Congress, June 23rd, 2018 at TCU Place, Saskatoon.

Schneberger D. Environmental CO2 Modification of Innate Immune responses to LPS and Organic dusts. Presented: International One Health Congress, June 23rd, 2018 at TCU Place, Saskatoon.

Trask C. (2018) Reaping what we sow: engaging workers and stakeholders in agricultural health research. Conference of the Canadian Association of Ergonomists (ACE). October 15-18, 2018. Sudbury, ON.

Asante B, Bath B, Trask C. (2018) Trunk Posture Assessment during Work Tasks at a Canadian Recycling Center. *International Journal of Industrial Ergonomics*. 68: 297-303 <https://www.sciencedirect.com/science/article/pii/S0169814117300331>.

Bath B, Jaindl B, Dykes L, Coulthard J, Naylen J, Rochelau N, Clay L, Khan MI, Trask C. (2018) Get 'Er Done: Experiences of Canadian Farmers Living with Chronic Low Back Disorders. *Physiotherapy Canada*. Dec 21(aop):1-10 <https://utpjournals.press/doi/abs/10.3138/ptc.2017-65>.

Bath B, Ma D, Lawson J, Trask C. (2018) Self-reported use of family physician, chiropractor and physiotherapy services among adult Canadians with chronic back disorders: an observational study. Submitted for publication in *BMC Health Services Research*, Dec;18(1):970. <https://bmchealthservres.biomedcentral.com/articles/10.1186/s12913-018-3790-6>.

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Bayly M, Forbes D, Blake C, Peacock S, Morgan D. Development and implementation of dementia-related integrated knowledge translation strategies in rural home care (2018). *Online Journal of Rural Nursing and Health Care*, 18(2). doi:10.14574/ojrnhc.v18i2.509.

Blackberry I, Wilding C, Perkins D, Greenhill J, Farmer J, Bauer M, Winbolt M, Morley C, O'Connell ME, Morgan D. (December 2018/ January 2019). Virtual dementia-friendly rural communities. *Australian Journal of Dementia Care*, 7(6), 11-13.

Brandt C, McFie PJ, Vu H, Chumala P, Katselis GS, Stone SJ. Identification of calnexin as a diacylglycerol acyltransferase-2 interacting protein. *PLoS One*. 2019 Feb; 14(1):e0210396.

Cammer A, Morgan D, Whiting S. (2019) Nutrition Care for Residents with Dementia in Long-Term Care Homes: Umbrella Review of Care Aide and Registered Dietitian Services. *International Journal of Aging Research*, 2(32). doi:10.28933/ijoar-2019-03-1005.

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Elliot V, Morgan D, Kosteniuk J, Froehlich Chow A, Bayly M. (2018). Health-Related Stigma of Non-Communicable Neurological Disease in Rural Adult Populations: A Scoping Review. *Health and Social Care in the Community*. doi:10.1111/hsc.12694.

Enright J, O'Connell ME, Branger C, Kirk A, Morgan D. (2018). Identity, relationship quality, and subjective burden in caregivers of persons with dementia. *Dementia: International Journal of Social Research and Practice*. doi:10.1177/1471301218808607.

Froehlich Chow A, Morgan D, Bayly M, Kosteniuk J, Elliot V. (2019). Collaborative approaches to team-based primary health care for individuals with dementia in rural and remote settings: A scoping review. *Canadian Journal on Aging/La revue Canadienne du vieillissement*. 1-17. doi:10.1017/S0714980818000727.

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Karunanayake CP, Amin K, Abonyi S, Dosman JA, Pahwa P. Prevalence and Determinants of Asthma among Aboriginal Adolescents in Canada. *Journal of Asthma* 2018. 10.1080/02770903.2018.1541354.

Kelly L. Penz, Norma J. Stewart, Chandima P. Karunanayake, Julie G. Kosteniuk, Martha L.P. Macleod. Competence and Confidence in Rural and Remote Nursing Practice: A Structural Equation Modelling Analysis of National Data. *Journal of Clinical Nursing* 2019: 1-16. DOI: 10.1111/jocn.14772.

Khan MI, Bath B, Boden C, Adebayo O, Trask C. (2018) The association between awkward posture and low back disorders among farmers: a systematic review. *Journal of Agromedicine* 2019 Jan 24(1), 74-89. <https://doi.org/10.1080/1059924X.2018.1538918>.

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Chronic Conditions and their Caregivers: A Scoping Review. *BMC Geriatrics*, 18(1), 231. doi:10.1186/s12877-018-0925-x.

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CONFERENCE & ABSTRACTS

Angarita-Fonseca A, Trask C, Shah T, Bath B. (2018) Canadian trends in the prevalence of Chronic Back Disorders, 2007-2014. **Presented:** 5th iteration of Global Health Student Young Professionals Summit. Becoming Change Agents in Global Health. University of Toronto. Toronto, ON; 2018 Nov 18.

Angarita-Fonseca A, Trask C, Shah T, Bath B. Prevalence of chronic back disorders among Canadian adults: trends in gender, age, and geography and distribution of physiotherapists. **Presented:** Canadian Physiotherapy Association Congress, Montreal, November 1-3, 2018. Montreal, QC.

Angarita-Fonseca A, Trask C, Shah T, Bath B. Chronic Back Disorders in Canadian adults: Results of the 2007-2014 Canadian Community Health Survey. **Presented:** 2018 Canadian Student Health Research Forum. June 11-15, 2018. Winnipeg, MB.

Bacsu J, Viger M, Abonyi S, Johnson S, Morgan D, Jeffery B, Novik N. (2018) Longer lives and the determinants of cognitive health: Rural older adults' perspectives. **Presented:** Gerontological Society of America 2018 Annual Scientific Meeting, Boston, MA, November 14-18, 2018.

Bacsu J, Viger M, Abonyi S, Johnson S, Morgan D, Jeffery B, Novik N. Supportive interventions of cognitive health: Rural seniors' perspectives. **Presented:** International Federation on Ageing 14th Global Conference on Ageing, Toronto, ON, August 8-10, 2018.

Bashiri B, Milosavljevic S, Trask C. (2018) Egress technique in agricultural machinery and the risk of falls. **Presented:** Conference of the Canadian Association of Ergonomists (ACE). October 15-18, 2018. Sudbury, ON.

Bashiri B, Milosavljevic S, Trask C. (2018) Seated whole body vibration and egress performance in Agricultural machines: mitigating the risk of injury by performing recalibration movements. **Presented:** 20th Congress International Ergonomics Association Conference, August 26th-30th, 2018, Florence, Italy.

Bath B, Lawson J, Ma D, Trask C. (2018) Uncovering inequities in access to health care among adult Canadians with chronic back disorders. **Presented:** Canadian Physiotherapy Association Congress; 2018 Nov; Montreal, QC.

Bath B, Lawson J, Ma D, Trask C. (2018) Gaps in access to care: self reported use of family physicians, chiropractors and physiotherapists among adult Canadians with chronic back disorders. **Presented:** Canadian Association of Health Services and Policy Research Conference: Shaping the Future of Canada's Health Systems; 2018 May 29-31; Montreal, QC.

Bayly M, Forbes D, Blake C, Peacock S, Morgan D, Woytkiw T. Development and implementation of dementia-related knowledge translation strategies: Perceived challenges and benefits from the perspective of rural home care providers. **Presented:** 47th Annual Scientific &

Educational Meeting of the Canadian Association on Gerontology, Vancouver, BC, October 18-20, 2018.

Bayly M, Morgan D, Froehlich Chow A, Kosteniuk J, Elliot V. Dementia-related support and education service accessibility and use in rural areas: Barriers and promising solutions. **Presented:** Canadian Association on Gerontology (CAG) 2018, Vancouver, BC, October 18-20, 2018.

Chumala P, Haney-Ball C, Kelly T, Thompson B, Oluwole O, Afanasieva A, Rennie D, Lawson J, Katselis GS. Urine proteomics workflow for the discovery of biomarkers in children with asthma. **Presented:** 66th ASMS Conference on Mass Spectrometry and Allied Topics; San Diego, California 2018 Jun.

Chumala P, Kelly T, Thompson B, Erickson R, Lawson J, Dyck R, Katselis GS. Examining the relationship between diabetic pregnancies and kidney disease in offspring using urine proteomics. **Presented:** 67th ASMS Conference on Mass Spectrometry and Allied Topics; Atlanta, Georgia 2019 Jun 2-6.

Chumala P, Kelly T, Thompson B, Okpalauwarkwe U, Bath B, Trask C, Taylor-Gjevre R, Leswick D, Obaid H, Bussey M, Nair B, Milosavljevic S, Katselis GS. A proteomics approach for the early clinical identification of axial spondylarthritis: a study of first degree relatives. **Presented:** U of S CoM 2nd Floor Research Day 2019; 2019 Mar 19-19.

Danylyshen-Laycock T, Morgan D, Stewart N, O'Connell ME, Goodridge D. The role of facilitation in sustainability of a dementia training program in rural long-term care homes. **Presented:** Gerontological Society of America 2018 Annual Scientific Meeting, Boston, MA, November 14-18, 2018.

Danylyshen-Laycock T, Morgan D, Stewart N, O'Connell ME, Goodridge D. The impact of Leadership and Culture on Sustainability of a dementia training program in long-term care. **Presented:** Gerontological Society of America 2018 Annual Scientific Meeting, Boston, MA, November 14-18, 2018.

Fonseca AA, Bath B, Trask C. Time trends for Chronic Back Disorders: Results from the Canadian Community Health Survey. **Presented:** Canadian Association for Research on Work and Health Conference, CARWH 2018: Research and Practice to Improve Health in a Changing World of Work; 2018 Nov; Vancouver, BC.

Fonseca AA, Trask C, Shah T, Bath B. Prevalence of chronic back disorders among Canadian adults: trends in gender, age, and geography and distribution of physiotherapists. **Presented:** Canadian Physiotherapy Association Congress; 2018 Nov; Montreal, QC.

Goes S, Trask C, Boden C, Bath B, Ribeiro D, Hendrick P, Clay L, Zeng X, Milosavljevic S. Systematically reviewing range of motion assessment for determining permanent functional impairment of the spine. **Presented:** Canadian Association of Research Work and Health; 2018 Oct; Vancouver, BC.

Horsley S, Montieth K, Mowat B, Schock G, Stasiuk K, Lovo Grona S, Boden C, Bath B. Use of real-time videoconferencing to deliver physical therapy services: a scoping review of published and emerging evidence. **Presented:** Canadian Physiotherapy Association Congress; 2018 Nov; Montreal, QC .

Kelly T, Thompson B, Chumala P, Okpalauwaekwe U, Bath B, Trask C, Taylor-Gjevre R, Leswick D, Obaid H, Bussey M, Nair B, Milosavljevic S, Katselis G. A proteomics approach for the early clinical identification of axial spondyloarthritis: a study of first degree relatives. **Presented:** American Society for Mass Spectrometry; 2018 Jun; San Diego, CA

Kiryuchuk S, Thompson B, McNair E, Schneberger D, Katselis G. Inflammatory Pathway expression in new and experienced swine confinement workers. **Presented:** 2018 ISASH Conference; Halifax, NS; 2018 Jun.

Koehncke N. Occupational Health and Safety Regulations in Canada and the Canadian Centre for Health and Safety in Agriculture. **Presented:** 1st Panamerican Conference on Occupational and Environmental Health in Rio de Janeiro, RJ, Brazil, 2019.

Koehncke N. Radiation research findings. **Presented:** American College of Occupational and Environmental Medicine annual conference in Anaheim, CA, USA. 2018.

Koziy RV, Chumala P, Thompson B, Kelly T, Yoshimura S, Bracamonte JL, Simko E, Katselis GS. Discovery proteomics for the detection of diagnostic markers in an experimental model of equine septic arthritis using LC-MS/MS. **Presented:** U of S CoM 2nd Floor Research Day 2019; 2019 Mar 19-19.

Lee S, Kirk A, Karunanayake C, O'Connell ME, Kirk EA, Morgan D. Factors associated with having a will, power of attorney and advanced healthcare directive in patients presenting to a rural and remote memory clinic. **Presented:** 53rd Canadian Neurological Sciences Federation Congress, Halifax, NS, June 24-27, 2018.

Lee S, Kirk A, Karunanayake C, O'Connell ME, Kirk E, Morgan D. Factors associated with having a will, power of attorney and advanced healthcare directive in patients presenting to a rural and remote memory clinic. **Presented:** Canadian Neurological Sciences Federation 53rd Congress, Halifax, NS, June 24-27, 2018.

Lin S, Rudulier C, Gordon JR, Katselis G. Global and Targeted Proteomics Analysis of Surface Proteins Expressed on Human Regulatory Dendritic Cells. **Presented:** U of S CoM 2nd Floor Research Day 2019; 2019 Mar 19-19.

Lovo Grona S, Bath B. Building Rural and Remote Primary Healthcare Capacity for Musculoskeletal Health: Linking Physiotherapists to Rural, Remote and Indigenous Teams using Technology. **Presented:** Canadian Physiotherapy Association Congress; 2018 Nov; Montreal, QC

Martel M, Zheng L, Kiryuchuk S, Guo H, Choi K. Dust Control in poultry housing by an electrostatic precipitation: A laboratory scale study. **Presented:** CSBE Technical Meeting 2018; Guelph, ON; 2018 Jul 22-25.

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Mubareka S, Groulx N, Savory E, Cutts TA, Theriault S, Scott JA, Roy CJ, Turgeon N, Bryce E, Astrakianakis G, Kiryuchuk S, Girard M, Kobinger G, Zhang C, Duchaine C. Bioaerosols and transmission, a diverse and growing community of practice. **Presented:** CSM 68th Annual Conference; Winnipeg, MB; 2018 Jun 18-23.

Muhammad IZ, Katselis GS, Chumala P, Pettitt M, Buhr MM. Identification of protein markers in Bovine Sperm Head Plasma Membrane Associated with Male Fertility Using Mass Spectrometry-based Proteomics. **Presented:** U of S CoM 2nd Floor Research Day 2019; 2019 Mar 19-19.

Nair B, Kastelis G, Milosavljevic S, Taylor Gjevre R, Leswick D, Obaid H, Bath B, Trask C, Okpalauwaekwe U, Tess K, Thompson B, Chumala P, Bussey M. A Proteomics Approach for the Early Clinical Identification of Axial Spondyloarthritis: A Study of First Degree Relatives. **Presented:** Canadian Rheumatology Association-Arthritis Health Professions Association Annual Scientific Meeting; 2019 Feb; Montreal, QC.

Nascimento A, Schneberger D, Pandher U, Merkowsky K, Thompson B, Kiryuchuk S, Singh B. Allergic Lung Inflammation in Offspring of Pregnant Mice exposed to Organic Dust. **Presented:** U of S CoM 2nd Floor Research Day 2019; 2019 Mar 19-19.

Nascimento A, Schneberger D, Thompson B, Sandini T, Singh B, Kiryuchuk S. The Effects of Resp Aid on Asthma. **Presented:** U of S CoM 2nd Floor Research Day 2019; 2019 Mar 19-19.

Oosman S, Weber G, Ogunsan M, Bath B. The Lighthouse pilot project: Enhancing access to physiotherapy services for people experiencing poverty and homelessness. **Presented:** Canadian Physiotherapy Association Congress; 2018 Nov; Montreal, QC

Pandher U, Schneberger D, Thompson B, Aulakh G, Singh B, Sethi RS, Kiryuchuk S. Repetitive exposure to glyphosate with LPS induces higher lung inflammation in Mice. **Presented:** U of S CoM 2nd Floor Research Day 2019; 2019 Mar 19-19.

Pandher U, Schneberger D, Thompson B, Aulakh G, Singh B, Sethi RS, Kiryuchuk S. Glyphosate combines with LPS to induce increased inflammation in mouse lungs. **Presented:** Canadian Society For Immunology (CSI) Conference, Banff, Alberta April 12-15, 2019.

Pandher U, Schneberger D, Thompson B, Aulakh G, Singh B, Sethi RS, Kirychuk S. Agricultural Respiratory Exposures: Glyphosate Combines with LPS to Induce Increased Lung Inflammation in Mice. Presented: 2019 Life and Health Sciences Research Expo, May 2, 2019.

Ramsden VR, Kirychuk S, Rabbitskin N, Abonyi S, Dolovich L, Dosman JA, Fenton M, Graham H, Lamarche L, Bighead S, Davis B, Jacobson N, Karunanayake C, McKay S, Turner T. Māmwōh-kamātowin (Working Together) – Enhancing Health & Wellness. Presented: NAPCRG 2018 Annual Meeting; 2018 Nov; Chicago, IL

Ramsden, VR, Kirychuk, S, Rabbitskin, NY, Abonyi, S, Dolovich, L, Dosman, JA, Fenton, M, Graham, H, Lamarche, L, Bighead, S, Davis, B, Turner, T. Māmwōh-kamātowin (working together) – Enhancing Health & Wellness with Sturgeon Lake First Nation. Presented: 17th International Congress on Circumpolar Health; Copenhagen, Denmark 2018 Aug 12-15.

Reist R*, Jelinski M, Bath B, Trask C. (2019) Getting to the Bottom of Shoulder Pain: An Ergonomic Assessment of Bovine Rectal Palpations. **Presented:** 22nd Annual Applied Ergonomics Conference, 2019 March 25-28, New Orleans, USA. *Winner of the Creativeness in Ergonomics (CE) Student of the Year Award.

Reist R, Jelinski M, Bath B, Trask C. (2018) Head and Shoulders, Knees and Cows: Investigating Musculoskeletal Disorder Risk Factors among Bovine Veterinarians. **Presented:** Canadian Association for Research on Work and Health Conference. October 21-23, 2018 Vancouver, BC.

Reist R, Jelinski M, Bath B, Trask C. (2018) Up to our Elbows in Ergonomics: Quantifying the risks of bovine rectal palpations. **Presented:** 20th Congress International Ergonomics Association Conference, August 26-30 2018 Florence, Italy.

Rudilier C, Lin S, Ness S, Katselis GS, Nadeau KC, Gordon JR. Simultaneous induction of tolerance to multiple allergens by regulatory dendritic cells from asthmatic and peanut allergic subjects. Presented: Collegium Internationale Allergologicum; Mallorca, Spain 2018 Sept 30 – Oct 2.

Schneberger D, Thompson B, Pandher U, Kirychuk S. CO2 Exposure can Modify Innate Immune Responses to Organic Dust and LPS. Presented: U of S CoM 2nd Floor Research Day 2019; 2019 Mar 19-19.

Shah T, Milosavljevic S, Trask C, Bath B. (2018) Geospatial access to physiotherapy services in Canada: mapping physiotherapist use and distribution [abstract]. **Presented:** Canadian Association of Health Services and Policy Research Conference: Shaping the Future of Canada's Health Systems; 2018 May 29-31; Montreal, QC.

Shah T, Milosavljevic S, Trask C, Bath B. (2018) The 'where' of care: mapping physiotherapy use in Canada in relation to physiotherapist distribution. **Presented:** Canadian Physiotherapy Association Congress; 2018 Nov; Montreal, QC.

Taylor Gjevre R, Nair B, Okpalauwaekwe U, Bath B, Gyurcsik N. Seasonal Variations in Physical Activity in Patients with Rheumatoid Arthritis. **Presented:** Canadian Rheumatology Association-Arthritis Health Professions Association Annual Scientific Meeting; 2019 Feb; Montreal, QC.

Thompson B, Chumala P, Schneberger D, Kirychuk S, Katselis GS. Differential Expression of inflammatory proteins in new male and female swine confinement workers. Presented: 67th ASMS Conference on Mass Spectrometry and Allied Topics; Atlanta, Georgia 2019 Jun 2-6

Trask C, Imeah B, Bath B, Liu A, Adebayo O, Rana M, Predicala B, Penz E, Milosavljevic S, Whittington L, Kociolek AM. (2018) Whole Hog Research: Ergonomic Evaluation and Cost-Benefit Analysis of Needle-less Injection Tools in Pork Production. **Presented:** Canadian Association for Research on Work and Health Conference. October 21-23, 2018 Vancouver, BC.

Trask C, Yung M, Milosavljevic S. (2018) Beyond back pain: acute cognitive and motor effects of simulated whole body vibration in lab-based experiments. **Presented:** 7th American Congress on Human Vibration, June 13-15, Seattle, USA.

Wilding C, Perkins D, Greenhill D, Farmer J, O'Connell ME, Winbolt M, Bauer M, Morley C, Morgan D. Building a virtual online community to support rural carers: Verily Connect project. **Presented:** 15th National Rural Health Conference, Hobart, Tasmania, March 24-27, 2019.

Wilding C, Blackberry I, Farmer J, Greenhill J, Perkins D, Bauer M, Winbolt M, O'Connell ME, Morgan D. The VERILY project on virtual, dementia-friendly rural communities: Perspectives from Australia. **Presented:** Aging & Society: Eighth Interdisciplinary Conference, Tokyo, Japan, September 18-19, 2018.

Yung M, Milosavljevic S, Trask C. (2018) Do Whole Body Vibration Exposure Thresholds Minimize for Acute Sensorimotor and Cognitive Effects? **Presented:** National Occupational Injury Research Symposium. October 16-18 Morgantown, WV, USA.

Yung M, Milosavljevic S, Trask C. (2018) Exploring the acute effects of whole body vibration: A simulated vibration study using guideline thresholds. **Presented:** 20th Congress of the International Ergonomics Association. Florence, Italy. August 26th-30th, 2018.

Yung M, Milosavljevic S, Trask C. (2018) Investigating the sequential combined effects of whole body vibration and physical or mental work demands: Are fatigue effects additive? **Presented:** 20th Congress of the International Ergonomics Association. Florence, Italy. August 26th-30th, 2018.

Zeng X, Reist R, Jelinski M, Bath B, Erickson N, Clark C, Trask C. (2018) Musculoskeletal Symptoms among Canadian Beef and Dairy Veterinarians: how common are they and what is the impact? **Presented:** 20th Congress International Ergonomics Association Conference, August 26-30, 2018, Florence, Italy.

FACULTY, STUDENTS & STAFF NEWS & AWARDS



Dr. Brenna Bath was the recipient at the 2018 SHRF Santé Impact award for her research project titled "Advancing interprofessional primary health care services in rural settings for people with chronic low back disorders: investigation of a physiotherapist and nurse practitioner intervention delivered through telehealth".

This project has developed into a broader program of research developing and evaluating enhanced musculoskeletal care for those in rural communities.



Dr. Shelley Kirychuk, College of Medicine and the Canadian Centre for Health and Safety in Agriculture (CCHSA), and co-applicants Drs. George Katselis, Joshua Lawson, and Vivian Ramsden were among 12 U of S researchers awarded Collaborative Innovation Development grants by the Saskatchewan Health Research Foundation

(SHRF) for 2017-18. Dr. Kirychuk's research project is on "Mold as a respiratory risk factor for rural populations". The overall goal of this project is to assess if measures of mold in dust samples from rural Saskatchewan homes (rural and First Nations) are associated with respiratory health outcomes of residents of the home.



Dr. Niels Koehncke, with project titled *Worker Radiation Safety Practices During Mobile Equine Radiography* received a College of Medicine Research Award (CoMRAD) \$29,000 for 1 Year. This research looks at radiation safety practices during mobile equine radiography in Alberta, Saskatchewan and Manitoba.

Dr. Niels Koehncke represented and co-signed for Canada and OMSOC on the "Rio Manifesto" together with multiple other nations and organizations including USA, Mexico and the UK calling for improved health and safety for workers in Panamerica and encouraging research connections.



Dr. Brenna Bath was the recipient of the Impact Award, Saskatchewan Health Research Foundation (SHRF). This peer-reviewed award is based on activities arising from the SHRF Establishment Grant: *Advancing interprofessional primary health care services in rural settings for people with chronic low back disorders: Investigation of a physiotherapists and nurse practitioner intervention delivered through Telehealth* (2013 to 2016 - Bath B (Principal Investigator)).

The award recognizes research that builds capacity, advances knowledge and informs decision-making in health care and comes with \$3000 to be used towards knowledge translation activities.



Dr. Catherine Trask was awarded the Researcher of the Year, University of Saskatchewan Department of Medicine Unified Head Award.

Dr. Catherine Trask received the Graduate Advising Excellence Award, University of Saskatchewan Graduate Students Association. *This award honours a graduate student advisor who*

has shown excellent supervisory and mentoring skills as well as exceptional support for their advisees' ideas, scholarly work, and financial needs. The honoured advisor embodies the capacity to stimulate graduate students to think critically and creatively, while enhancing their graduate student learning experience.



Katrin Richie, with project titled *Integrating Physiotherapists into Publicly Funded Primary Health Care*

Teams: An Environmental Scan, received a Master of Physical Therapy (MPT student) Research Funding (\$6,000) for an 8 month period in 2019) from the College of Medicine.



Dr. Ornwipa (Fah) Thamsuwan: 2018 Saskatchewan Health Research Foundation Top Fellowship, Soci-Health for Postdoctoral fellow Awarded for the project “Take a load off: an ergonomic evaluation of exoskeletons for Saskatchewan farmers”



Robyn Reist: 2019 Creativeness in Ergonomics (CE) Student of the Year Award for Masters student Awarded for the poster “Getting to the Bottom of Shoulder Pain: An Ergonomic Assessment of Bovine Rectal Palpations” presented at: 22nd Annual Applied Ergonomics Conference, 2019 March 25-28, New Orleans.



Melanie Bayly, Postdoctoral Fellow supervised by Dr. Debra Morgan, received a travel award for \$1500 to attend and present her research project at the 2018 Canadian Consortium on Neurodegeneration and Aging (CCNA) Science Day and Partners Forum. In addition, Melanie was awarded \$500 for the best poster in the Postdoctoral Researcher category of the Trainee Poster Competition, at the (CCNA) Science Day and Partners Forum (October 2018, Montreal, Quebec). **This award was supported by the Alzheimer’s Society of Canada.**



Congratulations to **Dr. Oluwafemi Oluwole,** Postdoctoral fellow at the CCHSA for his winning paper in the category of Social and Population Health during the 2018 Life and Health Sciences Research Expo (formerly the Life and Health Sciences Research Day). His paper titled “Asthma diagnosis among children along an urban-rural gradient” was published in the Journal of Asthma in February 2018.



Virginia Deobald, Nursing Masters student supervised by Dr. Shelley Peacock, was awarded the University of Saskatchewan College of Nursing Graduate Student Award: The Judy Gajadharsingh Award for Graduate Student Excellence in Dementia/Alzheimer Research (December 2018, Saskatoon, Saskatchewan).



Upkardeep S. Pandher was one of the recipients of the Respiratory Research Centre Graduate Student Scholarship Award (\$10,000). He also received a CIHR Travel Award in the amount of \$1,000 and a Graduate Student College of Medicine Travel Award (\$1,500).



Amanda Froehlich Chow, Postdoctoral Fellow supervised by Dr. Debra Morgan, received a travel award for \$1500 to attend and present her research project at the Canadian Consortium on Neurodegeneration and Aging (CCNA) Science Day and Partners Forum (October 2018, Montreal, Quebec).



Adriana Angarita Fonseca was nominated as being within the top 5% of doctoral students for participation in the CIHR Research Poster Presentation. As part of the Travel Award, CIHR selected her to receive an amount of up to \$1,000.00 to reimburse her travel/accommodation expenses to attend the Canadian Student Health Research Forum in Winnipeg, June 12-15, 2018. Adriana is a PhD candidate in the Department of Community Health & Epidemiology supervised by Dr. Catherine Trask and Dr. Brenna Bath.



August Kortzman, Clinical Psychology, PhD student supervised by Dr. Megan O’Connell, received a participation certificate for the Systematic Review Workshop: Using Methods from the Cochrane Collaboration and the GRADE Working Group, presented by the Saskatchewan Centre for Patient-Oriented Research (December 2018, Saskatoon, Saskatchewan). In addition, August was awarded the University of Saskatchewan Dean’s Scholarship (3 years; \$22,000 per year plus tuition). These scholarships are offered to students who have outstanding academic records, show research promise and are registering for the first time in a thesis-based graduate program.



Ulfat Ara Khanam, PhD student in Health Sciences program, College of Medicine, University of Saskatchewan, has been awarded the University of Saskatchewan Graduate Scholarship (UGS) by the College of Graduate and Postdoctoral Studies. The value of this scholarship is \$20,000 annually for three years. Ulfat is working towards her PhD research under the supervision of Dr. Joshua Lawson. Her project, titled “Predicting and validating asthma among rural and urban children”.



Karl Grewal, Clinical Psychology Masters student supervised by Dr. Megan O’Connell, was the recipient of a Canadian Frailty Network (CFN) Summer Student Award and an Outstanding Summer Student Poster Award (CFN National Conference (September 2018, Toronto, Ontario). In addition, Karl was awarded the Bilokreli Student Poster Prize – First Place at the 11th Annual Summit of the Knowledge Network in Rural and Remote Dementia Care (October 2018, Saskatoon, Saskatchewan). Karl also received the Canadian Institutes of Health Research (CIHR) Canada Graduate Scholarships – Masters Award (CGS-M) (April 2019).

FACULTY CREDENTIALS & AWARDS



Dr. Catherine Trask has been awarded an additional 5-year term as Canada Research Chair in Ergonomics and Musculoskeletal Health. This chair will support ongoing work in the CCHSA Ergonomics Lab focusing on work-related musculoskeletal disorders in agriculture. Dr. Trask’s appointment as a Canada Research Chair began in 2012, with the first term running to 2017. The current second term will continue until 2022.



Dr. Niels Koehncke completed the Leadership Development Program through the Edwards School of Business, University of Saskatchewan, 2019.

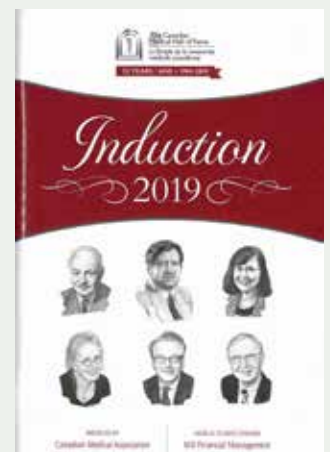


DR. JAMES A. DOSMAN INDUCTED TO CANADIAN MEDICAL HALL OF FAME

The Canadian Medical Hall of Fame (CMHF) celebrates Canadian heroes whose work advances health in Canada and the world, and fosters future generations of health professionals through the delivery of local and national youth education programs, scholarships and awards.

Our very own, Research Chair Dr. Jim Dosman, considered the ‘father of agricultural medicine in Canada’ was inducted into the Canadian Medical Hall of Fame at a ceremony in Montreal on May 2, 2019.

Dr. Dosman is the founding director of the Canadian Centre for Health and Safety in Agriculture and has received many honours including an Officer of the Order of Canada, the Saskatchewan Order of Merit, and a Fellow of the Royal Society of Canada. He has been inducted into the Canadian Academy of Health Sciences and the Saskatchewan Agricultural Hall of Fame for his accomplishments. Thank you Dr. Dosman for paving the way! We couldn’t be prouder! So deserving!



RESEARCH GRANTS

Bath B (PI), Lovo Grona S (Co-PI), Oosman S, Sari N, McKinney V, Dorion M, Sewap S, Brown J; Collaborators: Ballantyne B, Keith H, Weber Beeds A, Michel R, Mendez I, Bourassa R, Graham AM, Gjevre R, Bustamante L, Sasakamoose J, Ndubuka N, Johnson R. (Co-investigators). A Community-Informed Team and Technology Approach to Chronic Back Pain Management in Partnership with a Northern Saskatchewan Cree First Nation. Saskatchewan Health Research Foundation & Saskatchewan Centre for Patient Orientated Research. Total: \$179,871.00 for 2019-02 to 2021-01.

Bath B (PI). Development of an inter-professional remote spine clinic in a remote northern Indigenous community, Saskatchewan Centre for Patient-Oriented Research: Patient Engagement Application Development Award. Total: \$2,500.00 for 2018-07 to 2018-10.

Katselis G (PI), Bath B, Nair B, Trask C, Chumala P, Taylor-Gjevre R, Milosavljevic S (Co-investigators). Use of Proteomics as a Diagnostic and Prognostic Tool for Chronic Low Back Pain, Department of Medicine, University of Saskatchewan. Total: \$19,500.00 for 2018-11 to 2019-08.

Katselis G (PI). Research Cluster Funding for Interdisciplinary Research, University of Saskatchewan OVD. Total: \$5,000.00 for 2018-01 to 2018-12.

Katselis G (PI), Lawson J, Inman M, Nour M, Dyck R, Erickson R. (Co-investigators) Investigating the Role of Diabetic Pregnancies in Kidney Disease Among Type 2 Diabetes Mellitus Adolescents using Urine Proteomics, Saskatchewan Health Research Foundation. Total: \$50,000 for 2019-04 to 2020-03

Katselis G (PI), Rajput A, Rajput A (Co-investigators). Proteomics Studies in Parkinson's disease, University of Saskatchewan CoMRAD. Total: \$29,212.00 for 2019-04 to 2020-03.

Kirychuk S (PI). Research Cluster Funding, University of Saskatchewan OVD. Total: \$34,000.00 for 2019-04 to 2020-03.

Kirychuk S (PI). Research Cluster Funding, University of Saskatchewan OVD. Total: \$30,000.00 for 2018-01 to 2019-03.

Kirychuk S, Mayer M (Co-PIs).

Post Doctoral Fellowship for Alexandra Bellota: Dose to the Lens of the Eye in Veterinary Workers Performing Diagnostic Radiology Procedures, Saskatchewan Health Research Foundation. Total: \$100,000.00 for 2018-07 to 2020-03.

Kirychuk S, Florentina Do Nascimento A. (Co-PIs). *The effects of Resp-Aid on Asthma,* Fellowship for Dr. Amanda Florentina do Nascimento MI-TACS Accelerate. Total: \$30,000.00 for 2018-12 to 2019-07.

Simko E (Co-PI), Koziy R (Co-PI), Bracamonte JL, Katselis G (Co-investigators). Mass Spectrometric Identification of Biomarkers for the Detection of Eradication of Infection in Equine Septic Arthritis, Townsend Equine Health Research Fund. Total: \$28,835.00 for 2019-05 to 2020-04.

Taylor-Gjevre R (PI), Katselis G, Nair B, Leswick D, Obaid H (Co-investigators). Early Osteoarthritis Detection in Women with Hypermobility of the First Carpometacarpal Joint, University of Saskatchewan CoMRAD. Total: \$28,460.00 for 2019-04 to 2020-03.

SARM SCHOLARSHIP WINNERS

In 1995, the Saskatchewan Association of Rural Municipalities (SARM) auctioned the first copy of its history book "The Building of a Province: Commemorating the 90th Anniversary of the Saskatchewan Association of Rural Municipalities." This auction netted the sum of \$2,600 which the SARM Board of Directors contributed to the Canadian Centre for Health and Safety in Agriculture (CCHSA). These funds initiated the SARM 90th Anniversary \$1,000 Student Scholarship in Agricultural Safety and Rural Health. The Founding Chairs Program.

This year two scholarships of \$1,500 each were awarded to grade 12 students, Collete Kernaleguen, from St Brioux, Lake Lenore RM #399, and Dallyn Bast, from Macklin, Eye Hill RM # 382. Students were asked to submit essays about (a) The importance of safety and health on our farm or (b) Safety and health hazards on our farm.



Dallyn Bast
Eye Hill, RM #382

"On our farm, so many different situations can cause health issues, injury, and possibly death. Safety procedures should be followed as much as humanly possible. The farm is a dangerous place and putting safety first can be the ultimate life saver."

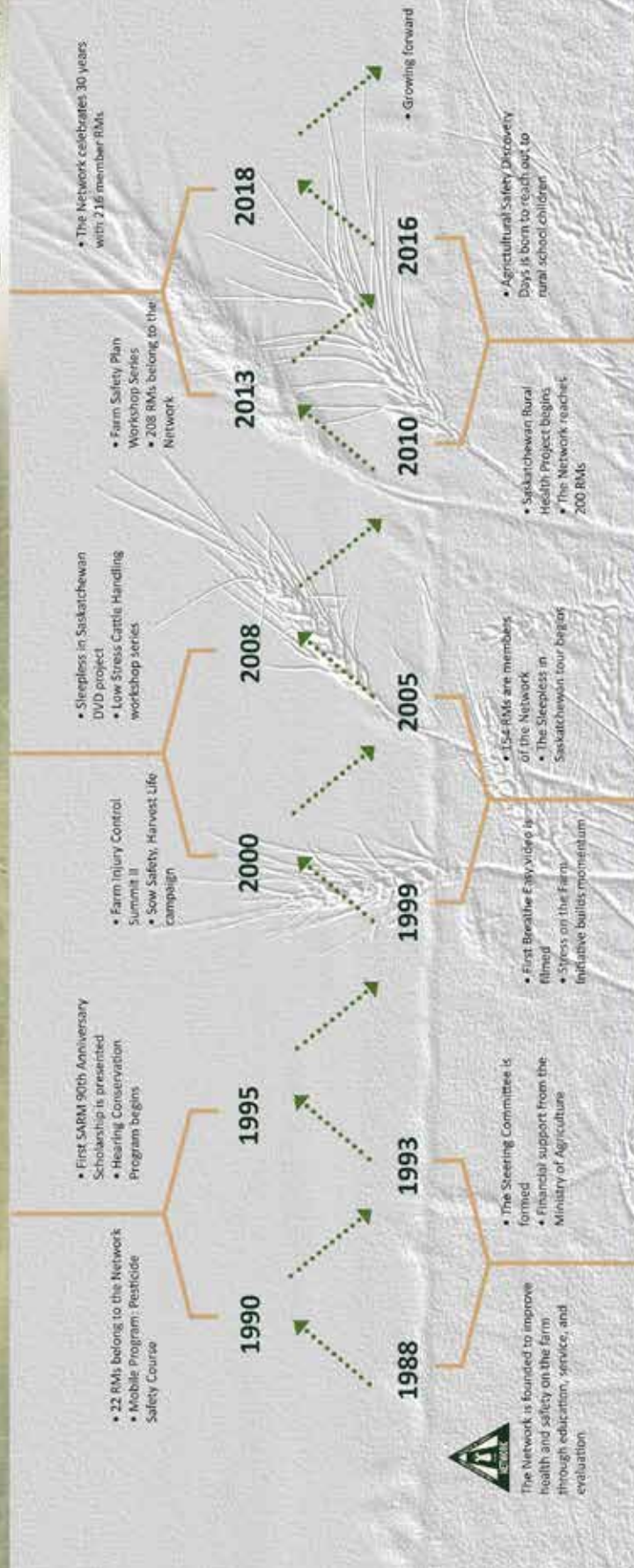


Collete Kernaleguen
Lake Lenore, RM #399

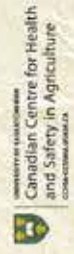
"By taking precautions and using simple techniques to teach safety everyone avoids injury and/or accidents from happening. Things like teaching kids to move to the side of the road if they hear or see machinery coming, making sure the equipment is maintained to keep the operator and everyone around safe and being aware of your surroundings. Practicing prevention is the easiest and best way to avoid injury or accidents."

30TH ANNIVERSARY

AGRICULTURAL HEALTH AND SAFETY NETWORK



1988 - 2018 30 years caring about farm families





UNIVERSITY OF SASKATCHEWAN

**Canadian Centre for Health
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