



Canadian MSK Rehab Research Network Newsletter

Summer 2025

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Co-PIs:

- Dr. Joy MacDermid (NPI)
- Dr. Trevor Birmingham
- Dr. Laurent Bouyer
- Dr. Deborah Marshall
- Dr. Rebecca Moyer
- Dr. Jean Sebastien Roy
- Dr. Alik Thomas

Network Coordinator:

- Sierra Crocker
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Announcements

Congratulations to **Dr. Lora Giangregorio** for being awarded a Tier 1 Canada Research Chair (CRC) in Bone Health and Exercise Science, with funding of \$1.4 million! Dr. Giangregorio is widely acknowledged for her exceptional research aimed at reducing the impact of osteoporotic (bone tissue) fractures. She leads the Bone Health and Exercise Science Lab (BonES) at the University of Waterloo, working on exercise research to reduce fracture risk.

Wearables and Biomechanics 2025 Summer School

From June 23 to June 26, 2025, over 40 trainees from institutions across the country came together for a dynamic Summer School on **Wearables and Biomechanics in MSK rehab**. This national training initiative was made possible through a collaborative effort between the **University of British Columbia, The Centre for Aging SMART, Lululemon, The Canadian Society for Biomechanics**, and the **Canadian MSK Rehab Research Network**.



The multi-day program featured speaker sessions, group-based work, and expert-led discussions focused on some of the most innovative and fast-evolving areas in the field, including:

- **Advances in Biomechanics**
- **Markerless Motion Capture**
- **Inertial Measurement Units**
- **Biomechanics in Action: Sport and Field Applications**
- **Wearable Technology Development**
- **Assistive Devices**

By bridging academic research with industry insight, the Summer School fostered cross-disciplinary learning and national collaboration. Participants left with new skills, new connections, and fresh ideas to apply in their labs and clinical settings.



This event is a testament to the power of collaboration in driving innovation and training the next generation of MSK rehab researchers.

For more information on the event, visit: <https://mskrehabnet.com/wearables-and-biomechanics-2025-summer-school/>

Current Network Plans – How to Get Involved

The Canadian MSK Rehab Research Network is currently planning multiple initiatives for 2025 and 2026.

Health Services Research and Health Economic Evaluation Summer School

The MSK Network will be hosting the **Health Services Research and Health Economic Evaluation Summer School** in partnership with the McCaig Institute for Bone and Joint Health. The event will take place at the University of Calgary from August 11 to 15, 2025. **If you are located in the Calgary area and would like to provide a seminar at this Summer School**, please reach out to the Network Coordinator at rehabnet@uwo.ca

Writing and Publication Webinar Series

The trainee committee is currently conducting the **Writing and Publication Webinar Series**. The third session of the series will focus on writing the results section of a manuscript and is titled ***From Data to Discovery: Writing the Results Section***. The session will be held on **August 7th from 2pm to 3pm ET**. The webinar will feature sessions from Dr. Dylan Kobsar and Dr. Pavlos Bobos with 10 minutes for Q&A at the end.

Register here:

<https://westernuniversity.zoom.us/meeting/register/VuQJmODQHmb3XtKbG4M6Q>

The fourth and final session of the Writing and Publication Webinar will focus on **patient partner engagement and authorship**. If you are interested in providing a presentation during this webinar, please reach out to the Network Coordinator at rehabnet@uwo.ca

2026 Hybrid Network Meeting

We are currently in the process of planning a **hybrid network meeting for 2026** and are aiming to align it with major conferences that our membership will be attending in the same year. This will help us maximize participation and create opportunities for in-person engagement. To support this planning, we kindly ask that you complete a short 1-question survey indicating which conferences you plan to attend in 2026:

https://uwo.eu.qualtrics.com/jfe/form/SV_3sXLU9LE4daUAbc

Trainee Committee

The Canadian MSK Rehab Research Network consists of over 160 trainees and this number is constantly growing. The purpose of the Trainee Committee is to provide a trainee perspective on Network initiatives including summer school content and main topic, trainee support opportunities, and planning new initiatives that will enhance and engage trainees within the Network. During the winter months, the Trainee Committee has assisted in planning the Writing and Publication Webinar Series, and the Wearables and Biomechanics 2025 Summer School.

The Trainee Committee is accepting new members! If you are interested in joining the Trainee Committee, please reach out to the Network Coordinator at rehabnet@uwo.ca

Knowledge Translation Committee

The purpose of the Knowledge Translation (KT) Committee is to mobilize knowledge produced by Network members and to disseminate information about MSK rehab research in general. The KT Committee consists of 4 members and a patient partner from across Canada, who are passionate about KT. The KT Committee is currently looking for ways to leverage AI in lay summaries and augmenting REHAB+. In addition, the KT Committee is forming a patient partner review committee to assist in reviewing the AI lay summaries.

The KT Committee is always accepting new members! The committee meets virtually on an ad-hoc basis to plan and implement KT initiatives. If you are

interested in joining the KT Committee or have questions, please email the Network Coordinator at rehabnet@uwo.ca

If you would like to support these initiatives or propose additional initiatives, please reach out to the Network Coordinator at rehabnet@uwo.ca

Previous Initiatives – Webinars and Resources

See below for a list of recent webinars and resources available to MSK Network members via our website:

Webinars

Navigating the Future: Scholarship and Career Options for Trainees

<https://mskrehabnet.com/news/navigating-the-future-scholarship-and-career-options-for-trainees-online-webinar/>

Understanding the Journal Review Process

<https://mskrehabnet.com/webinars/understanding-the-journal-review-process-webinar/>

Writing Smarter: Leveraging Technology for Impactful Publications

<https://mskrehabnet.com/webinars/writing-smarter-leveraging-technology-for-impactful-publications-webinar/>

Resources

Slideshow Presentations from the Wearables and Biomechanics 2025 Summer School

<https://mskrehabnet.com/wearables-and-biomechanics-2025-summer-school/>

List of Programs Curated to Assist the Journal Writing Process

<https://mskrehabnet.com/research/program-list-journal-writing-process/>

Trainee Exchange Recipients

The first round of applicants to the novel Trainee Exchange Opportunity were reviewed on January 15, 2025, and the second round was reviewed on June 15, 2025. After careful consideration, the Network decided to provide funding to five students for their exchange opportunities.

Congratulations to Jenna Schulz, Jennifer Villeneuve, Haithem M'barki, Cinthuja Pathmanathan, and Emma Ratke!

January 2025 Recipients			
Applicant Name	Jenna Schulz	Jennifer Villeneuve	
Current Program	Post-Doctoral Fellow Schulich School of Medicine and Dentistry	Masters in Engineering, Biomedical Engineering	
Current Institution	Western University	Western University	
Program Supervisor	Dr. Jane Thornton	Dr. Emily Lalone	
Exchange Institution	La Trobe University, Victoria, Australia	Brown University, Rhode Island, United States	
Exchange Supervisor and Lab	Dr. Kay Crossley, La Trobe Sport and Exercise Medicine Research Centre	Dr. J. J. Trey Crisco, The Brown Bioengineering Laboratory	
Research Topic	Evaluating the changes in biomechanical outcomes and experiences of females returning to running postpartum.	Investigating the biomechanical progression of thumb carpal metacarpal joint OA through dynamic analysis of thumb motion using four-dimensional computed tomography.	
June 2025 Recipients			
Applicant Name	Haithem M'barki	Cinhuja Pathmanathan	Emma Ratke
Current Program	PhD Kinesiology	PhD Kinesiology Sciences	Master of Applied Health Sciences
Current Institution	Laval University	McGill University	Brock University
Program Supervisor	Dr. Katia Turcot	Dr. Julie Côté	Dr. Shawn Beaudette
Exchange Institution	Geneva University	University of Birmingham	University of Brescia
Exchange Supervisor and Lab	Dr. Stéphane Armand, K-LAB	Dr. Deborah Falla, Centre of Precision Rehabilitation for Spinal Pain	Dr. Francesco Negro, INcEPTION Lab
Research Topic	Determining whether the Bodycad UKS PS- unicompartmental knee arthroplasty leads to superior improvement in the redistribution of joint loading in the knee compared to a standard UKA (Oxford UKA).	Exploring the relationship between motor unit behaviour and an asymmetry index in both healthy individuals and those with PFPS using high-density electromyography.	Developing methods for the use of high- density surface electromyography in the trunk musculature.

We wish the trainees the best of luck on their exchanges to the United States, Europe, and Australia!

The Network will evaluate applications for the Trainee Exchange Opportunity twice per year once on January 15 and again on June 15. The next review will occur on January 15, 2026!

Jenna Schulz's Trainee Exchange

Congratulations to Jenna Schulz for completing an exchange to La Trobe University's Sport and Exercise Medicine Research Centre in Melbourne, Australia under the supervision of Dr. Kay Crossley.



Jenna's project focused on understanding the experiences of female runners dealing with incontinence, as well as those returning to running after childbirth. Jenna collected comprehensive biomechanical data, including 3D gait analyses and strength testing, and conducted one-on-one semi-structured interviews to capture participants' lived experiences. Beyond primary research, Jenna actively contributed to a variety of ongoing projects within the Centre, gaining valuable experience working within a large, multidisciplinary research team. This collaborative environment greatly enhanced her skills in research design, data collection, and knowledge translation, and allowed her to build strong professional connections within the field of sport and exercise medicine.

Trainee Conference Travel Supports – April 2025 Recipients

The Network would like to congratulate our April Trainee Conference Travel Support recipients! The Administrative Committee was very pleased with the strong response for this call and the quality of the applications submitted.

Trainees were required to submit a lay summary of their presented project upon completion of their conference trip. Please visit the MSK Network website to read the lay summaries of the projects supported during this round.

Lay Summaries can be accessed here: <https://mskrehabnet.com/awards/>

Trainee Name	Institution	Project Title
Ahlam Zidan	McGill University	Home, school, and community mobility: An analysis of factors influencing the mobility of children and adolescents with arthrogryposis multiplex congenita
Chanelle Montpetit	Concordia University	From waves to wellness: The effects of aquatic therapy on muscular and psychological health in patients with chronic low back pain
Emma Ratke	Brock University	A passive back support exoskeleton can reduce fatigue related changes to the low back in a complex repetitive lifting task
Jesse Charlton	University of British Columbia	How pain and joint damage together influence knee loading in osteoarthritis
Lauren Straatman	University of Waterloo	Association of knee adduction moment with pain irritability in people with radiographic knee osteoarthritis
Linda Truong	University of British Columbia	Digital health tools for musculoskeletal pain: Not yet ready for prime time
Minori Iizuka	McGill University	Evaluating inertial measurement unit system for ice hockey shooting tasks
Natalie Schwarz	McGill University	Biomechanical differences in backwards skating across sexes and player positions in ice hockey
Owen Falkenham	Dalhousie University	Identifying clinically relevant gait kinematic clusters in patients with end-stage knee osteoarthritis
Temitope Osifeso	Western University	Shoulder to shoulder: Experiences of North American firefighters navigating interventions and healthcare choices for work-related shoulder disorders: An interpretive description

AI Lay Summary Assistance Tool

Network PI Dr. Joy MacDermid and James Shelley, Director of the Complex Adaptive Systems (CAS) Lab at Western University, have been collaborating to create an AI Lay Summary Assistance Tool. The AI Lay Summary Assistance Tool uses the full text of a journal article to produce a lay summary based on a pre-defined template.

AI Lay Summary Assistance Tool: <https://forms.office.com/r/mfKUq4CdTe>

The AI Lay Summary Assistance Tool is in **open beta** and we encourage members to follow up with input and suggestions on the tool's functioning.

Please email feedback to: james.shelley@uwo.ca

The AI Lay Summary Assistance Tool is only available to members with a **Western University email**. If you are a Network member who would like to have a lay summary produced, please email the Network Coordinator at rehabnet@uwo.ca. The Network Coordinator will create the lay summary and send it to you for review. Please also inform the Network Coordinator if you would like to host the lay summary on the Network website.

Lay summary procedure:

1. Upload the full text to the lay summary tool
2. Review the lay summary for accuracy
3. Create an AI generated image via Gemini, ChatGPT, or another platform
4. Send the lay summary to the authors of the article to have them review for accuracy
5. Reach out to the Network Coordinator rehabnet@uwo.ca to be connected to the Patient Partner Review Committee to review the lay summary and image
6. Make any final edits to the lay summary

The Network is currently creating lay summaries for all MSK rehab related articles in REHAB+. To access these lay summaries please visit our website:

<https://mskrehabnet.com/patients/ai-lay-summaries/>

Network Support Opportunities

Trainee Exchanges

The Network is pleased to announce the release of the new Trainee Exchanges. In 2026, we will support trainees with reimbursements of up to \$5000 CAD to support their travel and lodging while working at a host institution.

The purpose of the Trainee Exchange is to provide financial support for travel and lodging expenses, enabling trainees to spend an extended amount of time working in

a host supervisor's laboratory/program of research. Host labs can be located within Canada or internationally. Through this exchange, trainees are expected to learn new skills and gain experience in new techniques which they can bring back to their institutions and apply to their research.

Please note that reimbursements are contingent upon securing a host site/lab, host supervisor, and matched funding from the host or home supervisor.

Application Timeframe: The Network will evaluate applications twice per year once on January 15th, the next on June 15th. Applications will be adjudicated by a committee.

To apply please read the Call for Trainee Exchanges on our website which can be accessed at this link: <https://mskrehabnet.com/trainee-support-opportunities/>

To apply after reviewing the call, please complete this Qualtrics form: https://uwo.eu.qualtrics.com/jfe/form/SV_0ixrzpM6zBwEqh0

Hosts should apply via this Qualtrics form: https://uwo.eu.qualtrics.com/jfe/form/SV_87xY2n8SqWr7Aj4

Network Membership

New Members

We are happy to welcome the new members: Claire Hopkins, Benjamin MacDonald, Ethan Wilkie, Jaylon Pascual, Addisu Zeleke, Owen Falkenham, Véronique Lowry, Elodie Drew, Cheryl Wang, Emma Osness, Katie Crockett, Allison Ezzat, Laura Vancer, Koren Roach, Andrew Phillips, Martin Descarreaux, Benjamin St. Louis, Xueqing Zhou, Neda Naghdi, Minori Iizuka, Vishak Aathresh, Charles-Edouard Jarry, Mahan Jaberimiandoab, Chioke Swann, Nadia Yaghoobi, Milad Hafezi, Clara Duquette-Evans, Katie Kowalski, Mahdokht Dara, Lauren Schonwalder, Andrews Tawiah, Salma Bouqartacha, Natalie Schwarz, Karen, Chen, Kaylee White, Breanna Neubauer, Maryam Abbasi, Dexter Zamora, Marie Le, Harry Battersby, Landon Christoffel, Tonatiuh Cuauhtemoc, Ildephonse Nduwimana, Teah Cribbie, Kai-Wen Chien, Leah Williams, Erin Hodgson, Adam Dorrance, Jordan King, Teresa Lau, Louis Lortie, Fernando Gomez, Huda Nasir, Luis Antonio Franco-Vergara, Shaghayegh Chavoshian, Clara Etter, Ali Barzegar Khanghahand, Cesar Jimenez-Gonzalez, Alireza Etefagh, Milad Ataeian, Fatemeh Ehteshami, Jennifer Stinson, Ritika Sharma, Mélissa Martel, Nora Bakaa, Michael Kalu, Mateja Clifford, Robert Chauvet, Jason Fu, Sean Gaiesky, Fatemeh Khosrobeygi, Meihui Li, Perpetua Obi, Amin MohammadiNasrabadi, Hadi Moeinnia, Josh Lowery, Jessica Yeoman, Laurie-Ann Corbin-Berrigan, Michael Dunbar, Hyejeong Choi, Haithem M'barki, Nicole Kelp, Stéphane Armand, Jason Falvey, Amanda Black, Cinthuja Pathmanathan, Francesco Negro, Mathilde Tardif, Deborah Falla, Emma Ratke, and Connor Graham!

We are always accepting new memberships from researchers, partners, patients, and trainees who are involved in MSK health research. See the link below for details and the application form:

<https://mskrehabnet.com/about/>

We encourage our current Network Members to invite colleagues, partners, or team members who may be interested in joining the Network. Membership is open to researchers, collaborators, partners, trainees, or anyone with an interest in MSK rehab research.

Inquiries or applications can be forwarded to Sierra Crocker at rehabnet@uwo.ca

Network Members

A complete list of network members can be found at: <https://i-memo.org/en/msk-network-members>

External Opportunities

IMPACTs LAB – Dr. Myles O’Brien Paid Graduate Student Recruitment

Dr. Myles O’Brien is recruiting students interested in Graduate studies (Master’s or Doctoral) and studying MSK health & active aging. Students interested in promoting movement in community/hospital settings, epidemiology, frailty, and/or musculoskeletal function with objective measures are particularly encouraged to apply. His research program spans clinical trial, applied mechanistic, and epidemiological study designs. Specific thesis projects and independent studies will be determined based on interest and desired skillsets.

Funding is in place to support student scholarships related to MSK health clinical trials and epidemiological projects.

The successful applicant(s) will work within Dr. O’Brien’s research team and collaborate closely with the multidisciplinary IMPACTs lab. The successful applicant will be embedded within the Department of Medicine at the Centre de Formation Medicalé Nouveau-Brunswick in Moncton, New Brunswick.

General & Specific Requirements:

- Ability to write and speak in both English and French
- Sufficient course marks for graduate studies.
- Available for in-person work in New Brunswick.
- Experience working with older adults, wearable technology, coding, big datasets, health outcomes, MSK function and/or cardiovascular function is an asset (not mandatory).

Interested in Applying: Qualified applicants should send a CV (including graduation dates, GPAs, list of publications, technical skills, and contact information of 2 references) to Dr. Myles O'Brien (Myles.O'Brien@USherbrooke.ca). Doctoral applications are encouraged to send a writing example.

Information about specific projects conducted in our lab can be found on the IMPACTSLab.com website. Applications will be reviewed on a rolling basis until the position is filled.

Survey on Telerehabilitation (Virtual Care in Rehabilitation) for Caregivers

This survey is for you if someone that you know has benefited from remote rehabilitation (i.e., telerehabilitation) at least once AND you have helped them to benefit from this service or someone you know has not benefited from remote rehabilitation, only face-to-face with their therapist, but you would like to give your opinion on telerehabilitation as their caregiver.

You are invited to participate in a confidential survey lasting approximately 20 minutes in the context of the study entitled *Avoiding Pitfalls of Virtual Care: Paving the Road for More Ethical and Equitable Standards of Practice in Rehabilitation*.

To participate please access the link:

<https://sondage.crir.ca/redcap/surveys/?s=8L3PYK8WXRXT7PTE>

Or contact Dahlia Kairy at 514-343-6111 ext. 14691 or at dahlia.kairy@umontreal.ca for a paper version or if you need help completing the survey.

Help Shape Canada's Bone Health Research for the Next Decade!

OsNET is conducting a priority setting survey and looking for researchers, healthcare professionals, policy makers, other knowledge users, or persons with lived experience related to bone disease to share their voice in a two-step survey.

There are two steps in the study, both anonymous. The first step invites participants to submit what they think are important research priorities (up to five) related to bone health for Canadians in the next 10 years. Once all submissions are received, we will streamline and group them. It takes 10-15 minutes to complete the survey.

For step two, we will invite you to score submitted research priorities in groupings that are relevant to you. The criteria we will use to evaluate the research priorities relate to whether the research questions are answerable, have the potential to reduce the burden of bone disease or advance the field, and are accessible to, or are beneficial for equity-deserving groups. It takes about 10-30 minutes to complete the survey. Your submitted scores will be used to establish research priorities for bone health in Canadians over the next 10 years.



Do you want to define Canadian priorities for research on bone health for the next decade?

Who can participate?

Researchers, healthcare professionals, policy makers, lay people or people with lived experience with bone disease, or others with interests in research on bone health.



What is involved?

Contribute your opinions on what questions remain unanswered for you when it comes to bone health via survey (step 1 – list research priorities), then score research priorities (step 2). Step 1 of survey just takes 10-15 minutes to complete.

Why?

Your responses will help guide members of the Canadian National Bone Health Research Network (OsNet) in focusing their clinical research efforts and future collaborations.

If you wish to participate, contact:
Hung Nguyen at hm5nguye@uwaterloo.ca



THIS STUDY HAS BEEN REVIEWED AND RECEIVED ETHICS CLEARANCE THROUGH A UNIVERSITY OF WATERLOO RESEARCH ETHICS BOARD

If you are interested in participating, please contact Research Assistant Hung Nguyen hm5nguyen@uwaterloo.ca

For more information: <https://osnet.ca/platforms/research-platform-2-clinical-research/osnet-priority-setting-project/?fb-edit=1>

Recent Funding Success

Project Title: Pregnancy hormones and tendon health.

Funding Opportunity: 5-Year NSERC Discovery Grant.

PI: Scott A

Host Institution: University of British Columbia

Team Members: Waugh C

Read all the latest news on our website: <https://mskrehabnet.com/news/>

We are always happy to share recent successes of our Network members! If you have any news you would like to share, please reach out to rehabnet@uwo.ca with details.

Publications and Presentations

Recent Publications

Stockton Fletcher EK, Fischer AL, & **Kaur RH.**

Depressive symptoms are highly prevalent and associated with fatigue and pain catastrophizing in the hypermobility spectrum disorders and hypermobile ehlers danlos syndrome: A cross-sectional study.

Rheumatology International, 45(128).

2025

<https://doi.org/10.1007/s00296-025-05869-5>

Traweger AT, **Scott A**, Kjaer M, & Evi Wezenbeek.

Achilles tendinopathy.

Nature Reviews Disease Primers, 11(1).

2025

<http://dx.doi.org/10.1038/s41572-025-00602-9>

Johari S, MacDermid J, Graham L, Ziebart C, & **Shafiee E.**

A systematic review and meta-analysis to examine the effectiveness of exercise training in people with osteoporosis or osteopenia compared to other rehabilitation interventions on fear of falling and the number of falls.

Journal of Geriatric Physical Therapy.

2025

<https://doi.org/10.1519/JPT.000000000000457>

Recent Presentations

Trejos AL.

Estimating thorax and shoulder motion using magnetic-free quaternion-based functional sensor-to-segment calibration.

2025 International Conference on Rehabilitation Robotics (ICORR).

Salinas SA, Berjis M, Grolinger K, & **Trejos AL.**
