icord

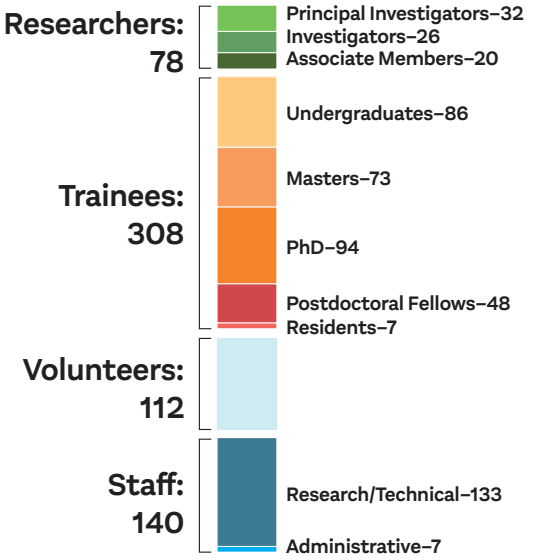
annual report 2024-25

THE UNIVERSITY OF BRITISH COLUMBIA

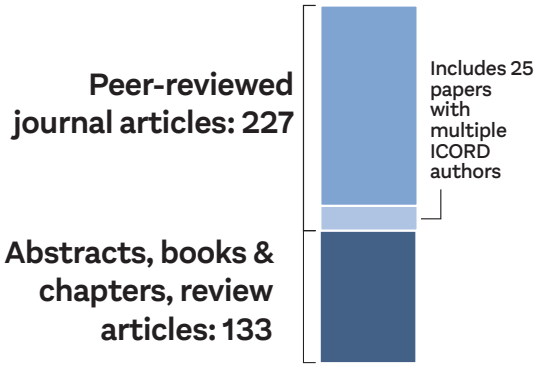
ICORD at a glance

April 1, 2024 to March 31, 2024

People: 638

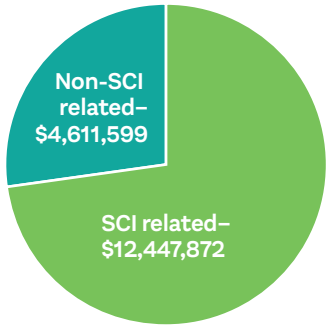


Publications: 360

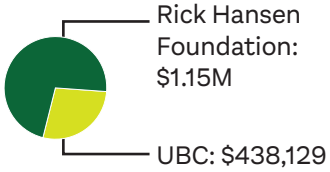


Funding

External competitive research grants held by ICORD PIs: **$17,059,471**



Support: $1,588,129



Contents

Introduction

As Director of ICORD, I'm proud to reflect on a year filled with meaningful progress, collaboration, and well-deserved recognition across our community. From urgent new research on spinal cord injuries caused by mountain biking, to international achievements in assistive technology, to the growth of programs that foster diversity and inclusion in science, 2024–2025 has been a year of impact. ICORD members have disseminated their work across the globe, contributing meaningfully to the international effort to improve the lives of those with SCI.

We were excited to see several members of our community recognized for their outstanding contributions: Dr. Corree Laule was awarded the Killam Teaching Prize, Dr. Andrei Krassioukov received the Graydon Meneilly Award for Excellence in Mentoring, Dr. Lyndia Wu was named Canada Research Chair in Wearable Brain Injury Sensing, and I was honoured to receive UBC's Jacob Biely Faculty Research Prize. These honours speak to the strength and depth of ICORD's leadership in both research and education.

At the same time, we experienced profound loss with the passing of Dr. Marcel Dvorak. Marcel was a wonderful friend and mentor – he singularly inspired me as a resident in orthopaedics to pursue a career in spine surgery and spinal cord injury research (and later introduced me to Wolfram Tetzlaff, who became my PhD supervisor).

We celebrated major milestones this year: the 20th anniversary of SCIRE, the continued expansion of seed2STEM, our most successful Annual Research Meeting to date, and the establishment of our new Meaningful Engagement Committee—all signs of a community that is growing, evolving, and looking ahead.

Much of what we accomplish is made possible through the ongoing support of the Rick Hansen Foundation. Their investment in ICORD enables much more than research—it creates an environment where collaboration thrives. Through shared technology, equipment, seed grants, and travel awards, this support helps us attract top researchers and trainees from around the world.

As we reflect on the past year, I want to thank our researchers, trainees, partners, and supporters for their continued dedication. The work we do together is transforming lives, and that's something we can all be proud of.

Brian K. Kwon, MD, PHD, FRCSC
Canada Research Chair in Spinal Cord Injury & Dvorak Chair in Spine Trauma
Director, International Collaboration on Repair Discoveries (ICORD)
Professor, Department of Orthopaedics, University of British Columbia

On the cover: volunteer Noah Yu and participant Jenna Lewsley work out at the Yuel Family Physical Activity Research Centre (PARC)—ICORD's fully-accessible and supportive gym (see page 15).

Leadership

Director
Brian Kwon

Advisory Council

David Granville

Kathleen Martin Ginis

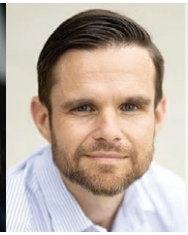
Tom Oxland

Wolf Tetzlaff

Executive

Heather Gainforth
ASSOCIATE DIRECTOR
Meaningful Engagement

Meaningful Engagement Committee



Chris West
ASSOCIATE DIRECTOR
Translational Research

Kip Kramer
ASSOCIATE DIRECTOR
Centre Operations

Space Committee

Mike Berger
ASSOCIATE DIRECTOR
Rehabilitation Research & Services

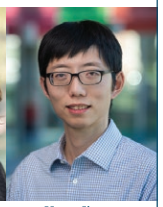
Corree Laule
ASSOCIATE DIRECTOR
Education & Training

Trainee Committee

Administration

Nancy Thorogood
Managing Director

Cheryl Niamath
Communications & Admin Manager



Yuan Jiang
Facilities Manager

Katie Ashwell
Admin/HR

Chandelle Coleman
Finance

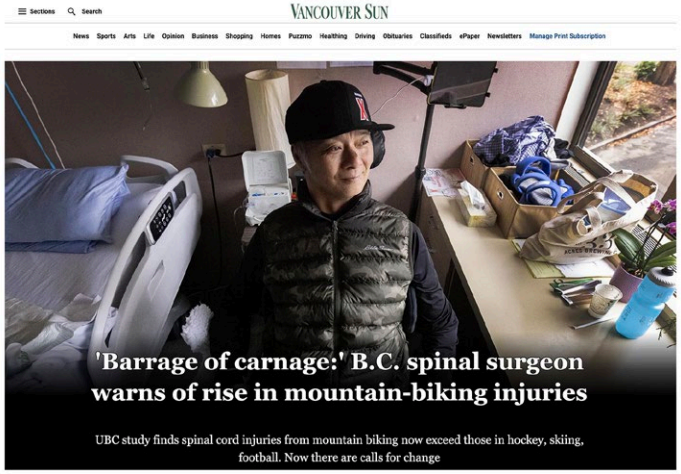
Zack Grant
Facilities/Equipment

Program highlights

SCI from mountain biking: Dr. Kwon's research raises alarm

ICORD Director Dr. Brian Kwon, along with his colleagues at UBC and Praxis Spinal Cord Institute, published a study in Neurotrauma Reports highlighting a growing concern: SCI resulting from mountain biking accidents. Titled "Spinal Cord Injuries Secondary to Mountain Biking Accidents — A Cause for National Alarm," the study analyzes data from the Rick Hansen Spinal Cord Injury Registry and reveals the startling frequency and severity of these injuries in British Columbia.

Between 2008 and 2022, 58 individuals in B.C. sustained spinal cord injuries while mountain biking—a number far exceeding those from other high-risk sports like ice hockey, skiing, and snowboarding. Many of the injuries occurred at lift-equipped bike parks, with 36% originating from Whistler Mountain Bike Park alone. The majority of those injured were healthy young men. 77.5% of accidents resulted from being propelled over handlebars.The paper estimates the collective cost of these injuries to B.C. at $195.4 million, including healthcare, rehabilitation, and economic impacts such as loss of productivity. Dr. Kwon emphasizes the need for collaboration between health professionals, mountain resorts, and the biking community to address prevention strategies.



Vancouver Sun story about mountain-biking study, November 25, 2024

Annual Research Meeting

SUPPORTED BY: Rick Hansen Foundation

Generously supported by the Rick Hansen Foundation for 22 years, ICORD's Annual Research Meeting (ARM) is a chance for faculty, trainees, staff, and partners to reconnect, learn about each others' work, and forge new connections and collaborations. This year's event combined the ARM and ICORD Trainee Symposium, with 180 people taking part over two full days. The event included keynote lectures by Dr. Shelly Sakiyama-Elbert of the University of Washington and Dr. James Guest of the University of Miami.

Research talks were presented by Drs. Stacy Elliott, Dena Shahriari, John Kramer, Femke Hoekstra, Louis-Pierre Auger, Numaira Obaid, Paulina Scheuren, and Sophie Stukas. Seven trainees from undergraduate to PhD gave 3-minute overviews of their work, and our partners in the Blusson Spinal Cord Centre (VCHRI, Digital Emergency Medicine, Praxis) presented a session as

Trainee poster session at the ARM

well. The meeting featured 78 posters, which is a new record! The event also included a trainee-focussed lecture on Translational Research, a workshop on supervisory skills, and a career panel.

Brian Kwon receives UBC's premier award for research

Dr. Brian Kwon received the Jacob Biely Faculty Research Prize for 2024. This prestigious award, UBC's premier award for research, recognizes his outstanding contributions as a surgeon-scientist to spinal cord injury research. Dr. Kwon is the first recipient of this prize from ICORD or the Department of Orthopaedics, and only the 7th member of the Faculty of Medicine to receive the prize since it was started in 1959.

Future scientists inspired!

The Blusson Spinal Cord Centre atrium was full of excited kids on Tuesday, February 11, 2025 for ICORD's Celebration of the UN International Day for Women and Girls in Science. More than 100 people attended the event, which included interactive displays by Science World, Ethos Lab, Gynecologic Cancer Initiative, STEMCELL Technologies, Geering Up, seed2STEM, and the UBC MRI Research Centre, as well as ICORD's Tetzlaff Lab and Orthopaedic and Injury Biomechanics Group!

ICORDians receive King Charles III Coronation Medals

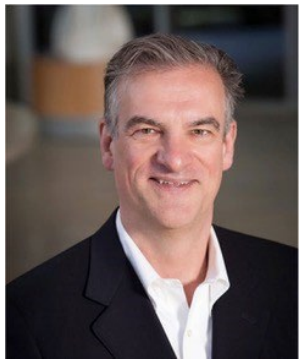
Drs. Stacy Elliott, Andrei Krassioukov, Brian Kwon, Wolfram Tetzlaff and Marcel Dvorak received King Charles III Coronation Medals in March as Spinal Cord Injury Research Trailblazers. This honour recognizes Canadians who have made a lasting impact in communities, territories, regions, and provinces across the country. The medal was created to mark the coronation of King Charles III in 2023 and is the first Canadian honour to feature the Canadian Royal Crown, approved by His Majesty. It is administered by the Chancellery of Honours in partnership with the Royal Canadian Mint. Nominated by the Rick Hansen Foundation, Stewart and Marilyn Blusson, Michael Fehlings, Michael Harcourt, George and Sylvia Melville, and Charles Tator were also honoured in this category.

Women and girls in science outreach event, February 11 2025


Drs. Krassioukov, Elliott, and Tetzlaff with their medals

Special visit

It was an honour to host UBC President Benoit-Antoine Bacon, Canadian icon Rick Hansen, philanthropists Marilyn and Stuart Blusson, Dean of Medicine Dermot Kelleher, UBC VP Academic & Provost Gage Averill, and UBC Orthopaedics Head Kishore Mulpuri on June 11, 2025. The visit included talks by ICORD Director Dr. Brian Kwon, UBC Professor Dr. Fabio Rossi, Rick Hansen, and President Bacon, followed by a tour of spinal cord injury research facilities at the Blusson Spinal Cord Centre.



In memoriam: Marcel Dvorak

ICORD PI and Paetzold Chair in SCI Clinical Research, Dr. Marcel Dvorak, passed away in May 2025. Marcel was a brilliant surgeon, pioneering researcher, master educator, and visionary leader, and one of the principal applicants in the original CFI proposal to build ICORD. In this regard, he has had an impact on everyone who works at or has an association with ICORD today. He leaves behind a lasting legacy that will benefit ICORD and the spinal cord injury community for years to come.

Gold medal

Jaimie Borisoff and his MAKE+ team from BCIT won the gold medal in the Wheelchair Race category of the 2024 CYBATHLON, held in Zurich, Switzerland last October. The CYBATHLON is an international competition that draws 100 teams from 30 countries around the world to tackle everyday challenges using innovative assistive technologies. The BCIT MAKE+ team competed against elite teams from around the world and delivered a flawless performance. They scored a perfect 100 points in the finals and became the only Canadian team to secure a gold medal at the 2024 CYBATHLON.

Jaimie Borisoff (centre) competing at CYBATHLON

ICORD SCI Partnership Workshop

ICORD trainees, staff and PIs, members of SCI community organizations, people living with SCI, caregivers, and healthcare providers, got together in Kelowna on October 20 and 21 to discuss ways to better include people with lived experience in ICORD research. The 70-person workshop was funded by a SSHRC Connections grant developed by Sarah Lawrason, a former Postdoctoral fellow in the lab of Dr. Kathleen Martin Ginis, and Alanna Shwed, a PhD candidate in Dr. Heather Gainforth's Lab.

Previous research with ICORD has shown that we do have the infrastructure to foster connections between researchers, people with lived experience of spinal cord injury, and other organizations, but needs a culture shift to understand why partnerships are important. The workshop focused on providing opportunities for partners to connect, building capacity for cross-disciplinary and cross-campus collaborations, gaining knowledge on the guiding principles of SCI research partnerships, identifying strategies to engage with partners in research, and understanding what is needed to further support partnerships at ICORD. This was accomplished through presentations, panel and roundtable discussions, and unstructured social events.

Meaningful Engagement Committee

SUPPORTED BY: Rick Hansen Foundation

One outcome of the ICORD SCI Partnership workshop was the foundation of ICORD's Meaningful Engagement Committee (MEC): a learning community made up of individuals who use ICORD research, including people with lived experience of SCI, ICORD PIs and trainees, and representatives from SCI community organizations and research-supporting organizations.

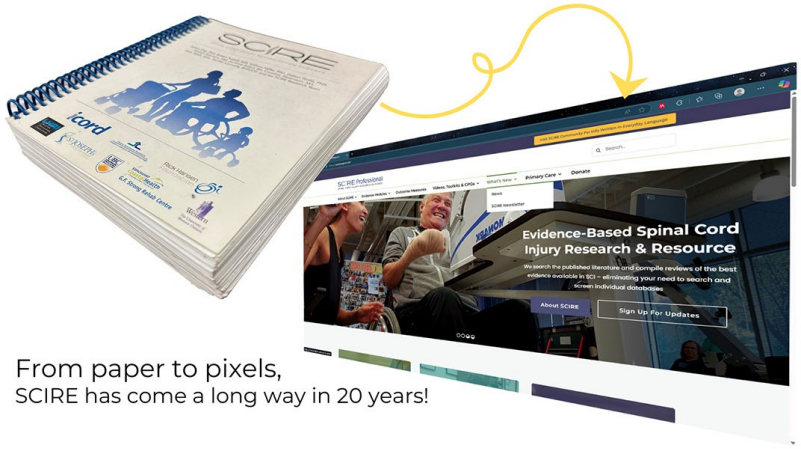
MEC's mission is to:

1. Offer opportunities for researchers and research users to develop and sustain meaningful connections.
2. Motivate and support researchers and research users to meaningfully engage at ICORD.
3. Foster knowledge, skills, and respect for meaningful engagement at ICORD.

The MEC is chaired by Drs. Heather Gainforth and Nancy Thorogood and generously supported by the Rick Hansen Foundation.

SCIRE turned 20!

In 2004, ICORD PIs Janice Eng, Bill Miller, and Andrea Townson, in collaboration with Parkwood Hospital researchers, created the Spinal Cord Injury Research Evidence with funding from ICORD. It was revolutionary at the time to place evidence-based content free on the internet, compared to the well-controlled journal venue that was not accessible to clinicians. At first, the team was concerned that putting the content online would prevent them from then publishing their content later in a traditional manner. However, editors of journals saw the website and were so impressed with it and asked that team to submit the content to their journals.



From paper to pixels,
SCIRE has come a long way in 20 years!

SCIRE Professional grew from a few evidence-based chapters to 38 current modules with hundreds of topics, including abdominal binders, pediatric SCI, sexual health, neuroprotection and employment. SCIRE also cover hundreds of outcome measures specific to spinal cord injury, and explains how to do them and describe their validity.

A SCIRE Community interface for people living with SCI and their families was added, written in lay accessible language. Multi-media was added with a YouTube channel of videos demonstrating outcome measures or procedures. The Breastfeeding after SCI video series is one of the most accessed.

In 2023, SCIRE added new modules specifically for primary care clinicians who often find it challenging to care for a patient population that they have received little training for. The SCIRE team's data searching abilities are known internationally and have been contracted to support the Canadian Spinal Cord Practice Best Practice Guidelines and the Paralyzed Veterans of America Clinical Practice Guidelines.

Over 80 peer-reviewed publications have been generated from SCIRE. A published evaluation of SCIRE showed that it increased access to evidence-based information, increased knowledge of the evidence, informed changes to the health providers' practice, and influenced their clinical decision making.

SUPPORTED BY: Rick Hansen Foundation

SCIRE is generously supported by the Rick Hansen Foundation and many other sponsors.

Engaging in reconciliACTION

seed2STEM, the summer research program for Indigenous youth started at ICORD, continued its exponential growth this year, with 104 students participating between Vancouver and Kelowna.

Since 2018, seed2STEM has placed 142 students in 112 research labs across UBC, SFU, and Vancouver health institutions. Students have worked in diverse fields including medicine, engineering, neuroscience, chemistry, public health, and environmental science. 95% of Grade 12 graduates have pursued post-secondary education, and 74% have chosen STEM fields. Undergraduate alumni are encouraged to return for 4-month paid research internships, acting as peer mentors and role models for younger students, and creating a cycle of Indigenous leadership in research.

Program co-chairs Dr. Corree Laule and Cheryl Niamath presented at the AISES National Gathering in Toronto in March, along with students Shana George and Abigail Nicholson. seed2STEM was recognized with a 3-year NSERC PromoScience grant, announced in March. The PromoScience program supports science promotion and outreach programs that aim to engage and inspire young Canadians to develop their skills and curiosity through science, technology, engineering, and mathematics (STEM). Additional funding was provided by:

Vancouver seed2STEM students enjoy a group activity day (above); Kelowna students visit the Dominion Radio Astronomical Observatory in Penticton (below).

& generous contributions from individual faculty members and private donors

Clinical studies

Sam Douglas and **Ali Williams** took over as ICORD's study coordinators. Ali is the manager of Dr. Tania Lam's Human Locomotion Lab, and Sam is an IT Support Analyst at Praxis Spinal Cord Institute.

Sam and Ali work with people interested in taking part in research to narrow down what studies they may be eligible for, based on research interests as well as common study inclusion and exclusion criteria. From there, they tailor a list of research studies and provide details and contact information for each one. They can also directly connect potential research participants with study coordinators.

Between April 2024 and March 2025, ICORD researchers initiated 11 new human-based research studies. Recruitment assistance is supported by the Rick Hansen Foundation through Spinal Cord Injury BC's recruitment coordinator (see page 14).

Sedentary behaviour and people with physical disabilities INTerview (SBrINT): Researchers in the SCI Action Canada Lab are exploring how people with physical disabilities experience sedentary behaviour (i.e., sitting still for long periods of time). Participants will be interviewed to explore what they know about sedentary behaviour and its effects on health and well-being as well as how they experience these behaviours on a regular basis.

Determining a standard location to measure tissue oxygen levels in healthy adults: Researchers in Dr. Babak Shadgan's lab are investigating how oxygen levels vary across different parts of the body in healthy people. Their goal is to find one spot on the body where oxygen levels are similar among multiple individuals in order to determine the best places on the body to do Near Infrared Spectroscopy (NIRS) research in the future.

Fatigue properties of the first dorsal interosseous muscle in SCI: Dr. Mike Berger's team is studying why people with SCI experience greater muscle fatigue than healthy people. Increased

amounts of muscle fatigue can negatively impact quality of life by interfering with daily activities. The study involves performing hand strength tests and undergoing electrical stimulation techniques

Diagnosis of Compartment Syndrome using a non-invasive optical method: The Shadgan Lab is researching a method to estimate the Tissue Perfusion Index using Near-Infrared Spectroscopy (NIRS) parameters to enhance patient monitoring and clinical decision-making, involving participants undergoing pressure adjustments on their arms while sensors measure blood flow and oxygen levels over multiple sessions.

Co-developing a novel intervention to promote wellbeing of family caregivers and individuals with spinal cord injury: Dr. Bill Miller and his research team are exploring the use of an eHealth tool developed to optimize the well-being of family caregivers of individuals with a spinal cord injury. Participation in this study will contribute to the development of resources to support caregivers.

Fear of falling and exercise self-efficacy in people with neurological disabilities who can walk: relationships between physical functioning and psychological outcomes: The SCI Action Canada Lab, under the guidance of Dr. Kathleen Martin Ginis, invites adults with spinal cord injury (SCI) whose primary mode of mobility is walking, to participate in a series of tests related to balance, and moving from sitting to standing.

Non-invasive spinal cord stimulation in acute spinal cord injury for recovery of autonomic function: Researchers from both Dr. Andrei Krassioukov and Dr. Mike Berger's Labs are measuring the effect of non-invasive spinal cord stimulation on the recovery of bladder, bowel, sexual, heart, motor function, and muscle spasticity for people living with SCI. The study will also examine the impact of spinal cord stimulation on overall quality-of-life.

Canadian SCI Pain Survey: Dr. Martin Ginis and her team invite Canadian adults with SCI to take part in a survey aiming to assess the current state of pain intensity and pain treatment methods. The survey will explore factors that impact the pain experience, such as: emotions, personality traits, anxiety, depression, support systems, resilience, sleep, and exercise habits.

Pelvic floor muscle physiotherapy: Researchers in Dr. Tania Lam's Lab are studying whether pelvic floor physiotherapy can improve bladder, bowel, and sexual function in people with motor-incomplete SCI. The 12-week program includes guided and at-home sessions to explore its potential benefits.

Vestibular experience: Researchers in Dr. Tania Lam's lab are exploring how the vestibular system adapts to new movement patterns after SCI by tracking body motion during everyday tasks using wearable sensors. The findings may support the development of therapies to improve balance.

Recreational Adaptive Devices (RAD): Researchers in Dr. Ben Mortenson and Dr. Bill Miller's Labs are studying the impact of an adaptive equipment loan program in Langford, BC, designed to support outdoor recreation for people with mobility impairments. Participants will try the program and share feedback through two short interviews.

Rick Hansen Foundation support

The funding support provided by the Rick Hansen Foundation to ICORD is vital. Not only are the direct results of the funding beneficial to the centre but the indirect benefits of the support are far-reaching. With shared tech support and equipment, seed grants, travel awards, and seminars, ICORD is an internationally-known centre where researchers and trainees want to come to do SCI research.

Highlights of some RHF-supported initiatives and activities at ICORD, 2024-25:

Seed Grants

Seed Grants funded by the Rick Hansen Foundation through the Blusson Integrated Cures Partnership since 2014 have leveraged more than $35M in competitively-funded research grants and 55 externally funded projects by the end of fiscal year 2025. Through the program, there have been 110 Seed Grants with $2M in BICP support. The amount leveraged will continue to grow with 5 new seed grants awarded, in addition to previously awarded grants that remain active.

In 2024-25, one Seed Grant was leveraged into a successful grant application:

$33K -> $995K (Canadian Institutes of Health Research, Fall 2024 Project Grant Program): Preliminary data generated from this Seed Grant awarded to Dr. Brett Hilton was instrumental in helping secure the CIHR funding. The Seed Grant, *Remodelling chromatin to promote regeneration after spinal cord injury,* was awarded in 2023.

Seed Grants supported by RHF contribute to new knowledge in the field of SCI. Researchers credited their past seed grants for nine scientific articles published this year (see appendix):

- Berger MJ, et al. Multipoint Stimulation Motor Unit Number Estimation of the Extensor Indicis and Anconeus After Spinal Cord Injury. Muscle Nerve. 2025 Feb 24.
- Claydon VE, et al. Bowel burdens: a systematic review and meta-analysis examining the relationships between bowel dysfunction and quality of life after spinal cord injury. Spinal Cord. 2024 Sep;62(9):495-506.
- Sawatzky B, Borisoff J, Mortenson WB, et al. Should I stay or should I go? An exploratory study comparing wheelchair-adapted rowing at home vs. in community gyms. Disabil Rehabil Assist Technol. 2025 Jan;20(1):211-221.
- Kramer JLK, Lam T, et al. Methodologies to elicit and record pudendal somatosensory evoked potentials in adult humans: A systematic review. Clin Neurophysiol. 2024 Oct;166:223-231.
- Miller WC, Borisoff, J, Mortenson WB, et al. Navigating the Pandemic: Exploring Perspectives of Individuals with Spinal Cord Injury on COVID-19 Resources. Medical Research Archives. 2024: 12(10)
- Miller WC, Borisoff J, Mortenson WB et al. Evaluation of the Quality of Current COVID-19 Resources Developed for Individuals with Spinal Cord Injuries: A Scoping review. The Medical Research Archives. 2024:12(8).
- Shadgan B et al. Enhancing upper extremity muscle strength in individuals with spinal cord injury using low-intensity blood flow restriction exercise. J Rehabil Med. 2024;56:jrm40608
- Shadgan B et al. Unlocking enhanced exercise benefits: blood flow restriction for safer and more effective workouts in individuals with spinal cord injuries. British Journal of Sports Medicine 2024;58:A100-A101.
- Tetzlaff W, et al. Ketone Esters Partially and Selectively Rescue Mitochondrial Bioenergetics After Acute Cervical Spinal Cord Injury in Rats: A Time-Course. Cells. 2024:13(21), 1746.

International SCI Biobank

The **International SCI Biobank (ISCIB)** is a translational research resource consisting of a collection of biospecimens, images and data to support biomedical research and to ultimately improve patient outcomes following SCI. ISCIB is an international, "poly-user" biobank, meaning that all biospecimens and their associated information are made available to researchers globally.

ISCIB has curated biospecimens and associated data from three distinct acute and chronic SCI participant consent categories: alive, alive and participating in another research study, and deceased. From the "alive" categories, cerebrospinal fluid, plasma, serum, and PAXgene Blood RNA tubes are collected, while cerebrospinal fluid and spinal cord tissue are collected from the "deceased" category.

To date, ISCIB has enrolled 360 participants across these three categories, 29 of which were enrolled between April 1st, 2024 and March 31st, 2025.

ISCIB currently stores 22 spinal cords from deceased donors with SCI, two of which were collected this year. ISCIB is expanding its recruitment and spinal cord collections locally to include individuals who pass away with chronic SCI, as well as expanding acute and sub-acute collections to other collaborative SCI centres across 4 new continents in the years to come. ISCIB will continue to consult with SCI-BC in order to pilot these chronic SCI enrollments locally in Greater Vancouver.

Members of the ISCIB team

In April 2024, ISCIB Program Manager Adam Velenosi attended the International Society for Biological and Environmental Repositories (ISBER) Annual Meeting in Melbourne, Australia, to give an oral presentation on ISCIB's Imaging Repository. This presentation is available to view on YouTube through the ISCIB website (News & Events).

Given ISCIB's growth over the past year and newly available publications made possible through ISCIB requests, a new page on the ISCIB website has been created to showcase all these publications (www.sci-biobank.org/publications).

Central Participant Recruitment

When it comes to SCI research, a rate-limiting step has been the timely recruitment of participants with SCI. To overcome this, the **partnership** between **ICORD and Spinal Cord Injury BC** was solidified to build interest in people with SCI to participate in ICORD research through knowledge translation (KT) activities and to recruit study participant through SCI BC's connections with their members. With support from RHF, the partnership continues to have a positive impact on meeting research demand for participation.

With recruitment for participation by people with SCI presenting a persistent post-pandemic challenge across the country, the value of this partnership continues to show its worth by dedicating human resources to multimodal recruitment efforts and being able to prioritize these efforts on ICORD-related studies and KT activities.

SCI BC is uniquely positioned to partner with ICORD to promote participation in their research and to support knowledge translation related to their

research activities. With an active membership of over 2,900 people throughout the province, a Spin magazine readership of an estimated 16,000, >300,000 annual visits to their websites, and a very engaged social media community, SCI BC has the power to connect with the target population for ICORD researchers.

Over the past several years, the expanding ICORD research excellence and capacity at UBC Okanagan, has broadened the opportunity for people with SCI to participate directly in SCI research to other regions of the province. We also continue to engage with researchers at UNBC, thus expanding the potential for future ICORD collaborations.

PARC

The **Yuel Family Physical Activity Research Centre** (PARC) is ICORD's most successful community engagement initiative. Located on the first floor of the Blusson Spinal Cord Centre, the purpose of PARC is to provide community members with SCI and related impairments with a space where they can be physically active and meet their exercise goals. Compared to similar facilities at other universities and/or health care facilities, PARC is unique in that community members are not required to register for a set program but are instead encouraged and supported to attend on a drop-in basis. The focus is on supporting participants to experience autonomy and choice regarding the frequency and type of exercise they engage in whilst still providing the support they need. The facility houses a complete system of HUR resistance exercise machines that use smart card technology to 'remember' participants and automatically adjusts the resistance on the machine using air compressors. Cardio machines in the facility are modified for greater accessibility and many allow participants the option of exercising without transferring from their day chairs, enhancing safety and allowing for ease of use and autonomy.

PARC is overseen by Manager Milly Zaletelj, ICORD PI Dr. Andrea Bundon, and six student supervisors through the UBC Work Learn program. These student supervisors support PARC's daily operations both in-person and online, ensuring a safe and welcoming environment for our members. In addition to conducting member intake assessments and reassessments, each supervisor manages and mentors 10–15 student volunteers. The PARC Community Engagement Committee, comprised of 7 persons with lived experience of spinal cord injury and related impairments, meets regularly with PARC staff to discuss and advise on critical matters related to the priorities and operations of PARC.

This past year, funding from RHF was instrumental for PARC operations and supported a portion of the PARC Manager and student salaries, in addition to valuable equipment and supplies.

PARC staff and student supervisors (L-R): Thomas Renovich, Julie Kim, Sydney Cormack, Milly Zaletelj, Dr. Andrea Bundon, Chelsea Yang, Elijah Sun, Tony Na

A few notable initiatives from the 2024-2025 year include:

- Work Integrated Learning at PARC: For the third year,

UBC's School of Kinesiology offered a 'Work Integrated Learning' (WIL) course at PARC. This course provides students with the opportunity to develop applied skills and competencies in community-based exercise settings while earning credits towards their degree. Overseen by Dr. Jasmin Ma and the PARC Manager, 10 students enrolled in the course. The expansion course has enabled us to offer PARC participants individualized exercise prescription, physical activity counseling, and technique coaching.

- Hours and Attendance: PARC is open 6 days a week with extended hours two days a week (until 7pm). These hours are well-attended and provide increased accessibility for members who work during the daytime. This past year we have seen an increase in attendance, reaching up to 45 visits a day and averaging between 150 and 200 visits per week.
- Equipment: We are constantly sourcing new equipment for PARC with the aim of providing participants with maximum choice. This year, we received a donation of an 'aROW' and an 'aSKI' that were designed by a team of researchers at ICORD and manufactured by Dr. Jamie Borisoff's team at BCIT. The aROW and aSKI are devices that affix to standard Concept 2 rowing and skiing ergometers to make them more accessible to wheelchair users and those with balance or mobility impairments.

A PARC particpant uses the specially-modified aROW

- Community of practice: PARC participates in a 'community of practice' developed as part of the Canadian Disability Participation Project 2.0 (https://cdpp2.ca/). This 7-year project, funded by the Social Sciences and Humanities Research Council of Canada, engages in research and knowledge translation related to promoting/supporting quality sport, exercise and physical activity experiences for persons with disabilities. The CDPP 2.0 Community of Practice includes representatives from facilities and programs across Canada that provide adaptive/disability-specific exercise programming. As part of this community, we meet regularly to discuss and share information and resources on topics related to training staff and volunteers, exercise program design and delivery, promoting exercise and physical activity counseling and more.

Rick Hansen Foundation funding also supports the **Meaningful Engagement Committee** (see page 9), knowledge dissemination events such at the **ICORD Annual Research Meeting** (see page 5) and **seminar series**, and **shared resources** (equipment as well as technical and clerical support). We are sincerely grateful for the continued and vital support of the Foundation.

Publication highlights

Papers from the past year that ICORD researchers are most excited about:

Michael Berger:

Linde LD, Dengler J, Curt A, Schubert M, Abel R, Weidner N, Röhrich F, Berger MJ, Fox IK. Ulnar compound muscle action potentials predict hand muscle strength 1 year after cervical spinal cord injury: A retrospective analysis. Ann Phys Rehabil Med. 2025 Mar 29;68(5):101959.

This paper justifies the efforts my laboratory is taking to understand how SCI affects nerves and muscles outside the spinal cord. It shows that there is a dramatic negative effect on functional prognosis, when these nerves and muscles are damaged.

Berger Lab

Jaimie Borisoff

Ripat J, Giesbrecht E, Borisoff J, Morales E, Harrison KL. (2024). Development of the Standardized Navigation Of Winter Mobility & Accessibility Network (SNOWMAN) course. Frontiers in Rehabilitation Sciences. 5: 1330507.

We can test and compare wheelchairs and components in a harsh real-world setting – the difficult terrains of winter in Winnipeg.

Andrea Bundon

Herrick SSC, Bennett EV, Bundon A. Feeling 'not enough' or 'too much': Exploring how LGBTQ+ adults experiencing disability navigate Canadian health contexts. Journal of Health Psychology. 2025).

In this work, we explored the intersections of disability, gender and sexuality and how these identities interact to shape peoples' experiences of (trying) to access healthcare. One key finding is that individuals reporting having to 'mask' or downplay certain aspects of their identities in different healthcare contexts. For example, when seeking healthcare for disability/impairment related care, some reported that they had to 'let go' of being misgendered or strategically omitted disclosing their queer identities. In contrast, when seeking healthcare services related to sexual health or reproductive healthcare, some participants reported needing to appear 'more able' due to concerns that disclosing the full nature of their impairment / chronic conditions would result in being denied access to reproductive services.

Victoria Claydon

Sober-Williams EK, Lee RHY, Whitehurst DGT, Claydon VE (2024) Bowel burdens: a systematic review of the impact of bowel dysfunction and associated autonomic dysreflexia on quality of life after spinal cord injury. Spinal Cord, 62: 495-506. JIF: 2.1.

This manuscript has been downloaded almost 4500 times since publication.

Jacquelyn Cragg

Jia A, Kuramoto L, Khakban A, Sio WS, Traboulsee A, De Vera MA, Oh J, Loree J, Tam R, Lynd LD, Cragg JJ. Fingolimod and risk of skin cancer among individuals with multiple sclerosis: a population-based cohort study protocol. BMJ Open. 2025 Jan 23;15(1):e088924.

This is a protocol study which uses "trial emulation" to examine drug safety issues in multiple sclerosis (note, multiple sclerosis is considered a form of non-traumatic SCI)

Peter Cripton

Al-Salehi L, Kroeker SG, Kerrigan JR, Cripton PA, Panzer MB, Siegmund GP. Cervical vertebral and spinal cord injuries in rollover occupants. Injury Epidemiology, 2024.

This is the first epidemiology paper to focus on the type and severity of SCI associated with automotive rollovers.

Stacy Elliott

Krassioukov A, Elliott S, Hocaloski S, Krassioukova-Enns O, Hodge K, Gillespie S, Caves S, Thorson T, Alford L, Basso M, McCracken L, Lee A, Anderson K, Andretta E, Chhabra HS, Hultling C, Rapidi CA, Sørensen FB, Zobina I, Theron F, Kessler A, Courtois F, Berri M. Motherhood after Spinal Cord Injury: Breastfeeding, Autonomic Dysreflexia, and Psychosocial Health: Clinical Practice Guidelines. Top Spinal Cord Inj Rehabil. 2024 Spring;30(2):9-36.

This is the first consumer guideline drawn from international findings. It is very practical – a missing piece for women with SCI.

Janice Eng

Tashakori A, Jiang Z, Servati A, Soltanian S, Narayana H, Le K, Nakayama C, Yang CL, Wang ZJ, Eng JJ, Servati P. Capturing complex hand movements and object interactions using machine learning-powered stretchable smart textile gloves. Nature Mach Intell 2024;6:106-118.

Granville Lab

Published in a *Nature* journal (impact factor 19) in which I am co-senior author (funded from my CIHR grant) and it garnered substantial media attention, including 2 CTV News interviews. This sensored glove has potential for a number of applications, from rehabilitation, gaming, and manufacturing. The cloth is embedded with instrumented fibres, and thus is flexible in feeling.

David Granville

Aubert A, Jung K, Hiroyasu S, Pardo J, Granville DJ. Granzyme serine proteases in inflammation and rheumatic diseases. Nat Rev Rheumatol. 2024 Jun;20(6):361-376.

This high-impact invited review recognizes the emergence of granzymes as immune cell-secreted serine proteases that play key roles in chronic inflammation, tissue injury and impaired remodeling. Though much work is still required to fully elucidate the mechanisms of granzymes in disease, recent high-profile publications have documented the presence of granzymes in many aging-related and/or chronic inflammatory conditions.

Brett Hilton

Hilton B, Griffin J, Fawcett J, Bradke F. Neuronal maturation and axon regeneration: unfixing circuitry to enable repair 25(10): 649-667. Nature Reviews Neuroscience, 2024.

This review, published in arguably the most visible review journal in neurosciences, highlights the major topic of my lab.

Hilton Lab

John Kramer

Kramer JLK, Lam T, Rossi F, Illes J. On the use of sham transcutaneous spinal cord stimulation in spinal cord injury clinical trials. Brain. 2025 Feb 4;. doi: 10.1093/brain/awaf040.

This is exciting because it challenges an existing dogma in the field that sham spinal cord stimulation is “impossible”. Somewhat controversial in nature but an important addition to the field.

Kramer Lab

Andrei Krassioukov

Moritz C, Field-Fote EC, Tefertiller C, van Nes I, Trumbower R, Kalsi-Ryan S, Purcell M, Janssen TWJ, Krassioukov A, Morse LR, Zhao KD, Guest J, Marino RJ, Murray LM, Wecht JM, Rieger M, Pradarelli J, Turner A, D’Amico J, Squair JW, Courtine G. Non-invasive spinal cord electrical stimulation for arm and hand function in chronic tetraplegia: a safety and efficacy trial. Nat Med. 2024 May;30(5):1276-1283.

My laboratory published an article in Nature Medicine, summarizing results of pivotal clinical trials on use of transcutaneous non-invasive spinal cord stimulation to improve hand function in people with SCI. This study was truly translational from bench to the clinical implementation of the study results. The FDA has approved ONWARD’s ARC-EX System for use in clinical practice in the USA. This approval makes it the first non-invasive spinal cord stimulator for chronic SCI patients to gain FDA approval.

KrassioukovLab

Brian Kwon

Kwan WC, Laghaei P, Kahlon H, Ailon T, Charest-Morin R, Dandurand C, Paquette S, Dea N, Street J, Fisher CG, Noonan V, Dvorak MF, Kwon BK, Spinal Cord Injuries Secondary to Mountain Biking Accidents — A Cause for National Alarm, Neurotrauma Reports, Vol 5, No 1, Published Online Nov 11, 2024.

This was our analysis of spinal cord injuries from mountain biking, which reported on 58 SCI from mountain biking in a 14-year period. It has sparked much interest in the mountain biking community about the potential catastrophic results of mountain biking and resulted in seven television and news stories. Importantly, it has been the launching point of a prevention campaign that we are starting.

Corree Laule

Morris SR, Swift-Lapointe T, Yung A, Prevost VH, George SI, Kozlowski P, Bauman A, Samadi F, Fournier C, Mattu P, Parker L, Velenosi A, Streijger F, Moore GRW, Hirsch-Reinshagen V, Kwon BK, Laule C. Novel MRI biomarkers

of the injured spinal cord – a comparative study of imaging and histology in human traumatic spinal cord injury. Journal of Neurotrauma. 2024 May;41(9-10):1223-1239.

This paper validates several myelin-sensitive MRI methods using human post-mortem spinal cord injury tissue. This is the first study to use human SCI tissue.

Kathleen Martin Ginis

Ponzano M, Nash MS, Bilzon J, Bochkezanian V, Davis GM, Farkas GJ, de Groot S, Jin J, Larsen CM, Laskin J, Ma J, Nightingale T, Postma K, Smith BM, Strøm V, van den Berg-Emons R, Wouda M, & Martin Ginis KA on behalf of the ISCoS Physical Activity Special Interest Group (2024). Consensus-based recommendations for designing, delivering, evaluating, and reporting exercise-intervention research involving people living with spinal cord injury. Archives of Physical Medicine and Rehabilitation.

Brings together an international team of scientists to draft 34 consensus-based recommendations on how to improve the rigour of SCI exercise research.

Martin Ginis Lab

Bill Miller

Giesbrecht E, Best KL, Miller WC, Routhier F, Harrison KL, Faieta J, Laberge M. Effects of a Community-Based Peer-Led eHealth Wheelchair Skills Training Program: A Randomized Control Trial. Arch Phys Med Rehabil, 2024;1-7.

This 3-site (Vancouver, Winnipeg, Laval) study evaluated the effectiveness of a peer lead eHealth intervention to improve the wheelchair skills of individuals with SCI. We saw changes with the satisfaction with mobility outcomes, self-efficacy of wheeling around other outcomes which were retained up to 6 months later. This trial also conducted an economic analysis of the intervention (under submission) the first to our knowledge.

Ben Mortenson

Simpson, E., Singh, G., Mamman, R., Miller, W. C., Borisoff, J., Derakhshan, P., & Mortenson, W. B. (2024). Exploring experiences and changes in daily and social activities among individuals with spinal cord injury during the COVID-19 pandemic: A longitudinal study. Medical Research Archives (European Society of Medicine), 12(10).

The was an unfunded study we did during COVID. It involved analysis of longitudinal qualitative data over a 9 month time frame early in pandemic. It was a challenging study in terms of the analysis and involved a large number of volunteers. The findings highlight how people with spinal cord injury experienced additional challenges as a result of COVID related restrictions and lock downs, which seemed to exacerbate pre-pandemic experiences of ableism.

Ipec Oruc

Kamensek T, Iarocci G, Oruc I. (2024). Atypical daily visual exposure to faces in adults with autism spectrum disorder. Current Biology, 34(18), 4197-4208.

This AI-assisted analysis of over 350 hours of first-person perspective footage explored daily visual exposure in individuals with autism, revealing impoverished exposure to faces in adults with autism spectrum disorder (ASD). We show that, in ASD, exposure to familiar faces is substantially reduced, and faces are viewed from farther away and with a bias towards non-frontal poses compared to those of non-autistic controls. These results are consistent with perceptual accounts suggesting that reduced experience with faces may explain why their facial recognition skills do not develop as well as others. This publication was featured in a new story by DMCBH Brain Matters August 30, 2024
https://www.centreforbrainhealth.ca/news/how-does-autism-spectrum-disorder-affect-the-development-of-facial-recognition-skills/

Tom Oxland

Noonan AM, Malakoutian M, Dehghan-Hamani I, Lewis S, Street J, Oxland TR, Brown SHM. Paraspinal muscle fibre structural and contractile characteristics demonstrate distinct irregularities in patients with spinal degeneration and deformity. Eur Spine J. 2024 Dec;33(12):4605-4618.

This article is very innovative and may have implications for SCI patients. Of course, that is to be determined, but the notion that paraspinal muscle is highly adaptive should be acknowledged in future research in this area.

Matt Ramer

Barraclough BN, Stubbs WT, Bohic M, Upadhyay A, Abraira VE, Ramer MS. Direct comparison of Hoxb8-driven reporter distribution in the brains of four transgenic mouse lines: towards a spinofugal projection atlas. Front Neuroanat. May 2024.

Most SCI research focuses on descending axonal tracts and their responses to injury. Ascending sensory information is equally important. Here, we anatomically characterize four different Hoxb8 reporter lines using confocal, super resolution, and light-sheet microscopy. All models demonstrate bulk-labeling of ascending projections to the brain, but with important differences given rostral expression boundaries in targeted and non-targeted transgenic mice. The routes taken by these axons through the pons, midbrain and thalamus have also been clarified, and we describe a new decussating tract of spinofugal axons ventral to the hypothalamus.

Babak Shadgan

Shadgan B, Nourizadeh M, Saremi Y, Baktash L, Lazarevic S. Enhancing upper extremity muscle strength in individuals with spinal cord injury using low-intensity blood flow restriction exercise. J Rehabil Med. 2024 Sep 24;56:jrm40608.

This pilot randomized clinical trial introduces low-intensity blood flow restriction (LI-BFR) exercise as a novel, safe, and effective rehabilitation strategy for individuals with

Shahriari Lab

spinal cord injury. The study demonstrated that just eight weeks of LI-BFR training produced significantly greater improvements in forearm muscle strength and functional independence compared to conventional high-intensity training. What is particularly exciting is the demonstration that meaningful gains in strength and daily function can be achieved with lower loads, thereby reducing the risk of overuse injuries in this vulnerable population. The strong participant satisfaction and feasibility findings underscore the potential for LI-BFR to be incorporated into rehabilitation programs and even daily home exercise as a transformative approach to enhance quality of life after spinal cord injury.

Dena Shahriari

Shalileh S, Moallemi A, Shahriari D. Neural probe implanted in precise location on the spinal cord of rodents. Journal of Visualized Experiments.(2024).

Leveraging Shahriari lab's neuromodulation technology, this visual publication presents a surgical technique to implant a neural probe with embedded light sources over the spinal cord in rodents.

Tetzlaff Lab

Wolfram Tetzlaff

Seira O, Park H, Liu J, Poovathukaran M, Clarke K, Boushel R, & Tetzlaff W. (2024). Ketone Esters Partially and Selectively Rescue Mitochondrial Bioenergetics After Acute Cervical Spinal Cord Injury in Rats: A Time-Course. Cells, 13(21), 1746

This publication shows that an oral Ketone ester could serve as a "diet in a bottle" for spinal cord injury and get around the need for a restrictive diet.

Cheryl Wellington

Esopenko C, Jain D, Adhikari SP, Dams-O'Connor K, Ellis M, Haag HL, Hovenden ES, Keleher F, Koerte IK, Lindsey HM, Marshall AD, Mason K, McNally JS, Menefee DS, Merkley TL, Read EN, Rojcyk P, Shultz SR, Sun M, Toccalino D, Valera EM, van Donkelaar P, Wellington C, Wilde EA. Intimate Partner Violence-Related Brain Injury: Unmasking and Addressing the Gaps. J Neurotrauma. 2024 Oct;41(19-20):2219-2237.

This paper outlines the shocking prevalence and complexity of brain injury inflicted in the context of intimate partner violence. Several authors of this paper (Adhikari, Mason, Shultz, van Donkelaar, Wellington) are part of a major Canadian effort to study this problem. Dr. Wellington is now leading two major U.S. Department of Defense grants with ~$8.2M USD in aggregate funding.

Chris West

Ahmadian M, Erskine E, Wainman L, Wearing OH, Duffy JS, Stewart LC, Hoiland RL, Taki A, Perim RR, Mitchell GS, Little JP, Mueller PJ, Foster GE, West CR*. (2024) Acute intermittent hypoxia elicits sympathetic neuroplasticity independent of peripheral chemoreflex activation and spinal cord tissue hypoxia in a rodent model of high-thoracic spinal cord injury. Exp Neurol.

Original research article reporting on 4 years' worth of studies to determine the mechanisms by which intermittent hypoxia causes plasticity within the sympathetic nervous system and improves blood pressure control.

People

Researcher highlights

Dr. Corree Laule (pictured above, left) received the **Killam Teaching Prize** in recognition of her demonstrated excellence in teaching. Awarded annually to faculty who are nominated by students, colleagues and alumni in recognition of excellence in teaching.

Dr. Andrei Krassioukov (pictured above, centre) was awarded the 2024 **Graydon Meneilly Award for Excellence in Mentoring** from the UBC Department of Medicine in recognition of a faculty member for their exemplary leadership as a mentor, fostering excellence in others (faculty, residents, students or staff).

Dr. Lyndia Wu (pictured above, right) is the new **Canada Research Chair in Wearable Brain Injury Sensing.** Dr. Wu's research seeks to create a better understanding of how head impacts affect brain health by developing wearable sensors that can collect real-time data. At the Sensing in Biomechanical Processes Lab (SimPL), she and her team address the complex problem of monitoring head impacts by developing sensors that be incorporated into mouth guards or helmets during live sports play to collect data on acceleration, angle of impact, and effects on brain activity. Her team also works to develop mobile brain and body imaging systems, and wearables sensors for sleep.

Trainee highlights

2025 ICORD Trainee Award winners: Trainee Awards are intended to recognize those attributes – beyond excellence in publications and presentations – that make a trainee or scientist outstanding. The awards highlight achievements in four distinct and important areas: service to others, work in SCI community, mentoring of trainees, and perseverance/resilience in the face of external life events.

The Gabriel Dix SCI Community Award honours individuals actively making a difference in the lives of people living with SCI. This year's award was presented to **Emily Giroux,** a PhD student with Dr. Heather Gainforth in the final year of her Ph.D. Emily is an impressive academic with a strong passion for doing research that serves communities. A cornerstone throughout all of her degrees has been a commitment to volunteering and serving SCI and disability organizations locally, provincially, and nationally. This award is named for Gabriel Dix, a former trainee and staff member in the Martin Ginis Lab before his death in 2021.

The Wolfram Tetzlaff Mentorship Award acknowledges postdocs and PhD students who consistently go above and beyond to guide and support trainees. The award acknowledges the hard work and dedication of these mentors to make students feel supported and encouraged. This year's award was presented to **Dr. Bethany Kondiles,** a postdoc in Dr. Tetzlaff's lab. Bethany has mentored over 20 undergraduate and high school students since 2021, creating a wonderful learning experience that has built confidence and success among her mentees. This award is named for Dr. Wolfram Tetzlaff, who served as director of ICORD from 2012 to 2023.

The ICORD Trainee Outstanding Service Award recognizes trainees who have made outstanding contributions to the ICORD community. This year's award was presented to **Xueqing Zhou**, a PhD student in Dr. Tania Lam's lab. Xueqing has held the position of Community Outreach Lead with the ICORD Trainee Committee since she was a first-year grad student. In addition to coordinating numerous ICORD tours, she has co-led and/or supported multiple trainee events, including meetICORD, ICORD Trainee Symposium, Volunteer Expo, etc. Xueqing also represents ICORD on the VCHRI-wide trainee committee to facilitate cross-centre communication and trainee development opportunities.

The Peggy Assinck Award recognizes ICORD students who best exemplify perseverance, dedication, resilience and passion for SCI research. In particular, it intends to recognize those outstanding individuals in the ICORD community who are managing extenuating forces such as health complications, interpersonal issues, or life circumstances, who may not be receiving the standard accolades because of factors outside of their control. This year's award was presented to **Robert Buren,** a 3rd year PhD student with Dr. Kathleen Martin Ginis, who is determined to solve the devastating problem of SCI neuropathic pain. Robert was nominated for his determination, perseverance, and academic accomplishments. This award was named for scientist and para-athlete Peggy Assinck, who completed her PhD with Dr. Wolfram Tetzlaff in 2016.

Emily Giroux

Bethany Kondiles

Xueqing Zhou

Robert Buren

ICORD's Principal Investigators

Researchers whose primary research programs are closely aligned with the mission of ICORD

Dr. Michael Berger | ICORD Associate Director; Clinical Assistant Professor, Physical Medicine and Rehabilitation | UBC

Dr. Jaimie Borisoff | Director, MAKE+ Applied Research, Adjunct Professor, former Canada Research Chair in Rehabilitation Engineering Design, Applied Research | BCIT / UBC

Dr. Andrea Bundon | Associate Professor, Kinesiology | UBC

Dr. Victoria Claydon | Professor, Biomedical Physiology and Kinesiology | SFU

Dr. Jacquelyn Cragg | Assistant Professor, Pharmaceutical Sciences | UBC

Dr. Peter Cripton | Professor, Co-Director - Orthopaedic and Injury Biomechanics Group, Mechanical Engineering / School of Biomedical Engineering / Orthopaedics | UBC

Dr. Stacy Elliott | Clinical Professor; Medical Consultant to Sexual Health Rehabilitation Services, VCH; Co-Director Vancouver Sperm Retrieval Clinic; Sexual Health Lead, Prostate Supportive Care Program, Prostate Centre, Psychiatry; Urologic Sciences | UBC / VCHRI / VCH

Dr. Janice Eng | Professor, Co-Director, Centre for Aging SMART, Physical Therapy | UBC / GF Strong Rehab Centre

Dr. Susan Forwell | Professor, Occupational Science and Occupational Therapy; Research Associate, Neurolgy, Faculty of Medicine | UBC / VCH

Dr. Heather Gainforth | ICORD Associate Director, Meaningful Engagement; Associate Professor, School of Health and Exercise Sciences | UBCO

Dr. David Granville | Professor, Pathology and Laboratory Medicine | UBC

Dr. Brett Hilton | Assistant Professor, Cellular and Physiological Sciences | UBC

Dr. Veronica Hirsch-Reinshagen | Assistant Professor, Pathology and Laboratory Medicine | UBC

Dr. John Kramer | ICORD Associate Director, Operations; Associate Professor, Anasthesiology, Pharmacology, and Therapeutics | UBC

Dr. Andrei Krassioukov | Patrick Reid Chair in Spinal Cord Rehabilitation Research; ICORD Associate Director, Rehabilitation Research; Professor, Medicine | ICORD/UBC

Dr. Brian Kwon | ICORD Director, Clinical Research; Professor / Canada Research Chair / Spine Surgeon / Research Director, Spine Research Program, Orthopaedics, Medicine | UBC / VCH

Dr. Tania Lam | Professor, Kinesiology | UBC

Dr. Cornelia Laule | ICORD Associate Director, Education and Training; Professor, Radiology; Pathology and Laboratory Medicine; Physics & Astronomy | Vice Chair, Research - Radiology | Director, UBC MRI Research | Co-Chair, seed2STEM Summer Research Program for Indigenous Youth | UBC

Dr. Kathleen Martin Ginis | Professor, Department of Medicine; School of Health and Exercise Sciences | Director, SCI Action Canada | Director, Centre for Chronic Disease Prevention and Management | UBCO

Dr. Bill Miller | Professor, Occupational Science and Occupational Therapy, Medicine | UBC

Dr. Ben Mortenson | Professor and Head, Occupational Science and Occupational Therapy | UBC, SFU

Dr. Ipek Oruc | Associate Professor, Opthalmology | UBC

Our Vision:

Make spinal cord injury preventable, livable, & curable.

Our Mission:

Conduct research and training towards the development and translation of more effective strategies to promote prevention, functional recovery, and improved quality of life after spinal cord injury.

Dr. Tom Oxland | Professor, Co-Director - Orthopaedic and Injury Biomechanics Group Orthopaedics; Mechanical Engineering | UBC
Dr. Matt Ramer | Lyall Knott BC Neurotrauma Professor; Associate Professor, Zoology; Neurosurgery | UBC
Dr. Babak Shadgan | Assistant Professor, Orthopaedics | UBC / VCH
Dr. Dena Shahriari | Assistant Professor, Orthopaedics; School of Biomedical Engineering | UBC / VCH
Dr. Wolfram Tetzlaff | Professor, Zoology; Surgery | UBC
Dr. Darren Warburton | Professor, Kinesiology; Experimental Medicine | UBC
Dr. Cheryl Wellington | Professor and Vice Chair, Research, Pathology and Laboratory Medicine | UBC
Dr. Chris West | ICORD Associate Director; Associate Professor, Cellular and Physiological Sciences | UBCO
Dr. Stephanie Willerth | Canada Research Chair in Biomechanical Engineering; Professor, Mechanical Engineering and Medical Science | UVic
Dr. David Wilson | Professor, Orthopaedics | UBC
Dr. Lyndia Wu | Assistant Professor, Mechanical Engineering | UBC

Investigators

Researchers whose primary research programs are peripherally aligned with the mission of ICORD

Dr. Phil Ainslie, Centre for Heart, Lung & Vascular Health, UBC
Dr. Mohsen Akbari, Mechanical Engineering, UVic
Dr. Hugh Anton, Physical Medicine & Rehabilitation, UBC/ VCH
Dr. Gary Birch, Neil Squire Society
Dr. Sean Bristol, Surgery, UBC
Dr. Erin Brown, Plastic Surgery, UBC/VCH
Dr. Mark Carpenter, Kinesiology, UBC
Dr. Karen Cheung, Electrical and Computer Engineering, UBC
Dr. Anita Delongis, Psychology, UBC
Dr. Christopher Doherty, VCH
Dr. Kayla Fewster, Kinesiology, UBC
Dr. Josh Giles, Mechanical Engineering, UVic
Dr. Tal Jarus, Occupational Science & Occupational Therapy, UBC
Dr. Shannon Kolind, Neurology, UBC
Dr. Jasmin Ma, Kinesiology, UBC
Dr. John Madden, Electrical and Computer Engineering, UBC
Dr. Tim O'Connor, Kinesiology, UBC
Dr. Scott Paquette, Surgery, UBC/VCH
Dr. Jacqueline Quandt, Pathology and Laboratory Medicine, UBC
Dr. Jane Roskams, Zoology, UBC
Dr. Mypinder Sekhon, Critical Care Medicine, UBC/VCH
Dr. Bill Sheel, Kinesiology, UBC
Dr. Carolyn Sparrey, Mechatronics System Engineering, SFU
Dr. John Street, Orthopaedics, UBC/VCH
Dr. Andrea Townson, Physical Medicine and Rehabilitation, UBC/ VCH

Associate Members

Researchers who collaborate with ICORD PIs

Dr. Tim Bhatnagar, BCCHR
Dr. Mike Boyd, VCH
Dr. Romeo Chua, UBC
Dr. Jens Coorsen, U Western Sydney
Dr. Kerry Delaney, UVic
Dr. Femke Hoekstra, UBCO
Dr. Ryan Hoiland, UBCO
Dr. Andy Hoffer, SFU
Dr. Judy Illes, UBC
Dr. Tim Inglis, UBC
Dr. Megan McGillivray, St. Francis Xavier U
Dr. Mohamed Javan, Tarbiat Modares U
Dr. Andrew Laing, U Waterloo
Dr. Nan Liu, Peking U
Dr. Freda Miller, UBC
Dr. Michael Negraeff, VCH
Dr. Tom Nightingale, U Birmingham
Dr. Aaron Phillips, U Calgary
Dr. Soshi Samejima, U Washington
Dr. Bonita Sawatzky, UBC
Dr. Miriam Spering, UBC
Dr. Paul van Donkelaar, UBC
Dr. David Whitehurst, SFU
Dr. Rhonda Willms, VCH

Emeritus Members

Dr. Tom Grigliatti
Dr. Piotr Kozlowski
Dr. Catherine Pallen
Dr. John Steeves (Founding Director)
Dr. E. Paul Zehr

icord

is a world-leading health research centre focused on spinal cord injury. From the lab-based cellular level of understanding injury to rehabilitation and recovery, our researchers are dedicated to the development and translation of more effective strategies to promote prevention, functional recovery, and improved quality of life after spinal cord injury. Located at Vancouver General Hospital in the Blusson Spinal Cord Centre, ICORD is supported by the Rick Hansen Foundation, UBC Faculties of Medicine and Science, and Vancouver Coastal Health Research Institute.

Rick Hansen Foundation

UBC FACULTY OF MEDICINE

Vancouver CoastalHealth Research Institute

Thank you for reading our 2024-25 Annual Report.

Prepared by Cheryl Niamath. **Contributors:** Nancy Thorogood, Katie Ashwell, Jocelyn Chan, Martin Dee.
For additional copies of this report or any other ICORD publication, please call 604-675-8844 or email admin@icord.org.

Contact us: ICORD Administration / 3F, Blusson Spinal Cord Centre / 818 W. 10th Avenue, Vancouver, BC Canada V5Z1M9
Telephone: 604-675-8810 | www.icord.org

Like us on Facebook (search "ICORD")