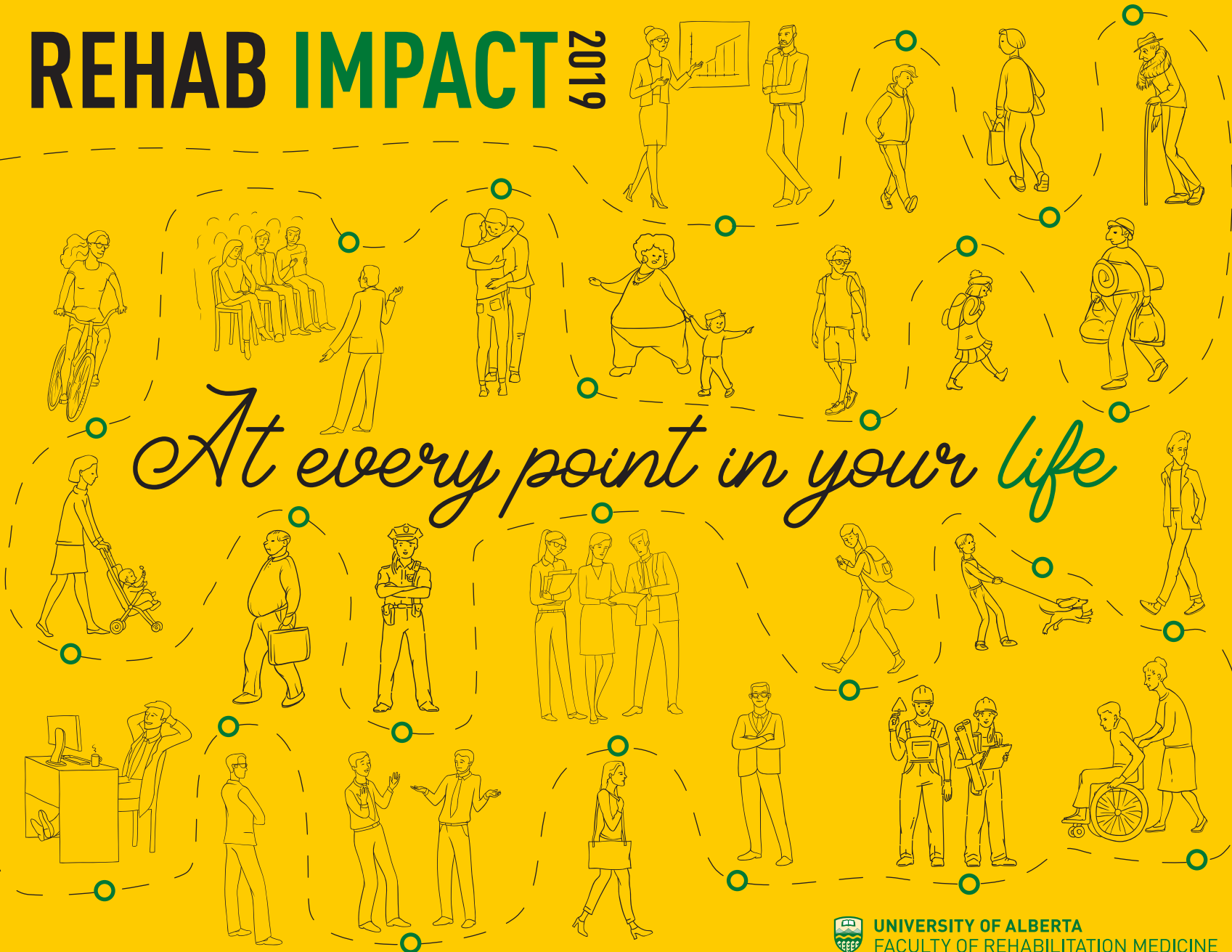


REHAB IMPACT 2019



At every point in your life

Rehab Impact is published annually by the Faculty of Rehabilitation Medicine at the University of Alberta. It is distributed worldwide to more than 8,000 alumni, universities, government bodies, organizations and friends of the faculty.

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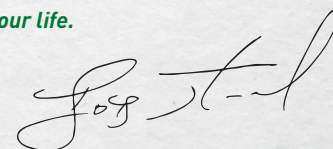
*Rehab has made an impact
at every point in my life*

My first exposure to rehabilitation was when I got hurt playing sports in university. Over the years, my family and I have trusted rehabilitation professionals to make our lives better. At five years old, my son saw a speech-language pathologist who empowered him to overcome fluency issues. My wife was able to move again after surgery thanks to a physical therapist. I saw first-hand how occupational therapists enabled my aging in-laws to live independently in their own home.

My life is but one of millions impacted by rehabilitation. Rehab impacts everyone, and I am humbled to lead the only free-standing rehabilitation faculty in North America. We are discovering the latest in spinal cord injuries. We are using video games to help seniors exercise. We are helping cancer survivors eat and swallow. We are using virtual reality to treat PTSD.

We—as faculty, staff, students, alumni and friends of the Faculty of Rehabilitation Medicine—are making an impact.

At every point in your life.



R.G. (Bob) Haennel, PhD, FACS
Professor & Dean



1,034
people participated in continuing professional education programs

our occupational therapy and physical therapy degree programs are offered in
Calgary & Edmonton

44
academic teaching staff

3,529
therapy visits at the Institute for Stuttering Treatment and Research

43
faculty

4
centres and institutes

4,282
patient visits at the Institute for Reconstructive Sciences in Medicine

67
administrative and support staff



We are the Faculty of Rehabilitation Medicine

\$1,437,183
raised in gifts and sponsorships

5
continuing education certificate programs

- Department of Communication Sciences and Disorders
- Department of Occupational Therapy
- Department of Physical Therapy
- Institute for Stuttering Treatment and Research
- Institute for Reconstructive Sciences in Medicine
- Glen Sather Sports Medicine Clinic
- Rehabilitation Research Centre
- Rehabilitation Science Program

6
graduate degree programs

95
current students in MSc and PhD Rehabilitation Science

790
current students in MSc Occupational Therapy, Physical Therapy and Speech-Language Pathology

8,100
alumni

44,500
patient visits at the Glen Sather Sports Medicine Clinic



3
research chairs

\$1,081,715
in student awards

3 student clinics:
Corbett Hall Early Education Program
Corbett Hall Student Physical Therapy Clinic
Corbett Hall Speech-Language Pathology Clinic

our physical therapy program is also offered in
Camrose





DID YOU KNOW?

As part of an occupational therapy course with professor and researcher **Sandy Hodgetts**, OT students take part in child observation labs where they interact with children and assess milestones, observing how they participate and play. They also go to a number of daycares, early learning centres, hospitals and community care centres.

Early Years



Taking baby steps after a stroke

Brain Canada grant will allow research team to provide early intervention for mobility issues

By Amanda McCarthy



What do you do if the person who has just had a stroke hasn't even been born yet?

A new University of Alberta study in the Faculty of Rehabilitation Medicine is looking at intervention techniques for babies who have suffered a perinatal stroke.

Jaynie Yang, professor, Department of Physical Therapy, Faculty of Rehabilitation Medicine is the recipient of a Brain Canada grant that will allow her to investigate activity-based therapy to increase mobility in children with impaired walking due to stroke.

This project has been made possible by the Brain Canada Foundation through the Canada Brain Research Fund, with the financial support of Health Canada and Stollery Children's Hospital Foundation through the Women and Children's Health Research Institute (WCHRI).

"What typically happens is that newborn babies or babies that are still in the womb suffer a stroke. Signs that a stroke has occurred can be picked up if the stroke happens around the time of birth and the child develops seizures. But often, the stroke happens earlier, and there are no signs until the child is three to six months old," says Yang. "Once symptoms start occurring, such as low levels of movement in one side of the body, that's when the child is referred to a specialist."

Out of every 1,000 births, one will result in a perinatal stroke. Up to now, treatment for these children has always been focused on the arms.

While mobility in the arms and hands is important to a child's quality of life, the ability to walk and run well is another major concern among parents of children who have suffered a stroke.

"Disabling effects are life-long for these children, but we're hoping we can alleviate some of the issues with early intervention and activity," explains Yang. "Interventions to improve mobility have mostly focused on passive activities, such as stretching, bracing, medications and surgery. But we think that physical therapy has a role to play in all of this."

According to Yang and her team, enhancing the activity of the affected leg early in life could improve leg function and avoid or delay other costly and painful interventions.

"Because a baby's brain is so malleable, there is a window where the effects of activity-based intervention are more likely to be successful."

Weights, uphill climbing, kicking and stomping are just some of the activities Yang is planning to conduct with her tiny clients. And thanks to her Brain Canada grant, she'll be able to provide all of this and more.

"We believe this study will not only improve the outcomes for the children, but also potentially improve quality of life for the families as a whole. That's very important."



Le saviez-vous?

2018 marked the 10th anniversary of the Certificate in Franco-phone Practice for Speech-Language Pathologists. This program is a joint initiative between the Faculty of Rehabilitation Medicine and Campus Saint-Jean. Thank you to Campus Saint-Jean for partnering with us to train SLPs who serve clients in French! Merci!



Grant Irwin (left) poses for a picture with Cassidy Fleming, Rehab Med Students' Association president 2017-18, and Dean Bob Haennel at a student Welcome Week event.

Retiring Alumni Council Rep

A big thank you to **Grant Irwin** (BSc PT Class of 1979), our Faculty of Rehabilitation Medicine Alumni Council Representative! As alumni council rep since 2016, Irwin served as a member of the Dean's Advisory Council, spoke at various events and promoted the faculty across campus and within Alumni Council.



Continuing Professional Education for Health-Care Providers

The University of Alberta Faculty of Rehabilitation Medicine offers a range of continuing professional education (CPE) opportunities for working clinicians, including graduate certificate programs, non-credit courses, workshops and more.

- Online Certificate in Pain Management
- Online Certificate in Stroke Rehabilitation
- Online Certificate in Sexual Health
- Certificate in Bridging to Canadian Physical Therapy Practice
- Certificate in Francophone Practice for Speech-Language Pathologists
- Wheelchair and Seated Mobility
- Intro to Surgical Design and Simulation
- Physio Practice in the Canadian Health-Care System
- Online Diagnostic Imaging in Physical Therapy Practice
- Overview of Dysphasia Management



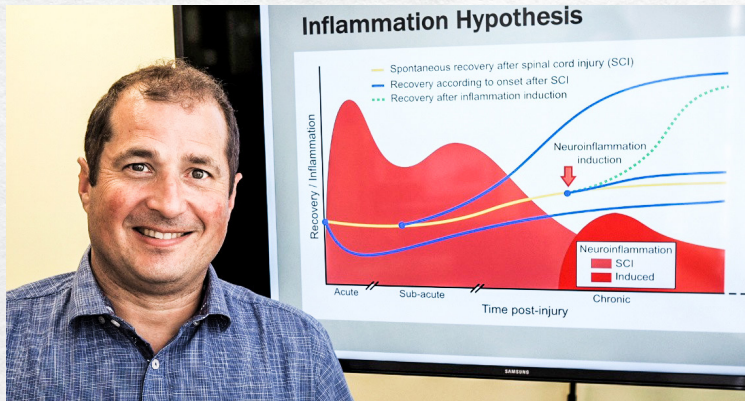
UNIVERSITY OF ALBERTA
FACULTY OF REHABILITATION MEDICINE

For more information on our professional development programs, visit: uab.ca/pd

Inflammation discovery opens window to better rehabilitation possibilities

Findings could have significant impact on how spinal cord injuries are treated in the future

By Sheila Graham



Introducing fever and inflammation at the right time after spinal cord injury improves the effectiveness of rehabilitation exercises.

U of A spinal cord researchers **Karim Fouad**, a Canada Research Chair in the Faculty of Rehabilitation Medicine, **Dave Bennett and Abel Torres** studied inflammation and rehabilitation training in rodents and discovered that creating a mild inflammatory response improved a rat's ability to relearn how to pick up pellets months after a spinal cord injury.

"Time is of the essence," explained Fouad. "It's usually impossible at the early stages to train at a high enough intensity to regain motor functions. If patients can't work on recovering those skills effectively, those skills are lost forever and cannot be regained."

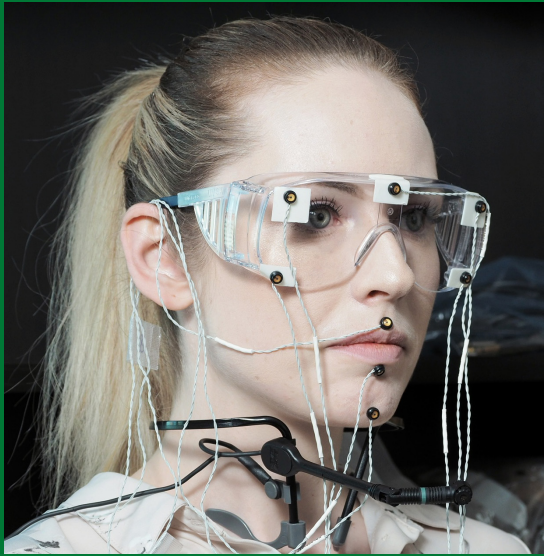
Fouad's findings could have significant impact on how nervous system injuries are treated in the future.

"If we can elicit similar responses in patients, this has huge potential to improve recovery," explained Fouad. "Loss of hand function is a leading cause of adult disability in Canada and can be devastating to patients and their families."

Fouad's proof-of-principle study, "Eliciting Inflammation Enables Successful Rehabilitative Training in Chronic Spinal Cord Injury," was published in the July issue of *Brain*, the international journal of neurology.

The study was supported by Wings for Life (Austria) and the Canadian Institutes of Health Research.





Face-time with **ISTAR**

Communication Sciences and Disorders researcher **Torrey Loucks** is studying speech movements to understand why heightened movement variability is linked to the main symptoms of stuttering.

By studying movements of the lips and jaw during speech, the research chair in stuttering for the **Institute for Stuttering Treatment and Research (ISTAR)** hopes to link the variability to the internal processes that cause disfluencies. The speech movement studies are conducted before and after therapy at ISTAR because speech movement variability is expected to decrease significantly after successful therapy.

Let sleeping dogs lie (with you)

As if we needed more reasons to cuddle up with our furry family members! Bringing the dog into the bedroom can help people living with chronic pain sleep better and can ease feelings of anxiety and loneliness. Researcher **Cary Brown** conducted a study of people who suffered long-term chronic pain. Results revealed that physical contact with their dogs helped participants feel more relaxed and safer, so they weren't as anxious as they were trying to sleep.





Alumni Weekend

JOIN US!

Alumni Weekend 2019: September 19-22
rehabilitation.ualberta.ca/alumni



Alumni Weekend: talks and tours included special presentations by former CFL player Graeme Bell and clinical assistant professor Andrea Ruelling.



Alumni Weekend included snowy family fun with zorbs and bouncy castles!

WHODUNIT?

Two gargoyles were quietly added above the west entrance of Corbett Hall in 1999 by a grateful student who is now a proud alumnus of the Faculty of Rehabilitation Medicine.



Class Notes

[I remember my time at the Faculty of Rehabilitation Medicine as] gaining the practical and critical thinking skills to set the foundation to enter the physiotherapy profession, and at the same time having some fun along the way (intramural hockey with the Rehab Med team, costume pub crawls, coaching sledge hockey, movie nights at Corbett Hall—just to name a few).

- **Tyson Plesuk**, MSc PT Class of 2007, physiotherapist at Movement Sports Clinic and was part of the Canadian medical team for the 2014 Winter Olympic Games in Sochi and 2018 Winter Olympic Games in PyeongChang

[What I remember from my time in the faculty are] the beautiful building and unforgettable professors, students and administrators, Angela Libutti and Judy Sara.

- **Dorit Redlich Amirav**, 2018 PhD recipient, occupational therapist specializing in mental health/professor at Tel Aviv University in Israel

[I] enjoyed the comradery of the small class of occupational therapy and the personalized attention and commitment from the faculty.

- **Patricia Fingerhut**, BSc OT Class of 1979, MSc OT Class of 2000, associate professor and chair, Department of Occupational Therapy, University of Texas Medical Branch

[Some of my favourite memories are] having lunch on the lawn by Corbett Hall and walking through the Health Sciences library and smelling books. :)

- **Melissa Peter**, BSc SLP Class of 1993, MSc SLP 1998, speech-language pathologist, private practice in Sydney, Australia

SUBMIT A CLASS NOTE! rehabilitation.ualberta.ca/alumni



We hosted several class reunions throughout the year, including the MSc SLP Class of 2000 (pictured above).

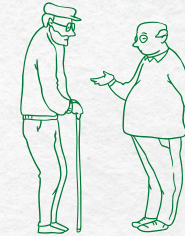
Thanks for Coming!

More than 300 people attended our annual Alumni-Student BBQ at Corbett Hall. We also welcomed back the Classes of 1958, 1963, 1968, 1973, 1978, 1983, 1988, 1993, 1998, 2003, 2008 and 2013 and special guests David Magee, Sharon Brintnell, Leonard Allbon, Wendy Davis and John Ramsey at the Dean's Alumni Luncheon!

Virtual personal trainer helps seniors get more exercise at home

U of A researcher developing personalized program that brings the appeal of electronic gaming to physical therapy for older adults

By Bev Betkowski



Stuart Embleton performs arm raises with guidance from the VirtualGym program as computing science researcher Victor Fernandez-Cervantes looks on. Feedback from Embleton and other seniors is helping U of A researchers refine the program to deliver customized physical therapy for seniors at home.

A high-tech University of Alberta research project is letting seniors hit a computerized gym especially designed for their needs.

VirtualGym, an electronic game that combines the entertainment of gaming with prescribed exercises, is being put through its paces in a Calgary seniors' residence to test its user-friendliness and appeal.

Once perfected, it will deliver at-home therapeutic exercises for seniors with chronic health issues, mobility problems or dementia, at the click of a button.

"It's a concept of bringing rehabilitation home," said Rehabilitation Science PhD candidate **Noelannah Neubauer**, who helped design the program in partnership with AGE-WELL. "We already have telehealth being used by doctors, why not rehabilitation too?"

Stuart Embleton, 77, believes seniors would use VirtualGym if it were available to them.

"Most seniors nowadays have computers and TV sets, and that, plus an optical input, is all you need to use the system. It's going to be more and more useful as it's further developed. It's called a game, but it's really a useful therapeutic process. If I had a broken hip or was frail or couldn't drive, and needed some physical therapy, I could use a virtual gym at home," he said.

That's especially valuable for rural or shut-in seniors who can't go to real-life gym classes or make regular visits to physiotherapy clinics, said Neubauer.

"We want seniors to be able to exercise more, and this provides another option for them."



Click 'n' Push

An app that identifies the exertion required to navigate the city in a wheelchair won Edmonton's HealthHack competition, part of the 2018 Smart Cities Challenge. Click 'n' Push allows users to map out a route based on how much exertion would be required to get to a destination in winter or summer. The prototype, developed by researcher **Martin Ferguson-Pell** and his team, includes a feature that allows users to choose their relative strength.



Edmonton 's Glen Sather Sports Medicine Clinic

In 2018, the **Glen Sather Sports Medicine Clinic** was once again named Edmonton's #1 physiotherapy clinic in the *Edmonton Journal*. The Glen Sather Clinic is a social enterprise whose main purpose is for the public good. Profits from the clinic are reinvested to support the patients we care for through community services, research and training future health-care professionals.

Cognitive Projections

Launched by the **Rehab Robotics** team, Cognitive Projections explores new ways of teaching and learning in health sciences through augmented reality (AR) and virtual reality (VR). VR examples include: VR OSCE Exam Simulator, Virtual Reality Craniofacial Anatomy, Virtual Reality Dental Anesthesia Simulator, Advice Taking in Virtual Reality, Scoliosis Virtual Reality, Cell 101 Virtual Reality and Media 101 Virtual Reality.



FAST FACT

Our professors and students represented the Faculty of Rehabilitation Medicine at the **National Gathering of Indigenous Elders** in 2017 and the **National Indigenous Cultural Expo** in 2018.



DID YOU KNOW?

Our **MSc Physical Therapy** and **MSc Occupational Therapy** programs are offered at several satellite sites in the province (PT - Edmonton, Calgary & Camrose and OT - Edmonton & Calgary) via Lifesize real-time webcast technology. We continue to educate rehabilitation professionals to meet the needs of people in Alberta and beyond through innovative technology.



World-renowned reconstructive sciences institute celebrates 25 years of innovation

For the last 25 years, the Institute for Reconstructive Sciences in Medicine (iRSM) has been providing expertise in surgery, medicine, rehabilitation medicine, engineering and computing science for head and neck reconstructive treatments and rehabilitative care. Work being produced by leading researchers has resulted in the institute being featured in *Avenue Magazine* several times. The institute's 25th anniversary celebration in 2019 recognized co-founders John Wolfaardt's and Gordon Wilkes' commitment to building a world-renowned research facility.



Professor and audiologist **Bill Hodgetts** received the President's Award for his outstanding contributions to the Canadian Academy of Audiology.



The **Corbett Hall Student Physical Therapy Clinic** is a full-time non-profit clinic for underserved populations. PT students take primary responsibility for providing assessment or rehabilitation under the supervision of licensed physical therapists.



CSD Annual Camps

The Department of Communication Sciences and Disorders hosts the **Augmentative and Alternative Communication (AAC) Camp Alberta** and **Alberta Aphasia Camp** each year. The AAC Camp, in partnership with March of Dimes Canada, provides opportunities for families and children using AAC devices to communicate and build friendships with each other. The Aphasia Camp is a way for individuals living with aphasia and their families to enjoy a weekend retreat and participate in recreational and therapeutic activities.

Virtual reality for PTSD treatment is ‘just the beginning’

UAlberta announces new Heroes in Mind, Advocacy & Research Consortium to support military, veterans, public safety personnel and their families

By Laurie Wang



Serving those who serve us, the University of Alberta announced the creation of the **Heroes in Mind, Advocacy & Research Consortium (HiMARC)**, advancing innovative health and wellness research, education and services for military, veterans, public safety personnel and their families.

HiMARC’s founding members include the Faculty of Rehabilitation Medicine, Alberta Health Services’ Glenrose Rehabilitation Hospital, Royal Canadian Legion Alberta - NWT Command, NAIT, Canadian Armed Forces, Department of National Defence, Veteran Affairs Canada and Covenant Health. Together, they have established several partnerships, initiatives and research projects—one of them being 3MDR, using virtual reality (VR) to treat post-traumatic stress disorder (PTSD).

HiMARC’s Motion-Assisted, Multi-Modal Memory Desensitization and Reconsolidation, or 3MDR, research study, the largest of its kind in Canada, will allow patients with PTSD to try VR therapy using the Computer-Assisted Rehabilitation Environment (CAREN) system at the Glenrose Rehabilitation Hospital.

Patients step into the CAREN unit and walk on a treadmill toward the stimulus—sounds and images that may remind them of events that brought on traumatic memories. The therapist is with them throughout this experience, guiding, directing and asking them a series of questions as the soldier or veteran confronts these memories.

“It was incredible. I don’t know how else to describe it. My senses were heightened. I was even sensitive to the clanging sound of the carabiner on my harness,” Capt. Anna Harpe said after experiencing the 3MDR system.

Though the social work officer for CFB Edmonton does not have PTSD, testing the 3MDR brought back vivid memories of a mission in Afghanistan when she was in the infantry. “I have worked with some clients who have been diagnosed with PTSD, and I have to say, the 3MDR is mind-blowing. My whole body was activated. You just cannot get the same thing through talk therapy in an office,” she said.

“We are so grateful for the support of our partners—the Royal Canadian Legion AB-NWT Command, Canadian Armed Forces and the Glenrose Rehabilitation Hospital Foundation; I look forward to continuing to grow this collaboration together,” said **Suzette Brémault-Phillips**, director, HiMARC, and associate professor, Department of Occupational Therapy. “There are more HiMARC research initiatives this year and we want to continue to bring research to life.”

Capt. Harpe agreed. “HiMARC is creating hope and I am so grateful for this group. I really believe this is just the beginning.”

Her Honour Lois Mitchell, the Lieutenant Governor of Alberta, was named the honorary patron of HiMARC.





Concussion Education Summit

The **Glen Sather Sports Medicine Clinic (GSSMC)** held its first ever Concussion Education Summit in Canmore, Alberta. Sponsored by the Banff Canmore Community Foundation and featuring a multidisciplinary lecture team from the GSSMC, the event provided insight into concussion management and treatments.



Don't take lower back pain **lying down**

Researcher **Doug Gross** co-led a global study on lower back pain published as a three-part series in *The Lancet*, which encourages activity, not rest, for the world's leading cause of disability. The study also showed that over-the-counter and prescription medications offer only limited benefits and should be a secondary treatment.

R M REHABILITATION MEDICINE **S A** STUDENTS' ASSOCIATION

For **students**, by **students**

Understanding how students are often in need of financial support and rely on student loans, the **Rehabilitation Medicine Students' Association (RMSA)** established the **RMSA Impact Award**, with a contribution of \$28,000. Though the RMSA has already created two scholarships, they wanted to create a new award to recognize students that go above and beyond in impacting the faculty and the broader community. The RMSA Impact Award is the largest investment to date by our passionate students who continue to lead by example and challenge each of us as alumni to support our alma mater.

FAST FACT

Rehabilitation Research Centre Director Doug Gross has been named Co-Chair of the Alberta Rehabilitation Research Advisory Council.



What will your legacy be?

Planned giving: bequests and wills

When you name the University of Alberta's Faculty of Rehabilitation Medicine in your will, you become a passionate supporter committed to world-changing research and the education of future generations of rehabilitation professionals.

The Faculty of Rehabilitation Medicine has a variety of areas to which you can direct your gift. Please contact us so that we can discuss your area of interest. Philanthropic support to the faculty makes student financial aid, scholarships, research, state-of-the-art technology treatment innovations and more possible.

When you give to the Faculty of Rehabilitation Medicine, you are

helping change the world. Through excellent teaching, cutting-edge research and service to the community, the faculty is committed to enhancing the quality of life for the people we serve.

Rehab makes an impact. At every point in your life.

To learn more about planned giving or to arrange a bequest, contact [John Voyer](#), Assistant Dean, Development
780-248-5781 | give2rehab@ualberta.ca

Give today to help ensure a better tomorrow.





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FACULTY OF REHABILITATION MEDICINE

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