Building on the vision of its founders, the McCaig Institute for Bone and Joint Health is committed to fostering interdisciplinary research. This commitment drives advancement in the diagnosis, treatment, and healthcare services for individuals affected by bone and joint diseases. Our dedication to enhancing musculoskeletal health contributes to a healthier future for our entire community.
Our Leadership

Dr. Cheryl Barnabe, MD, MSc’11, assumed the directorship of the McCaig Institute for Bone and Joint Health on January 1, 2024, succeeding Dr. Steven Boyd who served for eight dedicated years. Dr. Barnabe is a rheumatologist and a professor in the departments of Medicine and Community Health Sciences at the Cumming School of Medicine. To further strengthen the leadership of the institute, Dr. Roman Krawetz, PhD, was appointed deputy director.

Our Members

116 Faculty
(from Cumming School of Medicine, Kinesiology, Schulich School of Engineering, Veterinary Medicine, U of A, MRU, and UBC)

100 MSc Students

56 PhD Students

28 Postdoctoral Fellows

45 Others
(Undergraduates, Fellows, Residents)

121 Staff

New Recruits

In July 2023, former trainee Dr. Danielle Whittier returned to the University as an Assistant Professor, and assumed appointment in the role of Canada Research Chair (CRC) Tier 2 in Pediatric Musculoskeletal Image Science in the Department of Cell Biology and Anatomy.

In January 2024, Dr. Ejaife Agbani assumed his new role as an Assistant Professor in the Department of Physiology and Pharmacology.
Clinician-Scientist Empowering Patients with Personalized Approach to Bone Health

Dr. Prism Schneider secured over $1.2 million in funding from the Partnership for Research and Innovation in the Health System – Digital Health program (PRIHS). This funding will bolster her ongoing digital healthcare initiative known as the POWER Program: Personalized Osteoporosis Care with Early Recognition.

The POWER Program utilizes a smartphone app to empower patients in monitoring their bone health and preventing fragility fractures, addressing a significant care gap in outpatient settings. With fragility fractures common in Alberta, particularly among post-menopausal women, early identification and intervention are crucial. The app provides personalized bone-health care plans, educational materials, medication reminders, and virtual consultations, benefiting rural and remote patients by reducing the need for frequent in-person appointments.

Classic Pac-Man Game Offers Insight into McCaig Institute’s Nationally Recognized Research

Dr. Tony Dufour and Dr. Roman Krawetz have been honored by Arthritis Society Canada for their groundbreaking research on osteoarthritis. To help explain this science, they compare the enzyme Tryptase β, which disrupts joint lubrication and triggers inflammation, to Pac-Man consuming dots in the game. In their research published in Nature Communications, they showed how this enzyme continues to cause harm even when protease inhibitors – in the analogy, the game’s ghosts – attempt to slow its activity. This research is focused on better understanding these processes and finding ways to control them, to mitigate long-term damage and alleviate pain for those living with osteoarthritis. The team are now studying how administering a drug to the affected joint may inhibit the negative effects of Tryptase β.
Trainee-Led Art Enriches Community and Transforms Our Bridgeway

In spring of 2024, we proudly inaugurated the McCaig Arts Gallery, marking a momentous occasion for students, faculty, and staff who worked to bring this vision to life. The gallery, situated within the Bridgeway space, stands as a testament to the fusion of creativity and science within our community.

Dr. Cy Frank Legacy Lectureship
112 in-person & 98 virtual
Dr. Walter Herzog presented his extensive work on pre-clinical models of knee joint osteoarthritis (OA). His focus was on post-traumatic OA, muscle weakness induced OA, and obesity/metabolic syndrome associated OA, including the potential clinical applications.

Wood Forum
230 in-person & 190 virtual
Experts in the field of bone health shared insights with our community on topics including healthy bone development in youth, optimizing bone health in adulthood, eating well for your bones, and the search for bone-building therapies.

Science in the Cinema
130 in-person
Members of the public watched Big Hero Six, followed by a Q&A session with Dr. Michael Kallos and Dr. Mariana Bento on the topic of innovations and developments in Alberta’s medical device sector.

Digital Engagement Highlights

UTODAY ARTICLES
14
RESEARCH IN MOTION
4 issues 660+ subscribers

Social Media Subscribers

FACEBOOK
448 ↑12%
INSTAGRAM
590 ↑34%

TWITTER/X
883 ↑4%
YOUTUBE
474 ↑12%
LINKEDIN
142 (New in 2023)

Trainee-Led Art Enriches Community and Transforms Our Bridgeway

At the heart of this endeavor lies the ARTS Society, founded by passionate trainees. Not only did they establish the society, but they also spearheaded the transformation of the gallery into a vibrant space for artistic expression. The inaugural exhibition, “Science Through Art,” was curated by a diverse cohort of artists, students and faculty.