



**M<sup>c</sup>CAIG** INSTITUTE  
FOR BONE AND JOINT HEALTH



RESEARCH • EDUCATION • COMMUNITY

# STRATEGIC PLAN

## 2016-2021



**UNIVERSITY OF CALGARY**  
CUMMING SCHOOL OF MEDICINE

***Mobility for Life.***

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## VISION

Leading the improvement of musculoskeletal health for patients across their lifespan through research and education.

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## MISSION

To enhance the musculoskeletal health of Albertans by focusing our efforts on a “precision medicine” approach to research: tailoring the right intervention for patients at the right time.

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## OUR CORE VALUES

### SOLUTION DRIVEN

We place the patient and community health needs at the forefront of our work, striving for faster and better health outcomes for people suffering from bone, muscle and joint conditions.

### COMMITMENT TO EXCELLENCE

We are committed to producing high-quality work and solutions based on integrity, transparency, sustainability and global standards of achievement. We will maintain the highest standards by continually measuring and improving our outcomes.

### INNOVATION

We strive to be global leaders in musculoskeletal research, education and knowledge translation through a focus on excellence, targeted and strategic growth, learning, and development of novel solutions to musculoskeletal health challenges.

### COLLABORATION

We use a multidisciplinary team approach to problem-solving that results in innovative, comprehensive solutions for improving the musculoskeletal health of patients.

## **Bone and joint diseases are the primary cause of disability in Canada, affecting one in six Canadians aged 15 years and older.**

In 2015, the estimated annual economic impact of bone and joint diseases in Canada was \$33 billion. By 2031, this is expected to more than double to over \$67 billion. In any given year, a Canadian living with bone and joint diseases is up to one and a half times more likely to be hospitalized, require physiotherapy, visit a specialist or require multiple primary care visits than someone with other chronic conditions, and two to three times more likely than someone without any chronic illness.

The McCaig Institute for Bone and Joint Health's 2016-21 strategic plan introduces our revitalized vision of "leading the improvement of musculoskeletal health for patients across their lifespan through research and education." Our mission is "to enhance the musculoskeletal health of Albertans by focusing our efforts on a "precision medicine" approach to research: tailoring the right intervention for patients at the right time." This will shape our three strategic goals in the areas of research, education and community and bringing us closer to achieving *Mobility for Life* for all Albertans.

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*In 2006, Eltoff Abdalla received Alberta's first fresh biological joint transplant as part of research done by the McCaig Institute's Joint Transplantation Program. Within a year she was back to cycling, running and going to the gym. Ten years later, she is still doing great. "Having the procedure gave me freedom," says Abdalla. "It gave me my life back."*





# RESEARCH

## STRATEGIC GOAL 1

**Become a globally recognized centre of research excellence in precision medicine for musculoskeletal health.**

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The concept of precision medicine begins and ends with the patient, with clinical problems driving research. Our strength is our capacity to address research questions across the full spectrum of health research, from basic discovery through to clinical implementation. The McCaig Institute's new Centre for Mobility and Joint Health is a hub where physicians, basic scientists, biomedical engineers, patients and the Alberta health system collaborate to keep Albertans moving.

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*Heather Giuffre and her husband, Michael, are participants in a research study looking at the effects of calcium and vitamin D supplements on bone health. "We've seen first-hand the effects of poor bone health, and we want to do what we can to avoid it," says Heather who loves to play tennis and work-out at the gym.*

## STRATEGY 1.1

Use biomarkers, imaging and mobility to steer the development of a precision medicine approach to the treatment of arthritis patients for better outcomes and the efficient use of health-care systems and resources.

### OBJECTIVES

- Launch the Centre for Mobility and Joint Health (MoJo).
- Create a database for inflammatory arthritis, and develop a template that will expand to other disease areas in the future.
- Expand infrastructure and research capacity in the area of analytics/bioinformatics.
- Identify and focus on key research questions for characterizing inflammatory arthritis, identify champions and build multidisciplinary teams to solve clinical problems.

## STRATEGY 1.2

Use a comprehensive research approach that integrates basic discovery through to patient care.

### OBJECTIVES

- Develop events and initiatives (e.g., academic speed dating, seminars, blue-sky sessions) that improve awareness of research across the institute and encourage collaboration.
- Provide resources (i.e., grants, studentships) that encourage collaboration across multiple areas of research.
- Provide logistical support to researchers.
- Reach out to other CSM institutes and key partners (faculties, provincial organizations) to increase interaction that supports discovery and translation.
- Work with government and industry partners to develop and test novel technologies that improve MSK care.

## STRATEGY 1.3

Build research capacity and cultivate a culture of excellence in osteoarthritis, osteoporosis and rheumatoid arthritis and other musculoskeletal (MSK) conditions.

### OBJECTIVES

- Recruit, train and retain high-quality researchers in key areas.
- Successfully compete for external funding.
- Encourage and support publication in high-impact peer-reviewed journals.





# EDUCATION

## STRATEGIC GOAL 2

**Provide a high-quality, interdisciplinary training program in musculoskeletal health.**

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Training the next generation of researchers, clinicians and industry leaders in MSK health is critical for conducting innovative research. Our training program will attract the best and brightest trainees from around the world.

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*The McCaig Institute has a thriving group of trainees within a variety of faculties, including the Cumming School of Medicine, the Schulich School of Engineering and the Faculty of Kinesiology. Our trainees are extremely successful and include Vanier Scholars, Eyes High Scholars and Banting Fellows.*

## STRATEGY 2.1

Establish a competitive training environment that rewards excellence.

### OBJECTIVES

- Establish a fund/endowment to support highly skilled people through scholarships and awards.
- Provide funding for strategic, targeted recruitment of high-quality trainees (tentatively named McCaig Institute Scholar).
- Recognize and reward community and academic excellence of trainees.

## STRATEGY 2.2

Develop an enriched training program for MSK health.

### OBJECTIVES

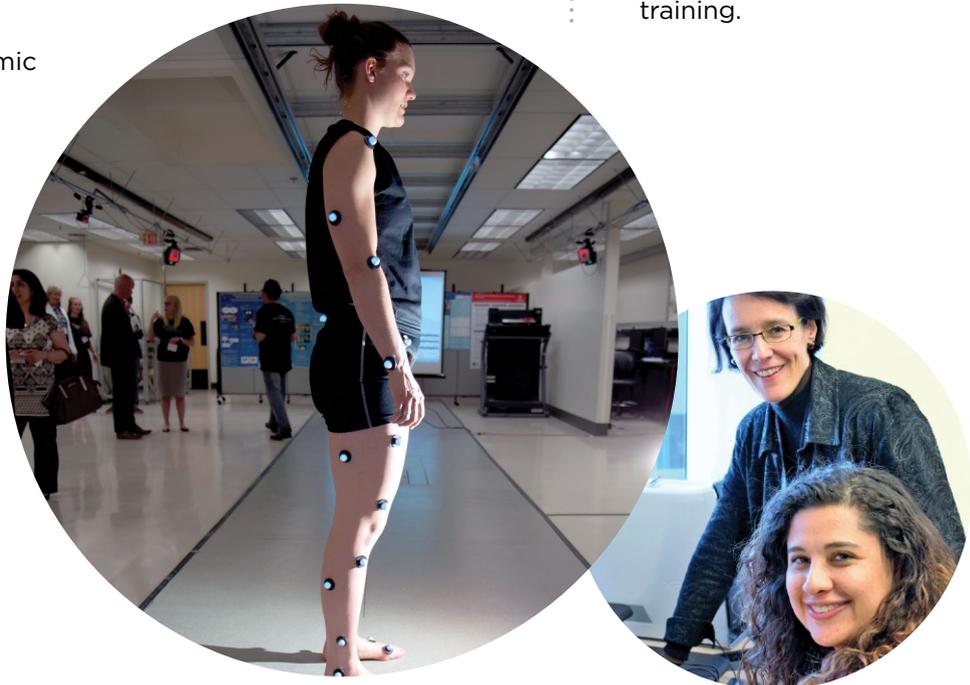
- Identify requirements to provide value to trainees in a training program that includes seminars, local site visits, professional development and courses.

## STRATEGY 2.3

Engage trainees in a larger network of MSK researchers nationally and internationally.

### OBJECTIVES

- Use travel awards to stimulate relationships with other MSK programs in Canada (and beyond).
- Establish exchange programs with industry and other MSK programs in Canada to enhance training.





# COMMUNITY

## STRATEGIC GOAL 3

**Translate research knowledge into patient care, products, policies and services to improve the musculoskeletal health of Albertans.**

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The McCaig Institute's patient-focused research and key partnerships allow us to translate new knowledge back to the community. We will broaden our impact by building a community of provincial partners that will facilitate discovery, knowledge translation and implementation.

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*When Ava Morgan was seven, she began complaining about sore knees. A series of blood tests and a visit to a rheumatologist confirmed she has Psoriatic Juvenile Arthritis. "She has tried so many medications, but I think we've finally found one that works," says Ava's mom, Christeena. Today, Ava loves playing hockey, ringette and going to the playground with her brother and sister. "There is no stopping this kid!" says Christeena.*

### STRATEGY 3.1

Build a community of provincial and international partners that can facilitate discovery, knowledge translation and implementation.

#### OBJECTIVES

- Strengthen relationship with Alberta Bone and Joint Health Institute and the Bone and Joint Health Strategic Clinical Network to maximize the use of resources in the province and minimize duplication of efforts.
- Identify and foster relationships with local, provincial, national and international industries that are related to bone and joint care.



### STRATEGY 3.2

Engage the community to increase their knowledge about bone and joint health and improve their health and mobility.

#### OBJECTIVES

- Celebrate the strong community of advocates we have for the institute and continue to build our network of champions and donors.
- Conduct education and outreach activities that engage and educate the community (e.g., Wood Public Form, Café Scientifique, Science and the Cinema, Open House).
- Develop a comprehensive marketing and communications strategy to increase awareness about bone and joint health among the community stakeholders.



## THE INSTITUTE TODAY

Today the institute is one of the most comprehensive musculoskeletal research centres in Canada, with expertise spanning basic discovery to clinical implementation and health systems improvement.

Through research excellence and regional partnerships with Alberta Health Services' Bone and Joint Health Strategic Clinical Network (BJH SCN) and the Alberta Bone and Joint Health Institute (ABJHI), the McCaig Institute has become a global leader in musculoskeletal research. Using a collaborative research approach in a multidisciplinary environment, it focuses on improving the diagnosis, treatment and prevention of bone, muscle and joint disease and turning evidence-based research into real-world solutions.



## MCCAIG INSTITUTE AT A GLANCE

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### MEMBERS

Clinicians, Scientists,  
Engineers & Health-Care  
Researchers

45 Full Members  
29 Associate Members  
60+ Research Staff  
60+ Trainees

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### FACULTIES

Medicine, Engineering,  
Science, Kinesiology  
Veterinary Medicine,  
Rehabilitative Medicine  
and Nursing at the  
University of Calgary and  
the University of Alberta

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## OUR PARTNERSHIPS

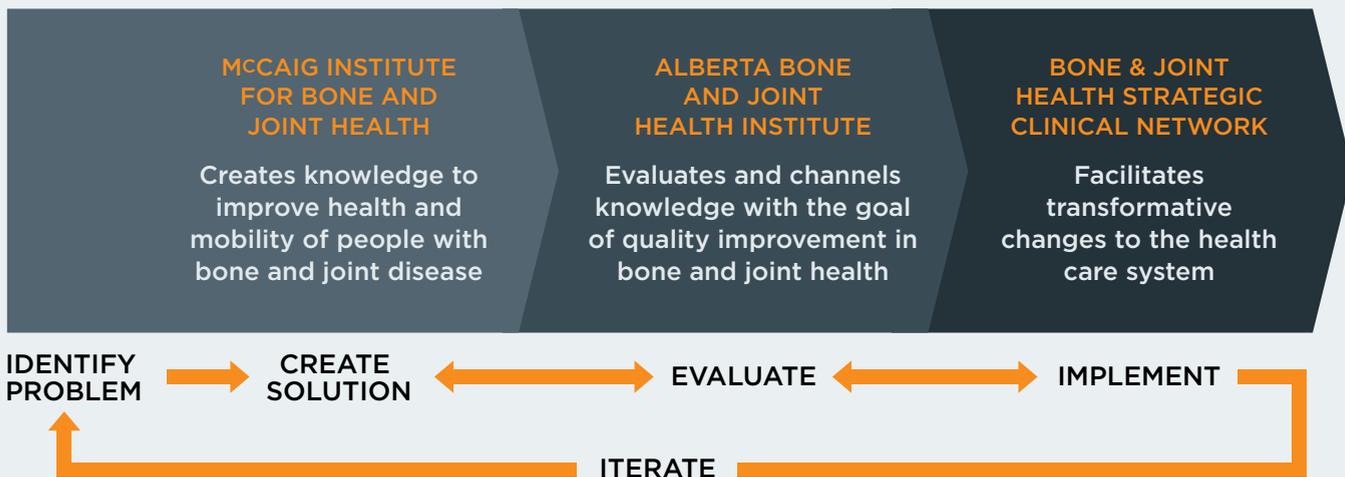
The figure below illustrates the role our unique partnerships play in knowledge translation.

The BJH SCN determines clinically relevant problems as identified by health-care providers. McCaig Institute researchers create novel solutions, and the ABJHI evaluates and implements these solutions in the health-care system.

By working together, we can quickly introduce effective diagnostic and therapeutic tools into the health-care system. Ultimately, this will profoundly improve the quality of life and mobility of countless Canadians.



## IMPROVING BONE & JOINT HEALTH AND MOBILITY



## CONTACT US

For more information about bone and joint health research or to join our mailing list, contact us at:

**MCCAIG INSTITUTE FOR BONE AND JOINT HEALTH**

**T:** (403) 210-6774   **E:** [mccaig@ucalgary.ca](mailto:mccaig@ucalgary.ca)

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