Members of the Joint Transplantation Program Working Group include:

- orthopaedic surgeons
- clinician scientists
- medical researchers

**GOAL:** to provide biological treatment options for patients with osteochondral (bone and cartilage) joint injury.

Healthy cartilage attached to bone from a cadaveric donor is transplanted to the damaged joint of a patient to restore the articular surface (site and size matched).

**CURRENT FOCUS:** improve cartilage preservation techniques to extend storage times and maintain tissue quality and function for transplantation.

**THE CLINICAL PROBLEM: CARTILAGE DAMAGE**

| Articular cartilage |

- joint injury
- pain/ loss of function
- early arthritis

- There are limited treatment options for young patients (under the age of 60) who are not suitable candidates for a total joint replacement.

- If left untreated, isolated cartilage defects will continue to degrade over time and lead to early arthritis.

- Due to research at the McCaig Institute fresh osteochondral tissue can now be preserved for up to a month, making the transplants safer for patients (microbiology testing and infectious disease results are known well in advance).

**Research that affects people’s lives!**

**Where will this research lead?**

- These transplants may prevent or at least delay the need for a total joint replacement.

- Establish osteochondral transplants as a standard practice of care in Canada (currently, they are a pilot study in partnership with Alberta Health Services).

- Build on emerging technologies for preserving osteochondral tissue for transplantation – potentially, storage could be indefinite (cryopreservation).

- Continue to expand the scope of the program to include other biological treatment options for patients as they are developed in the future (i.e. stem cell therapy).

Dr. Hutchison performing the first fresh bulk osteochondral transplant in Calgary (2006).