



## **Transplants could** be the solution for ligament injuries

BY JIM WELLS

Gauntlet Staff Writer

863-0022

A doctor at the University of Calgary's Heritage Medical Research Centre is studying the knees of rabbits in an effort to discover a way to transplant knee ligaments in people.

Dr. Cy Frank and 12 assistants have been studying how knee ligaments work for the last year, and Frank said he believes they are on the brink of a transplant operation that could revolutionize sports medicine in Canada.

The researchers are working with rabbits because the knee ligaments of rabbits resemble those of humans, except that rabbits have only one ligament per knee while humans have four.

A severe knee ligament injury can end a professional athlete's career, and can ruin an amateur's weekend football game or ski trip, Frank noted. Approximately 10,000 people in Calgary suffer from severe knee ligament injuries.

"Ligament injuries are still one of the biggest unsolved problems in sports medicine," he said.

Frank, 36, said he became dissatisfied with the treatment available for knee ligament injuries after he seriously damaged one of his knees several years ago.

The transplantation of a knee ligament from one person to another has never been attempted in Canada, although it has been tried in the US. But Frank says not enough research has yet been done for the operation to be performed safely.

"Until I'm convinced that the operation is foolproof, I'm not prepared to do anything to people that I wouldn't have done to myself," he said.

"There would have to be pretty convincing proof that something is going to work short-term, do no harm and hopefully do some good before I would consider subjecting a person to the operation," he added.

Ligaments are tissue fibres that bond bone to bone and provide about ten per cent of the support in a joint. Muscles provide the other 90 per cent.

Frank is studying the medial collateral ligament, which attaches the thigh bone (femur) to the shin bones (tibia and fibula), the two bones in the lower leg.

The medial ligament runs on the inside of the knee and, along with the posterior collateral ligament on the outside of the knee, prevents side-toside movements of the joint.

Craig Gattinger, a physiotherapist at the Olympic Saddledome's sports clinic, said he is excited about the stable joint, this may be an outlet for them," Gattinger said.

But Gattinger remained cautious. "Before we can subject the human body to someone else's ligament, we've got to be sure that it will provide enough strength to maintain itself after a year of wear and tear,' Gattinger said.

Frank and his research team, who are funded by grants from the Alberta Heritage Foundation, are primarily interested in learning how normal ligaments perform and what they are made of.

The team is also researching the amount of exercise and immobilization needed to heal the injured part of a ligament and are trying to understand what happens to the tissue during the healing.

In Ontario and in other countries, artificial ligaments are being implanted, but according to Frank, it is hard to come up with an artificial material to replace the original.

Dacron, teflon or steel implants have been tried, but human ligament tissue is more effective in the long term, Frank said.

"Some of the artificial materials are turning out to be disastrous," Frank noted. "In Europe about five years ago, there was a wave of enthusiasm over carbon implants. They implanted literally thousands; now people are coming back with their knees as bad as before."

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# And now a word from our rivals...

BY IAN JACK

Varsity Staff Writer

The recently released President's Report on Industrial Renewal is a gold-mine of U of T trivia. So get ready to amaze and astound your friends with these little tidbits:

· Only four US universities, and one British school, have a greater fulltime population than U of T

• U of T is responsible for over \$250 million in research and development every year, and is outspent in Canada only by the National Research Council, Agricultural Canada, and Bell-Northern Research.

• U of T offers 66 doctoral programs, 19 of which are not offered elsewhere in Canada.

· Erindale and Scarborough Colleges-in the west and east-and the Dunlop Observatory-in the north-all lie exactly 32 kilometres from the downtown campus.

• U of T has seven affiliated religious colleges-Emmanuel, Knox, Regis, St. Augustine's, Wycliffe, and the divinity colleges affiliated with St. Michael's and Trinity Colleges.

• U of T reached full capacity in 1975

330 BAY STREET, SUITE 220, TORONTO, ONTARIO M5H 2S8 **EXAMINATION SCHEDULE** 

# **FINE ARTS, SCIENCE** PLEASE NOTE THE FOLLOWING CHANGES TO THE

FACULTIES OF ARTS, EDUCATION,

**EXAMINATION SCHEDULE DATED:** 

**FEBRUARY 12, 1987** 

### CHANGE TO READ

#### Anthropology

AS 1110.06C	Wednesday, April 22	12noon - 3:00pm	Curtis	I
English				
AS 1010.03M(W)	Thursday, April 16	9:30am - 11:30am	Ross	S203
History				
AS 3200.06A	Wednesday, April 29	12noon - 3:00pm	Curtis	G
<b>Physical Education</b>				
AS/SC 3020.03M(W) AS/SC 3020.03N(W)		12noon - 3:00pm 12noon - 3:00pm	Curtis Curtis	I
Psychology				
AS/SC 3140.035(W) AS/SC 3450.03M(W)	Friday, April 24 Tuesday, May 5	12noon - 3:00pm 12noon - 2:00pm	Curtis Stedman	H,K D
ADD				
Psychology				
AS/SC 3450.03Q(W)	Tuesday, May 5	12noon - 2:00pm	Stedman	D
Social Science				
AS 1010.06A AS 1820.06A AS 2700.06A	Monday, April 27 Friday, May 1 Thursday, April 16	7:00pm - 10:00pm 8:30am - 10:30am 7:00pm - 10:00pm	Stedman Ross Curtis	A N203 I
Sociology				
AS 3350.03M(W)	Friday, May l	12noon - 2:00pm	Curtis	F

#### DELETE

#### Chemistry

Thursday, April 23 SC 3160.03(W)

#### Earth and Atmospheric Science

SC 3130.03(W) Thursday, April 23

#### English

AS	2010.06A	Thursday, May 7
AS	3010.06A	Wednesday, May 6
AS	3110.06A	Friday, April 24
AS	3140.06A	Wednesday, April 22
AS	4150M.03(W)	Thursday, April 23
AS	4210A.06	Wednesday, May 6

#### French

AS 2100.06A Monday, May 4

#### Sociology

AS 3200.06A Wednesday, May 6

possibilities the new operation may bring. "If they (people with knee injuries) want surgery, if they want a

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Page 4 EXCALIBUR March 26, 1987