

2015/2016 Summer Studentship Project Application Form

Send to: Research Office, University of Otago Christchurch, PO Box 4345, Christchurch, by 5pm on **3 July 2015**

Supervisor Information (First named supervisor will be the contact):

Supervisor's Name and Title(s): Prof Gary Hooper, Prof Alastair Rothwell, Dr Tim Woodfield

Department: Orthopaedic Surgery and MSM

Institution: UOC

Phone: 643 364 1086

E-mail: gary.hooper@otago.ac.nz

Mailing Address: Lower Ground floor, Parkside, PO Box 4345

Research Category (Choose one category only – to be used for judging the students' presentations):

Clinical X

Laboratory

Community

Project Title (20 words MAXIMUM): Aseptic Loosening following hip and knee replacement: are there different mechanisms of failure?

Project Description: Analysis of the NZ Joint Registry

Introduction: The incidence of hip and knee replacement within New Zealand is predicted to increase by over 200% within 18 years. This increase in primary replacement will also be associated with a corresponding increase in revision surgery. One of the commonest causes for late revision joint replacement is due to aseptic loosening which is often secondary to polyethylene failure. Identifying the reasons for failure is important in order to reduce the socioeconomic burden of revision surgery.

Aim: This study will examine the 16 year report of the New Zealand Joint Registry to determine if there are different mechanisms of failure between hip and knee replacements and to make recommendations as to how the longevity of these implants could be extended.

Method: 1 A literature review will be undertaken looking at the different rates of revision and reasons for revision between hip and knee replacements.

2 Analysis of the 16 year results of the NZJR which collects all hip and knee replacements in NZ since 1999. The revision rates will be reviewed and the reason for revision compared between hip and knee replacements. The group of aseptic loosening for each group will then be analysed in detail to determine if there are any common factors which may increase the rate of revision surgery.

3 A draft paper will be completed discussing the results and recommending changes in practice to improve the long term results of these procedures.

Student Prerequisites (eg. Medical Student) if applicable:

Medical student with some statistical skills