2017/2018 Summer Studentship Project Application Form

Send to: Research Office, University of Otago Christchurch, PO Box 4345, Christchurch, by 5pm on 3 July 2017

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

First Supervisor's Name(s): A/Prof Matt Doogue

Department: UOC, Department of Medicine

First Supervisor's Phone: 03 364 1055 | First Supervisor's Email: matt.doogue@otago.ac.nz

First Supervisor's Mailing Address: Private bag 4710, Christchurch 8140

State:

ZIP Code:

Co-Supervisors Name and Titles(s): Dr Paul Chin, Clinical Pharmacologist, Dr James Williams, Prof Murray Barclay

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

Clinical		

Project Title (20 words MAXIMUM):

The incidence and prevalence of adverse drug reactions in a tertiary hospital

Project Description:

Introduction: Adverse drug reactions (ADRs) are a major cause of harm to patients. Approximately 5% of hospital admissions are due to ADRs and approximately 50% of hospitalized patients have had previous ADRs. This project will compare new ADRs, recorded in hospital discharge coding data, with historical ADRs, recorded in the hospital electronic prescribing software. This is a stand-alone project within a larger project on ADRs.

The student will work as part of a multi-disciplinary team with Canterbury University students studying for Masters in Data science. There will be both clinical and informatics supervisors.

The data are available and the project can be completed in 10 weeks. As the project is using de-identifed data, ethics approval is not required.

The selected student will learn and be involved in data analysis, interpretation and presentation of results. The student will have close supervision by clinical academic staff. The student will be encouraged to present their project at a scientific meeting - although this is not required and would be outside the 10-week project time frame.

The student is expected to have basic knowledge of epidemiology, medical research and computer skills. They are expected to be able to work collaboratively with students who have advanced skills in data analysis.

Aims: To describe the drugs associated with adverse drug reactions in hospitalised patients. To compare the drugs causing hospitalisation with those recorded in patients' clinical records as past ADRs.

Possible impact (in lay terms): Properly recorded ADRs are needed to guide future treatment decisions. The diagnostic accuracy of ADRs is poor. Better understanding of what ADRs are recorded will allow us to target interventions to improve ADR diagnoses.

Methods: New ADRs will be identified and obtained from CDHB clinical coding data. Existing ADRs will be identified and obtained from the CDHB electronic prescribing system (MedChart™). Data analysis will be undertaken using descriptive and comparative statistics using software tools including Microsof Excel, GraphPad Prism, Tableau® and R.

Student Prerequisites (eg. Medical Student) if applicable:
Medical student