

## 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): David Gibbs (Medical Oncologist), R. Matthew Strother (Medical Oncologist), Margaret Currie (Senior Research Fellow).

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

**Clinical**

### Project Title (20 words MAXIMUM):

**Correlating accelerometer data (FitBit) and exercise surveys as measurements of physical activity in cancer patients.**

### Project Description:

#### Introduction:

Lack of physical activity (PA) has been linked to obesity in cancer patients, and obesity has been linked to poorer cancer-specific outcomes. Prior work by our group used a survey instrument (the Physical Activity Scale 1, PAS) to measure PA in breast cancer patients, and found a general decline in activity in patients after diagnosis and during treatment with chemotherapy. Personal accelerometers have been previously validated as a measure of PA. We propose using accelerometer data derived from FitBits to objectively measure PA in cancer patients during chemotherapy, and correlate this to survey-based assessments.

If this pilot work shows that use of accelerometers are a viable way to measure PA in cancer patients, further work could focus on the impact of PA on chemotherapy side effects and the effect of exercise interventions in cancer patients.

With a growing prevalence of obesity amongst New Zealanders, and amongst New Zealanders with cancer, efforts to improve PA are of growing importance.

**Aim:** In a small cohort (n=10) of cancer patients (men and women) on chemotherapy relate 1 week of accelerometer data to a concurrent survey.

#### Method:

Ten patients receiving active chemotherapy will be convenience sampled in the first week of a cycle to wear a Fitbit device. At the end of the week, patients will be asked to complete the PAS. Results of the PAS will be compared to the data and metadata derived from the accelerometer covering the same span. Statistics will be descriptive, and will explore relationships between accelerometer measurements of PA and PAS derived estimates of PA.

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

**Comfort with spreadsheet (MS-Excel), comfort with talking to patients and administering a survey-based instrument.**