University of Manitoba Undergraduate Research Award competition
College of Pharmacy Research Projects

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<tr>
<th>PI Name (Last, First):</th>
<th>Tranmer, Geoffrey</th>
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<tr>
<td>PI Email:</td>
<td><a href="mailto:geoffrey.tranmer@umanitoba.ca">geoffrey.tranmer@umanitoba.ca</a></td>
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<tr>
<td>Please advertise to students on my behalf: (yes/no)</td>
<td>Yes</td>
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<td>I will approach a student myself: (yes/no)</td>
<td>Maybe</td>
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Project Title:

Breaking Bad 2.0: The Anticancer Chronicles

Short Description of Research:

Unlike the Breaking Bad television series, an academic medicinal chemistry lab is well equipped to synthesize new drugs (anticancer) and we actually want to help people/patients. My group is in the process of synthesizing a series of anticancer compounds for the treatment of various cancers. Due to potential patent issues, we are not able to disclose the general structure of the molecules we wish to synthesize, however, I can provide a brief overview of the project below. The summer student will synthesize new anticancer drugs and assist in the study of the anticancer properties of the compounds using various biochemical assays. This is a medicinal chemistry project where the student will synthesize new molecules on a daily basis and assist in the testing of their anticancer properties with the help of a doctoral student. Additionally, the student may also perform some in vitro cell based assays, following proper training. Overall, the summer research project is like a G-Rated academic version of Breaking Bad, but much less glamourous, dramatic or cinematic, and a whole lot safer and intellectually rewarding. Disclaimer: No recreational vehicles will be harmed during the completion of this project.
Project Title: Opioid Agonist Therapy in Primary Care: a Review of Care Delivery and Access in Winnipeg

Short Description of Research:

Between January 2016 and September 2021, opioid use has hospitalized approximately 29,000 Canadians and ended over 26,000 lives. Opioid use disorder (OUD) is defined as a “problematic pattern of opioid use leading to clinically significant impairment.” In 2018, nearly 13% of Canadians reported using an opioid, with 9.6% of these engaging in problematic use. Opioid agonist therapy (OAT) is an effective treatment for OUD, though it remains largely underutilized. To increase access, expansion of OAT provision from specialty addiction clinics into primary care settings has been recommended. With minimal Canadian data, we rely on international reports to describe barriers to OAT service uptake, including stigma, treatment experiences/beliefs, knowledge gaps, and high costs. We seek to thoroughly review OAT care in Winnipeg to better understand how these services are delivered and how care provision in this developing area may be improved.

Objectives

1. Engage with Peer Co-Researchers (PCRs) to: (i) identify outcomes important to persons with lived/living experience (PWLE) with OAT and/or OUD; (ii) inform key aspects of research design (i.e. survey development, implementation methodology).

2. From PWLE and primary care stakeholder (provider, administrator) perspectives: (i) identify barriers/facilitators to accessing or providing OAT; (ii) explore OAT care gaps, with the purpose of identifying support services that could be developed and/or optimized to complement OAT pharmacotherapy.

3. Map current practices and summary statistics for the provision of OAT in primary care clinics across Winnipeg.

Anticipated Results/Significance

Qualitative data on barriers/facilitators to accessing and providing OAT in Winnipeg, along with summary statistics, will provide a meaningful overview of the current state of OAT in primary care.
settings in the city. With opioid harms rapidly increasing, the time to increase access to OAT and other supports is now. Primary care clinics, though poised to provide accessible OAT services, are currently underutilized for this purpose. Enacting healthcare delivery change is complex, therefore this review of current practices, care gaps, and barriers/facilitators from multiple stakeholders’ perspectives will provide valuable insight to help inform meaningful practice changes.

Results will ultimately be shared in a larger stakeholder workshop to discuss the findings and begin collaborative development of a stakeholder-informed primary care pilot model for OAT delivery.
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Number of students I would accept to work on this project: 1

Project Title: Pharmacogenomic Testing Options in Canada (PGx-CAN)

Short Description of Research:

Pharmacogenetics (PGx) is the study of genetic variation in medication response both in terms of therapeutic and adverse effects. The ability to prescribe medication while limiting adverse drug reactions and promoting the best possible care for patients is essential to patient-centred health and wellness. PGx testing has the potential to optimize medication therapy for individual patients. Given the exponential growth in the evidence base and favourable perceptions of PGx testing among clinicians, patients, and the general public, there is good reason to anticipate increases in both the supply of and demand for testing in the future. As such, healthcare providers will undoubtedly be tasked with deciding which test, if any, best suits the needs of their patients and clinical practice. The study aims to identify and assess PGx testing options in Canada. Our critical evaluation hopefully will assist healthcare providers in this decision-making process in choosing a PGx test.