FACULTY OF GRADUATE STUDIES

CIHR Doctoral Scholarship
Student Workshop

Dr. Lisa Hughes, Assoc. Dean FGS
Leigh Conroy, Killam Scholar, Medical Physics
Kyle Wilson, Vanier and Killam Scholar, Biological Sciences

Monday September 12, 2016
Process-committee, feedback and mentoring

General tips for application prep.
Dr. Lisa Hughes, Assoc. Dean, Faculty of Graduate Studies

Perspectives from UCalgary Graduate Leaders
Leigh Conroy, Killam Scholar, Medical Physics
Kyle Wilson, Vanier & Killam Scholar, Biological Sciences

Graduate Leaders Circle Info
Scholarship Cafes Info

Question period
Graduate Scholarship Officer:

- Jamie Pryde (jpryde@ucalgary.ca) – CIHR
Next Steps

- Instructions to apply: [http://www.cihr-irsc.gc.ca/e/38887.html](http://www.cihr-irsc.gc.ca/e/38887.html)

- ResearchNet Login: [https://www.researchnet-recherchenet.ca/rnr16/htdocs/login/splash.jsp](https://www.researchnet-recherchenet.ca/rnr16/htdocs/login/splash.jsp)

- Canadian Common CV link: [https://ccv-cvc.ca/](https://ccv-cvc.ca/)

Next Steps

1. Register for Canadian Common CV (CCV) and ResearchNet accounts

2. Create a CCV and link to ResearchNet application

3. Start a ResearchNet application

4. Identify referees

5. Prepare Non-CCV components of the application.
A complete application consists of:

- Application details (form pages)
- Canadian common CV (CCV)
- Institution transcripts
- Proof of citizenship
- 3 referee assessments
- Lay title/Lay Abstract
- Training Expectations (Max 2 pages – check other restrictions)
- Research proposal – (Max 1 page – check other restrictions)
- Space, facilities, personnel support – (2000 characters with spaces)
- Priority areas - must select the Priority Announcement/Funding Pool title from the list and the Relevant Research Area(s)
- Canada Graduate Scholarship to Honour Nelson Mandela Identification Form - must be uploaded as a single PDF document (unprotected) not to exceed 30 MB
- Special circumstances (optional) – max one page (written by student)
- Available at: http://www.cihr-irsc.gc.ca/e/38887.html
The Process / Deadlines

- Full applications submitted to CIHR via ResearchNet by 29-Sept 20:00 EDT (6pm Mountain time)
- **Not** checked for completeness by FGS
Selection Criteria

- CIHR guide for reviewers:
  
  http://www.cihr-irsc.gc.ca/e/33043.html

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<thead>
<tr>
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<th>Achievements and Activities</th>
<th>Characteristics of the Candidate</th>
<th>Research Environment</th>
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<tr>
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“relative to your expectations of someone with their academic experience”
CIHR Strategic Priorities

- CIHR accepts applications in all areas of health research; biomedical research, clinical research, health services research, and social, cultural, environmental and population health research.

- Not sure which tri-council you fall into? Ask them!

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<tr>
<th>Descriptor</th>
<th>Range</th>
<th>Outcome</th>
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<td>Outstanding</td>
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<tr>
<td>Excellent</td>
<td>4.0 – 4.4</td>
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<tr>
<td>Very Good</td>
<td>3.5 – 3.9</td>
<td>Not Fundable</td>
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<td>Good</td>
<td>3.0 – 3.4</td>
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<td>Average</td>
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<td>Below Average</td>
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<td>Not Acceptable</td>
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Subsections of CIHR application

- Achievements and Activities
  - Publication activity (10%)
  - Other Research Activity (10%)
  - Academic Performance (Transcripts) (15%)

- Characteristics and Abilities
  - References (40%)
  - Critical thinking, independence, perseverance, originality, organizational skills, interest in discovery, research ability, LEADERSHIP

- Research Training Environment
  - Training program for candidate (most written documents, 10%)
  - Scientific Activity of Supervisor (5%)
  - Research Resources of Supervisor (5%)
  - Training Record of Supervisor (5%)
Think of the application from the perspective of one of the reviewers on the University or National Committee. Some of these people are from government or business.

- This person will be reading dozens of these likely at the end of a regular day. Don’t make it hard to find important material. Be clear and concise.

- They have 5 minutes to summarize your application. What are the key things you would want them to say? Are these points obvious when you go through your application?

READ AND FOLLOW THE APPLICATION GUIDELINES AND TIPS.

Make sure the entire application corroborates.
*The competition is sufficiently high that no one needs to be given the benefit of the doubt on anything.

**Research Proposal**

- The reader should come away with a clear sense of what you will do, why it is significant and how it is novel relative to what is already known. Write for mainly for non-specialists but also for specialists.

- Define specialized terms.

- Relate the proposal to your personal experience.

- How does the research fit in with program, university, provincial, and federal priorities?

- If your proposal works perfectly, how would it position you as a leader in the field?
Publications/Presentations:

- Make everything as detailed as possible
- Avoid acronyms for conferences.
- If you spoke at an international versus regional meeting, indicate that.
- Submitted manuscripts should be accompanied by the manuscript # and date.
- Explain the prominence of journals (Impact Factor? Top journal in the field?)
General Tips for Presentation

Reference Letters:

— Address the criteria!! Characteristics and abilities are mostly assessed from reference letters. If a student has a straight A+ transcript and a page of awards, don’t devote 90% of the letter to talking about academic excellence.

— Leadership is not just extracurriculars, address the personality traits and comment on where you think this student will end up in their career- TRAJECTORY.

— Be specific. Back a point up with an anecdote.

— Address your plans for development of this student. What opportunities will you provide? Show that this is more than a free student to you and that the student can be a leader in the field and society.
Suggestions for referees

- You are supporting a student for one of the most prestigious scholarship in Canada.

- Have a dialogue with the applicant about their goals.

- Before writing, make a top 5 list of things that make this student unique and things they have done that genuinely impressed you.

- After you have your list, study the selection criteria and use your Top 5 list to address as many points as possible: [http://www.cihr-irsc.gc.ca/e/33043.html#k](http://www.cihr-irsc.gc.ca/e/33043.html#k)
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Training Expectations

- Large portion of the application, so every word counts – only place where YOUR voice is heard!

- Describe how the training they expect to acquire will contribute to their productivity and to the research goals they hope to achieve.

- Indicate why they decided upon the proposed training location and what they expect to learn from the training experience.

- Demonstrate your motivation and enthusiasm!

- Strategies:
  1. Be explicit in descriptions
  2. Aim for cohesion
Common errors

- Too generic
- Clichés
- Overly dramatic
- What will help the reviewer remember you after reading 20 applications?
- Lack of vision: The Human Performance Lab is a world class laboratory, from which I will learn novel techniques and gain invaluable experience.
**Vision:** As a young investigator, my goal is to support and create a research environment grounded in patient-relevant questions around musculoskeletal, and joint health.

**Why?** Using an integrated, translational agenda on modifiable risk factors for joint disease, my goal is to contribute to research that leads to *improvements in patient outcomes*.

**How?** To lead research in this area, one must have cross-disciplinary guidance, experience in collaboration, a strong technical skillset, mentorship opportunities, editorial experience, knowledge, and ultimately translation skills.

**Link to training environment:** The Human Performance Laboratory, guidance by Dr. Herzog and my mentorship team, will provide all dimensions of preparation needed for me to achieve my career goals....
Why UCalgary?
- Eyes high strategy

Why your supervisor?

Why your program?

Where do trainees from your lab go/what do they do?

Who can you collaborate with?

What extracurricular opportunities will you have?

How is this concordant with the CIHR/UCalgary Strategies?

Show intangibles –
- Access to leadership/mentorship?
- Access to editorial/reviewing?
- Committee membership?
“University of Calgary (UCalgary) has identified both biomedical engineering and inflammation/chronic disease as 2 of 6 priority research areas aligned with the CIHR Institute of Musculoskeletal Health and Arthritis. UC boasts 5 Canada Research Chairs in Biomedical Engineering, including Dr. Herzog, making UCalgary the optimal location to conduct this research.

In particular, I am well-positioned with this research agenda in Alberta with the alignment and convergence of funder, province-wide health services and academic institutions around the issue of bone and joint health.

Further, the opportunity to learn with practice-relevant and evidence-based cross-faculty mentorship will provide me with training that is enviable on an international scale.”
What is leadership?

- **Leadership** (potential and demonstrated ability), as defined by the following qualities:

  - **Personal achievement:**
    - professional involvement in dance, arts, music, etc.;
    - significant artistic achievement;
    - recognized athletic achievement, especially in a leadership role;
    - entrepreneurial achievement (startup company); and/or
    - foreign travel and study.

  - **Involvement in academic life:**
    - mentoring/teaching;
    - supervisory experience;
    - involvement in student government and in the university community, including committees, teams, senate, boards, ethics committees, etc.;
    - project management;
    - roles in professional societies; and/or
    - organization of conferences and meetings.

  - **Volunteerism/community outreach:**
    - community involvement in charity or not-for-profit organizations.

  - **Civic engagement:**
    - parliamentary page positions and internships;
    - political activity; and/or
    - elected positions.

- **Other**
Some guidelines for proposal content

- **Introduction**: Newspaper article level – everybody should understand it.
- **Hypothesis** (if applicable – may be research question or goal).
- **Methods**: More detailed, educated non-field specific audience.
**INTRODUCTION:** High level – explain your motivation.

The prognosis for non-small-cell lung cancer (NSCLC) is poor, with a 5-year survival rate of only 15% [1]. Stereotactic body radiotherapy (SBRT) is a treatment option for early stage NSCLC that allows the delivery of high doses of radiation in a few large fractions; however, safe treatment requires precise definition of the target volume and accurate daily set-up. Lung cancer is inherently difficult to treat with radiation therapy (RT) due to the movement of the tumour during respiration, and the proximity of critical organs such as the heart, esophagus, and healthy surrounding tissue. To account for respiratory motion in RT planning, the contoured tumour volume is expanded to include the entire extent of the tumour motion throughout the respiratory cycle. This approach may overestimate the influence of motion on dose delivered to the tumour and unnecessarily irradiate surrounding uninvolved lung tissue.
Hypothesis/Research Question/Aim

I will investigate the correlation between dose delivered under respiratory motion on failure patterns and complications in lung SBRT patients. Based on the results of this study, I will recommend treatment planning goals, target definition strategies, and margins for lung SBRT under respiratory motion.
METHODOLOGY – more specific but still accessible

Our centre has a large database of SBRT lung patient data, including respiratory four dimensional computed tomography (4DCT) data, treatment couch set-up shifts, patient plans, and up to 5-years of follow-up on local recurrence and toxicities. I will perform an analysis of variance (ANOVA) using planning parameters such as V20 (volume of healthy lung tissue receiving 20% of the dose), and the extent of motion in the 4DCT image to determine correlations between static plan quality, actual delivered plan quality under respiratory motion, and treatment outcomes in our dataset.
Expected outcomes/ Key Deliverables:

- **Example 1:** These studies will provide clinical evidence towards the impact of respiratory motion plan degradation on treatment outcomes and to what extent respiratory motion information should be included in the RT treatment planning process.

- **Example 2:** Key deliverables include a preliminary set of biomarkers (functional, structural and inflammatory) that differentiate the Met-OA subtype from the post-traumatic OA subtype in a 6-month longitudinal rat model.

Significance (realistic) – Tie into priority areas for CIHR

Knowledge Translation Plan/ Future directions /Follow-up Studies

- Caution: Overly specific plans can get you into trouble
It is a good idea to add a small section showing what you will be doing with your research AFTER your PhD, and how it ties in with your leadership vision (Trajectory).

“Specifically, [after my PhD], I plan to collaborate with physicians at the University of Calgary to implement the technology into regular clinical practice in Alberta for knee OA patients and monitor long-term clinical outcomes. If positive results are achieved, I will expand use of the program nationally.” – RT Lewinson

“In my early career I will endeavor to develop, patent, and commercialize a low-cost clinical profiling tool that will use function, structure (imaging), movement patterns, and inflammation (biomarkers) to objectively determine subtypes of OA patients in the primary care setting using linkages and training from the Alberta Innovates Health Solutions OA Team. I will use my bench science findings to make early, OA targeted diagnosis and treatment a reality—which aligns with CIHR’s mandate to support research increasing prevention, early detection, and appropriate, personalized care for chronic disease.” – KH Collins

“By determining the developmental trajectory of children’s development of stereotypes, I hope to collaborate with the University of Calgary’s “Outrun the Stigma” campaign to promote early intervention strategies to help children recognize the importance of individuality within social groups.” – J Switzer
“one of the most important aspects of an application” – CIHR website

Sometimes reviewers will gauge their appropriateness to review application based on this

May be published on CIHR’s website or shared with the media

“newspaper level”
Space, Facilities and Personnel Support

Max 2000 characters with spaces

“It should demonstrate the commitment of the proposed supervisor(s) and their institution to support the development of the applicant's research project (funding, facilities, equipment, etc.) and professional development.”

Explicit things to mention:
- Operating money (demonstrate impact)
- Unique facilities/technology/tools
- Technical staff
- Collaborations (ongoing and potential)
- Support from other students/PDFs
Use to your advantage!

Knowledge Translation space

Working papers

Non-peer reviewed contributions

Demonstrate you are well rounded

Publications and research outputs matter, but you will be judged based on your academic experience.
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Opportunity to receive one-on-one feedback from successful Vanier and Killam scholarship applicants (members of the Graduate Leaders Circle (GLC))

Sign up for 20 min. session

– Writing specialist
– Scholarship specialist
CAFÉ DATES

- 13 September (Tues), 1:00 to 4:30pm
- 30 September (Fri), 1:00 to 4:30pm
- 12 October (Wed), 1:00 to 4:30pm

All Cafés will take place in MT 215.

To signup:
Contact: gradlead@ucalgary.ca
Connect and learn more about other workshops!

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mygradskills@ucalgary.ca