Preparing a successful Discovery Grant application can present a unique challenge for investigators more used to seeking CIHR funding. Both at UBC, and across the country, researchers whose work pertains to health encounter a lower level of success in applying for Discovery Grants than their colleagues in more straight-forwardly NSE fields. Accordingly, SPARC has prepared the following advice specifically for DG applicants with a background in health-related fields

The following comments and suggestions reflect our consultations with UBC faculty members who have served on the Discovery Grant Evaluation Groups, in particular EG 1501 (*Genes, Cells and Molecules*) and EG 1502 (*Biological Systems and Functions*).

1. It is essential that the proposed research pursue questions in the Natural Sciences & Engineering. While this research may have medical applications, it is critical to justify the work in the context of its fundamental scientific importance. Anecdotally, roughly half of all applications to EG 1501 struggle to make this distinction.

   Demonstrating that the proposal genuinely belongs in the NSE requires the following:

   a. The grant cannot have <u>any</u> conceptual or budgetary overlap with any held or applied for CIHR funding. Applicants who hold CIHR funding must convincingly demonstrate that no overlap exists; simply stating that no such overlap exists is unlikely to be sufficient. (The sample grants below by Tokuriki and Shahriari address this well, in the "Relationship to Other Research Support" section.)

   b. The applicant's "Significant Contributions" <u>must</u> also be NSE related. There are instances of applicants citing >40 high-impact publications, only for the evaluation group to disregard the vast majority on the grounds that they are clearly disease or health-related. As a result, an otherwise outstanding scholar can fall into the inadequate category when their research excellence is assessed. The ideal is to frame contributions specifically in terms of their NSE impact, and to consider how this presents your work to the evaluators. (The sample grants below by Ainslie and Pavlidis do a good job of emphasizing the NSE impact of their health-related scholarship.)

   c. Discovery Grants are intended to support a <u>program</u> of research. As NSERC describes it, "*the DG program supports ongoing programs of research with long-term goals rather than a single short-term project or collection of projects*." Applicants more used to writing for CIHR can fall into the trap of outlining a set of closely connected research aims that could, in principle, be addressed in a single paper. A successful DG application needs to describe not only a set of short-term objectives to be met over the next five years, but also how these fit into the expected trajectory of the PI's research in the long-term. (In all six of the sample grants below, the proposal establishes a clear set of goals for the lifetime of the grant, set within the context of a long-term objective.)

2. As point 1c above hints, applicants can encounter "cultural" differences between CIHR and NSERC. Some potential issues to be aware of include:

   a. Be cautious about using overly superlative language. Evaluation group members are explicitly advised to scrutinize grand claims very closely. The proposed research program should be impactful and significant, but need not be world-changing.

b. Try not to rush the application. While time is precious for researchers, a hastily assembled application can give the impression that the PI doesn't care about the relatively modest funding a DG will provide. Also, it is important to write a DG from scratch; a ten-page CIHR Project Grant Proposal cannot be force-fit in a five-page NSERC Discovery Grant Proposal!

c. NSERC CVs are more elaborate than CIHR CVs. The NSERC Researcher CCV has 12 additional sections that need to be populated, plus another 12 sections in which the language and/or entries could be refocused on NSE rather than health/medical. While a red X denotes missing mandatory information, a green checkmark does not mean that the section is populated, only that there are no mandatory requirements or that any mandatory requirements have been met. Please review the CCV carefully to ensure it is complete; full details are provided on Page 3.

SPARC's Sample Grant Library (Link) includes a number of successful Discovery Grant applications from researchers whose work straddles the NSE / Health divide. Recent relevant examples you may wish to consult include:

Ethan Greenblatt	2022/23	EG 1501	Early-career
Nobuhiko Tokuriki	2022/23	EG 1501	Established
Philip Ainslie	2021/22	EG 1502	Established
Dena Shahriari	2021/22	EG 1511	Early-career
Paul Pavlidis	2021/22	EG 1501	Established
Simon Wisnovsky	2021/22	EG 1501	Early-career

If you have questions about the above, or would like to discuss how best to present your program of research to an NSE audience, please get in touch with the SPARC office!

Moving from a CIHR Biosketch CCV to an NSERC Researcher CCV

Important notes

- To finalize your CCV, any red X must be converted to a green √
- A red X means the section or a specific entry is mandatory
- A green √ simply means either that the section has no mandatory requirements or that any mandatory requirements have been met; it does **not** mean the section is populated
- All sections listed below should be reviewed and completed, as relevant/possible (i.e., new sections), or revised (i.e., existing sections), even if they display a green √, to make sure you are not submitting a CCV full of empty sections, which may be received unfavourably by reviewers

New sections to populate (i.e., sections required by NSERC but not by CIHR)

- Personal Information – Language Skills
- User Profile
- Activities – Administrative Activities
    o Event Administration; and
    o Editorial Activities
- Activities – Advisory Activities – Expert Witness Activities
- Activities – Assessment and Review Activities – Organizational Review Activities
- Activities – International Collaboration Activities
- Memberships
    o Committee Memberships; and
    o Other Memberships
- Contributions – Interviews and Media Relations
    o Broadcast Interviews; and
    o Text Interviews
- Contributions – Publications – Journal Issues

Existing sections to revise (i.e., sections required by both NSERC and CIHR)

- Recognitions
    o Refocus entries on NSE, if possible
- Employment – Academic Work Experience
    o Convert language in Work Description box to an NSE focus, if possible
- Research Funding History
    o Requires 6 years of entries instead of the 7 years required by CIHR
- Activities – Supervisory Activities – Student/Postdoctoral Supervision
    o Trainee personal data may only be included with the individual's consent; if this cannot be obtained, choose "Unknown"
- Activities – Knowledge and Technology Translation
    o Refocus on NSE examples, such as: business innovation, citizen/community engagement, consultation service (e.g., for industry), involvement in/creation of start-up; policy/regulation development; R&D collaboration with industry; research uptake

strategies; standards development, technology, product, process, service improvement/development, technology transfer and commercialization

- Contributions – Presentations
  - Refocus entries on the proposed NSERC research program
- Contributions – Journal Articles; Books; Book Chapters; Reports; Manuals; Conference Publications
  - Refocus entries on the proposed NSERC research program