

## May 6<sup>th</sup>, 2021 Workshop



# **NSERC Discovery Grants & RTI**

Evaluation Groups: 1501 – Genes, Cells and Molecules

1502 – Biological Systems and Functions

1503 – Evolution and Ecology

1504 – Chemistry

1505 – Physics

1506 – Geosciences

1507 – Computer Science

1508 - Mathematics and Statistics

1509 – Civil, Industrial and Systems Engineering

1510 – Electrical and Computer Engineering

1511 – Materials and Chemical Engineering

1512 – Mechanical Engineering

SAP — Sub-atomic Physics

We acknowledge that we live and work on Treaty 6 Territory and the Homeland of the Métis. We UNIVERSITY OF pay our respect to the First Nations and Métis ancestors of this place and reaffirm our relationship with one another.

~ Please note: this workshop is being recorded.

## Schedule of events

1:00 – 1:10 PM	Welcome, Introductions, and Overview of the Evaluation/Rating Process at NSERC
1:10 – 1:40 PM	Research Facilitators & Planning Officers: Tips on HQP, EDI, Budget, CCV, RTI and Internal Review
1:40 – 2:15 PM	NSERC EG/RTI Members: Tips from adjudication
2:15 – 3:00 PM	Q&A
3:00 – 3:30 PM	Break-out rooms by Evaluation Group



## Research Facilitators and EG/RTI members presenting:

 Ron Borowsky, (NSERC Lead) Professor, Psychology (Cognition and Neuroscience); A&Sc

EG 1502 - Biological Systems & Functions - Merit & Ratings

#### **Research Facilitators:**

Danielle Baron, Ag & Bio
 - HQP

Tera Ebach, RASI - EDI

Karen Mosier, Medicine - Budget

Heidi Smithson, Engineering - CCV

Bruna Bonavia-Fisher, Medicine - RTI

Manisha Jalla, RASI - Int. Review

• Troy Harkness, Professor, Biochemistry, Microbiology and Immunology; Medicine EG 1501 – Genes, Cells and Molecules

 Jaswant Singh, Professor, Veterinary Biomedical Science; WCVM, EG 1502 – Biological Systems and Functions

 David Palmer, Professor, Chemistry; A&Sc, EG 1504 – Chemistry

 Adam Bourassa, Professor, Physics and Eng. Physics; A&Sc, EG 1506 – Geosciences

Regan Mandryk, Professor, Computer Science; A&Sc
 EG 1507 – Computer Science

Dena McMartin, Professor, Civil, Geol. and Envir. Engineering; Engineering EG 1509 – Civil, Industrial & Systems Engineering

Thomas Fisher, Professor, Anatomy, Physiology and Pharmacology; Medicine
RTI Evaluation Group: Genes, Cells and Molecules



## The Merit "Grid"

#### **DISCOVERY GRANTS MERIT INDICATORS**

	The Merit Indicators should be used in conjunction with the Peer Review Manual, which outlines how reviewers arrive at a rating.					
	EXCEPTIONAL	OUTSTANDING	VERY STRONG	STRONG	MODERATE	INSUFFICIENT
her		Research excellence, accomplishments, and service are <b>far superior</b> to others.	Research excellence, accomplishments, and service are <b>superior</b> to others.	Research excellence, accomplishments, and service are <b>significant</b> .	Research excellence, accomplishments, and service are <b>reasonable</b> .	Research excellence, accomplishments and service are <b>below an acceptable level</b> .
Researcher		Contributions presented in the application are of <b>high quality</b> .	Contributions presented in the application are <b>above average in quality</b> .	Contributions presented in the application are of <b>good</b> quality.	Contributions presented in the application are of <b>reasonable</b> quality.	Contributions presented in the application are <b>limited</b> in quality.
-	Impact and importance of the work is clearly evident and groundbreaking.	Impact and importance of the work is clearly evident and influential.	Impact and importance of the work is clearly evident.	Impact and importance of the work is evident.	Impact and importance of the work is somewhat evident.	Impact and importance of the work is <b>not clearly evident</b> .
Merit of the Proposal	presented, is extremely original and innovative and is likely to have impact by leading to groundbreaking advances in the area and/or leading to a technology or policy that addresses socio-economic or environmental needs.  Long-term vision and short-term	Proposed research program is clearly presented, is highly original and innovative and is likely to have impact by contributing to groundbreaking advances in the area, and/or leading to a technology or policy that addresses socio-economic or environmental needs.  Long-term goals are clearly defined and short-term objectives are well	Proposed research program is clearly presented, is original and innovative and is likely to have impact by leading to advancements and/or addressing socio-economic or environmental needs.  Long-term goals are defined and short-term objectives are planned.	Proposed research program is clearly presented, is original and innovative and is likely to have impact and/or address socio-economic or environmental needs.  Long-term goals and short-term objectives are clearly described.	Proposed research program is clearly presented, has original and innovative aspects and may have impact and/or address socio-economic or environmental needs.  Long-term and short-term objectives are described.	Proposed research program, as presented lacks clarity, and/or is of limited originality and innovation.  Objectives are not clearly described and/or likely not attainable.
erit of	The methodology is clearly defined and appropriate.  The methodology is clearly described and appropriate.		described and appropriate.	The methodology is described and appropriate.	The methodology is partially described and/or appropriate.	The methodology is <b>not clearly</b> described and/or appropriate.
	The application <b>clearly den</b>	nonstrates how the research activities to	be supported are distinct from those fund	ded (or applied for) by other sources.		The application does not clearly demonstrate how the research activities to be supported are distinct from those fund (or applied for) by other sources or does no clearly demonstrate a program of research the NSE.
Ig of HQP	terms of the research training environment provided and HQP	Past training is <b>far superior</b> to other applicants in terms of research training environment provided and HQP	Past training is <b>superior</b> to other applicants in terms of the research training environment provided and	Past training compares <b>favourably</b> with other applicants in terms of the research training environment provided	Past training is <b>modest</b> relative to other applicants in terms of the research training environment provided and HQP	Past training is <b>below an acceptable level</b> in terms of the research training environment provided and HQP
Past Traini	positions that require skills gained	contributions to research.  Most HQP move on to impactful positions that require skills gained through the training received.	HQP contributions to research. HQP generally move on to impactful positions that require skills gained through the training received.	and HQP contributions to research. HQP generally move on to positions that require skills gained through the training received.	contributions to research.  Some HQP move on to positions that require skills gained through the training received.	contributions to research.  HQP rarely move on to positions that require skills gained through the train received.
=	Training philosophy and research training plans are of the highest quality: highly appropriate, clearly defined and	Training philosophy and research training plans are far superior: highly appropriate, clearly defined and expected to produce high quality	Training philosophy and research training plans are superior: highly appropriate, clearly defined and expected to produce quality results in	Training philosophy and research training plans are appropriate and clearly defined in terms of the overall approach and specific projects for HQP.	Training philosophy and research training plans are partially appropriate and partially defined in terms of the overall approach and specific projects for HQP.	Training philosophy and research train plans are <b>not appropriate</b> and <b>not clearly defined</b> in terms of the overall approach and specific projects for HQ
Philosophy & Research Training Plan Past Traini		results in terms of the overall approach and specific projects for HQP.	terms of the overall approach and specific projects for HQP.			
Philosophy & Research Training Pla		and specific projects for HQP.		Challenges related to equity, diversity and inclusion specific to the institution and/or field of research are described.	Challenges related to equity, diversity and inclusion specific to the institution and/or field of research are partially described.	Challenges related to equity, diversity and inclusion specific to the institutic and/or field of research are inaccurar or not described.



## UNIVERSITY OF SASKATCHEWAN NSERC DG Rating Form – Ron Borowsky

	Exceptional		Outstanding		Very Strong
Excellence of the researcher	Strong	ᅡ	Moderate	Hi	Insufficient
Knowledge, expertise, and experience of the researcher in the NSE Quality and impact of contributions to the proposed research and/or other areas of research in the NSE Importance of contributions to, and use by, other research and end-users	Rationale for rating:  Knowledge, expertise, and experience of the course/glosal position, PDF, PhO, etg (in what area -assatis/incopylicons)service (research, searcing, N Gustilly and impact of contributions to the princh NSE (particular search) and properties of the princh NSE (particular search) and properties are contributions (sumberior author, Household Could included in contributions (number of classions impact) (particular search) and properties of contributions (number of classions impact) (particular search) (p	SE community, in oposed research opposed research	may apply to the probes below also?? ch and/or other areas of research in il marked with *?) themes capturing current work, recent		
erit of the proposal	Exceptional		Outstanding		Very Strong
ont or the proposal	Strong		Moderate	[	Insufficient
Significance and expected contributions to NSE research; potential for policy- and/or technology-related impact Clarity and scope of objectives Clarity and appropriateness of methodology Feasibility Extent to which the scope of the proposal addresses all relevant issues Consideration of sex, gender and diversity in the research design, if applicable to the field Consideration of interdisciplinary methods or practices in research Appropriateness of, and justification for, the budget Demonstration that the DG proposal is distinct conceptually from research supported (or submitted for support) through CIHR and/or SSHRC Clear explanation why DG funding is essential to carry out the research proposed in the DG application (for applicants who hold or receive funds from a CIHR Foundation Grant)	- use summary to help outline this! Originality and innovation - developed new experimental pe Significance and expected contril - mode/theory development, long Clarity and scope of objectives - long term goalst/vision (mode/theory - Clarity and appropriateness of m - understandable for general scie - Feasibility - can be done by their lab, has re - consideration of sex, gender and - if not applicable, should clearly - Extent to which the scope of the - you control the scope of the 's Appropriateness of, and justificat - pasonable, use tables for clarit - Demonstration that the Discovery for support) through Clarit and/or - summaries from grants, but cleic - Clear explanation why Discovery application (for applicants who h - why, couldn't the CIHR Foundati	putions to N- term "storn eory?) and athodology ntific audier levant expe diversity in state why, to proposal ac pry", not to on for, the y (e.g., fund or Grant prop SSHRC or statemen Grant fund id or have on grant co	NSE research; potential for poli y', socioeconomic/environmen I short term objectives (experin nce, credibility (publications in- erience (if not, clear plan, but 'i n the research design, if applic but give this careful considerat ddresses all relevant issues to big or too small budget das for HQP in which years), 'gr postal is distinct conceptually frents of 'no conceptual or budget ling is essential to carry out the applied for a CIHR Foundation over this work?	cy- and tal important nents/st volving story" stable ion et the futor research ary over	udies?) clearly defined? these methods)? nould fit you)  nding then do what you wan earch supported (or submitte rlap" are helpful ch proposed in the DG
Contributions to the training of highly	Exceptional		Outstanding		Very Strong
qualified personnel	Strong	I	Moderate		Insufficient
<ul> <li>Quality and impact of past training</li> <li>Training environment</li> <li>HQP awards and research contributions</li> <li>Outcomes and skills gained by HQP</li> <li>Quality, suitability and clarity of the planned training</li> <li>Training philosophy</li> <li>Mentorship approach and enhancement of the research and training environment</li> <li>Challenges or barriers to inclusion and</li> </ul>	Rationale for rating:  Past contributions to the training of HQP  - UGs, Masters, PhDs, PDFs, techs, all count, knowing where they ended up shows you care and are prouse the contributions of the con				social aspects (team build

• Research training plan for individual HQP

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## Excellence of Researcher

EXCEPTIONAL	OUTSTANDING	VERY STRONG	STRONG	MODERATE	INSUFFICIENT
Acknowledged as a <b>leader</b> in terms of research excellence, accomplishments, and service.	Research excellence, accomplishments, and service are far superior to others.		Research excellence, accomplishments, and service are significant.		Research excellence, accomplishments, and service are <b>below an acceptable</b> <b>level</b> .
Contributions presented in the application are of the <b>highest level of</b> <b>quality</b> .	Contributions presented in the application are of <b>high quality</b> .		Contributions presented in the application are of <b>good</b> quality.		Contributions presented in the application are <b>limited</b> in quality.
Impact and importance of the work is clearly evident and groundbreaking.	Impact and importance of the work is clearly evident and influential.	Impact and importance of the work is clearly evident.	Impact and importance of the work is evident.	Impact and importance of the work is somewhat evident.	Impact and importance of the work is not clearly evident.

#### Rationale for rating:

- Knowledge, expertise, and experience of the researcher in the NSE
- current/past positions, PDF, PhD, etc (in what areas?)
- awards/recognitions/service (research, teaching, NSE community, may apply to the probes below also)?
- Quality and impact of contributions to the proposed research and/or other areas of research in the NSE
- grants awarded (co-I or PI?)
- editorial boards?
- publications (quantity/quality, lead/senior author, HQP on them and marked with \*?)
- presentations (invited?)
- most significant contributions (number of citations; for long-term themes capturing current work, recent impact?)
- Importance of contributions to, and use by, other research and end-users
- knowledge translation?
- media coverage?



## Merit of the Proposal

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EXCEPTIONAL	OUTSTANDING	VERY STRONG	STRONG	MODERATE	INSUFFICIENT		
Proposed research program is clearly	Proposed research program is clearly	Proposed research program is clearly	Proposed research program is clearly	Proposed research program is clearly	Proposed research program, as		
presented, is <b>extremely original</b> and	presented, is highly original and	presented, is original and innovative	presented, is original and innovative	presented, has original and innovative	presented lacks clarity, and/or is of		
innovative and is likely to have impact	innovative and is likely to have impact	and is likely to have impact by leading	and is likely to have impact and/or	aspects and may have impact and/or	limited originality and innovation.		
by leading to groundbreaking advances	by contributing to groundbreaking	to advancements and/or addressing	address socio-economic or	address socio-economic or			
		socio-economic or environmental	environmental needs.	environmental needs.			
	a technology or policy that addresses	needs.					
socio-economic or environmental needs.	socio-economic or environmental						
	needs.						
Long-term vision and short-term	Long-term goals are clearly defined		Long-term goals and short-term	Long-term and short-term objectives	Objectives are not clearly described		
objectives are clearly defined.	and short-term objectives are well planned.	short-term objectives are planned.	objectives are clearly described.	are described.	and/or likely not attainable.		
The methodology is clearly defined and	The methodology is clearly described and appropriate.		The methodology is described and	The methodology is partially described	The methodology is not clearly		
appropriate.		described and appropriate.	appropriate.	and/or appropriate.	described and/or appropriate.		
Rationale for rating:							
- use summary to help of	outline this!				be supported are distinct from those funded (or applied for) by other sources or does not		
Originality and inno					clearly demonstrate a program of research in the NSE.		
<ul> <li>developed new ex</li> </ul>	- developed new experimental paradigms, techniques, combined approaches?						
<ul> <li>Significance and ex</li> </ul>							
- model/theory development, long-term "story", socioeconomic/environmental impact?							
<ul> <li>Clarity and scope or</li> </ul>	f objectives						

- - long term goals/vision (model/theory?) and short term objectives (experiments/studies?) clearly defined?
- Clarity and appropriateness of methodology
  - understandable for general scientific audience, credibility (publications involving these methods)?
- Feasibility
  - can be done by their lab, has relevant experience (if not, clear plan, but "story" should fit you)
- Consideration of sex, gender and diversity in the research design, if applicable
  - if not applicable, should clearly state why, but give this careful consideration
  - Extent to which the scope of the proposal addresses all relevant issues
  - you control the scope of this "story", not too big or too small...
- Appropriateness of, and justification for, the budget
  - reasonable, use tables for clarity (e.g., funds for HQP in which years), "get the funding then do what you want"
- Demonstration that the Discovery Grant proposal is distinct conceptually from research supported (or submitted for support) through CIHR and/or SSHRC
  - summaries from grants, but clear statements of "no conceptual or budgetary overlap" are helpful
- Clear explanation why Discovery Grant funding is essential to carry out the research proposed in the DG application (for applicants who hold or have applied for a CIHR Foundation Grant)
  - why couldn't the CIHR Foundation grant cover this work?

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## Training of HQP

EXCEPTIONAL	OUTSTANDING	VERY STRONG	STRONG	MODERATE	INSUFFICIENT	
Past training is at the highest level in	Past training is far superior to other	Past training is superior to other	Past training compares favourably with	Past training is modest relative to other	Past training is below an acceptable	
terms of the research training	applicants in terms of research training	applicants in terms of the research	other applicants in terms of the	applicants in terms of the research	level in terms of the research training	
environment provided and HQP	environment provided and HQP	training environment provided and	research training environment provided	training environment provided and HQP	environment provided and HQP	
contributions to research.	contributions to research.	HQP contributions to research.	and HQP contributions to research.	contributions to research.	contributions to research.	
Most HQP move on to highly impactful	Most HQP move on to impactful	HQP generally move on to impactful	HQP generally move on to positions	Some HQP move on to positions that	HQP rarely move on to positions that	
positions that require skills gained	positions that require skills gained	positions that require skills gained	that require skills gained through the	require skills gained through the training	require skills gained through the training	
through the training received.	through the training received.	through the training received.	training received.	received.	received.	
Training philosophy and research training	Training philosophy and research	Training philosophy and research	Training philosophy and research	Training philosophy and research	Training philosophy and research training	
plans are of the highest quality: highly	training plans are far superior: highly	training plans are superior: highly	training plans are appropriate and	training plans are partially appropriate	plans are not appropriate and not	
appropriate, clearly defined and	appropriate, clearly defined and	appropriate, clearly defined and	clearly defined in terms of the overall	and partially defined in terms of the	clearly defined in terms of the overall	
expected to produce top quality results	expected to produce high quality	expected to produce quality results in	approach and specific projects for HQP.	overall approach and specific projects	approach and specific projects for HQP.	
in terms of the overall approach and	results in terms of the overall approach	terms of the overall approach and		for HQP.		
specific projects for HQP.	and specific projects for HQP.	specific projects for HQP.				
	•	Challenges related to equity, diversity	Challenges related to equity, diversity	Challenges related to equity, diversity	Challenges related to equity, diversity	
Challenges related to equity, diversity and	inclusion specific to the institution and	and inclusion specific to the institution	and inclusion specific to the institution	and inclusion specific to the institution	and inclusion specific to the institution	
field of research are clearly described.	The same of the sa	and field of research are described.	and/or field of research are described.	and/or field of research are partially	and/or field of research are inaccurate	
				described.	or not described.	
		Specific actions to support the	Specific actions to support the	Specific actions to support the	Specific actions to support the	
		recruitment of a diverse group of HQP	recruitment of a diverse group of HQP	recruitment of a diverse group of HQP	recruitment of a diverse group of HQP	
Specific actions to support the recruitmen	t of a diverse group of HQP <b>and</b> an	and an inclusive research training	and/or an inclusive research training	and/or an inclusive research training	and/or an inclusive research training	
inclusive research training environment a	re clearly defined.	environment are defined.	environment are defined.	environment are partially defined.	environment are not appropriate or not	

#### Rationale for rating:

- Past contributions to the training of HQP
- UGs, Masters, PhDs, PDFs, techs, all count, knowing where they ended up shows you care and are proud!
  - Training environment
  - lab(s), training, techniques and equipment, academic programming, seminars
  - HQP awards and research contributions
  - highlight scholarships and research contributions (students in lead roles?)
  - · Outcomes and skills gained by HQP
  - HQP go on to PDF, faculty, industry jobs, etc
- Training plan
  - · Training philosophy
  - pedagogical approaches, frequent interaction (not just "weekly lab meetings"), social aspects (team building),
  - HQP research training plan
  - name HQP where possible in proposal, and provide details here about who is doing what and why
  - EDI of HQP! (see slides from our next 2 presenters)

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## Research Facilitators

- Danielle Baron, Ag & Bio
- Tera Ebach, RASI
- Karen Mosier, Medicine
- Heidi Smithson, Engineering
- Bruna Bonavia-Fisher, Medicine R
- Manisha Jalla, RASI

- HQP

- EDI

- Budget

- CCV

- RTI

- Int. Review



## Training of HQP – Danielle Baron



#### HQP Considerations (Appendix 4, 2020-21 Peer Review Manual)

# Contributions to the training of highly qualified personnel

- Quality and impact of past training
  - Training environment
  - · HQP awards and research contributions
  - Outcomes and skills gained by HQP
- Quality, suitability and clarity of the planned training
  - Training philosophy
    - Mentorship approach and enhancement of the research and training environment
    - Challenges or barriers to inclusion and advancement of under-represented groups
    - Planned approach to promote participation of a diverse group of HQP
  - Research training plan for individual HQP

## **Past training:**

- Don't worry if you are an ECR and this is your first research program!
- Undergrads, Masters, PhD, PDFs, technicians, research assistants, summer students
- Highlight your lab facilities, specialized equipment/techniques, academic programs/training
- Discuss past awards, presentations that HQP did
- Where they are now industry, academia show that you have kept in touch!



## Training of HQP



HQP Considerations (Appendix 4, 2020-21 Peer Review Manual)

# Contributions to the training of highly qualified personnel

- Quality and impact of past training
  - Training environment
  - · HQP awards and research contributions
  - Outcomes and skills gained by HQP
- Quality, suitability and clarity of the planned training
  - Training philosophy
    - Mentorship approach and enhancement of the research and training environment
    - Challenges or barriers to inclusion and advancement of under-represented groups
    - Planned approach to promote participation of a diverse group of HQP
  - Research training plan for individual HQP

## **Training plan:**



### 1) Training philosophy

- Your approach to supervising students and mentorship
- Team building, frequent (virtual) interactions, pedagogical approaches

#### 2) Research training plan

- Do not just list your HQP!
- Describe spec-ifically which HQP will be responsible for which aspects of the research and WHY
- Ensure this is mirrored in your methods section in your proposal
- Can include a Gantt chart in your budget jst
- Use names where possible

## **Equity, Diversity and Inclusion (EDI) on Discovery Grants**

Training of Highly Qualified Personnel

Past Training of HQP

raining Philosophy & Research Training Plan

Past training is at **the highest level** in terms of the research training environment provided and HQP contributions to research.

Most HQP move on to highly impactful positions that require skills gained through the training received.

Training philosophy and research training plans are of the highest quality: highly appropriate, clearly defined and expected to produce top quality results in terms of the overall approach and specific projects for HQP.

Past training is **far superior** to other applicants in terms of research training environment provided and HQP contributions to research.

Most HQP move on to impactful positions that require skills gained through the training received.

Training philosophy and research training plans are far superior: highly appropriate, clearly defined and expected to produce high quality results in terms of the overall approach and specific projects for HQP.

Challenges related to equity, diversity and inclusion specific to the institution **and** field of research are **clearly described**.

Specific actions to support the recruitment of a diverse group of HQP and an inclusive research training environment are clearly defined.



## **Equity, Diversity and Inclusion (EDI) on Discovery Grants**

- Institution or College EDI challenges <u>Uview</u>
- Field of Research EDI challenges Check with Professional Association
- USask commitments for <u>EDI recruitment</u> that address Institution challenges
- Include your own specific EDI Recruitment practices that address both USask and Field EDI Challenges.
- USask resources for an <u>Inclusive research training environment</u> that address EDI challenges.
- Include your own specific training plan practices that address USask and Field EDI challenges





## Budget – Karen Mosier

## **BUDGET TIPS**

- Make sure the totals listed in the grant proposal match the totals in the budget section
- Check that all the expenses listed in the budget are eligible expenses and only contain the required items necessary to complete the research
- Give accurate costs and do not try to pad your budget as most reviewers are researchers themselves and are quite familiar with the costs of doing research

- Make sure that there is no mathematical errors in the budget
- Include enough detail in your budget justification
- Don't forget to include benefits for your personnel and include a description of their role in the study
- Don't just ask for items but give a breakdown of the costs
- Relate your budget back to the objectives outlined in your proposal

#### PERSONNEL:

 50% of a technician's salary (.5 FTE) over 3 years = \$25,675 salary + \$4325 (mandatory benefits CPP, EI, WC, Vacation Pay, Stat holidays) = \$30,000/yr x 3 years = \$90,000

[NOTE: The other half of the technician salary (.5 FTE) will come from the Department Head Support Program]

The technician's duties will include performing various laboratory techniques, assisting with data collection, working with the graduate student, training the summer students, and assisting with the coordination of my research program

#### MATERIALS AND SUPPLIES:

Supplies

\$24,000

Virus isolations \$1500, cell culture \$2350, sequencing \$2500, consumables \$1750, culture media \$1400, swabs \$500, RT-PCR \$5000, qPCR \$5000, histopathology \$4000

Materials

\$1.50,000

Animal trials [These costs include purchase of 50 birds, maintenance costs of flock over 12 months, challenge protection studies, daily maintenance (feeding, watering), incineration of birds and disinfection of isolation faculty = \$50,000/yr x 3 years = \$150,000

Budget Tips from previous NSERC DG Workshops



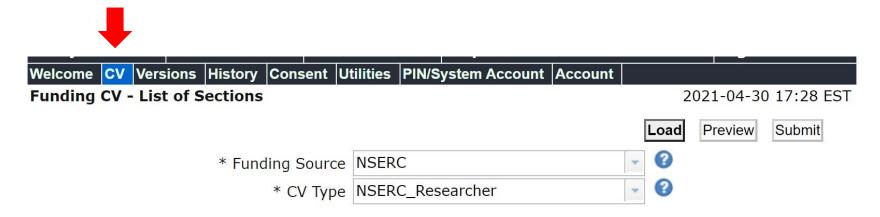
# Top Tips for CCV

- Start Early!
- Use the NSERC CCV template (under Funded on the CV tab)
- Follow the PDF Guide provided by NSERC in the NSERC template
- Make good use of extra space
- Mark your HQP with asterisks following their surnames
- Visit the Grants Repository to see samples of CVs from past successful applications (<a href="https://vpresearch.usask.ca/events/grants-calendar.php">https://vpresearch.usask.ca/events/grants-calendar.php</a>)
- Contact your RF or RASI with questions or issues
- Attend the fall CCV and DG application clinic (dates and times will be announced later in the summer).



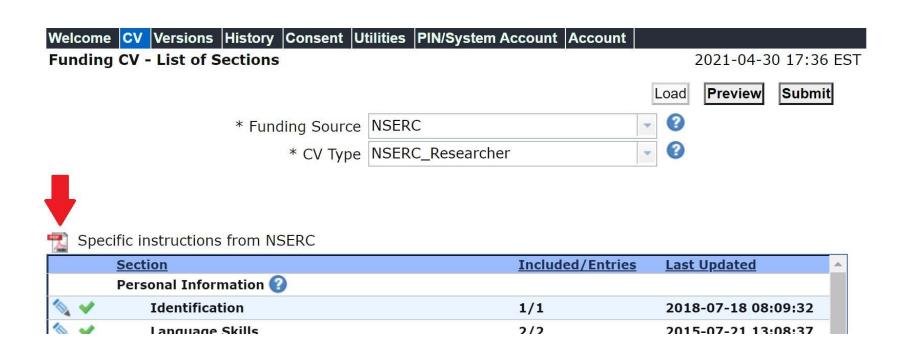
# Use the NSERC CV Template

 To select the NSERC CCV template, choose 'Funded' under the CV tab, search for NSERC under funding source, then select NSERC\_Researcher for CV Type.





# Follow the PDF provided by NSERC





# Make good use of extra space

 Note that many of the text boxes in CCV have a lot of space. You can use this space to provide additional information about entries (e.g., award received for a paper, etc.)





## Mark your HQP with asterisks following their surnames



## Research Tools and Instruments (RTI)

- foster and enhance the discovery, innovation and training capability of university researchers in the NSE by supporting the purchase of research equipment- 1 year; up to \$150K.
- applicants and co-applicants must each hold a DG or one of the grants in their list, can only submit one application per competition, either as an applicant or a co-applicant but not both.
- for tools and instruments that form a comprehensive system, or the purchase of new, used or refurbished equipment, for the repair, upgrade or rental of equipment, or for the fabrication of equipment that is not readily available off the shelf
- Success rate: 28%

#### Free form proposal limited to four pages

1. need, urgency and suitability of equipment for the research programs (40%)

2. merit of the research programs supported by the equipment and excellence of pertinent to the budget and relationship to the applicant(s) (40%)

3. importance of the equipment for the

training of highly qualified personnel (HQP) (20%)

#### Budget justification limited to two pages

- 1. must contain only information other research support.
  - 2. Supported by a template table to fill

3. include two quotations for over \$25,000. If you cannot provide them, provide a justification under a clear heading

#### CCV

applicant and each of the coapplicants must submit a CCV

#### Equity, diversity and inclusion considerations

Very important part of the application, helps you differentiate yourself form the rest of the applications in the pile. Give concrete examples of the actions that Usask, your department and your laboratory take to advance underrepresented groups AND provide the best inclusive and nurturing environment to work in.



## Internal Review – Manisha Jalla

**DG-** Evaluation

Faculty Name

Department And College

DG- Evaluation Group	Faculty Name	Department and College	Group	racuity Name	Department And Conege
1501:Genes, Cells & Molecules	Susan Detmer Troy Harkness Meena Sakharkar Julia Boughner Yan Zhou Peter Bretscher Jack Gray Mirek Cygler Patrick Krone (Emeritus Professor) Daniel MacPhee	Veterinary Pathology, WCVM BMI, College of Medicine College Pharmacy and Nutrition APP, College of Medicine VIDO BMI, College of Medicine Biology, College of Arts and Science BMI, College of Medicine Anatomy & Cell Biology, College of Medicine Veterinary Biomedical Sciences, WCVM	1502: Biological Systems and Functions	Jaswant Singh Joel Lanovaz John Howland Ron Borowsky Greg Penner Yangdou Wei Jack Gray	Veterinary Biomedical Sciences, WCVM College of Kinesiology APP, College of Medicine Psychology, College of Arts and Science Animal and Poultry Science, AgBio Biology, College of Arts and Science Biology, College of Arts and Science
1503: Evolution & Ecology	Robert Clark	Global Institute for Water Security		John P Giesy	Veterinary Biomedical Sciences, WCVM
	John Tse  Alexander Moewes	Physics & Engg. Physics, Arts and Science Physics & Engg. Physics, Arts and			
1505: Physics	Andrei Smolyakov	Science Physics & Engg. Physics, Arts and	1504: Chemistry	David Palmer	Chemistry, College of Arts and Science
		Science		Adam Bourassa	Physics & Engg. Physics, Arts and Science
1507:	Chanchal Roy	Computer Science, Arts and Science	1506: Geosciences	Yuanming Pan	Geological Sciences, Arts and
Computer	Julita Vassileva	Computer Science, Arts and Science	300301611663	Steven Siciliano	Science Soil Sciences, AgBio
Science	Regan Mandryk	Computer Science, Arts and Science	4500- M-41-0	Raymond Spiteri	Computer Science, Arts and Science
1509: Civil, Industrial &	Dena McMartin	Institutional Planning and Assessment, Civil, Geological and Environmental Engg, CoE	1508: Math & Statistics	Juxin Liu	Mathematics and Statistics, Arts and Science
Systems Engineering			1510:	Ha Nguyen	Electrical and Computer Engineering, CoE
1511: Materials &	Ajay Dalai	Chemical and Biological Engineering, CoE	Electrical & Computer Engineering	Safa O Kasap	Electrical and Computer Engineering, CoE
Chemical Engineering			1512:	Carey J Simonson	Mechanical Engineering, CoE
			Mechanical Engineering	James Johnston	Mechanical Engineering, CoE



## **Internal Review**

RTI Evaluation Group	Faculty Name	Department and College
Genes, Cells & Molecules	Thomas Fisher Wei Xiao Patrick Krone (Emeritus Professor)	APP, College of Medicine BMI, College of Medicine Anatomy & Cell Biology, College of Medicine
Environmental Sciences	Robert Clark Christy Morrissey	Global Institute for Water Security School of Environment and Sustainability; Biology, College of Arts and Science; Toxicology Centre
Biological Systems and Functions	Jaswant Singh Valerie Thompson	Veterinary Biomedical Sciences, WCVM Psychology College of Arts and Science
Chemistry	Michel Gravel	Chemistry, College of Arts and Science
Materials & Chemical Engineering	Qiaoqin Yang	Mechanical Engineering, CoE
Engineering	Ildiko Badea	College of Pharmacy and Nutrition



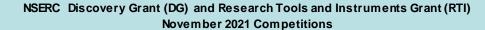
# Intention to apply (USask) NOI to NSERC

Draft proposal for internal review(USask)



# RASI submission deadline (RTI)

(ask your RF for earlier college/dept deadlines)



#### Internal Review and Submission Timelines

DG	RTI	REQUIR EM ENT	DEADLINE		
х	х	Applicants initiate their intention to apply and/or request for internal review by submitting the Intention to Apply/Request for Internal Review Form for NSERC DG/RTI to <a href="mailto:grant.review@usæk.ca">grant.review@usæk.ca</a> . Please put 'Lastname NSERC DG/RTI' in the subject heading.	Anytime before July 26, 2021		
X		NSERC Deadline for Submission of DG Notification of Intent (NOI) to Apply NOI must be submitted to NSERC through the NSERC Research Portal.	August 1, 2021 (tentative as that Is a Sunday of a long weekend)		
х		Applicants participating in the internal review, please e-mail a copy of your submitted NSERC DG NOI to <a href="mailto:grant.review@usask.ca">grant.review@usask.ca</a> (306-966-7521). Please put 'Lastname NSERC DG' in the subject heading.	August 9, 2021		
X	X	Applicants consult with their suggested reviewers, Research Facilitators, Associate/Vice-Deans Research, or mentorship teams to strategize and prepare their draft application.	Anytime between now and September 15 2021		
х	х	Applicants submit draft DG and/or RTI application and CCV for internal review to their internal reviewers, and copy to <a href="mailto:grant.review@usask.ca">grant.review@usask.ca</a> .  Please put 'Lastname NSERC DG/RTI' in the subject heading.	September 16, 2021		
X	x	Internal reviews are returned to the applicants and copy to grant.review@usask.ca, directly from internal reviewers (or from grant.review@usask.ca if assistance is needed).	October 7, 2021		
x	x	Applicants consult with their suggested reviewers, Research Facilitators, Associate/Vice-Deans Research, or mentorship teams to incorporate reviewer feedback. Research Facilitator reads for the logistical flow and completion of the proposal.	October 7 – 15 (RTI) October 7 – 22 (DG)		
x	x	College/UnitIntemal Approval Applicants must submit a full application package including CCV through Univ RS for Department and College academic approval. Applicants comply with college/unit-specific internal approval processes and deadlines.	Please check with your Research Facilitator or Associate/Vice Dean Research/Director		
	х	Research Acceleration and Strategic Initiatives (RASI) Compliance Review and Approval (RTI)  College/school/unit of the applicant must review the application, decide on approval and submit the decision in <a href="University Research System (UnivRS">UniveRS</a> ) at least 5 business days prior to the agency submission deadline. RSEO will review for eligibility, conduct a final compliance review check and provide Institutional approval. Applicants will have the opportunity to incorporate any required changes they wish to address or as noted by	October 18, 2021		

RASI. Paper applications will not be accepted.



## **RTI** deadlines

RASI submission deadline | (DG)

(ask your RF for earlier college/dept deadlines)

DG deadline

		_
NSERC RTI Submission Deadline Final applications must be submitted by applicants to NSERC through the NSERC Research Portal, and will be forwarded by the RASI staff.	October 25, 2021	
Research Acceleration and Strategic Initiatives (RASI) Compliance Review and Approval (DG)  College/school/unit of the applicant must review the application, decide on approval and submit the decision in University Research System (UnivRS) at least 5 business days prior to the agency submission deadline. RSEO will review for eligibility, conduct a final compliance review check and provide Institutional approval. Applicants will have the opportunity to incorporate any required changes they wish to address or as noted by RASI. Paper applications will not be accepted.	October 25, 2021	
NSERC DG Submission Deadline Final applications must be submitted by applicants to NSERC through the NSERC Research Portal, and will be forwarded by the RASI staff.	November 1, 2021	
NSERC Discovery Grant/RTI Workshop:  Workshop Highlights  Specific strategies relevant to the merit indicators;  Top tips and advice from:  Research Facilitators on CCV, HQP, Budget, Equity, Diversity and Inclusivity (EDI) considerations, successful RTI applications and Internal Review; Experienced NSERC Evaluation Group members regarding successful applications; Web Ex Breakout sessions to facilitate discussions on any Evaluation Group-specific considerations	6 May 2021; Time: 1:00pm – 3:30 pm	
Webinars and Information Sess	ions Calendar	
EVENT	DATE	
DG Webinar: Submission of a Notification of Intent to Apply (English) Live Q&A NOI Overview and Tips (English videos)	TBA*	
RTI Webinar: Submission of an Application (English)	TBA*	
DG Webinar: Submission of an Application (English)	TBA*	

**TBA** 

USask Q&A session for DG and RTI Applicants including information on CCV

and Full Application in Research Portal



## DG/RTI Evaluation Group Members

- Troy Harkness, EG 1501 Genes, Cells and Molecules
- Jaswant Singh, EG 1502 Biological Systems and Functions
- David Palmer, EG 1504 Chemistry
- Adam Bourassa, EG 1506 Geosciences
- Regan Mandryk, EG 1507 Computer Science
- Dena McMartin, EG 1509 Civil, Industrial & Systems Engineering
- Thomas Fisher, RTI Evaluation Group: Genes, Cells and Molecules



## EG 1501: Genes Cells & Molecules, Prof. Troy Harkness

#### Points to consider:

#### 1. Make it clear what is NSE in your work

- Go over the NSE components in your health-related papers in Significant Contributions section
- Do not focus on health research
- In CV, add a statement with the paper regarding NSE contributions

#### 2. Be clear about your expertise and assess honestly

- Too many people exaggerate their expertise
- Very little space in 5 pg proposal so explain in your Significant Contributions section and/or add a sentence with the reference in your reference list

## 3. When getting Message from Evaluation Group (MEG), very little is conveyed as to why the application was rejected

- Have an NSERC funded colleague look at your old grant and ask for an honest assessment
- Do not resubmit an old grant thinking it was fine there is institutional memory

#### 4. Add asterisks in CV to highlight your HQP

- Add a statement in CV to highlight HQP contributions

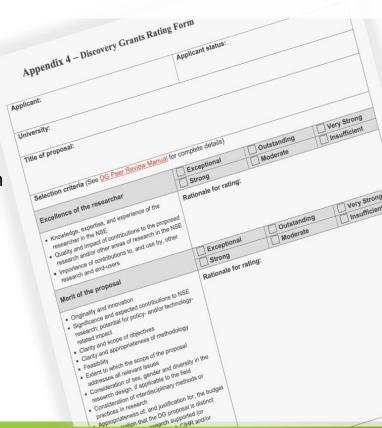
#### 5. In HQP section, explain past training outcomes clearly and thoroughly

- Discuss pubs, awards, skills, current positions, etc.
- In EDI section, discuss barriers and issues faced by HQP
- Use personal experiences and do not simply quote University websites.
- Write about the role of sex and gender in your research and research environment

## UNIVERSITY OF SASKATCHEWAN EG 1502: Biol Sys & Funct, Prof. Jaswant Singh

## The Grid is our God during the Competition week

- Evaluation Group members breath-in and live by the Grid!
- R1 and R2 are your friends and advocates
  - Help them
- As R1, I get only 3-4 minute to present your case!
- What rationale would you like to appear on the Evaluation Form
  - o Fill in the form for someone from USask database (i.e., understand the Grid)
- Keep the story simple
  - Weaving the story between different sections (=multiple iterations)
- Pay attention to EDI and keep CIHR out
  - What specific EDI actions are you taking





## EG 1504: Chemistry, Prof. Dave Palmer

**General**: Read the instructions. Follow the instructions. Use "The Grid" of merit indicators. Your **NOI** determines who will evaluate your grant, so use the opportunity wisely.

#### Strength of Researcher:

- Use your "Most Significant Contributions" to make your case
- Your 4 attached samples will be used to judge quality. You may wish to attach a paper you think is terrific but in a niche journal.
- You can use and refer to those attachments to demonstrate you have the expertise & equipment to carry out the research

#### Merit of Proposal:

- Make it easy to read: uncrowded; readable diagrams; smart use of colour & bold type.
- Objectives up front, & very clear
- Criteria: original & innovative, so not more of the same; show that your work is evolving.
- Get someone <u>outside</u> your research area to read it.
- Take the advice you get.

#### HQP:

- Highlight the merit beyond the science. What does a trainee gain by working with you in particular?
- EDI: Do your homework. Use facts not feelings.
- Approach EDI like you do your discipline: define the problem, and what you are doing to solve it. (Remember the EG members are your peers.)



#### EG 1506 Geosciences: Prof. Adam Bourassa

- Geosciences covers a very broad range of topics
  - Frame your application for reviewers with tangential expertise; one key figure goes a long way
  - Research program (long term goals) driven by questions with clear objectives mapped to projects and HQP
- Explain eligible delays and use the new 2 pager for contributions > 6 years
  - Delay time periods are doubled for ECR window of eligibility
- Use the merit indicator grid to craft each aspect of your proposal
  - Explanations of significance (quality, impact) much more so than numbers are used for evaluation
- Frame your Discovery Grant program in the context of your larger research program
  - Lots of Geoscience applications link to bigger programs (satellite remote sensing, field campaigns, ship time)
  - Make a clear case for the new science that the DG program enables that leverages the bigger program (new analyses, new/more HQP, hands-on training)
- Make sure the scope of the objectives is a good match for the level of planned HQP
- EDI has two aspects:
  - context and examples for your field, and
  - a plan for EDI in the proposed work;
  - many applications miss the context and examples

- Five Readers who decide your fate
  - R1 presents (reads carefully), R2 less so, R3-R5 even less so
  - All have equal vote
  - Use formatting to make everything skimmable
- General advice
  - Write to the metrics & use formatting
  - Use the free-form sections to qualify your contributions and summarize
  - Don't neglect the CCV
- Quality and Quantity
  - In student outcomes, publications, etc.
- Don't forget about HQP Training Plan (1/6 of evaluation)
  - What is the value-added of your training environment?

#### DO

- Articulate a long-term goal
- Demonstrate connections between short-term objectives & long-term goal
- Highlight the skills, activities, and opportunities planned for each HQP
- Become an editorial board member
- Share information about informal mentorship and impact beyond strict CCV requirements

#### **DON'T**

- Minimize EDI training and opportunities in HQP training plan
- Limit EDI training and commitments to HQP (DO demonstrate personal commitment)
- Only provide lists publications & presentations without showing evidence of impact
- Limit literature review and progress to date citations to your own publications

## Consider the reviewers perspective...

We are not likely to be expert in your field (I had rated my comfort level as "high" in only 4 of the 21 applications I reviewed).

We have a lot of applications to review – keep them simple and focused on the criteria.

There are different ways to argue for need, urgency, and merit - identify your strengths and state them clearly and often.

The process requires reviewers to essentially rank each application in each of the three categories - weakness in any of them can sink your chances.

Pay careful attention to HQP and EDI.

## University of Application Preparation Resources

#### **NSERC Resources:**

- NSERC Instructions <a href="http://www.nserc-crsng.gc.ca/ResearchPortal-">http://www.nserc-crsng.gc.ca/ResearchPortal-</a> PortailDeRecherche/Instructions-Instructions/DG-SD eng.asp
- NSERC Presentation Standards (fonts, margins etc.) are at: http://www.nserc-crsng.gc.ca/OnlineServices-ServicesEnLigne/pdfatt2 eng.asp
- NSERC Webinars: http://www.nserc-crsng.gc.ca/ResearchPortal-PortailDeRecherche/RP-CCV-Webinar eng.asp
- NSERC resource videos <a href="http://www.nserc-crsng.gc.ca/ResearchPortal-">http://www.nserc-crsng.gc.ca/ResearchPortal-</a> PortailDeRecherche/Resource-Informatives eng.asp

#### USask Resources:

- USask NSERC DG repository
   https://share.usask.ca/go/ovpr/grants\_repository/
- Videos and slides from our previous NSERC grant workshops (\*2019 video linked\*\*)

Workshops and Tipsheets - Research Acceleration and Strategic Initiatives - Office of the Vice-President Research - University of Saskatchewan (usask.ca)

 Comprehensive list of resources available for the EDI component of your Discovery Grant application:

https://usaskca1-

my.sharepoint.com/:b:/g/personal/maj944\_usask\_ca/EaJxaNFoBtVKp-9ur9MRCgBPAys4RixQnOlltOaGgF0Hw?e=RVYt2e www.usask.ca



## **NSERC** Research Facilitation & Planning Team

- NSERC Leader: Ron Borowsky
- \* Research Programs Coordinator, Research Acceleration and Strategic Initiatives: Manisha Jalla

#### **Research Facilitators**

- Agriculture and Bioresources: Danielle Baron
- Arts and Science: Colleen Cochran
- Edwards School of Business: Joelena Leader
- Engineering: Heidi Smithson
- Johnson-Shoyama School of Public Policy: Bethany Penn
- Dentistry and School of Public Health: Janice Michael
- Kinesiology/Pharmacy and Nutrition: Gen Clark
- Medicine: Biomedical Departments (BMI, APP): Bruna Bonavia-Fisher; Department of Medicine: Ozlem Sari
  Department of Surgery: Karen Mosier; Department of Pediatrics: Tova Dybvig
  Department of Psychiatry: Mariam Alaverdashvili; Departments of Family Medicine, Medical Imaging, Obstetrics
  & Gynecology, Oncology, Ophthalmology, Pathology and Laboratory Medicine: Mark Milne
- Western College of Veterinary Medicine: Kevin Driscoll
- School of Environment and Sustainability: Graham Fairhurst
- Research Acceleration and Strategic Initiatives (Large Scale Grants): James Dobson



## Research Support Specialists, Research Acceleration and Strategic Initiatives

Colleges / Schools	Name
Arts and Science	Nicole Benning
Education	-
Edwards School of Business	
School of Public Policy	
Law	
Library	Laurie Schimpf
Centre for Forensic Behavioural Science and Justice Studies	
Centre for the Study of Co-operatives Community-University Institute	
for Social Research (CUISR)	
Agriculture and Bioresources	Brenda Meyer-Burt
Engineering	
Global Institute for Food Security	
Global Institute for Water Security	
School of Environment and Sustainability	Tera Ebach
Toxicology Centre	
Vaccine & Infectious Disease Organization	
Western College of Veterinary Medicine	Comoron Pora
Medicine  Rhommon and Northitian	Cameron Berg
Pharmacy and Nutrition	
Nursing; Dentistry Kinesiology	
School of Public Health	
Saskatchewan Population Health and Evaluation Research Unit	Ronda Appell
(SPHERU) Canadian Centre for Health and Safety in	
Agriculture (CCHSA)	
Indigenous Peoples' Health Research Centre	