

# The International Research Collaboration Grant

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## Table of Contents

Table of Contents.....	0
1. Introduction .....	2
2. Objectives.....	2
3. Funding .....	3
4. Collaborating Institutions and Fields .....	3
5. Who May Apply.....	3
6. Procedures .....	4
7. Evaluation Criteria.....	5
8. General Regulations.....	6
9. Outcomes.....	6
10. Acknowledgements.....	6
11. Appendix I: Highlights of the Committee’s Deliberations.....	7
12. Appendix II: Benchmarking Study .....	8
Collaborative Research Networks (CRN) Department of Education and Training – Australia .....	8
Charles Darwin University - Collaborative Research Network Program.....	11
WORLDWIDE UNIVERSITY NETWORK: Research Development Fund 2016.....	13
Natural Sciences and Engineering Research Council of Canada .....	15
Collaborative Research and Development Grants (including DND/NSERC Research Partnership Grants) .....	15
DND/NSERC Research Partnership Grants.....	19
RESEARCH COUNCILS, UK.....	22
University Of Georgia: Global Research Collaboration Grant Program .....	24
Temple University: Temple University Internationalization Grants .....	26

## 1. Introduction

The University aspires to be an internationally recognized institution in research in strategic areas of focus, including energy, catalysis, desalination and clean water. In line with this aspiration, the University has selectively engaged in strong collaborations with top institutions in these specific areas through university-wide collaboration agreements, including the collaboration with MIT in renewable energy and clean water, the collaboration with Georgia Tech in seismic signal processing, and with Caltech in catalysis, among others. Through these focused collaboration efforts, the University has been able to grow its research profile of high quality scholarly publications and registered patents, and develop new innovative technologies that solve real-world problems, some of which have already seen their way into commercialization.

In order to maintain the momentum created through these university-level collaboration agreements and facilitate a stronger involvement of KFUPM researchers in international research networks and programs, the International Research Collaboration (IRC) grant is created. The IRC grant will support the development of existing international collaborations within the well-established research priorities of the University's Strategic Research Plan. The grant is intended to support large collaboration projects aiming to advance knowledge and develop technologies and to complement existing grants and support programs. The grant may also support the establishment of new international collaborations in the future provided that the collaboration is demonstrated to be able to fulfill its potential.

## 2. Objectives

The overall objective of the IRC grant is to further advance well-established international collaboration efforts between the University's researchers and their peers in top institutions in the world. The specific objectives are the following:

- i. Encourage the development of sustainable long-term international joint research and collaboration,
- ii. Strengthen the knowledge exchange and collaboration between KFUPM researchers with their peers in top institutions in strategic research areas of the University,
- iii. Facilitate increased exposure of KFUPM researchers and students to international and collaborative research,
- iv. Promote high-quality research leading to impactful and significant research outcomes, and
- v. Further raise the research profile of the University and enhance its global reputation in its strategic areas of research.

It is important to note here that this grant is not intended to be a seed funding grant for exploring new international research collaborations possibilities. On the contrary, the aim of the grant is to facilitate continuing existing well-established collaborations between experienced and synergetic teams from both KFUPM and the other institution in areas of focus of KFUPM.

### 3. Funding

The duration and funding of a project awarded through this grant depend on the amount of work planned to be conducted, the type of activities and the size and involvement of the project team members and their backgrounds. A major discriminator of this grant is the funds allocated to cover the collaboration overhead cost. Matching funds from the international partner institution will be considered favorably in the selection process.

Projects funded through this grant will not exceed **four years** in duration, and the funding amount per project cannot exceed **SAR 2,000,000**. These funds can be used to hire post-docs, provide compensation incentives for students (including students from the other institution) and cover costs related to research collaboration activities, such as research visits, research training, delivering lectures, teaching a course in the summer, joint seminars or workshops, procurement of equipment and consumables, joint publications and other forms of joint information dissemination.

### 4. Collaborating Institutions and Fields

Collaboration with researchers from top institutions in the field of the project is highly desirable. The field of collaboration must be a priority area of KFUPM or an emerging area of research (as identified by the steering committee of the grant). Evaluation of the partner institution and the partnering team will be conducted on a case-by-case basis and collaboration with universities with whom KFUPM already has established ties in the area of the proposed research will be given priority for funding.

### 5. Who May Apply

KFUPM faculty members and researchers with a proven record of accomplishment in the area of the collaboration and with a strong history of the successful management of previous research projects may apply for this grant. It is expected that the partnering researchers and institutions have a proven record in the proposed research and with whom research links have already been established before. However, for the first cycle (2017 – 2018) applies only to MIT, Stanford and Georgia Tech.

## 6. Procedures

The grant will be administered by a Steering Committee headed by the Vice Rector for Research. The steering committee sets the strategic areas of research for each cycle, oversees the operation of the grant, assesses the performance and impact of the grant and the quality of its outcomes and reports its activities to H.E. the Rector of the University. It is important that the management model of the grant is fully integrated with the research enterprise at KFUPM due to its strategic significance and impact.

The following procedures will be followed in administering this grant:

- i. The Steering Committee decides on the areas of strategic priorities to be supported by the grant. The list of support areas will be dynamic where emerging areas may be added as the steering committee deems appropriate. The steering committee also decides on the awards based on the priorities in a temporal basis given the budget as well as the “priority areas” covered so far at the time. The steering committee ensures a balanced coverage of all priority areas as much as possible.
- ii. DSR makes a call soliciting pre-proposals from University faculty and researchers. Pre-proposals must include project description, explaining their importance, relevance and significance, and demonstrating existing collaborations with the peer institution, along with clear statements of objectives and expected outcomes. Pre-proposals are evaluated by the Research Committee and it informs the selected proponents to submit the detailed proposals.
- iii. The selected project team submits the research proposal in the format prescribed by DSR (available in DSR’s website). The proposal must include: (i) a description of the proposed project including the proposed partners, the proposed objective and expected outcomes, (ii) a short description of how the project meets the grant objectives, (iii) detailed budget showing the funding sought, breakdown of the main expenditure and an indication of the resources (cash and in-kind ) to be contributed by each participant (iv) a detailed schedule including milestones, (v) the expected outcomes and benefits, (v) resumes of the project team, and (vi) a signed commitment from the collaborating researchers and their affiliated institutions. The submitted proposals must also provide evidence that: (i) the project contributes to the strategic research objectives of KFUPM in achieving excellence in its priority areas of research and (ii) the project will have demonstrated results that could not be achieved by KFUPM researchers alone without international collaboration.
- iv. The research proposal will be reviewed by the Research Committee in conjunction with the opinion of selected experts from the world’s top universities in the area of the proposed research.

- v. Criteria used in evaluating proposals include project justification, clarity and achievability of proposed objectives, methodology, significance of project's expected outcomes, student training and others (see Section 7 below).
- vi. The Research Committee makes its recommendations about all the submitted proposals through this grant and forwards them to the Steering Committee, which does a contextual evaluation of the recommended proposals, their fitness, relevance and impact and forwards its final recommendations to H.E. the Rector for approval.
- vii. During the project execution phase, progress reports of the projects submitted every six months will be evaluated by the Research Committee within the Deanship of Research, and summaries of progress are forwarded to the Steering Committee.

## 7. Evaluation Criteria

Submitted proposals will be evaluated based on the following criteria:

- i. The alignment of the proposed research with the strategic areas selected by the Steering Committee;
- ii. The merit of the proposal based on novelty, significance, clarity of presentation and appropriateness of design and research plan, feasibility of the proposed work, appropriateness and justification of the budget, and significance of expected outcomes;
- iii. The academic record and research background of all researchers involved in the project;
- iv. The strength of the researchers and institutions in the area of the proposed research;
- v. The mutual benefits of the proposed international research collaboration for KFUPM and the international partner institution;
- vi. Expected outcomes, such as publications, student training, intellectual property development, etc., and
- vii. The current focus of the grant is to target well-established collaborations with top institutions having on-going collaboration. However, international collaboration in strategic research priority areas with other top institutions can be made available at the later stage. Therefore, submitted proposals that do not fit this criterion will not be considered through this grant at this stage.

## 8. General Regulations

- i. Projects submitted under this grant will be competing for its annual budget allocated by the University based on a recommendation from the Steering Committee and the available budget for research funding.

## 9. Outcomes

Expected outcomes include:

- i. Publication Quality (At least one Q1 paper per year per project).
- ii. Publication Quantity (THREE ISI papers per year per project).
- iii. Other forms of IP. The IP ownership will be governed by the University policies in this regard.
- iv. Development of other research projects of strategic significance to the University.
- v. Research training of KFUPM students.
- vi. Joint seminars/workshops/visits of international collaborators.
- vii. Knowledge transfer, such as the development of a process or a product.

KFUPM researchers are expected to contribute significantly to the project work. Consequently, they are expected to be the lead authors in the joint publications. IPs developed through this grant will be governed by the KFUPM regulations for contributory research work.

## 10. Acknowledgements

Proper acknowledgment of KFUPM support in all publications and other outcomes resulting from completed funded projects is mandatory.

## 11. Appendix I: Highlights of the Committee's Deliberations

- This grant has to be treated differently from other grants to be meaningful and attractive and has to have its own distinguishing structure (activities supported and criteria and evaluation)
- The priority areas of the university will have to be clearly defined and announced to all before the grant is started
- Ownership of IP and developed technologies resulting from work done through this grant needs to be properly defined
- There should be emphasis on technology development through this grant.
- We should try to have the grant cover all areas of focus of the university in addition to covering emerging areas, and have the grant allow collaboration with other institutions provided that they satisfy the requirements of the grant.
- How do we incentivize co-I's from other institutions to be part of the grant? By sponsoring students in their own institutions?
- What meaningful restrictions to impose on the involvement of faculty members from both sides (KFUPM and the partnering institution)?
- How to minimize the potential problem of having most of the work done outside (outsourcing project work) or having minimal involvement of the external investigators (being more or less like consultants)?
- Need to mention something about this in the guidelines at least
- Need to have this reflected in the evaluation and the in the proposal templates
- The types of activities to be supported need to be defined and should be somewhat different from other grants
- Sponsoring students in the other institution
- Sponsoring KFUPM students to spend a semester during their graduate studies with projects involving training of students given priority
- Some relevant ranking of institution should be used in evaluating its stature in the area of the collaboration. This evaluation is to be done on a case-by-case basis.
- The steering committee will have too many responsibilities to be headed by the VRR. It's better to have it headed by the Dean of Research and have the committee report on its activities to VRR (similar to NSTIP's scientific committee).
- Best practices in supporting international research collaboration focus more on providing seed funding for preparing large proposals to be submitted to funding agencies, rather than providing funding for full-fledged projects.

## 12. Appendix II: Benchmarking Study

In addition to formal discussion in two meetings, the Committee did a benchmarking study of several universities and research funding organizations, particularly in Europe, Australia and North America. Research collaboration grants appear to be mostly funded by international organizations. Some of these funds and their modes of operation is described in the following sections.

### Collaborative Research Networks (CRN) Department of Education and Training – Australia

The Collaborative Research Networks (CRN) programme is intended to effect structural adjustment in the research and research training capacity of smaller, regional and less research intensive universities in the higher education system.

The CRN programme was announced in the 2009-10 Budget. In May 2011, \$61.5 million was announced by the Australian government to establish twelve CRN projects. An additional \$19.6 million for three more projects was announced in July 2012, bringing the total funding to \$81.1 million for fifteen CRN projects.

CRN is designed to develop the research capacity of smaller, less research-intensive and regional higher education institutions. It encourages these institutions to adapt to a research system driven by performance outcomes by teaming up with other institutions in areas of common interest. All participants in a collaborative network will benefit from partnerships, with flow-on effects for the research and innovation system as a whole.

#### Objectives

The objectives of the CRN programme are to:

- help smaller and less research-intensive universities adapt to a research system driven by performance outcomes
- facilitate collaboration between these universities and larger universities with established research strengths
- encourage less research-intensive, smaller and regional universities to focus their research activities in areas of excellence
- improve the level of collaboration between different parts of the innovation system, and in particular between universities, and
- address wider national research and innovation goals.

#### Program Objectives and Outcomes

The Collaborative Research Networks program forms part of the Australian Government's agenda for reform of the nation's higher education and innovation systems.

The CRN program will contribute to the Government's goal of increased collaboration and has specific objectives. The program will:

- help less research-intensive smaller and regional institutions adapt to a research system driven more strongly by performance outcomes;
- facilitate collaboration between less research-intensive institutions and other institutions with established research strengths;
- encourage less research-intensive institutions to focus their research activities in areas of existing or emerging strength;
- help address the challenges associated with undertaking research in regional institutions;
- improve the level of collaboration between different parts of the innovation system, and, in particular, between universities; and
- meet local and regional priorities.

Long-term expected outcomes are:

- the sustainability of partnerships or collaboration between institutions;
- the contribution of projects towards realising institutional missions or goals;
- increased research capacity, including increasing the number of research groups performing at world class levels; and
- the contribution of projects to national research and innovation priorities.

An immediate expected outcome of the CRN program is a measurable increase in the level of research collaborative activities between universities. This could be reflected by (but is not limited to):

- an increase in joint research publications;
- an increase in joint applications for Australian Competitive Grants and other competitive grants;
- an increase in joint supervision of Higher Degree by Research Students;
- an increase in the number of 'research active' or 'research only' staff;
- an increase in the number of academic staff with Higher Degrees by Research;
- improved efficiency in research administration resulting from the use of shared facilities and resources; or
- other measures showing increased collaboration or improved efficiency, to be determined on a case-by-case basis.

The CRN program is intended to be flexible. Projects may involve existing or emerging areas of research capability, and should include a rationale for relevance to participating institutions' strategic directions. Projects need not be limited to specific fields of research and may have more than one element with different partner institutions for each element.

The reporting requirements and key performance indicators for CRN projects will vary between projects. They will be specified by the institutions involved and agreed with the department

before a funding agreement is concluded. The reporting requirements will focus on the achievement of some or all of the outcomes above. While it is intended that the reporting requirements for CRN projects will not be onerous, they may require participating institutions to provide supporting data in addition to that submitted as part of the DIISRTE and DEEWR annual data collections.

The key deliverables are:

- support and funding for science, research and collaborative projects;
- consultation and collaboration with research community;
- support for international collaborative research projects and relationships; and
- support for increased awareness of science and research in the community.

The key performance indicators are:

- increase numbers of research groups performing at world-class levels (as defined by Excellence in Research Australia);
- increase number of participants in activities promoting science-based careers;
- increase access to research infrastructure to facilitate and support collaborative research activities; and
- increase number of projects reporting strengthened international collaborative relationships and research outcomes.

These deliverables and performance indicators will be taken into consideration when assessing CRN proposals and applications.

### **Funding and Use**

CRN funding is available for any purpose which supports research capacity building. This could include, but is not limited to:

- staff engaged specifically for or in CRN projects – salaries for the proportion of their time spent on CRN activities;
- teaching relief for academic staff engaged specifically for or in CRN projects – salaries for the proportion of their time spent on CRN activities;
- fellowships for CRN project activities;
- staff and student exchanges;
- joint supervision or staff development arrangements;
- shared research infrastructure;
- access to major Australian research facilities; or
- Costs associated with establishing and strengthening collaborations.

## Charles Darwin University - Collaborative Research Network Program

Charles Darwin University in collaboration with the Australian National University, James Cook University and the Australian Institute of Marine Science have been awarded \$5 million under the Australian Government's Collaborative Research Network to form a partnership that creates a national program of collaborative social, coastal/marine and environmental research and innovation in the northern Australian region.

The Northern Research Futures (NRF) alliance will create a program of national collaborative social and coastal/ marine and environment research and innovation in the northern Australian region.

The NRF will be a multi-disciplinary collaboration to establish the important research architecture essential to meeting the national challenges associated with living sustainably in the remote tropic zone and also the interfaces between community and environment.

### Goals

This important collaboration will enhance Charles Darwin University's research capacity. It will also contribute to raising the quality and recognition of its research nationally and internationally through increased publication outputs; increased numbers of Higher Degree by Research students; higher levels of collaboration with research providers, businesses and end-users as well as a substantial increase in critical social and environmental research capacity in northern Australia.

### Objectives

The NRF's alliance has two medium/ long-term objectives:

- CDU is nationally recognised as a critical node in social and environmental research for the remote tropical north working as part of a critical mass of researchers with two of Australia's most research-intensive universities (Australian National University and James Cook University) and a major science organisation (Australian Institute of Marine Science)
- To enable ongoing and sustainable programs of multi-disciplinary collaborative world-class research that is sought out by both end users and next users for integration into policy and practice.

### Outcomes

Research Leadership

- Sustainable partnerships and alliances – one CRC application submitted; six ARC Linkages submitted (three per theme)
- End User communication – Recognised national R&D 'hub' for northern Australia – target to increase the number of active, collaborative research projects with partner organisations by 100 per cent

- Systematic research mentoring within CDU drawing on partner programs and practice – sustainable program integrated into CDU Research Strategic Planning
- Secondment exchange of senior academics across the program – raising the ability of CDU to attract and retain high quality research personnel – target to increase the number of research intensive staff at CDU who are employed at Level C and above by 30 per cent

#### Research Training

- Postgraduate Scholarships – At least seven EFTSL established and successfully underway
- ECR and PhD programs of systematic, contextualized research training integrated into CDU Research Strategic Planning
- High quality supervision of PhD students in collaboration with partners – target to increase the numbers of CDU research students jointly supervised with staff from partner organisations by 100 per cent

#### Collaboration

- Regular annual seminars/ symposia held – minimum of one per annum in Northern Australia
- Additional MOUS with end users/ partners underway – from a base line of three MOUs to a minimum of five/li>
- All projects to involve at least two partners, and all HDR students to be supervised by at least two partners
- Increase the number of active. Collaborative research projects with partner organisations by 100%
- Secondment staff exchange program evaluated against research productivity and outputs and integrated into CDU Research Strategic Planning
- Ongoing sharing of existing expertise, infrastructure and resources between partners formalised

#### Knowledge Transfer

- National sponsored Crawford Conference on Northern Australia successfully held during life of the Program
- An e-Working Paper Series established through ANU Press
- Monograph of annual highlights produced (three minimum)
- Joint journal publications – minimum of 10 per annum
- Joint conference papers – minimum of four per annum>
- Draft of at least one joint edited book on Northern Australia concluded
- Training and professional development opportunities for end users underway – with seminars held regularly (at least two per annum)

## **WORLDWIDE UNIVERSITY NETWORK: Research Development Fund 2016**

### **Guidelines and Application**

The Worldwide Universities Network is a world leading research university network, tackling global challenges through international collaboration. The WUN Research Development Fund fosters innovative, international collaborative research and mobility programs.

### **What is the WUN Research Development Fund (RDF)?**

The RDF offers grants of up to £12,000 (average £10,000) to foster partnership in the network, including new members as a priority, and support research collaborations in the following WUN Global Challenges (see WUN website for full description of the WUN Global Challenges):

- Responding to Climate Change – focusing in the 2016 round on global research platforms; and resilience of human systems; related to food and environment security.
- Public Health (non-communicable disease) – focusing in the 2016 round on life course approach to healthy ageing; health of migrants across the life course; the resilience of adolescents and health workers in different cultural contexts; and schools as a setting for reducing risk factors associated with NCDs.
- Global Higher Education and Research – focusing in the 2016 round on access; mobility; and investment in higher education.

Understanding Cultures – focusing in the 2016 round on migration and population; two-way understanding of China; trans-disciplinary approaches to indigenous research; global digital cultures; and heritage.

Proposals are particularly encouraged that address one or more of these Global Challenges as well as one of WUN's cross-cutting themes in economics, big data, and regional programs of the Global China Group and the Global Africa Group. The RDF provides one year of seed funding with the firm expectation that projects will result in academic publications, policy impact and sustainability through securing funding from external sources.

### **What can RDF funds be used for?**

RDF funds may cover the costs of exploratory research initiatives, targeted workshops, faculty exchanges and the formation of collaborative networks, among other activities. Applications that incorporate a research mobility component for early career researchers and postgraduate students are encouraged. The WUN RDF will not cover management fees, salaries or salary supplementation, purchase of capital assets, equipment depreciation, scholarships, course fees and bench fees. Where funds are to be used for air travel, only economy class fares are permissible.

### **Am I eligible to apply?**

The RDF is open only to academic staff (faculty members) at WUN member universities. Applications must first be approved for submission through an internal review process at the Principal Investigator's university and submitted to WUN with the sign-off of the local WUN Coordinator.

Programs must engage at least three WUN member universities and should span at least two countries. The collaboration can include non-WUN universities and external partners but must have an active core of WUN member universities. In the spirit of the network, activities organised through the programs should be open to all WUN members. It is a priority for WUN to engage newer members in the RDF.

Applications must commit matching cash support (total sum) by the partner institutions to equal or greater value of the amount requested. Salary payments of existing research staff will not be accepted as matching cash support.

**What are the criteria for assessment?**  
Applications will be assessed against the following criteria:

#### **Objectives**

The program is of high academic quality and addresses a novel research problem or takes an existing WUN research program in a significantly new direction. The program is likely to have significant impact, is interdisciplinary and is international in scope.

**Relevance to WUN Goals**  
The program aligns with WUN strategic objectives and addresses a WUN Global Challenge.

#### **Teamwork**

The program involves a team of researchers across a range of relevant disciplines and regions. Programs that include early-career researchers and PhD students are particularly encouraged and an outline of how this integration will be achieved should be provided.

#### **Outcomes**

The program results in external funding and academic publications and/or policy options.

#### **Sustainability**

The program will build long-term international relationships based on genuine commitment by the research partners, and provides a plan for attracting sufficient resources for the continuation of the project beyond the initial grant.

#### **Applications will need to be accompanied by:**

- Program budget outlining key areas of expenditure, using the template provided in the application.

- CV of the principal investigator (1 page maximum) with URL links to partner investigators.
- Letters of support from WUN partner universities confirming matching support, using the template provided in the application.

## Natural Sciences and Engineering Research Council of Canada

### Collaborative Research and Development Grants (including DND/NSERC Research Partnership Grants)

Overview	
Duration	Up to five years
Application Deadline	Any time
How to Apply	<a href="#">See below</a>
Application Forms	<ul style="list-style-type: none"> <li>• Form 100 – Personal Data Form</li> <li>• Form 101 – Application for a Grant</li> <li>• Form 183A – Information Required from Organizations Participating in Research Partnerships Programs (including letters of support)</li> </ul> <p>To create or access an application, select <a href="#">On-line System Login</a>. To view instructions, select <a href="#">PDF Forms and Instructions</a>.</p>
For more information	<a href="#">Consult the Contact List</a>

### Objectives

The Collaborative Research and Development (CRD) Grants are intended to give companies that operate from a Canadian base access to the unique knowledge, expertise, and educational resources available at Canadian postsecondary institutions and to train students in essential technical skills required by industry. The mutually beneficial collaborations are expected to result in industrial and/or economic benefits to Canada.

### Description

CRD Grants support well-defined projects undertaken by university researchers and their private-sector partners. Direct project costs are shared by the industrial partner(s) and NSERC. Projects may range from one year to five years in duration, but most awards are for two or three years.

If the university researcher's partners include a private-sector partner and the Department of National Defense (DND), apply for a DND/NSERC Research Partnership Grant (a targeted CRD Grant).

CRD projects can be at any point in the research and development (R&D) spectrum in the domains of the natural sciences and engineering that is consistent with the university's research, training, and technology transfer mandate. Information on the eligibility of research topics under NSERC's mandate is available in the guidelines about Selecting the Appropriate Federal Granting Agency. Eligible collaborations include focused projects with specific short- to medium-term objectives, as well as discrete phases in a program of longer-range research. All proposals require evidence of detailed planning and sound budget justification, and must clearly spell out the underlying assumptions, intended approaches, milestones, and deliverables. Certain expenditures related to project management are now eligible as a direct cost of research up to a maximum of 10% of the total direct costs (see the Guidelines for Research Partnerships Programs Project Management Expenses).

Projects that focus on the application of existing technology, provide routine analysis, collect data without interpreting underlying mechanisms, or provide professional practice or consulting services (contract research) are not eligible. Similarly, proposals that involve the set-up and operational management of an institute, a formal or informal group of researchers, or that are principally associated with the acquisition and maintenance of scientific equipment will not be considered.

### **Industrial Participation**

Each project must be supported by at least one eligible industrial partner that must:

- collaborate at all stages of the research project (i.e., help develop the proposal and, as the project unfolds, interact regularly with the academic researchers, students and other research personnel and provide input on the project);
- demonstrate a clear intention and the capacity to exploit the research results within Canada; and
- contribute to the direct project costs. The industrial partners must collectively provide contributions in an amount equal to, or greater than, the amount requested from NSERC. The industrial cash must be at least half of the NSERC request, with the balance provided as in-kind contributions to the project by the industrial partner(s). NSERC will recognize only those in-kind contributions that are fully documented and considered essential to carry out the work. For a full discussion of the eligibility and value of in-kind contributions, refer to the Guidelines on Eligibility and Value of In-Kind Contributions section of the Guidelines for Organizations Participating in Research Partnerships Programs.

The Partner Eligibility Guidelines section of the Guidelines for Organizations Participating in Research Partnerships Programs should be consulted to determine the eligibility of the industrial partner to participate.

Industrial cash contributed before the proposal is submitted may be used to start the project, but NSERC will not leverage industrial in-kind contributions received or funds spent more than three months prior to the date of submission. NSERC funds cannot be applied to expenses incurred before a project was approved.

NSERC's Policy on Intellectual Property (IP) supports the premise that every effort should be made to exploit the results of NSERC-funded research in Canada, for the benefit of Canadians. For most projects, a copy of the final and signed research agreement—compliant with NSERC's IP Policy between the industrial partner(s) and the university covering, at a minimum, the entire duration of the grant—must be provided to NSERC within six months from the date of the conditional offer.

### Application Procedures

Proposals can be submitted at any time, using a Personal Data Form (Form 100), an Application for a Grant (Form 101), and an Information Required from Organizations Participating in Research Partnerships Programs (Form 183A). Full instructions for professors and their industrial sponsor(s) to complete the forms and the on-line submission are found on NSERC's On-line Services page. All proposals undergo peer review. Large or complex proposals (requesting \$200,000 or more per year from NSERC) are reviewed by a site visit committee. An additional review by the Advisory Committee on University-Industry Grants (ACUIG) will take place after the site visit is completed and after the site visit committee has made a recommendation. The ACUIG normally meets four times a year—in March, June, September, and December. Regardless of the amount requested, NSERC reserves the right to conduct an in-depth review of any proposal through a site visit, a virtual site visit and/or a referral to the ACUIG.

Decisions on funding CRD Grants are usually made within three months of receiving a complete application; however, large or complex applications may take up to six months for processing.

### Selection Criteria

Applications are evaluated on the following criteria:

- **Scientific merit:** The project must be scientifically sound, technically feasible, and promise either to generate new knowledge or to apply existing knowledge in an innovative manner.
- **Competence of the research team:** The applicant and the research team together must have all the expertise required to address the defined objectives competently and to complete the project successfully. Academic expertise may be complemented with the know-how from the industrial partner(s).
- **Training opportunities:** The proposal must include a student training component. It must indicate how the knowledge and experience gained by graduate students, postdoctoral fellows, research assistants or others, including company personnel, are relevant to the advancement of the field, to developing practical applications of knowledge, or to strengthening the industrial research base. The number of undergraduate and graduate students trained is expected to be commensurate with the size of the project. Students and postdoctoral fellows are expected to enhance their skills through interactions with

the industrial partner(s) (e.g., participation in planning meetings, active exposure to industrial processes such as R&D, manufacturing, regulatory, intellectual property, commercialization, etc.)

- **Industrial relevance and benefits:** The industrial partner(s) must contribute an appropriate amount from its own resources to the project, consistent with the risks and rewards involved, and must be in a position to exploit successful research results. The proposal must identify how the work will benefit the industrial partner(s) and demonstrate that the exploitation of the project results will benefit the Canadian economy within a reasonable timeframe.
- **Benefit to Canada:** As well as the economic benefit to Canada described under the Industrial relevance and benefits criterion above, the proposal should outline any additional economic, social, and environmental benefits that could be realized in Canada within a reasonable timeframe.
- **University support:** For large or complex proposals (requesting at least \$200,000 per year from NSERC), the proposal must demonstrate adequate university support for the project by detailing the specific commitments of the university regarding the provision of financial support, equipment, and/or facilities.
- **Budget:** The proposal must provide a detailed explanation and justification for each budget item. The proposed cost-sharing between NSERC and the industrial partner must be explained and justified. A significant portion of the budget must be allocated to salaries for students and postdoctoral fellows.

### **Report on an ongoing or past CRD grant**

If the application is a continuation of research undertaken in a recently completed or nearly completed CRD project, receiving at least \$100,000 per year from NSERC, an additional report (maximum three pages) detailing the results achieved is required. The continuing industrial partner(s) must clearly outline the impact of the ongoing or recently completed CRD in its letter(s) of support.

### **NSERC/Mitacs Joint funding opportunity**

Applicants may include in their CRD grant application a request for additional support through Mitacs Accelerate internships as a component of the training of highly qualified personnel (HQP). Note that Mitacs internships cannot be the only mechanism for HQP training, and Mitacs internships must be funded through industry support separate from the support for the CRD grant. The internships may result in an increase in the overall number of students and postdoctoral fellows involved in the project, or may provide opportunities for students and postdoctoral fellows to deepen their relationship with an industrial partner. Applications for a combined CRD grant–Mitacs internship are required to provide additional information relevant to the internship(s) (see Instructions for Completing an Application – Form 101). NSERC will conduct the peer review of the joint application and will communicate the results to Mitacs.

### **Reporting**

CRD projects are monitored closely. Progress reports are requested according to the size and the total duration of the award:

- all CRD recipients are required to provide a final report;
- CRD grants with an awarded value greater than or equal to \$150,000 in the first year or on annual average are required to provide an annual progress report;
- CRD grants with an awarded value greater than or equal to \$50,000 and less than \$150,000 in the first year or on an annual average are required to provide a progress report near the end of each two-year cycle:
  - near the end of year two for three- and four-year CRD awards;
  - near the end of year two and year four for five-year CRD awards;
- at the end of year two and subsequent years, where a progress report is not required, a confirmation of the continuing collaboration with the industrial partners, receipt of the industrial partner's contributions and the need for funds (grant account balance) will be requested from the grantee and the institution;
- CRD grants with an award value less than \$50,000 in the first year or on an annual average will not be required to provide a progress report.

On the basis of the results obtained or problems encountered, grantees may propose amendments to the project objectives, milestones or budget. Even when no progress report is required, the university and the grantee are required to inform NSERC of any change that may affect the grant.

When a progress report is required, the industrial partner(s) will be invited to provide comments on the project's progress. When no progress report is required, the industrial partner(s) will still be invited to provide NSERC with any pertinent comments pertaining to the project and the collaboration. The next installment will not be released until the industrial partner(s)'s current year's contribution is made, the commitment to contribute in the next year is re-confirmed (if requested), and (if requested) an evaluation of the project's progress is provided.

The amounts of second and subsequent installments are contingent on a demonstrated need for NSERC funds. When a progress report is requested, grantees must provide statements of actual expenditures and anticipated future costs. When no progress report is due, NSERC will request information from the grantee and the university to ensure that there is a continuing need for funds and that leveraged industrial contributions were provided in the preceding period.

Grantees or industrial partner(s) that have failed to provide the requested feedback on projects may be declared ineligible to apply for, or sponsor, new proposals.

### **DND/NSERC Research Partnership Grants**

DND/NSERC Research Partnership Grants support projects where DND and at least one eligible industrial partner are involved in the collaboration.

A key strategic goal of the Department of National Defense (DND) and NSERC is to collaborate fully in the development of an innovative, knowledge-based economy.

To achieve this goal, DND and NSERC have established a jointly managed and funded DND/NSERC Research Partnership Grant that aims to:

- capitalize on the complementary R&D capacity existing in the universities and in DND in order to generate new knowledge and support the development of new technical capabilities relevant to the development and application of dual-use technologies in selected areas of interest to both DND and NSERC;
- build strong two- and three-way linkages and create synergy between researchers in DND and universities and the private sector;
- achieve the efficient and effective transfer of research results and technology to identified receptors in the public and the private sector; and
- train and develop highly qualified personnel in priority areas consistent with the future human resource requirements in the public and private sectors.

### **Funding Available**

DND and NSERC will provide funding for university-based research, research training and research-related activities carried out in collaboration with DND and Canadian-based companies. The maximum value of the research grants that will be made available is normally limited to \$500,000 per project. Requests exceeding this amount will only be considered under special circumstances and on a case-by-case basis.

Eligible activities are the same as those for any CRD project.

To be eligible for support, a proposal must involve a collaborative effort with at least one eligible industrial partner and at least one DND Scientific Authority; it must also include information about intellectual property agreement(s) being negotiated or in place that specifically address the disposition of intellectual property rights coming into and/or emanating from the proposed research project.

### **Research Priorities**

The grant will support unclassified university-based research dedicated to the development of non-weapon specific technologies with dual-use applications oriented towards the objectives of DND and with broader commercial applications.

Proposals should address the following priority research areas as agreed to by DND and NSERC:

Electronics – Technologies for the secure and reliable transmission and reception of information over long distances, and for the accurate and reliable determination of position, velocity and time (possibly under interference).

Undersea Systems – Undersea sensors and response systems, including integration and persistence of undersea systems.

**Information Systems** – Integration of technologies for decision-making, for situational awareness, and for secure distribution of data and information among users, and, in particular, solutions for the fusion of quantitative and qualitative information from large, heterogeneous and/or unreliable datasets.

**Autonomous Systems** – Technologies to ensure that autonomous systems can deal with unexpected situations (changes, errors, etc.) or tasks that challenge their sensing, modeling, planning, or movement envelopes.

**Air Vehicles** – Technologies related to flight safety and endurance in the Earth's atmosphere, and integration of these technologies.

**Naval Platforms** – Technologies related to the safe, efficient and effective operation of surface ships and underwater vehicles, and their signatures.

**Mobility Systems** – Technologies that affect mobility and endurance of land vehicles.

**Space Systems** – Technologies that affect the affordable and effective use of Space for defence and security.

**Surveillance Systems** – Technologies that exploit the electromagnetic spectrum for reliable detection, tracking, classification and identification of objects of interest.

**Human Performance Effectiveness** – Technology and integration of technology to optimize human performance including, but not limited to, human-machine teaming and robotic collaboration, information fusion, human-machine interfaces, augmented reality, and wearable sensors.

**Life Support Systems** – Technologies concerned with human effectiveness, protection, health, safety and survival in austere operational environments.

### **Evaluation Criteria**

Proposals will be evaluated using the selection criteria for CRD grant applications as well as relevance to the DND and NSERC research priorities listed above.

### **Intellectual Property**

The participants recognize that DND will normally seek rights to use or have used resulting intellectual property for defense purposes. An intellectual property agreement will be established between DND and the participants of each research project supported through this grant. Awards will be made on the condition that the parties reach an agreement on the disposition of intellectual property acceptable to DND and NSERC. DND, as a co-founder of the grant, must be a signatory to the intellectual property agreement.

### **Application Procedures**

As a first step, applicants must contact the DND scientific authority to ensure that the proposed research activity aligns with the DND research priorities.

Research proposals must be submitted on NSERC forms. Applicants are required to meet all NSERC regulations described in its Program Guide for Professors. Proposals can be submitted at any time using Forms 100, 101 and 183A. Full instructions for professors and their industrial sponsors on how to complete the DND/NSERC Partnership Grant forms and on-line submission are found on NSERC's On-line Services page.

DND support to the project must be documented by filling the appropriate section of Form 101, and a Form 183A.

Before submitting an application, applicants and industrial partners are invited to discuss their proposals with the NSERC Manager, who can also comment on written drafts. The NSERC Manager does not assess the scientific or technical content, which will be done by peer reviewers, but can suggest changes that may strengthen the proposal. Applicants should ensure that their proposals include all the necessary information, since they may not have the opportunity to clarify their proposals during the review process.

The application can be submitted at any time throughout the year.

It is not necessary to submit an additional application to DND.

### **Acknowledgements**

Acknowledgement of the DND and NSERC assistance is expected in any communication arising from, or referring to, the activities supported by the DND/NSERC Research Partnership Grant.

## **RESEARCH COUNCILS, UK**

### **Principles for Funding Multi-Institutional Collaboration in Innovation and Research**

This Framework of Principles relates to funding for collaborative, multi-institutional research and related research activities, such as capital investment, doctoral training, innovation, knowledge exchange, and public engagement. Collaborations may include public or private sector research organizations, as well as business and other partner organizations where these bring distinctive contributions to the collaborative research activity.

- Research Councils UK (RCUK), Higher Education Funding Bodies, Innovate UK and the UK Space Agency (referred to collectively below as 'UK funding bodies') support collaboration in research and related activities through a range of mechanisms.
- Complex interdisciplinary research projects increasingly need to be tackled through multi-institutional proposals which bring together the necessary expertise to address challenging research problems. Multi-institutional research proposals have the potential, therefore, to demonstrate the excellence of their proposed approach in peer review.
- The UK funding bodies will ensure that scope for multi-institutional collaboration is made clear in funding calls, and that policies are developed taking into account their impact on university groups and consortia. Any costs relating directly to the management of the collaboration may be included in relevant funding bids.

- Subject or discipline based research consortia have the potential to create and build critical mass in new fields, and researchers and research groups are strongly encouraged to consider how their research proposals can be made more competitive through collaboration with appropriate partners, particularly in connection with bidding for EU and international funding.
- Effective collaborations are driven by the people who collaborate, not institutions; however, institutions and their senior managers play an important role in encouraging and facilitating new collaborations.
- A multi-partner collaboration may or may not be based on an existing consortia - any collaboration must demonstrate that it brings together the capabilities, expertise and resources necessary to address the proposed project.
- Collaborative proposals must demonstrate clarity of leadership, a strategic use of funding across the partnership, agreement over intellectual property ownership, and clear mechanisms for the governance and monitoring of progress across the partner organizations.
- Where research requires contributions from more than one funding body, the funders have clear arrangements to manage joint funding arrangements and to ensure such proposals are appropriately assessed, avoiding any 'double jeopardy'.
- Where proposals can demonstrate that a spatial concentration or clustering of the partners will help with exploring the potential social or economic impact for the research (e.g. as detailed in the Pathways to Impact for the proposal) this will be taken into account. Regional or geographical co-location of partners as such is not a funding criterion.
- Conflicts of interest when reviewing multi-institutional proposals will be avoided by seeking independent international reviews of a proposal where this is necessary.
- Research Councils only fund eligible research organisations which have the appropriate mechanisms in place to assure the Councils over the costing of research and the management of grant funds. Research Councils recognise that it will often be appropriate for a single research organisation to act as the accountable organisation for the purposes of a multi-institutional partnership.
- The Higher Education Funding Bodies play a vital role in ensuring that barriers to research collaboration within the Higher Education sector are minimised, and that institutions are supported in developing or extending their collaborative working.
- The 2014 Research Excellence Framework will ensure i) that it is possible for collaborations of significant scale to make a joint submission covering their work, if they so wish; and ii) that in other cases where research is undertaken collaboratively across two or more HEIs, full credit can be given to each of the partners for their contribution. A submitting unit that makes successful effort to forge collaborative partnerships can expect this to be taken into account in the assessment of their research environment – in addition to any credit that may be given in due course for research outcomes and impacts arising from such partnerships.

For the purposes of research funding metrics, institutions are able to report on their share of research income and expenditure from a grant being managed centrally by another partner in accordance with HESA Finance Statistics Return procedures.

### **University Of Georgia: Global Research Collaboration Grant Program**

UGA is launching a Global Research Collaboration Grant (GRCG) program to encourage the development of sustainable international research and service activities. Grants ranging from \$4,000 to \$8,000 will be awarded to support preliminary international research, partnership development, and proposal preparation undertaken in pursuit of specific sources of external funding.

The program is funded by UGA's Office of the Vice President for Research and the Office of International Education, in conjunction with academic units.

#### **Program Description**

The Office of the Vice President for Research (OVPR) and the Office of International Education (OIE) are making available a limited number of preparatory grants to facilitate the development of sustainable international research and technical assistance activities. Grants will be awarded to support preliminary international research, partnership development and proposal preparation undertaken in pursuit of specific sources of external funding.

#### **Eligibility Criteria**

The "Global Research Collaboration Grant" or "GRCG" program is open to all UGA faculty and administrative staff pursuing externally funded international research and technical assistance initiatives. To be eligible, proposals must identify and commit to pursue specific sources of external funding as a result of the activities enabled by the GRCG grant.

#### **Funding**

Grants will range from \$4,000 to \$8,000 each, with OVPR/OIE matching unit (department / school / college) contributions at a 1:1 ratio. For example, a maximum grant of \$8,000 must include a \$4,000 contribution from the investigators' unit(s). International travel funds made available by UGA units to support this specific collaborative activity may be counted toward the required unit match, provided travel has not taken place as of the date of the grant application. Matching funds from international partners (in addition to the \$8,000 maximum UGA contribution) will be considered favorably in determining grant awards.

Grantees should expect to be able to use the funds over one year for videoconferencing, travel and other collaborative efforts, preliminary data collection, feasibility studies and to cover proposal preparation costs.

#### **Proposal Content**

The following proposal components are required and must be submitted via the online proposal submission form. Please find the link to this form under "Submission Instructions and Deadlines". All uploads must be .pdf file type except the budget, which may be .pdf, .xlsx or .xls.

- Preliminary information (Form entry):
  - Title of project or Name, affiliation, email of UGA PI
  - Name, affiliation, email of all UGA collaborators
  - Name, affiliation, email of all external collaborators, funding agencies or recipients of technical assistance with a short (one- sentence) description of the capacity in which they are involved
  - Budget Contributions Summary: UGA Unit Contribution, OVPR/OIE Contribution, Optional: Contributions from international partners.
- Upload as one PDF:
  - Summary of planned project for non- expert (1 page max)
  - Description of preparatory activities to be funded by the grant (1/2 page max)
  - Expected outcome of those activities, identifying by name the sponsor(s) and program(s) to which subsequent external funding requests will be submitted (1/2 page max)
- Upload: Budget, following the Faculty Research Grant Budget template found here: [http://research.uga.edu/docs/forms/iga/FRG -Budget -Template.xlsx](http://research.uga.edu/docs/forms/iga/FRG-Budget-Template.xlsx)
- Upload: Letter (s) from UGA unit leader (s) confirming matching financial support for the initiative
- Upload: CV's of the PI and all project collaborators

### **Submission Instructions and Deadlines**

Two rounds of funding will be held each academic year. Proposals should be submitted no later than the date identified in the Call for Proposals for the relevant funding round.

Proposals should be submitted online via the proposal submission form. Save and return is not available so applicants should have documents prepared for upload prior to completing the form. Clicking "Submit" is a final transmission of the proposal.

### **Evaluation Criteria and Procedures**

Vetting and approval of proposals will be done jointly by OVPR and OIE, with input from one or more committees appointed to assist with the selection process. The following will be taken into account by the review teams:

- Quality of the proposal. The research and technical assistance activities contemplated by the proposal should be high quality, innovative and clearly articulated.
- Importance and strategic fit. The proposal should provide evidence that it contributes to key societal challenges and fits with and complements the wider multidisciplinary research portfolios across UGA and the partner.
- Teamwork and interdisciplinarity. The proposal should involve a team of researchers across a range of relevant disciplines at UGA and the partner, where appropriate.
- Partnership development. The proposal should demonstrate the potential to develop sustainable collaborations with institutions and individuals abroad. Proposals that include matching funding from international partners will be prioritized.

- **Sustainability.** The proposal must articulate a credible plan to attract additional external funding, linking the preparatory activities for which UGA grant funding is requested to specific future funding submissions.

### **Award Conditions**

Grants are expected to have a January 1 or a July 1 start date, depending on funding round, and funds are to be spent within one year of award. An initial report will be due one year after the start of funding, then a final report after two years. These reports should focus on what was accomplished and the status of attempts to obtain external funding.

## **Temple University: Temple University Internationalization Grants**

Internationalization Grants have been created by the Office of International Affairs to provide faculty and staff with funding to engage in projects that will help the University integrate international and intercultural perspectives and content into teaching, learning, research, and campus life.

The Office of International Affairs is pleased to support proposals that extend across disciplines, enhance the international reputation of Temple University, and extend the University's globalization mission. Preference will be given to projects that result in participants making a direct contribution to internationalization efforts at Temple University.

Proposals that fall within the following four categories will be considered:

### **Category 1. Faculty Exchange with International Partner Universities**

Grants in this category will target projects where a faculty member travels to one of Temple University's international university partners and participates in an activity that will enhance his/her international experience and knowledge and foster relations between Temple and its partner institutions. Activities include, but are not limited to, delivering lectures, teaching a course in the summer (typically July), taking a sabbatical, and developing collaborative research. Faculty may visit multiple partner universities in the same country or in multiple countries.

Grant Amount: Up to \$4,000

### **Category 2. Faculty – Collaborative Research**

Grants in this category will support investigators to travel for existing or future research projects that either involve working cooperatively with scholars abroad and/or cover a research topic with an international component. Activities include, but are not limited to, efforts toward developing proposals for collaborative research, coauthoring publication, conducting joint research projects, or establishing joint research centers.

Grant Amount: Up to \$4,000

### **Category 3. Faculty - Globalization of Curriculum**

Grants in this category will fund faculty travel with the purpose of developing and implementing international components into specific courses. During the travel the faculty is expected to forge connections with international scholars and institutions that are critical for the curriculum development. This grant is intended to provide a means to enable the addition of an international element to the course or greater depth to an international topic not previously present in the course. Faculty may visit multiple universities in the same country or in multiple countries.

Grant Amount: Up to \$4,000

### **Category 4. Faculty and Staff - Globalizing the Campus**

Grants in this category are open to Temple University faculty and staff members whose proposed international travel aims to 1) improve the campus life for international students at Temple, 2) serve Temple students engaging in study abroad, 3) assist in recruiting international students to Temple, and 4) assist in forging relations between Temple and international institutions. For example, traveling abroad to learn how programs and universities abroad receive and serve American students or other international students can be a valuable experience to help improve upon Temple's protocols and make a direct contribution to campus internationalization efforts.

Grant Amount: Up to \$4,000

### **Process and Deadlines for Submission**

Upon approval from faculty's department chair and dean or administrator's direct supervisor and division head, the proposals (see below for format) can be sent directly to Patrice Smiley, Executive Assistant for International Affairs, at [InternationalizationGrant@temple.edu](mailto:InternationalizationGrant@temple.edu).

The submitted proposal will be reviewed once a year.

March 31, 2016 proposal submission deadline for travel intended for July 2016 - June 2017

Awards will be decided upon by a committee composed of faculty/staff members appointed by the Associate Vice Provost for International Affairs. The grantees will be notified of results of the proposals within one month of the proposal submission deadline.

## Proposal Checklist

- Complete the internationalization grant application form. This form includes applicant and project summary information: applicant contact information, title of the project, name(s) of the director(s), project goals, objectives, timelines, proposed outcomes, a list of other Temple University or outside funding applications for the same project and the status of such requests, the total amount of funding requested from the Office of International Affairs, and the time period for which funding is requested.
- Budget outline. A template is provided as part of the application.
- The department chair and dean of the school/college is required to endorse (physically sign) the application prior to submission. For staff, supervisor and division head must sign.

## Eligibility and Requirements

- Internationalization grants are open to tenured, tenure-track, non-tenure track faculty (NTT) and full-time staff. Adjunct faculty are not eligible to apply for grants at this time.
- Proposals should demonstrate ability to reach the university's goal of integrating international and intercultural perspectives and content into teaching, learning, research, and campus life.
- The dean and chair of the department must endorse (physically sign) the application prior to submission. For staff, supervisor and division head must sign.
- "Other" or "Miscellaneous" expenses should constitute no more than 10 percent of the total budget for the proposal.
- Faculty members are permitted to apply for internationalization grants during their sabbatical.
- Limit of two proposals per deadline.
- Preference is given to new initiatives and excludes annual reoccurring projects.
- Conferences will not be funded.

## Report

A summary report on the project is due within three months after use of the funds. All reports should include the following components:

- An accounting of how internationalization grant funds were expended.
- A description of the activities undertaken and how each of these activities advanced the project goals.
- A discussion of the ways in which the project contributed to faculty professional development, curriculum innovations, research collaboration or internationalization efforts at Temple University.
- Any future plans or goals to continue the project upon return and any recommendations for how the Office of International Affairs can help.

- The summary report should be emailed to Patrice Smiley at InternationalizationGrant@temple.edu.
- Grantees will also participate in a debriefing meeting with the Office of International Affairs and the International Advisory Council Committee upon return (once in the fall and once in the spring).

### **Sharing Results of Internationalization Grants**

You may be asked to present the results of your internationalization grant at OIA's annual Global Temple Conference held in the fall or at the International Educators Academy.