

Centre for Catalysis Research Innovation (CCRI) Collaborative Research Award for Medicinal Chemistry: “PDF for Hire”

Deadline (Summer/Fall Award)

Applicants are invited to submit by **Jan 17 2020** to Dr. Michael Organ, Director CCRI (organ@uottawa.ca) and/or Dr Steffany Bennett, Associate Director CCRI (sbennet@uottawa.ca).

Support

This award is made possible by support from the CCRI, the Ottawa Heart Research Institute, and the Office of the uOttawa Vice President Research.

Award Description

The **CCRI Collaborative Research Award for Medicinal Chemistry: “PDF for Hire”** is intended to promote collaborative research between members of the CCRI, Faculty of Science (FoS) Department of Chemistry, University of Ottawa and researchers in the Faculty of Medicine (FoM), University of Ottawa (Department of Biochemistry, Microbiology, Immunology, Department of Cell and Molecular Medicine, OHRI, UOHI, and CHEO Research Institute).

Applicants with the need for a skilled synthetic chemist to deconvolve initial ‘hit’ compounds into bona fide ‘leads’ can apply to host a designated CCRI post-doctoral fellow (PDF) trained in medicinal chemistry for up to six months (full stipend of PDF is part of the award) and can apply for up to \$3,500 in associated consumables.

The award covers the full salary of the PDF and can cover consumables (up to \$3,500 per project). It is expected that one PDF, guided by faculty members from the Department of Chemistry, should be able to balance two projects from two different PIs in Medicine. Once the projects have reached the 6-month point, the PDF would then be paired with two new PIs from Medicine and their partners in Chemistry to start two new medicinal chemistry projects.

Eligible consumables are only those reagents/disposables required to synthesize the necessary compounds to advance the hit. The compound development must use a method or methods identified by the FoS Chemistry PI partner; the compound(s) must be tested using a bioassay validated and currently in use by the FoM Biomedical PI partner. The PDF will be responsible for the chemical synthesis (hosted by the FoS Chemistry applicant) and must be involved in subsequent compound testing (hosted by the FoM Biomedical applicant).

Eligibility

Applications are invited from a partnership of two PIs, one from the Faculty of Science and member of the CCRI (FoS), Department of Chemistry and Chemical Biology and one affiliated with the Faculty of Medicine (FoM).

Application (3 pgs + CVs)

- A one page proposal summary outlining:
 - a) **Rationale:** the nature of the biomedical problem to be addressed and the initial hit compound
 - b) **Approach:** the nature of the target compounds required to address the biomedical problem
 - c) **Feasibility:** the synthetic solution to be employed to generate these compounds and evaluation/assay plan
 - d) **Timeline:** the anticipated timeline required to generate and test these compounds
 - e) **Sustainability:** an indication of which granting agencies/industrial partnerships the two PIs will pursue together using the preliminary data generated by this CCRI Collaborative Research Award: “PDF for Hire”
- An additional 1 page **Appendix** detailing the proposed synthetic route of the compounds that will be generated. Any precedents that you can provide for what is being proposed would be helpful, especially for chemistry that could be viewed as higher risks.
- A budget (max one page) outlining the necessary consumables to be purchased
- Common CVs (NSERC format) of both PIs

Review Procedures

Applications will be reviewed by the “PDF for hire” awards committee comprising:

- a) The Director of the CCRI (Dr Michael Organ)
- b) The Associate Director of the CCRI (Dr Steffany Bennett)
- c) A member of the Department of Chemistry, Faculty of Science (will be nominated from previous CCRI PDF for Hire awardees)
- d) A member of the Department of Biochemistry, Microbiology, Immunology, Department of Cell and Molecular Medicine, OHRI or CHEO Research Institute (affiliated with the Faculty of Medicine, will be nominated from previous CCRI PDF for Hire awardees)
- e) A member of the UOHI affiliated with the Faculty of Medicine

The review of this collaborative award has three phases:

Phase 1: First, feasibility of the proposed chemical synthesis will be evaluated by Dr Organ and a CCRI member of the chemistry department. Here, applications whose synthesis is deemed the most feasible given ease of the synthetic route and the expertise of the medicinal/organic chemist the CCRI has hired for this hybrid position will be scored higher. The critical proposal elements for this part of the review are the **Approach, Feasibility, Timeline and Appendix One.**

Review process: Reviewers are asked to provide one evaluation score:

- a “Yes” or “No” as to whether or not the application is recommended for funding. This will be used as an initial triage. “No” can only be indicated if the synthesis is considered by the reviewers not to be feasible in the time-frame by the PDF hired for this position.

Phase 2: The feasibility of the proposed bioassay will be assessed by Dr Bennett and faculty representatives affiliated with the Faculty of Medicine and the UOHI. Here, we are assessing whether the ability to screen the compounds generated is in place and can be done in the 6 month funding period. The critical proposal elements for this part of the review are the **Approach, Feasibility, and Timeline.**

Review process: Reviewers are asked to provide one evaluation score:

- a “Yes” or “No” as to whether or not the application is recommended for funding. This will be used as an initial triage. “No” can only be indicated if the bioassay has yet to be optimized, is not routinely performed in the applicants’ laboratories, is unclear and/or is not capable of screening all compounds generated within the 6-month time frame.

Phase 3: Fundable applications are then reviewed by all reviewers according to the capacity of the project to generate novel exciting data that will assist the applicants in applying to external funding agencies and/or submit a peer-reviewed paper in the 6 months following the award. The critical proposal elements for this part of the review are the **Rationale and Sustainability.**

Scores are assigned according to the following rating scale:

- 4.5 - 5.0 outstanding
- 4.0 - 4.4 excellent
- 3.5 - 3.9 very good
- 3.0 - 3.4 acceptable, but low priority
- 2.5 - 2.9 needs revision
- 2.0 - 2.4 needs major revision
- 1.0 - 1.9 seriously flawed

Anchor points:

- 4.0 and above: Project is well-designed, with interpretable end points with documented evidence that a collaborative approach will involve both supervisors’ laboratories. Higher scores indicate increasing excellence in the quality of the proposal, applicants, and/or clarity in the value-added of the proposed collaborative approach. Highest scores are reserved for stellar proposals in which the benefit of a collaborative approach is clearly determined.
- 3.4 -3.9: Fundable but less than clear as to whether there is specific need for a skilled synthetic chemist and/or whether preliminary data generated will result in publications and/or joint grant proposals co-authored/co-applied for by the collaborators.
- 3-3.4: Fundable but low priority. Unlikely to generate required data within the 6 month time-frame.
- 1.0-2.9: Not fundable. Proposal is fatally flawed, has already been done, will not lead to publication or co-grant applications. Lower scores indicate a combination of all three problems.

Critical Dates

Application Deadline: Jan 17 2020

Award announcement: Jan 27 2020

Funding Period: Feb 1 2020-July 31 2020

Final Report

It is expected that within this 6-month time frame the partnering PIs will be able to generate sufficient preliminary results to apply for external funding. A one page final report is required at the end of the 6-month period indicating progress made as a result of the CCRI Collaborative Research Award: “PDF for Hire” and the target agency the applicants will be pursuing to advance their partnership.

Contact

Dr Michael Organ, Director, CCRI
Tel: 613 562 5800 x5698
Email: Organ@uottawa.ca

Dr Steffany Bennett, Associate Director, CCRI
Tel: 613 562 5800 x8372
Email: sbennet@uottawa.ca