

## Seed Grant Program General Information and Instruction for Submission

### Purpose

The objective of the Faculty of Dentistry Seed Grant Program is to provide short-term funding to support research projects with the greatest potential for advancing fundamental and applied dental-related knowledge as well as “*high risk-high reward*” technology/product development. **The Program will provide a maximum of \$5000 per application.**

The proposed research must demonstrate alignment with one of the fundamental research or clinical areas:

- **Fundamental research:** Biomaterials, connective and mineralized tissue biology, education, microbiology, oral pathology and cancer, pain and neuroscience, and wound healing
- **Clinical areas:** Anaesthesia, dental public health, endodontics, oral and maxillofacial radiology, surgery, pathology, oral medicine, orthodontics and dentofacial orthopedics, pediatric dentistry, periodontics and prosthodontics

The funds provided are expected to enable applicants to generate preliminary/feasibility data, develop and/or validate methodologies, tools, technologies, devices, or inventions with the intended goal of pursuing more comprehensive funding opportunities (e.g., CIHR, NSERC, NIH, commercialization-focused grants, etc.), knowledge dissemination (e.g., peer-reviewed publication, conference presentation), and/or accelerating technology/product development (e.g., filing an invention disclosure to the Innovations and Partnerships Office, securing partnership/collaboration with companies, pursuing additional funding opportunities, etc.).

### The Program will support:

- Projects at any stage from discovery to application that will contribute to the creation and use of dental-related knowledge with impact on delivery of patient care
- Projects that explore, accelerate or move an innovative concept from idea to market at an affordable price that fulfills the demand of the market

### Competition Deadline:

- 15 April and 15 October each year at 5:00 pm

### Available Funds

- This program will support projects lasting up to one year
- The maximum amount for a single award is \$5000
- Each Principal Applicant may receive **one (1)** Seed Grant per year

### Eligibility Criteria

The Principal Applicant must be a faculty member with primary appointment at the Faculty of Dentistry, University of Toronto. The application must be a new proposed project and must not currently be funded by other internal or external awards. Principal Applicants who received an internal Faculty of Dentistry award (e.g., DRI funds, RAMP, Seed Grant) within the last year must demonstrate successful outcome through the submission of a Progress Report in order to be eligible for consideration for funding.

### Application Process

For consideration for funding, the following documents must be completed and submitted prior to the indicated deadline. The Principal Applicant is responsible for ensuring the application is accurate, complete, and adheres to the requirements for submission outlined below as well as for submitting the entire application package. Applications that are incomplete, do not meet the indicated requirements, and/or are submitted past the deadline will not be accepted.

## A. Required Documents

- Signed and completed Application Form and Research Proposal (including Supplementary Material as applicable, to be submitted by email as one (1) PDF document) **to: Leah Raz (L.Raz@dentistry.utoronto.ca) and Farah Thong (farah.thong@dentistry.utoronto.ca)**

## B. Research Proposal Guidelines and Requirements

- **Page restriction:** the research proposal is limited to **five (5) pages, including preliminary data, references, charts, tables, figures, photographs, and budget.**
- An **additional two (2) pages** is permitted solely for technology/product development proposals to describe commercialization potential (**see Research Proposal Sections**). No other materials will be accepted.
- **Supplementary Material:** Additional acceptable materials that DO NOT count towards the page restriction indicated above may be included as outlined below; no other materials will be acceptable as Supplementary Material.
  - Applications that involve the participation of human subjects may append information related to the proposal, such as Information and Patient Consent Form, REB approval/application, etc.
  - Technology/product development: Provisional patent, letter(s) of support from companies
  - Response to reviewers' comments, as applicable. Maximum **one (1) page**
- **Page format:** 8.5"x11" with a 1" border around the page. Include the title of the research proposal and the name of the Principal Applicant in the Header. Indicate the page number at the bottom of each page.
- **Use a 12-point font size.** Maximum of **six (6) lines per inch.** No condensed/narrow fonts, type or spacing.
- Proposals that do not adhere to these guidelines and requirements will not be accepted.

## C. Research Proposal Sections

Provide a clear and concise description of your research proposal using the following sections. The number of words (and pages) in each section is at the discretion of the applicant but the proposal must be within the page limits as set out in Section B.

1. **Abstract**
2. **Introduction/Background**
3. **Research Strategy: Aims, Objectives, and Goals; Methodologies**
4. **Project Deliverables (Anticipated Outcomes/Results) and Timeline (including milestones)**
5. **Next Steps (Plan for further research, pursuit of external funding, knowledge translation)**
6. **Team**
7. **Commercialization Potential (applicable solely to technology/product development projects).** Provide a brief description of the following, as applicable:
  - Technical feasibility
  - The most likely commercial applications of the technology and potential end-users
  - Market and competitor analyses, including examples of competitive products/processes
  - Unmet market need and how your technology addresses this need (e.g. competitive advantage/unique features, strengths, novelty of your technology)
  - Risk factors that could prevent or impede the market adoption of the technology
  - Proposed business model, i.e., likeliest route to market
  - Existing partnerships with private and/or other sectors or potential for future collaborations/funding
  - Status of the technology from an Intellectual Property (IP) perspective, including if applicable, appropriate IP protection (i.e. provisional or full patent application, copyright. etc.), know-how
  - Anticipated next steps and timeline to achieve commercial application

## 8. Budget and Budget Justification

- **Ineligible Expenses:** Salary, stipend, or any form of compensation for personnel (including applicant, co-applicant, staff, trainees, etc.); computer or other related hardware; maintenance/warranties and operating costs of equipment/hardware; consulting; administrative/management charges and fees; statistician/data analysis services; travel, transportation and subsistence costs; entertainment; patent expenses; publication costs; tuition and course fees.

Applicants are strongly encouraged to include pertinent preliminary data to support the proposed project. Applicants are also advised to review the Reviewer Evaluation Criteria, which will be used to adjudicate proposals.

## D. Reviewer Evaluation Criteria

Reviewers will evaluate proposals according to the following criteria:

### 1. Impact

- Potential to address a critical problem or barrier to progress in the field
- Potential to significantly improve, advance or exert a sustained influence over dental-related fundamental or applied knowledge, impact patient outcomes, clinical practice, education, policy and/or technology development
- Potential to deliver tangible and useful results and benefits
- Potential to attract comprehensive funding opportunities, knowledge dissemination, and/or development of new product and/or technology in the near future

### 2. Innovation

- Is the project idea novel?
- Does the application challenge and seek to shift current research or clinical practice paradigms by utilizing novel theoretical concepts, approaches or methodologies, instrumentation or interventions?

### 3. Research Strategy

- Alignment of proposed research with one of the fundamental research or clinical areas at the Faculty of Dentistry
- Are the overall strategy, methodology, and analyses well reasoned and appropriate to accomplish the specific aims/objectives of the project?
- Are the aims, objectives, goals realistic? Do the hypotheses rest on sufficient evidence and are clearly stated and testable?
- Are potential problems, alternative strategies and benchmarks for success presented?
- If the project involves human participants, are the plans for protection of human subjects from research risks justified in terms of the proposed goals and strategy?
- Are the investigators familiar with recent pertinent literature?

### 4. Project Deliverables

- Did the applicant include anticipated outcomes/results that are aligned with the proposed aims, objectives, goals?
- Did the applicant include realistic timeline and milestones?

### 5. Next Steps

- Has the applicant included an appropriate and feasible plan for next steps (for example, for further research, pursuit of external funding, knowledge translation/dissemination)?
- Would the outcome from the proposal lead to additional funding from external funding agencies or result in dissemination of outcomes (peer-reviewed journal, conference presentation)?

**6. Team**

- Appropriateness of the complement of expertise, experience, and resources among the applicant(s) and resources as it relates to the ability to collectively deliver on the project's objectives
- Has the applicant clearly described the roles and responsibilities and level of engagement of each applicant and co-applicant, link them to the objectives of the project as well as the availability of appropriate infrastructure, facilities, personnel, equipment and/or supplies to deliver the project's outputs and achieve the project's contributions?

**7. Commercialization Potential (applicable solely to technology/product development projects):** Reviewers will evaluate the commercialization potential of the proposed technology/product development using the following criteria:

- Innovation/technology:
  - Technology: Progress beyond state-of-the-art; technical feasibility; milestones for reaching technical goals; plan for further development
  - Product/Services: product definition, customer's benefits
- Market:
  - Time to market
  - Target consumers/clients (accessibility, availability)
  - Characteristics of market (size, geographical, market entry barriers, value of market, driving force for market development)
  - Competitors (size, geographical, competitiveness, business concept)
- Scientific/technical merit, novelty, technology opportunity, competitive analysis, market assessment, fit of the technology opportunity to market need, IP integrity, team expertise, next steps.
- Would the outcome from the proposal with additional development lead to a real market opportunity or partnering with companies?

**8. Budget and Budget Justification**

- Is the budget appropriate to conduct the proposed research?