iBEST Translational Partnership Grant (TPG) 2022

The iBEST is calling for proposals up to $70,000 to be spent over the period of one year. This opportunity aims to support and accelerate the translation of projects to address clinical problems and/or improve health and treat disease while providing enriched training experiences to trainees.

Background: As a hub for science, engineering, biomedical research and entrepreneurship, iBEST brings science and engineering together with clinical expertise to more readily develop solutions for patients. Research partnerships between clinicians, scientists and engineers have been responsible for most major breakthroughs in healthcare and patient treatment.

iBEST's TPG is designed to bring together engineering and science strengths with clinical expertise to translate research concepts into testable healthcare solutions. Science and engineering PIs without a clinical collaborator are also invited to apply and participate in a matchmaking process facilitated by iBEST's leadership. More details are outlined below.

Timeline for 2022 Competition

Competition Announcement	November 7, 2022
Letter of Interest (LOI) deadline	December 12, 2022
Invitation to submit full application	January 13, 2023
Deadline for full application	February 15, 2023
Notification of Award	April 2023

Objective and Scope

The goal of this opportunity is to support and accelerate the translation of projects to address clinical problems and/or improve health and treat disease while providing enriched and multidisciplinary training experiences to trainees. Priority will be given to projects that demonstrate:

- Significant trainee mentoring opportunities in a multidisciplinary environment;
- Strong collaboration between science/ engineering and clinical settings;
- Translational potential;
- Potential to sustain funding through other sources;

Eligibility

Proposals will be deemed eligible based on the following:

- Include at least one iBEST member and at least one science and/or engineering co-PI(s), and one clinician co-PI(s);
- Women and members of under-represented minorities are strongly encouraged to apply;
- The research proposals being considered must demonstrate translational potential;
- The research proposals being considered must include trainee participation and an associated trainee plan;
- EDI considerations must be embedded throughout the proposal;
- Successful applicants must agree to:
  - Provide progress and final reports to iBEST;
  - Present at the iBEST symposium;

Guidelines for Invited Full Application Submission

- The research proposal should be novel and previously unfunded, or form a part of or addition to a funded study that is not currently not funded.
- The completed application must be received no later than 5pm on February 15, 2023. The magnitude of the project should match the size of the award. It is anticipated that this funding will be used to produce data to support the application of future larger grants.
- Documentation received after the submission deadline will not be submitted for review.
- The applicant is responsible for ensuring completeness of the application. Incomplete applications or applications that exceed the page limits will not be considered.
- The following are necessary for preparation of the research proposal:
  - Cover page with: title of research proposal; amount of funding requested; names, degrees, and roles of the principal applicant and co-applicants; contact information of the principal applicant
  - Summary of the proposed research in plain language (separate page, 300 word limit)
  - Statement of Objectives; Specific Aims and Hypotheses (separate page, one-page limit)
  - Research Strategy (2-page limit). The headings suggested include:
    - Brief review of literature and background information
    - Preliminary data (if available, but not required)
    - Design and Methodology
    - Data Analytic Plan if applicable
    - Anticipated Timeline
    - Innovation, Impact, Future research plans

- Training plan (separate page, 300 words limit)
- References (separate page, one-page limit)
- Budget with justification (separate page, one-page limit)
- Curriculum Vitae: to increase efficiency in reviewing proposals, we request that all applicants use the short biosketch template at the bottom of this document.

Review Process and Criteria

All Proposals will be reviewed and assessed by March 2023. Research proposals will be evaluated based on the following criteria:

Significance

- Scientific merit (validity, integrity, originality);
- Contribution to advancement of scientific knowledge and high potential impact;
- Novelty of collaboration;

Feasibility

- Feasibility of study design, methodology, analysis;
- Adequate power & sample size;
- Study budget & proposed timelines;
- Proposed multidisciplinary training experience;

Impact/ Potential for translation

- Anticipated impact and potential for the translation of the research results into benefits for Canada, including improving the Canadian healthcare system and/or more effective Canadian health services, and economic benefits in Canada; the timeframe for the expected translation of results;
- Appropriateness and potential impact of the knowledge translation plan towards clinical implementation and/or commercialization of results;

Training Plan

- The quality of the training environment and opportunity;
- Level and content of training;

Equity, diversity and inclusion elements

- **EDI in research practice (EDI-RP)** involves promoting diversity in team composition and trainee recruitment; fostering an equitable, inclusive and accessible research work environment for team members and trainees; and highlighting diversity and equity in mentoring, training and access to development opportunities.

- **EDI in research design (EDI-RD)** involves designing research so that it takes EDI into account through approaches such as intersectionality, gender-based analysis plus (GBA+) anti-racist approaches, and disaggregated data collection and analysis that includes consideration of diversity and identity factors such as, but not limited to, age, culture, disability, education, ethnicity, gender expression and gender identity, immigration and newcomer status, Indigenous identity, language, neurodiversity, parental status/responsibility, place of origin, religion, race, sexual orientation, and socio-economic status.

Submission of the Full Application

The application form and the biosketches of the principal applicants should be sent together by email to ibest@ryerson.ca by 5pm on February 15, 2023. Applications that are late, incomplete, or exceed the page limit will not be considered. Each should be a separate .pdf document, attached to the same email.

Conditions of the fund

Research Ethics Board Approval (If required)

The successful applicant must provide evidence of Research Ethics Board approval along with consent forms where human subjects are involved in the study, before the funds are released.

The successful applicant must provide evidence of University Animal Care Committee approval where animals are involved in the study, before the funds are released.

It is expected that the successful applicant will obtain REB or (when applicable) ACC approval within 3 months of the date of notification of the award

Financial Considerations

The amount of each grant is intended to cover costs associated with the study, including equipment (e.g. study drug/device costs), and other miscellaneous costs (e.g., publications, presentations, and software licensing fees). The grant is not intended to provide salary support for investigators and/or staff. No indirect costs are provided. The funds must be fully spent within 1 year of being awarded, no extensions.

Research and Grant Administration

The grant recipients must provide one progress report and one final report to the iBEST summarizing work completed, including any publications, as well as an accounting for funds.

Publications

Grant recipients are expected to present their methods and findings at the iBEST Symposium and at least one peer reviewed scientific meeting, and to submit their work for publication in peer-reviewed journals.

All publications and presentations that result from a project supported by the iBEST should carry the following acknowledgment: "This research was supported by the Institute for Biomedical Engineering, Science and Technology (iBEST) Translational Partnership Grant Fund"

Data Sharing Agreement

Grant recipients must agree that any data that are collected from a project supported by the iBEST should be available to be shared via the TDRA's open science principles

Grant Recipient Responsibilities

The following responsibilities must be assumed and carried out by the grant recipient:

- Review and execution of institutional study grant agreement and any applicable local grant agreements
- Research Ethics Board submission and approval (if applicable). REB approval must be obtained prior to transfer of funds.
- Health Canada Clinical Trial Application (CTA) submission and approval (if applicable)
- Compliance with all applicable laws, regulations or guidelines (e.g. ICH-GCP, etc.)
- Study-related activities such as data management, statistical analysis, medical writing, monitoring, etc.

Registration and posting of study results on http://prsinfo.clinicaltrials.gov (if applicable)

Safety reporting to Health Canada, the research ethics board (as per local requirements), and if a drug/device product is involved, the Product Safety/Pharmacovigilance group for the appropriate company.

Communication of progress updates to the iBEST

Forward copy of abstract(s)/manuscripts(s) to the iBEST upon submission to meetings/journal.

Notification of Decision for Innovation Fund

Grant recipients will be notified of the decision regarding funding in April 2023. Both successful and unsuccessful applicants will receive a notification.

iBEST Institute for Biomedical Engineering, Science and Technology

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BIOGRAPHICAL SKETCH

Provide the following information for the Senior/key personnel and other significant contributors.
Follow this format for each person. **DO NOT EXCEED FIVE PAGES.**

NAME:

POSITION TITLE:

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)*

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	Completion Date MM/YYYY	FIELD OF STUDY

A.   Personal Statement

B.   Positions, Scientific Appointments, and Honors

C.   Contributions to Science

Toronto Metropolitan University | ST. MICHAEL'S UNITY HEALTH TORONTO