**McMaster University Seed Fund Application- Guidance Document**

APPLICATION DEADLINE: \_\_\_\_\_\_\_March 25th, 2024\_\_\_\_\_\_\_\_

**Description:**

The purpose of the Fund is to invest in new business ventures that involve one or more members of the McMaster community AND are translating research or knowledge created at the university or its affiliated hospitals into socioeconomic benefits.

Funding from $200-500K/application

**Eligibility Criteria of Applicant:**

* Minimum of one (1) founder, key officer, or personnel must be a member of the McMaster Community (defined as faculty, staff, student, alumni, worked or studied at McMaster)
* Must be an incorporated for-profit entity prior to investment.
* Must be further developing an innovation, technology or knowledge arising from McMaster research
* Must be planning to create a socio-economic impact through a scalable commercial business that will have the potential to provide a return on the investment

**Investment Criteria:**

* Market opportunity / application identified and customer validation– can be early, but should be well thought out and have had discussions with potential customers or stakeholders (i.e. those that will pay for the product/service).
* Must have an intellectual property strategy and competitive advantage identified, regulatory pathways (if applicable) are considered.
* Minimum of two (2) employees will be dedicated to the company after investment is made
* Appropriate use of funds with a reasonable, achievable plan to get to next value inflection point
* Minimum Technology Readiness Level (TRL) = 4 (<https://www.ic.gc.ca/eic/site/101.nsf/eng/00031.html> )
* Alignment with McMaster’s strategic plan, e.g. fits with at least one United Nations Sustainable Development Goals, and demonstrable benefit to Canada.

Team Information:

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| Name of Primary Applicant: | |  |
| Co-Founders: | | Expectation is that there is at least one other co-founder or key employee(s) (see note below) that will be involved in a meaningful way |
| Number of Employees: | | Employee does not yet have to be paid, however expectation is that there are a minimum of 2 people who are or will be committed to putting significant time and effort into company |
| Team Member Roles:  (Please describe what each member of your team brings to the table for the company. Have you or any member of your team successfully commercialized a technology or founded a company? If so, please describe.) see examples in table | | |
| Role(s): | Description: | |
| Founder/CEO  CSO/CTO  Business Development / Product manager | Key Responsibilities: Will set goals, strategy, long and short-term plans. Build and develop team. Interface with partners and investors.  Experience: serial entrepreneur; worked in industry as a senior executive; secured $xx million in investment from seed investors / VC firm; grew sales xx-fold in xx years; completed Lab2Market or other incubator program  Key Responsibilities: Lead development strategy and plan, finalize prototype, plan pre-clinical /early clinical stages as the company progresses out of its early-stage of research.  Experience: worked in industry, collaborated with companies for product development or validation studies  Confirm market need for product, bridge between product and customer. Lead in partnership and IP contracts/negotiations.  Experience: worked in industry, secured strategic partners; negotiated partnership deals | |
| Other Members and/or Advisors, Mentors, Key Opinion Leaders  (If you have a Key Opinion Leader (technical, medical) and/or business advisory board. Please list names and expertise) | | |
| Name(s): | Expertise: | |
| Mr. J. Smith  Dr. A. Jones | Experienced serial entrepreneur in relevant / applicable industry / market sector with success in raising funds and exits, Confirmed or invited to be a board of director.  VP, Business Development at XYZ company – led in development of strategic partnerships and successful in negotiating multi-million dollar deals or successfully developed and executed go-to-market ; early adopter strategy and plan. Interested in joining the company if financing is secured.  Clinical specialist in relevant field (e.g. Oncologist and oncology researcher) with experience in working with companies (e.g. board member on biotech companies, led large clinical trials). Interested or will be invited to be board member or Chief Medical Officer.  Regulatory affairs / ISO certification / product design consultant experience in advising companies in this sector on regulatory / certification / product development strategy. Invited as mentor/advisor (paid or unpaid) or to be an advisory board member. | |

Market Opportunity:

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| Problem:  What is the major problem that you are solving and who has defined this need to you? | |
| You should address:  What is the problem or opportunity & what is the frequency or extent of the problem or opportunity?  Who is looking to solve the particular problem or take advantage of the opportunity, and are they willing to pay to solve it?  Who / how many people have you spoken to get end user feedback (append any market research or assessments or customer validation studies, if available). | |
| Market:  (What is the size of the market that your solution will be addressing?) | |
| Information to consider including:   * Number of customers / end users / patients with the problem you are trying to solve (e.g. # patients with target disease; # companies that are in need of your service; # people who already buy a similar product or who you would be targeting as your customer) * What is the value of sales of similar or alternative products in market in Canada, North America, Worldwide on annual basis? * Any information of market value forecasts and expected growth in future * What are the market drivers and trends? (e.g. growth in population of those over 70 will mean that there is a need for products that help people age at home; need for care providers) * Do you know who your target market is and can you provide an estimate of your Total Addressable Market? (e.g. product for medical device that diagnoses concussions would be sold to physicians and physiotherapists in rehab centres; there are xx rehab centres and xx patients treated for concussion at those centres every year) | |
| Competitive Landscape:  Who are your main direct/indirect competitors? Explain how your innovation/product/solution is, or could be, superior to existing alternatives. | |
| Information should include:  List of competitors in market  Direct competitors: established companies in the market with a major market share as well as smaller companies that are also in or looking to grow into that market; identify any emerging players which are growing rapidly  Indirect competitor: are there other ways that end users/customers solve that problem  Discuss limitations of competing products and articulate your competitive advantage | |
| Business Model:  How do you plan to generate revenues? Please provide any details if you have generated revenues, secured partnerships. | |
| Information to include:  Who will pay for your product? Who will use it? How will you reach them, i.e. how will you get product / service to them? Where do you fit in the value chain?  If a business plan established, it may be appended. | |
| Do you have interest/engagement of a potential customer or commercial development partner? | Yes No  If Yes, please provide a description below. |
| If a customer or partner has been engaged, provide details  Example:   * Expressions of interest from leading customers, anything from letter of support (if you build it, I will buy; or better: I will be interested in buying a certain number at a certain price point/range, or best: a potential customer(s) will sign a purchase order for first sale of product when it is ready) * Term sheet with a prospective licensee that would convert to a license or partnership agreement once asset reaches specific milestone or validation proof * Manufacturing partner identified, details to include would be if they are willing to manufacture at a price point/volume * Investor identified, details to include would be what they would like to see achieved before they invest, where they see this and future value inflection points * Third party collaborators who will validate, especially if they provide credibility to your stakeholders | |

Use of Funding / Future Plans:

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| How much money are you requesting from the McMaster Seed Fund? |
| Request expected to be between $200-500 K |
| What are the major technology and/or business milestone(s) that you are trying to achieve with this funding? |
| These milestones should include bringing the technology and/or company to a value inflection point that will encourage further investment and/or partnerships.  Examples:   * engagement of a BD lead who will secure a strategic partner or lead customer(s) in xx months * creating a new formulation of product or refine prototype to get to an MVP or data package that can be demonstrated to customers or investors or strategic partners or to strengthen patent portfolio * toxicology, in vitro metabolism and safety pharmacology confirmed by CRO (drug development) needed to show safety profile that investors or strategic partners have identified as a barrier for their next steps * complete studies and engage with consultants to complete pre-clinical data package and refine clinical trial strategy plan to get CTA with Health Canada or IND in FDA (US) * validate additional applications/uses for technology * carry out field tests or validation studies for additional voice of customer feedback, provide data for return on investment or pricing for end user, ensure usability * R&D to demonstrate manufacturability, robustness, stability of product to address concerns about scalability, cost to manufacture, reliability of process |
| How will these funds be used? Provide a specific budget, plan of what you will be doing and timeline of deliverables  \*\*Note that the MSF investment will be released in tranches, tied to deliverables. Break down your budget and deliverables in appropriate tranches. Expectation and strong preference will be that the final tranche of funds is released when additional funding is secured, this additional funding may include any combination of grants such as Mitacs, NSERC Alliance or I2I, SOPHIE, IRAP/CIC or additional investment. |
| Budget for example below is 260K, suggested distribution in tranches could be as follows:  100K upon award- supports salary, formulation, validation study  100K awarded once validation study successfully completed (will be used for continuing salary support, patent expenses)  Final 60K awarded once successfully secured matching funds to enable CRO study |

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| **Budget Cost (estimate)** | **Details (What will be done and achieved; Who will be doing this work)** | **Timeline (start / end date or expected time required)** |
| $100,000 | Salary support for Business Development lead to secure first investor/customer/partner + travel or meeting costs to visit | January 1, 2023 to December 31, 2023 |
| $25,000 | Engage with NAME OF CRO/CMO to complete toxicology study or do a pilot manufacturing run | November 15, 2023 to February 15, 2024 |
| $50,000 | R&D contract to PI’s lab to complete formulation optimization studies – budget related to PDF salary and materials costs | 6 months |
| $10,000 | Patent expenses to file national phase in Europe | Due December 15, 2023 |
| $75,000 | Validation study at pilot customer site – budget related to hiring 1 employee and graduate student salary to build a prototype and run field tests | January 1, 2023 to December 31, 2023 |

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| Describe your strategy for seeking subsequent support, including grant funding, Angel or VC investment, generating revenues, strategic partnerships, etc. |
| Describe Fundraising/grant application strategy   * Grants to be applied for: list any non-diluted funding sources that you plan to apply for to either leverage this investment or that you may apply to in future. Possible examples, CIHR CMZ grant, NSERC I2I phase 2, IRAP, SDTC, NGen. * For next funding rounds (amount targeted: justify), list investors that you have already contacted or plan to target, when you plan to reach out * Where revenue is expected in the short term, describe revenue generation model (timeline, expectations) * Name strategic partners who may invest, contribute to growth of company in a tangible way |

Technology

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| Describe your core technology in non-technical terms. What is unique about your technology that provides a competitive advantage? | |
| Provide a lay summary:  Provide any relevant background, but mainly describe why your technology is important and how it addresses the problem. Has the research on which your technology is based been replicated by another researcher or third party?  Provide any details or description of the specific technology to give an idea of what stage of development you are at, evidence that you have that this is going to work and/or is unique. Include how your technology would improve the state of the art, and what potential benefits this would have that would provide a competitive advantage, make an impact for society. Specify novel aspects of your technology that make it unique and advantageous over other solutions proposed for problem you are addressing. | |
| Do you have any Intellectual Property in place or filed? | Yes No  If Yes, please describe/cite any patent filing numbers below. |
| Provide patent references/numbers and status | |
| What other grants and/or funding has been provided in support of this technology development? | Yes No  If Yes, please all funding below including amount. |
| List Grants that have contributed funds to the project to date.  List other funding (donations, personal funding, friends and family or other investment, debt financing) that you have received to fund technology and business to date | |
| Has your team published any literature on the current technology? | Yes No  If Yes, please list all publications on which your technology is based. |
| List relevant publications. | |

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| Which of the following best describes your current Technology Readiness Level (TRL)?  (Descriptions obtained from Government of Canada Website and adapted from ) | | |
| Level 1 | Basic principles of concept are observed and reported | Scientific research begins to be translated into applied research and development. Activities might include paper studies of a technology's basic properties. |
| Level 2 | Technology concept and/or application formulated | Invention begins. Once basic principles are observed, practical applications can be invented. Activities are limited to analytic studies. |
| Level 3 | Analytical and experimental critical function and/or proof of concept | Active research and development is initiated. This includes analytical studies and/or laboratory studies. Activities might include components that are not yet integrated or representative. |
| Level 4 | Component and/or validation in a laboratory environment | Basic technological components are integrated to establish that they will work together. Activities include integration of "ad hoc" hardware in the laboratory. |
| Level 5 | Component and/or validation in a simulated environment | The basic technological components are integrated for testing in a simulated environment. Activities include laboratory integration of components. |
| Level 6 | System/subsystem model or prototype demonstration in a simulated environment | A model or prototype that represents a near desired configuration. Activities include testing in a simulated operational environment or laboratory. |
| Level 7 | Prototype ready for demonstration in an appropriate operational environment | Prototype at planned operational level and is ready for demonstration in an operational environment. Activities include prototype field testing. |
| Level 8 | Actual technology completed and qualified through tests and demonstrations | Technology has been proven to work in its final form and under expected conditions. Activities include developmental testing and evaluation of whether it will meet operational requirements. |
| Level 9 | Actual technology proven through successful deployment in an operational setting | Actual application of the technology in its final form and under real-life conditions, such as those encountered in operational tests and evaluations. Activities include using the innovation under operational conditions. |

Venture Information:

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| Incorporated Venture Name | Input if available | | |
| Is your venture incorporated?  If yes, what year was it incorporated? If no, enter expected date of incorporation. | Yes No | Year of Incorporation/ Expected year of Incorporation: | Should have plans to incorporate if not yet done |
| Venture Address |  | | |
| What are your company’s goals, mission, and vision? | | | |
| Eg:  Our goal is to build a company in Hamilton that manufactures and sells products that help people age at home. We will grow revenues and market share through Canada and US in the first 5 years, then expand globally through sublicensees or 3rd party distributors.  Our mission is to deliver breakthrough cancer immunotherapies by advancing two leading and complementary platforms targeting tumor immunity, to improve survival for people with cancer. | | | |
| Have you considered an exit strategy and if so, what does this look like? | | | |
| Merger, acquisition, IPO? What partners are likely targets? Can you comment on potential deal value? What have other similar companies been acquired or valued at, and at what stage?  e.g. Building a company similar to XYZ Biotech, who was at phase 1 clinical trial with a lead candidate and 2 others in their pipeline when they did an IPO last year and now have a market cap of $xx million.  We will be selling our products to ABC Inc. who may become a strategic investor or acquirer, as they have with their partnership or acquisition of SME Corp. in 2020 for $ | | | |
| Please list any government funding, in-kind contributions, or program support that you have received for this venture to date | | | |
| Input any funding/support venture has received to date. | | | |
| Describe how much has been invested into the venture (investment in dollars in exchange for shares) and describe the relationship to the company (friends/family/third parties). | | | |
| Describe equity investments to date (cash received in exchange for shares or promise of shares), not grants | | | |
| Other (if applicable):  Anything other information that may be important | | | |
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