Blueline Drug Target Program – A Unique Canadian Funding Opportunity

This document is a full description of the application process.

Name of Program: Blueline Drug Target Program

Sponsor: Blueline Bioscience, a Toronto-based biotechnology incubator backed by Versant Ventures.

Program Timeline

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<td>Launch of Call for Proposals (CFP)</td>
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<td>August 29th, 2014 (11 pm ET)</td>
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<td>September 5th, 2014</td>
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<td>Late October/Early November, 2014</td>
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Application Process: This program has a two-step application process:

- Phase 1: submission of a one-page Letter of Registration which will be screened for relevance to the CFP; and
- Phase 2: submission of a five page Full Proposal by applicants deemed relevant at Phase 1.

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1. Description

Blueline Bioscience is a Toronto-based biotechnology incubator backed by Versant Ventures, a leading global life science venture capital firm. Our mission is to translate scientific discoveries by identifying, developing, and building innovative biotechnology companies with world-leading scientists from across Canada.

The Blueline Drug Target Program offers a unique opportunity for Canadian academic researchers with novel targets and mechanisms of action to collaborate with Blueline to translate their research discoveries into high impact therapeutics. Blueline Bioscience’s experienced team of drug discovery experts, biotechnology entrepreneurs and life science investment professionals will collaborate with funded teams to advise on the design of a research plan to rigorously evaluate the therapeutic potential of novel targets.

For example, positive research outcomes after completion of a 12 month grant might include, but are not limited to:

- Completing in vitro and in vivo studies with tool compounds to validate the therapeutic potential of the target; and/or
- Validating the mechanism of a lead compound supporting advancement to lead optimization.

2. Objectives

The objectives of the Blueline Drug Target program are:

- To advance the validation of novel drug targets and/or lead compounds;
- To forge collaborations between leading academic researchers, biotechnology entrepreneurs, and life science investors;
- To identify academic projects with very high potential to address unmet medical needs and to be first-in-class in key therapeutic fields; and
- To ultimately create biotechnology companies to progress these discoveries toward commercialization.

3. Funds Available

Blueline Bioscience financial contributions for this Program are subject to availability of funds. Funds will be administered through a Sponsored Research Agreement negotiated between Blueline Bioscience and the Host Institution of the Principal Investigator.

- The maximum amount per grant is $150,000 for up to one year, non-renewable.
- It is anticipated that up to 10 grants will be funded.
4. **Eligible Research Areas**

The eligible research areas for this Program are limited to the fields of:

- Oncology
- Inflammation
- Immunology
- Neurodegenerative diseases
- Ophthalmology
- Orphan diseases
- Regenerative medicine

Successful applicants must provide convincing rationale for the pathophysiological role of the target or mechanism, the potential for therapeutic impact, and the distinctive capabilities and insights of their research team to achieve validation. Targets must be novel and might include:

- Newly identified targets in an area of high therapeutic interest;
- Fundamentally new approaches to modulate known and/or validated targets;
- Targets amenable to small molecule or biologics drug discovery, based on structure, class, function, etc.; and/or
- Multiple targets provided that it is practical to make significant progress with available funding.

5. **Applicant Eligibility**

Applications will be accepted from individual researchers or small teams of **no more than three researchers** working in collaboration.

The Principal Applicant must be an independent researcher, based at a recognized Canadian university or research institution, who:

- is autonomous regarding his/her research activities; and
- has an academic or research appointment which:
  - must commence by the effective date of funding; and
  - allows the individual to pursue the proposed research project, to engage in independent research activities for the entire duration of the funding, to supervise trainees, and to publish the research results; and
  - obliges the individual to conform to institutional regulations concerning the conduct of research, the supervision of trainees, and the employment conditions of staff paid with Blueline Bioscience funding.

6. **Allowable Costs**

Direct costs of the Research Plan for which the funds were awarded.

- Funds must be used effectively and economically.
- Expenses must be essential for the research for which the funds were awarded.
- Contributions to shared expenses must be directly attributable to the funded research and authorized by the grantee.
Funds can be used to support the purchase of equipment critical to the research project, up to a maximum of 10% of the total funds awarded. Grant funds may be used to support essential personnel substantially dedicated to the project such as: graduate students, postdoctoral fellows, and research associates. Other costs essential to the research project as authorized by the grantee in the sponsored research agreement.

7. Review Process

Blueline Bioscience will assemble an internal review panel of experts with extensive experience in: drug discovery and development in industrial and academic settings; basic and translational research in the therapeutic areas of interest; and hands-on biotechnology company creation, investment, and growth.

Letters of Registration will be reviewed only for relevance to the CFP.

Review criteria for Full Proposals will include:

- Novelty of the target and a compelling rationale for validation and further development;
- The unique capabilities and insights of the applicants to pursue validation of the proposed target;
- The potential for clinical impact on the disease of interest;
- The ability to generate meaningful target validation within the one year granting period;
- The qualifications and track record of the applicants; and
- An awareness of and ability to be competitive with other academic or industry groups working in the specific area.

Based on these criteria, a maximum of 20 applications will be selected to go forward to face-to-face meetings with the review panel in Toronto, Montreal and Vancouver. Following this review process, a maximum of 10 applications will be awarded funding.

8. Reporting Requirements

The Principal Applicant will be required to submit an electronic Final Report to Blueline Biosciences at the end of the granting period. A report template will be provided.

9. Intellectual Property (IP)

Any IP generated during the granting period will be subject to the intellectual property policies of the host institution of the Principal Applicant, including publication rights and IP ownership. Through the Sponsored Research Agreement, Blueline Bioscience will acquire a limited-term option to negotiate a license to any newly generated IP.

10. Communications

Blueline Bioscience will not have veto rights with respect to publication of the results of funded research, but reserves the right to review any proposed publications one month prior to submission.
11. Confidentiality

Blueline Bioscience will not share the information provided by applicants through the registration and application process other than with directors, officers and/or representatives of Blueline Bioscience, Versant Ventures and their respective affiliates. However, applicants should not provide any information which they expect to be treated in a confidential manner at this stage.

Recognizing the importance of confidentiality to the academic community, Blueline Bioscience will consider the requirement for confidentiality during the face-to-face reviews with shortlisted applicants on a case-by-case basis.

12. How to Apply

Registrations should be submitted in PDF format to grants@bluelinebio.com by 11 pm ET on August 29th, 2014. On September 5th, registrants invited to submit a Full Proposal will be notified and given further instructions. The deadline for the submission of Full Proposals (in PDF format to grants@bluelinebio.com) is 11 pm ET, October 10th, 2014.

Registration
Letters of Registration (maximum one page) must include:

- The name of the Principal Applicant and additional team members (maximum of three total), including host institutions;
- Full contact information for the Principal Applicant;
- The project title;
- The name of the Institution that will administer the funds for the project;
- An indication of the funds to be requested; and
- A brief summary of the proposed research, indicating the research area and potential target(s) to be studied

Full Proposal - by invitation only
Full proposals must be no more than five pages in length, and should be organized according to the following Sections I through VIII according to the instructions within each section. If you choose to include charts, graphs, or citations, add them on a separate Appendix page (maximum 2 pages) and reference them directly (e.g. Figure 1 or Table 2).

Applications must be formatted in Arial font size 11, single-spaced with 2.54 cm margins.

Title. Target and primary therapeutic area/disease

Section I. What is the target? – ½ page maximum
Use this section to briefly describe the target of interest. Key points to include are:

- How was the target identified?
- What is the therapeutic rationale associated with this target?
- What was the reason for prioritizing this target?

Section II. Why is this target interesting? – ½ page maximum
Use this section to justify the attractiveness of this target for further validation research and its importance relative to other potential targets. Examples of interesting features might include but are not limited to:

- Existing evidence for the target’s role in disease - e.g., human genetic data, *in vitro* characterization, *in vivo* results, clinical insights, nature of screen identifying target.
- New insights into roles of the target (and unique insights your research team possess in this regard). Priority and novelty relative to other targets in the field.
- Relevance to oncology, inflammation, immunology, neurodegenerative diseases, ophthalmology, or orphan diseases.

**Section III. What are tractable therapeutic modalities? – ½ page maximum**

Use this section to describe the rationale for the biochemical tractability of developing modulators for this target to provide a therapeutic effect. Discussion should include comparison to similar on-market or clinical stage molecules in the same pathway or modulating related targets if available.

Please provide brief rationale for why your proposed therapeutic modality could be viable. For example, therapeutic modalities might include:

- Small molecule inhibitors
- Antibodies
- Soluble receptors
- Gene therapies

**Section IV. What evidence exists to support the validity of the target? – ½ page maximum**

Use this section to further describe the current evidence for the validity of the target. This can include clinical or preclinical work done by your lab or others in the field (e.g., published literature). Examples of validation might include:

- Human genetic data – GWAS, etc.
- Animal genetics – knock-outs, knock-ins, etc.
- Expression/function studies – knockdown, rescue, soluble decoy, etc.
- Inhibitor/function studies – mAb, peptide, small molecule, tool compounds
- Structural biology – Crystal/NMR structure and site mapping

**Section V. Proposed Research Plan – 1 page maximum**

Without going into too much detail, please use this section to provide an overview of your proposed Research Plan. Please focus on specific experiments or investigations you would pursue to validate the target. Note that Research Plan should be roughly twelve months in duration.

**Section VI. Why is your research group uniquely capable of pursuing validation for this target? – ½ page maximum**

Use this section to provide an overview of the capabilities and insights of the research group related to this target. Also provide an overview of your research lab and resources you have at your disposal, including shared facilities and internal/external collaborations. Key points to include are:

- Demonstrated knowledge and expertise related to the target
- Proprietary models, assays, tools and techniques developed in your lab
- Number and type of personnel – dedicated vs total
- Key equipment essential for progression of research plan
- Existing collaborations and resources exterior to your research group

Section VII. Relevant publications - ½ page maximum

Use this section to list the most important publications related to the specific target of study (these do not have to be your own).

Section VIII. Budget Table - 1 page maximum

Use this page to indicate how you plan to spend the funds you are requesting.

Contact Information

For questions about this initiative and the research objectives, please contact:

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