**Review Criteria for Academia Sinica Biotechnology Research and Translation Program (BRTP)**

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The Academia Sinica Biotechnology Research and Translation Program (BRTP) is established to support research projects focused on the biotechnology development to address unmet medical need, particularly in preclinical research and development and prototype validation. Funding period for each project is 3+2 years, with the last two years of funding determined by progress towards milestones. Research topics may include, but are not limited to, cancer treatment, immunology, regenerative medicine, metabolic diseases, cardiovascular diseases, and diagnostics. Projects to be funded must demonstrate well-defined goals, realistic milestones, and strong translational potential, meeting the following criteria:

1. Potential high social impact by addressing unmet medical needs.
2. Clear and compelling scientific evidence demonstrating the disease mechanism, mode of action (MoA), and the *in vitro* and/or *in vivo* activities of the proposed drug candidates or medical device prototypes.
    - Applicants should have clearly established a causal relationship between the molecular target and the disease, supported by mechanistic data.
    - For new drug development, applicants must present drug hits that modulate the target and demonstrate disease-alleviating effects, with defined modes of action. Evidence of drug activity through *in vitro* assays is required, and *in vivo* validation in animal models is highly encouraged.
    - For medical device development, applicants should present a functional prototype with supporting data demonstrating its intended function and biological compatibility. Animal testing data are highly encouraged.
3. Clearly defined plans and milestones for technology transfer or spinning-off a start-up company. (optional)

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To aid Principal Investigators in preparing grant applications, the **review criteria** for BRTP projects are provided below. **Reviewers** will be asked to provide a thorough evaluation based on the following specific bullet-point questions and rank the proposal accordingly on a scale of 1–5. Applicants are reminded that **the prospects for product commercialization** will be the main points considered in the overall funding decision.

### 1. How significant is the specific problem to be addressed?

- Does the project address a real and well-defined unmet medical need?
- Does solving the specific problem have translational potentials important to science and/or society?
- Has the problem and its translational aspects been identified by others before?
- Has the problem been solved before?

### 2. To what extent is the idea innovative?

- Are there sufficient experimental data to validate the proposed technology?
- What are the novel elements in this application? Is the product patentable?
- What are the closest ideas conceived by others to date?
- Is there any major scientific flaw in the proposed idea?

### 3. What is the extent of anticipated impact?

- If the project succeeds, to what extent will the outcomes lead to significant scientific advancement and high social impact?

**4. How feasible is the Research Plan and proposed approach?**

- Has the applicant thought through the problem to be addressed and its associated technology transfer and/or commercialization path thoroughly?
- Has the applicant identified the risks involved and have plans to de-risk?
- Are there any major technical and/or commercialization flaws in realizing the milestone?
- How feasible are the proposed timeline and milestones for translating drug hits into drug candidates?
- Is any collaboration with industry established or to be sought? Is matching fund from any source being committed?

**5. Do the applicants have relevant expertise? Are they committed?**

- Does the project team include a co-PIs with expertise in the relevant field?
- Is there evidence that the applicant is committed to deliver impactful results? Suggest what capability is missing and to be accomplished during the grant period.

**6. Is the proposed project internationally competitive?**

- How does the quality of this application compare with the top level globally?
- Is there any potential to attract global attention or partnerships?
- What's the proposed speed to maintain competitiveness internationally?

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Applicants are advised to prepare their proposals so that Reviewers can easily identify the answers to each of the questions. BRTP administration staff can help applicants use commercial databases established in BioTReC to obtain relevant information. All Reviewer's comments will be redacted and provided to the applicants after the completion of the review process.

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*Note: Please refer to the funding opportunity announcements and other relevant documents available online including the guidelines provided in the application forms and templates, for additional requirements and details for BRTP project.*