



BiInnovation Student Fellowship & Mentorship

Teva's National BiInnovators Forum is a unique program that includes an annual scholarship, mentoring and guidance of professionals from Teva and the bio-ecosystem. The purpose of the program is to support and promote the translational aspects of biological therapies between academia and industry and to advance entrepreneurship in the biomed field.

The \$10,000 **scholarships** for the academic year will be awarded on the basis of excellence in studies and scientific research and are intended for **doctoral students** and **post-doctoral trainees** whose research deals with the following areas:

Areas of scientific focus for 2022-23

Brain disorders:

- Novel molecular targets/novel molecules/biomarkers in CNS and PNS; novel pathways and mechanisms in brain disorders, e.g. neurodegeneration, neuromuscular disorders, psychiatric disorders, rare disorders with CNS phenotype and pain.
- Mechanisms for delivering proteins and specifically antibodies to the brain and advanced monitoring/imaging of BBB crossing.
- Neuro-immunology.

New targets and mechanisms for Immuno-modulation relevant for cancer, autoimmune, inflammation, and respiratory diseases.

Protein engineering and computational modeling technologies.

Drug delivery systems for protein-based drugs, e.g. nanoparticles or exosomes.

mRNA based therapy.

Novel methods to characterize and predict biologics-based drug adverse reactions like immunogenicity.

AI and big-data tools and approaches for proteins structure-function prediction, antibody affinity, immunogenicity, antibody optimization etc.

Digital biomarkers, sensors and wearables for monitoring brain disorders.

Details at:

[Full "Request For Application" \(RFA\) pdf follows on the next page](#)

Please fill out the application form with the accompanying files, according to the detailed instructions, and submit to Alana Sisam <alanarhassan@tauex.tau.ac.il>>

Deadline for submission: **Nov. 06, 2022**

Coordinated by:

Dr. Dana Bar-On, Teva

Dr. Daniel Bar, TAU

Prof. Micha Fridman, TAU

Prof. Uri Ashery, TAU



1. General

The National Forum for BioInnovators ("NFBI") initiated by Teva Pharmaceutical Industries Ltd. (hereinafter: "Teva") in 2019, in order to support and enhance Israeli biologics-based therapeutics research.

NFBI focuses on advancing translational research in the field of biologics-based therapeutics in the fields of Immunology and Neuroscience performed in academic and medical institutions in Israel, and advancing entrepreneurship training in the biomed and life science fields. Within the scope of the competitive NFBI for 2022-23, Teva shall provide up to 35 research student scholarships as well as professional mentoring for the selected research projects conducted by selected doctoral student or post-doctoral student (within three years of their doctorate) (hereinafter:

"Students") under supervision of the academic principal investigator (who is full time, senior academic faculty members (Senior Lecturer and above) (hereinafter: "Principal Investigator" or "PI") in academic or medical (e.g. hospitals, HMOs) institutions in Israel (hereinafter: "Institution"). **The purpose of this request for applications (hereinafter: "RFA") is to present the NFBI 2022-23 program, process and criteria for selecting research projects (hereinafter: "Research Projects"), reflected in the applicant research proposal (hereinafter: "Research Proposal") to be supported by NFBI.**

Students (together with their Principal Investigators) are hereby invited to submit Research Proposals (hereinafter: "Applications") to join the NFBI, as described in this RFA, in support of their Research Projects.

2. Objectives

- 2.1. Encouraging Israeli academic innovation and translational research in the field of biologics-based therapeutics;
- 2.2. Encouraging the efforts of bridging the gap between academia and industry specifically in the field of biological drug discovery and development;
- 2.3. Supporting excellent young researchers with their career development and integration into industry following their graduation;

The NFBI's objectives as stated above will serve as guidelines in the definition of criteria used during the evaluation and selection process of the NFBI Recipients (as defined below).

3. Areas of scientific focus for 2022-23

3.1. Brain disorders:

- Brain disorders:
 - Novel molecular targets/novel molecules/biomarkers in CNS and PNS; novel pathways and mechanisms in brain disorders, e.g. neurodegeneration, neuromuscular disorders, psychiatric disorders, rare disorders with CNS phenotype and pain.
 - Mechanisms for delivering proteins and specifically antibodies to the brain and advanced monitoring/imaging of BBB crossing.
- Neuro-immunology

- New targets and mechanisms for Immuno-modulation relevant for cancer, autoimmune, inflammation, and respiratory diseases.
- Protein engineering and computational modeling technologies.
- Drug delivery systems for protein based drugs, e.g. nanoparticles or exosomes.
- mRNA based therapy.
- Novel methods to characterize and predict biologics-based drug adverse reactions like immunogenicity.
- AI and big-data tools and approaches for proteins structure-function prediction, antibody affinity, immunogenicity, antibody optimization etc.
- Digital biomarkers, sensors and wearables for monitoring brain disorders.

4. Funding of Research Projects.

4.1 Research Scholarship.

Teva shall provide financial support to selected Research Projects to be conducted by selected Students, as per the process below, under the supervision and guidance of their Principle Investigator (hereinafter:

"Research Scholarship"). Research Proposals for a Research scholarship should be submitted by the Student in the areas described in Section 3, and must include the endorsement of the Principal

Investigator and the Institution. Each Research Project that is selected will receive **Research Student Scholarship in an amount of \$10,000**, for a period of one year starting from the Agreement effective date.

5. Applications to the NFBI Program

5.1. Applications for Research Scholarships will be submitted in accordance with the application form and guidelines attached hereto as APPENDIX A.

5.2. Applications can only be submitted by Students in Institutions with endorsement of their PI.

5.3. Applications can be submitted by Students who are Israeli citizens and/or permanent residents or returning Israeli citizens with granted study and/or work positions at Institutions. Institution may also approve applications submitted by foreign students of the Institution (which has all relevant permits and authorizations).

5.4. As applicable, the Student and PI will be responsible for obtaining any certificates of approval and/or authorizations required to conduct the Research Project and present such certificates to the Institution and/or to Teva (as may be requested) prior to the commencement of the Research Project.

5.5. The selected Students for Research Scholarship (collectively, hereinafter: "Recipients") must openly disclose the fact that Teva is providing them with such Research Scholarship.

5.6. All payments made as part of a Research Scholarship will be made to Institution and not to the selected Recipient.

5.7. The Research Scholarship must be forward looking and may not compensate expenses already incurred by the Recipient's and/or Institution.

5.8. It is hereby agreed that students can receive the scholarship twice per degree but with at least one year break in between. Preference will be given to students that did not get the scholarship before.

6. Application Submission.

6.1 Guidelines for submission of Applications:

6.1.1. Applications for Research Scholarship shall be submitted in English to the Institution, to the contact person in section 6.3, and shall include the information and documents requested in Appendix A.

6.1.2. Full Applications, and any requests for clarifications and/or questions throughout the application process, shall be sent by e-mail to the contact person listed in Section 6.3 below.

6.1.3. The Students and PIs are required to review carefully the RFA and the Agreement attached as Appendix B (see section 8 below) and sign the Acknowledgement form attached as Appendix C of the RFA.

6.2. This RFA will be managed according to the following process and timeline:

6.3. Contact Person at the Institution

Contact person for all purposes regarding this RFA is:

First and Last Name: Dr. Daniel Bar

Position: Principal Investigator

Email: dany.ba@gmail.com

Address: School of Dental Medicine. Faculty of Medicine, Tel Aviv University

6.4. Relevant Deadlines

- RFA Issuance – Oct 2022
- Application Submissions – 06 Nov. 2022
- Announcement of Recipients and issuance of rejection letters – Dec. 2022
- Start of the program – Jan 2023

7. Evaluation and Selection Process; Miscellaneous

7.1. All Applications will be reviewed, evaluated and selected by the Institution's internal committee according to the guidelines detailed in this RFA.

7.2. The following criteria will be considered while evaluating and selecting the Recipients:

- Degree of scientific excellence and coherence of the application;
- Degree of innovation and potential to lead to significant scientific and medical advances;
- Relevance to the scientific focus areas specified in section 3;
- Credentials of the applicant(s) (excellent scientific track-record, strong leadership skills, creative problem-solvers);

7.3. The Student is required to participate in the NFBI events and meetings. This includes monthly scientific meetings of all Students involved in the NFBI program (the meetings might include networking events with the bioecosystem, workshops, conferences, hackathons and the final Bio-Mix competition, an annual innovation completion where the students compete in teams and present ideas they developed during the year for scientific unmet needs as

training), an annual mentoring meeting together with the Students' PIs. The Student is committed to be present in at least 80% of the meetings.

7.4. All dates of the activities will be published in advance and coordinated with the PIs and Students.

7.5. Notwithstanding anything to the contrary in this RFA, Institution's internal committee shall have the sole discretion in selecting applications and reserves the right to accept or reject any and all responses at its sole discretion.

7.6. The Research Scholarship shall be used in accordance with the terms and conditions of this RFA and subject to the terms of the agreement for the NFBI Research Program.

7.7. Recipients declare that, at all relevant times, whether prior, during or after the conduct of the Research Project, all necessary certification requirements will be met in accordance with policies and regulations on ethical conduct of Research Project

7.8. A Final progress report will be submitted to Teva by the Recipients in accordance with instructions provided by Teva. The progress report should be up to 2 pages in length including:

- Research Project Information
- Research Project Overview
- Research Project Objectives
- Research Project Milestones
- Research Project Progress Status
- Discussion
- Conclusions and Future Plans

8. The Agreement

8.1. Teva and the Institution shall sign the research agreements attached herewith as Appendix B (collectively hereinafter: "Agreement").

8.2. The Agreement will contain sections regarding Teva's right to request and review the progress of the research activities and Teva's right to request a reconciliation of the funds in case that the Research Project was stopped from being conducted for any reason whatsoever.

8.3. By submitting an Application in accordance with this RFA, the Recipients and the Institutions are accepting all terms and conditions set forth in this RFA and the Agreement. Where there is a contradiction between this RFA and the Agreement, the Agreement shall prevail.

APPENDIX A TO THE RFA STUDENT RESEARCH SCHOLARSHIP APPLICATION FORM

PART I

1. Research Project Title
2. Name of Institution(s) (Institution that will administer the funds for your project)
3. Principal Investigator
4. Name of the Student
5. Therapeutic Area **Cancer / Central Nervous System / Peripheral Nervous System / Autoimmune / Pain / Respiratory / Technology / Platform**

PART II

Short description of the overall Research Project (up to 3 pages) which shall include the following information:

- a. Research Project title.
- b. Summary of the Research Project (up to 300 words).
- c. Scientific background including a short review of existing research in the field.
- d. Defined Research Project objectives and expected impact on the therapeutic field.
- e. Research Project description (including methodology).
- f. Innovative aspects and Significance.
- g. Time table plan with main milestones and expected completion dates (up to 1 page).
- h. Collaboration with other Institutions, if relevant.

PART III

Applicants must declare that they will obtain all required approvals for conducting the research project from relevant authorities.

PART IV

1. Short (2 minutes) video of the candidate explaining the motivation to join the forum, presenting him/herself and his/her research project.

2. Curriculum Vitae of the Student (up to 2 pages):

- a. Name (Title, Last, First, Initial)
- b. Email
- c. ID number
- d. Affiliation: PI name, Institution and Department
- e. Phone no. (Office/cell phone number)
- f. Picture
- g. Educational Background (years, institution, expertise, degree)
- h. Relevant Employment History (years, institution, area of research, title)
- i. List of Publications by Applicant
- j. List of awards and/or scholarships received by applicant (year, title of award, source)

3. Letter of endorsement from the student's PI.

4. Acknowledgment form: The Students and PIs are required to sign the Acknowledgement form attached as Appendix C of the RFA.

Requirements for all attachments to the application:

- a. Margin of 2 cm (minimum) around the page.
- b. Observe page limitations, additional pages may NOT be added unless specified.
- c. Use only letter size (21.25 X 27.5 cm) white paper/background for all attachments.
- d. Use a font size of 12 point, black type. No condensed type or spacing.

APPENDIX B TO THE RFA Agreement

APPENDIX C TO THE RFA

Acknowledgment form for the Student and his/her PI

We hereby confirm that we have read the Request for Applications for the National Forum for BioInnovators ("NFBI") ("RFA") and the Research Student Scholarship Agreement between our Institution and Teva, attached to the RFA as Appendix B, and we agree to all conditions, commitments and instructions thereto, pertaining to us. In particular, we hereby agree to the following:

- We hereby acknowledge that the recipients of the Research Scholarship will be chosen at the sole discretion of an internal committee of investigators of the Institution, in accordance with the terms of the RFA and the Agreement.
- The PI and Student undertake to commit to the instructions pertaining to confidentiality and publications as per the Agreement.
- The student will be invited once a month to a meeting of all the students involved in the forum. Student is committed to attend at least 80% of the meetings.
- The student and PI might be invited to present the Research progress to a panel of Teva's experts. In advance of such mentorship session, the Student will send Teva a presentation summarizing the Research progress, approved by the PI, as needed. The PI and student will commit to 1 mentorship session per year, per Teva's instructions.
- A final report (according to the the Agreement) shall be submitted within no later than 60 days following completion of the Research (or earlier termination of the Agreement).
- The contact details are in Appendix A of the RFA. The Student will advise in any case of change.

Student's name:

Signature:

Principal Investigator name:

Signature:

Institution:

Title of the Research project:

Date: