



March 30, 2021

TO: NIH Intramural and Extramural Investigators

FROM: Deputy Director for Intramural Research, NIH
Associate Director for Clinical Research & Chief Scientific Officer, NIH CC

SUBJECT: 2021 Bench-to-Bedside Call for Proposals

Timeline:

Call for Proposals: March 30, 2021
Letter of Intent (LOI) due date: May 14, 2021
Notification of invitation to submit full proposal: June 11, 2021
Application due date: July 19, 2021
Applications reviewed: October 2021
Investigators notified of decisions: December 2021
Earliest start date: January/February 2022

We are pleased to announce a call for proposals for the NIH Bench-to-Bedside and Back Program (BtB). This is the 23rd cycle of BtB funding for two-year awards designed to seed new projects that propose to translate basic science observations to the patient and/or clinical observations to the laboratory with the goal of improving human health. The program promotes meaningful collaborations between basic and clinical investigators, which can involve either intramural investigators from different laboratories, or intramural and extramural investigators.

Project Requirements:

This program supports innovative small/pilot research projects designed to translate basic scientific findings into therapeutic interventions for patients and to increase understanding of important clinical observations of disease processes. Every project must include an intramural investigator who is responsible for submitting the application, and he or she must have at least one intramural and/or extramural co-investigator. Preference is shown for projects involving extramural partners, though this is not required. Projects may have single or multiple Principal Investigator(s). Extramural investigators may initiate or lead projects, though the extramural investigator must still have an intramural co-investigator who submits the application. Extramural investigators who need assistance identifying intramural partners may consult:

- NIH's database of all current intramural research at <http://intramural.nih.gov/search/index.tml>;

- Intramural Principal Investigator Directory at <http://irp.nih.gov/our-research/principal-investigators>;
- “Search the Studies” website to identify investigators on relevant protocols at <http://clinicalstudies.info.nih.gov/index.html>; or
- BtB Program Office (BenctoBedside@mail.nih.gov) for assistance in identifying intramural partners.

Funding:

Each award will be a maximum of \$150,000/year in direct costs for two years. The extramural investigator(s) cannot receive all project funds, at least some funds must be directed to the intramural investigator(s). Year 1 project funds will be distributed in FY 2022 and Year 2 project funds will be distributed in FY 2023. **The extramural investigator must have an active, in-scope NIH grant to receive any supplemental funding support.** All appropriate indirect costs must be included in the submitted BtB application.

Intramural Funds: Intramural funds will be provided to intramural investigators via intra-agency agreements. At least one intramural investigator on the project must have responsibility for scientific and budgetary oversight (e.g., the investigator must have a budget/assigned CAN and resources).

Extramural Funds: Funds to extramural investigators will be provided as an administrative supplement to an eligible NIH grant. To receive funds, **it is mandatory** that the parent grant is aligned closely with the subject area of the proposal so the project can be supported within the aims and objectives of the parent grant. In order to ensure alignment with the parent grant, a written justification must be included in the budget section of the BtB application describing the scientific relationship. **Please note, if the BtB extramural partner is NOT the PI on the NIH grant**, he or she must ensure in writing that the parent NIH grant PI is supportive of the use of supplement funds to be used on the BtB project **as long as he or she is listed as a key personal on the NIH grant**. Incomplete grant information in the full proposal (e.g., invalid project period dates or lack of scientific alignment) will eliminate the proposal from funding consideration. Indirect costs for extramural investigators will be covered beyond the direct cost limit of \$150,000 if they are included in the budget request in the full proposal.

***NOTE: Due to NIH policy, there are no exceptions to the above requirements for receipt of extramural funds. Applications with ineligible extramural components may be eliminated from consideration or may have their funding reduced if awarded. Please contact the Bench-to-Bedside team with any eligibility questions.**

Research Areas of Interest:

Awards will be available in topics relevant to the research interests and priorities of funding NIH Offices Institutes/Centers (ICs). If additional award categories are added prior to the LOI due date, these will be highlighted on the BtB Program website

https://ocr.od.nih.gov/btb/btb_program.html. All applications are automatically considered for “general category” funding through the Office of Clinical Research’s BtB funds in addition to any funding consideration by the donor offices listed below.

- (1) **AIDS (Support from Office of AIDS Research)** Exemplary HIV/AIDS projects aligned with the new overarching HIV/AIDS research priorities will be considered for funding (<https://www.oar.nih.gov/hiv-policy-and-research/research-priorities>).
- (2) **Behavioral and Social Sciences (Support from Office of Behavioral and Social Sciences Research):** Projects will be considered for funding that identify promising and emerging lines of behavioral and social sciences research (BSSR) relevant to the health research mission of the NIH. Of particular interest are projects that stimulate new areas of basic BSSR (bBSSR) that address important research questions and facilitate the translation of bBSSR findings to applied research. OBSSR also encourages innovative approaches that improve the precision, accuracy, and efficiency of measures of behavioral and social phenomena.
- (3) **Dietary Supplements (Support from the Office of Dietary Supplements):** Awards in this funding category are designed to promote scientific study of the benefits of dietary supplements in maintaining health and preventing chronic disease and other health-related conditions but not in disease treatment. In the U.S., these ingredients are usually defined as including plant extracts, enzymes, vitamins, minerals, amino acids, and hormonal products that are available without prescription and are consumed in addition to the regular diet.
- (4) **Health Disparities & Minority Health (Support from the National Institute on Minority Health & Health Disparities):** NIMHD will fund projects that support the overall NIH effort to reduce and ultimately eliminate health disparities, improve minority health, and promote health equity. Research projects must focus on 1) improving our understanding of ways to reduce health disparities among racial/ethnic minorities, persons of less privileged socioeconomic status, sexual and gender minorities, or underserved rural residents; or 2) health determinants and mechanisms of health outcomes in racial/ethnic minority populations as defined by the US Census; and 3) projects that focus on social determinants of health and address the role structural racism and discrimination. NIMHD does not support non-human studies.
- (5) **Women's Health (Support from the Office of Research on Women's Health):** One project will be funded that focuses on efforts to improve the health of women through biomedical and behavioral research. The influence of sex and gender on health and disease is of particular interest, specifically comparing and contrasting female and male data from cells, animals, or tissues across a range of research questions. For information on the Trans-NIH Strategic Plan for Women’s Health Research, see: www.nih.gov/women/strategicplan.
- (6) **Cancer Moonshot Funds-NCI Administrative Supplements:** This one-time funding opportunity is associated with the [Cancer MoonshotSM Blue Ribbon Panel](#)

Recommendation B to “create a translational science network devoted exclusively to immunotherapy.” Its purpose is to facilitate highly-collaborative translational immunoncology (IO) research under meritorious, novel Bench-to-Bedside and Back (BtB) projects by leveraging and sharing unique expertise, resources, and/or capabilities of the [Pediatric Immunotherapy Discovery and Development Network \(PI-DDN\)](#) or [Immuno-Oncology Translation Network \(IOTN\)](#) awardees and their NIH intramural research partners.

Under the NIH BtB Program, this funding opportunity invites two-year BtB applications. Every project must include an NIH intramural investigator who is responsible for submitting the BtB letter of intent (LOI) and application online (Proposal Central; PC; <https://proposalcentral.com/>), and at least one extramural **PI-DDN or IOTN investigator** whose eligible parent award has a current competitive segment lasting until June 30, 2023 or beyond. Projects may have single or multiple Program Directors/Principal Investigators (PDs/PIs). Extramural investigators may initiate or lead projects, although the extramural investigator must still have an NIH intramural investigator who submits the BtB LOI and application.

Extramural investigators who need assistance in identifying intramural partners may consult:

- NCI intramural investigators and their research interests at <https://ccr.cancer.gov/>;
- NIH’s database of all current intramural research at <https://intramural.nih.gov/search/index.taf>;
- Intramural Principal Investigator Directory at <http://irp.nih.gov/our-research/principal-investigators>;
- “Search the Studies” website to identify investigators on relevant protocols at <https://clinicalstudies.info.nih.gov/indexpage.aspx>; or

The applicants are encouraged to propose well-balanced extramural-intramural contributions to their innovative BtB IO research projects that are aligned closely with the aims and objectives of the parent **PI-DDN or IOTN Awards**. In the budget section of the BtB application, the scientific relationship and the alignment with the parent award must be described. If the BtB extramural partner is not the PI of the parent PI-DDN or IOTN Award, a letter from the parent award PI must be attached to indicate the PI’s support for the use of supplement fund on the BtB project.

The research areas of interest include, but are not limited to:

- Enhancement in leveraging longitudinal studies at the NIH Intramural Research Program to improve understanding of human immunity that affects cancer evolution and progression.
- Enhancement in translational evaluation of promising discoveries in PI-DDN and IOTN that have potential to advance immunoprevention and immunotherapies for cancers, including rare cancers and cancers with health disparities.

- Employment of state-of-the-art, non-invasive imaging techniques or analytically validated, standardized tumor and immune profiling assay platforms to identify candidate biomarkers of safety (immune-related adverse events and other toxicities), effectiveness and resistance to treatment regimens involving immunotherapies.
- Development of improved cancer immunotherapies, including T cell therapies and cytokine therapies; improved maintenance immunotherapies following hematopoietic stem cell transplantation; or optimized combination therapies involving immunotherapies for tolerable, synergistically efficacious, and durable clinical outcomes.

The Cancer MoonshotSM (CM) Program will support both extramural and intramural research. For extramural partners of the meritorious BtB projects, their eligible PI-DDN or IOTN Awards, that have current competitive segments lasting until June 30, 2023 or beyond, will be supplemented.

The NCI intramural investigators for meritorious BtB projects will be fully supported with the CM fund. For the other NIH Institutes' or Centers' intramural research costs, the CM fund will pay 2/3 of their costs, and the 1/3 would be supported with some of the NIH BtB funds for meritorious projects if funds are available.

[Application Process](#)

Letter of Intent (LOI) (Due May 14, 2021):

The LOI process allows investigators to describe the project idea for pre-submission approval. PIs will receive a decision letting them know if the Scientific Director(s) consider(s) the concept appropriate for consideration as a full proposal. LOIs will be submitted online by the lead intramural PI at <https://proposalcentral.altum.com/default.asp?GMID=68>. Tips for LOI submission can be found at https://ocr.od.nih.gov/btb/btb_program.html.

The following content is required:

1. Project title and all applicable BtB categories
2. If a resubmission, indicate when the proposal was previously submitted
3. Contact information and IC(s)/institution(s) of all intramural and extramural investigators
4. Estimated budget, to show an estimate of annual total costs for each investigator receiving funds
5. Summary of Project, to include overall summary, specific project's aims, approach, and a brief explanation of the contributions of each project collaborator. The character limit is 5,000 including spaces

The lead PI can enable colleagues to access the LOI online during development; however, the lead intramural PI must submit the completed LOI, which will be reviewed by his/her Scientific Director and the Scientific Directors of the other intramural investigators listed on the project. The lead intramural PI will be notified via email as to whether or not the Scientific Director(s) has/have approved the project.

Full Application (Due July 19, 2021):

Once endorsement from the Scientific Director has been received, the system can be accessed for development of the full proposal. Full proposals must be submitted online at <https://proposalcentral.altum.com/default.asp?GMID=68>.

The following information must be entered accurately and completely:

1. **Investigator(s) name(s), IC(s) or institution(s), contact information, and roles**
2. **Abstract:** This section will be automatically pre-populated by summary provided in LOI and may be amended.
3. **Research Proposal:** No more than 6 pages of 11-point Arial text with 0.5-inch margins, including tables and figures, excluding references. The following format is suggested:
 - Significance and background
 - Specific Aims
 - Research strategy, including hypotheses, preliminary results, experimental plan, and milestones {Note: if proposal involves a clinical trial, please include a separate protocol synopsis (limit 2 pages.)}
 - Budget justification
 - Resubmission status {Note: if proposal is a resubmission, reviewer feedback from a prior cycle may be included, with an explanation of changes to the proposed project.}
4. **Budget Form:** download from program website: https://ocr.od.nih.gov/btb/btb_program.html. If applicable, budget requests for extramural partners **must** include existing extramural grant number to receive supplement and **must** include the indirect costs.
5. **NIH Biosketch for all principal and associate investigators**
6. **Checklist:** download from program website: https://ocr.od.nih.gov/btb/btb_program.html
Customer support with online submissions for LOIs and/or full proposals will be provided by *proposalCentral*. Contact information is as follows: e-mail: pcsupport@altum.com; phone: 800-875-2562 (toll-free) from 8:30am - 5:00pm Eastern time, Monday through Friday.

Review of Applications:

A review team, appointed by the Chief Scientific Officer, NIH Clinical Center, will review and rank the proposals. The team will include both intramural and extramural basic and clinical scientists representing multiple institutes and centers and will include expertise in the funded research categories. **Applications with an extramural component will be subject to further review prior to funding to ensure scientific alignment with the parent grant.** Considerations for review will include:

- High quality of science (to be evaluated by the [NIH Enhanced Review Criteria for Research Grants and Cooperative Agreements](#)) with the potential to result in understanding an important disease process or lead to new therapeutic intervention;

- Strong translational science, with the bedside and bench components clearly related; one should lead logically to the next, and both should be strongly developed;
- The proposed translational work has the promise to evolve into an active clinical protocol with patient involvement in the future*;
- Although projects can be exclusively among intramural investigators preferably from more than one IC, collaborations between intramural and extramural investigators will receive priority review;
- The work should be a truly new initiative, not a funding request for work in progress.

****Translational component:** Applicants must explain how the proposed project will involve clinical work with direct patient contact OR how the proposal results will lead to next steps involving clinical work (ultimately with direct patient contact). Involvement at the Clinical Center is a preference but not a requirement.*

Requirements for Funded Projects:

Principal Investigators for awarded projects will be required to submit annual progress reports. Please note that if you were previously the intramural lead on a BtB project and failed to provide a progress report we will not be able to release any additional funds for continuation of the award (i.e. year 2 funds) and will not be able to make any future awards until the reporting requirements are met.

Contact:

Please feel free to contact us by email (BenchtoBedside@mail.nih.gov) with program questions. Additional information may be found on the Bench-to-Bedside program website: https://ocr.od.nih.gov/btb/btb_program.html

Michael M. Gottesman -S
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 Date: 2021.03.15 17:24:33 -04'00'

Michael M. Gottesman, M.D.
 Deputy Director for Intramural Research

John I. Gallin -S
Digitally signed by John I. Gallin -S
 Date: 2021.03.15 12:38:10 -04'00'

John I. Gallin, M.D.
 Associate Director for Clinical Research & Chief Scientific Officer, NIH CC

cc: NIH Institute, Scientific, and Clinical Directors
 Maureen Goodenow, Ph.D., Director, OAR, NIH
 Eliseo J. Perez-Stable, M.D., Director, NIMHD
 Joseph M. Betz, Ph.D., Acting Director, ODS, NIH
 Janine Clayton, M.D., Director, ORWH, NIH
 William Riley, Ph.D., Director, OBSSR, NIH
 Tom Misteli, Ph.D., Director, Center for Cancer Research
 Dinah S. Singer, Ph.D., Deputy Director, Scientific Strategy and Development