

I. Objective

Duke MEDx's purpose is to foster collaborations between faculty members from the Duke School of Medicine and the Pratt School of Engineering. With this request for proposals (RFP), we seek to catalyze inter and trans-disciplinary, early-stage and translational research that **increases insight into; measures; or addresses the effects of environmental exposures on health**. We also wish to encourage collaborations with the Nicholas School of the Environment.

Proposed projects must represent a new collaboration or a new research question for an existing collaboration and demonstrate the leveraging of unique skills and knowledge of all team members. Examples of the types of projects that are in scope are those that develop monitoring devices or sensors, measure and analyze environmental insults or human exposure, investigate physiological responses to environmental insults, or create solutions to ameliorate the impact of environmental stressors on human health. This RFP welcomes early-stage projects that will be competitive for extramural funding from, for example, the [NIH's Climate Change and Health Initiative](#) (the impetus for which is the White House's [Executive Order 14008](#)), the [NSF ORCC](#), and other sponsors such as the [Wellcome organization](#). MEDx particularly encourages those applications that may lead to translational and commercialization events, including the creation of intellectual property, sponsored research, licensing, SBIR/STTR funding, or new company formation.

II. Award Information

Awards will typically be for up to \$50,000 with a 12-month performance period. If the team requests more than \$50,000 (but no greater than \$75,000), the proposal must include a detailed justification and the request must be discussed with the MEDx team prior to submission. MEDx anticipates that it will award three grants.

III. Eligibility Requirements

The project team **must** have at least two and up to three Primary Investigators. While there must be a PI with an appointment in Medicine and one with an appointment in Pratt, they should be joined by a faculty member from Nicholas, or one of the Medicine or Pratt PIs should have a joint appointment in Nicholas. PIs may be regular rank or non-regular rank. If the faculty member does not have and/or requires permission to dedicate time to the project or space to conduct the research, this must be obtained prior to submission. Additionally, we strongly encourage collaborations with extramural partners. For details on how to operationalize these collaborations, please contact us, as MEDx funds cannot be provided in the form of grant support for extramural collaborators.

IV. Research Scope

The proposed projects must include a series of aims that are thematically related, foster collaboration among team members, and as a whole demonstrate inter- or transdisciplinary approaches and translational potential. Topics can range from the level of the individual, e.g. molecular effects, to the population level. Teams may wish to cross-pollinate methods such as (but not limited to) machine learning; omics; modeling; geospatial/satellite data streams; development and application of stressor capture devices, imaging, or biomonitoring tools etc. Please note that the above are examples: they are not prescriptive and do not designate priority areas for this RFP.

V. Application Guidelines

Pre-submission inquiries are mandatory. Applicants must submit the [pre-submission inquiry in the form of a 'Proposal Canvas'](#). Once submitted, the MEDx team will review the material, schedule a consultation with the applicants, and invite applicants for the full submission. The pre-submission 'Proposal Canvas' must be submitted to Duke MEDx (dukemedx@duke.edu). It is strongly recommended to submit this canvas at least 3 weeks prior to the full application deadline so as to have adequate time for scheduling the consultation, receiving feedback, and preparing the full application accordingly. Please name the file using the following format: *lastname1_lastname2_lastname3(if applicable)_canvas*

Full application: Applications must be submitted via a Qualtrics Survey no later than May 18, 2022. At the end of the pre-submission consultation, applicants will be provided with a link and password to access the Qualtrics survey site.

To apply, please submit:

1. A 5-page-or-less proposal (at least 0.5-inch margins, 11-point font or larger, PDF file format) that concisely addresses the following in language accessible to a reader with technical expertise not necessarily in your field:
 - a. **Introduction:**
 - i. What is the problem being addressed, and why is it important for human health? How does this research inform real-life individual and public health outcomes?
 - ii. Who/which communities/beneficiaries would be affected, and how?
 - iii. What is the potential impact of this project; why is it important? How will you measure success?
 - b. **Specific Aims:** state the specific aims of the project
 - c. **Approach:** describe the approach(es), and the novelty of the approach (or the objectives)
 - d. **Collaboration:**
 - i. Describe the team and collaboration
 - ii. How does this collaboration develop novel cross-disciplinary methods, insights, and research approaches that would not have occurred with a traditional, uni-disciplinary investigation?
 - e. **Experience:** how does your experience enable you to approach the problem?
 - f. **Timeline and Milestones:** provide an outline of milestones to be achieved at 6 months and 12 months.
 - g. **Sustainability Plan:** provide an outline of the sustainability plan for the proposed project (e.g. targeted sources of follow-on funding).
2. Bibliography/References (no page limit)
3. A high-level, one-page budget with individual budgets for each investigator. Budgets must indicate personnel, equipment, and other related costs. Please do not indicate indirect costs on budget. **MEDx grants cover only direct costs.**
4. Standard NIH biosketches for all collaborating investigators.

NOTE: Combine items 1-4 into a single PDF in the prescribed order above, and name the file using the following format:

lastname1_lastname2_lastname3 (if applicable)_App

VI. Evaluation Criteria

Applications will be evaluated on their significance to human health; complementarity of the research team; feasibility of the approach; and ability to execute the project in the proposed time-frame.

VII. Reporting Requirements

Awardees will:

1. Submit 6 & 12 month written progress reports.
2. Provide quarterly updates to the MEDx team in informal, verbal meetings.
3. Provide annual progress metrics for a period of 5 years post project completion.

VIII. Budget Guidelines

The budget period is 12 months. Up to \$50,000 in direct costs may be requested. For a larger budget request, see [Section II](#) for instructions. If Institutional Review Board (IRB) or Institutional Animal Care and Use Committee (IACUC) review or approval is required, funding will not be released until such approval is obtained.

1. Grant funds may be budgeted for:
 - a. Research support personnel or students/trainees
 - b. Small equipment, research supplies and core lab costs, or
 - c. Other purposes deemed necessary for the successful execution of the proposed project
 - d. Tuition remission

2. Grant funds may not be budgeted for:
 - a. Salary support for the faculty collaborators
 - b. Effort for students, post-doctoral trainees or fellows on training grant equivalents
 - c. Capital equipment
 - d. Office supplies or communication costs, including printing
 - e. Meals or travel, including to conferences, except as required to collect data
 - f. Professional education or training
 - g. Computers or audiovisual equipment
 - h. Manuscript preparation and submission
 - i. Indirect costs
 - j. Subcontracts to other institutions
 - k. Foreign components, as defined in the NIH Grants Policy Statement
3. Awarded funds must be used to conduct the work proposed. MEDx reserves the right to revoke funding in the event it is determined that funds were not spent in accordance with the approved proposal or if progress are not submitted upon request.

IX. Timeline and Key Dates

1. Mandatory pre-submission canvas submission: No later than May 12, 2022
2. Invited application deadline: May 18, 2022
3. Application review: May/June 2022
4. Awards announced: No later than June 27, 2022
5. Project start: July 1, 2022

X. Contact Information

Please contact Donna Crenshaw or Tarun Saxena at dukemedx@duke.edu with any questions. Please use *MEDx Engineering, Environment, and Health 2022 RFP* as the subject heading.