NIH NATIONAL CANCER INSTITUTE

IMAT INNOVATIVE MOLECULAR ANALYSIS TECHNOLOGIES

PART OF THE CENTER FOR STRATEGIC SCIENTIFIC INITIATIVES

IMAT Mission

Technology-Focused Research

Supports the development of cancer research tools and platforms throughout the technology development pipeline, from inception to validation (excludes biological/clinical hypothesis).

Investigator-Initiated Support

Empowers investigators to identify unmet needs in cancer research and propose novel technological solutions.

Multidisciplinary Portfolio

Solicits ideas for new technologies drawn from a variety of scientific disciplines. Projects include tools related to microscopy, tumor models, biospecimen science, sequencing, synthetic biology, and more.

Unique Review

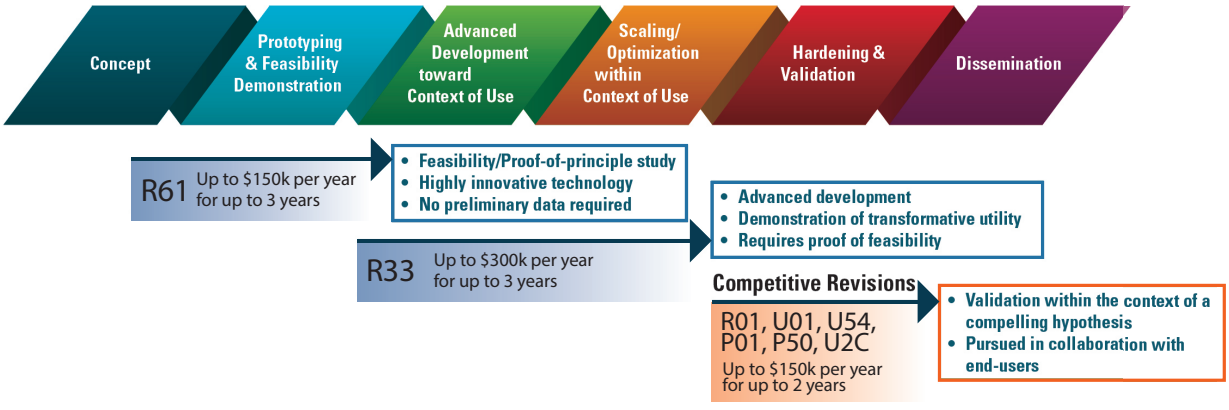
Reviews conducted by a diverse panel of experts that reflect the technical breadth of applications and varied needs in cancer research with consideration for the high risk tolerance of the IMAT program.

High Innovation, High Impact

Encourages development of novel technolgies involving a high degree of technical innovation that could have substantial potential impact on cancer research or clinical care.

Innovative methods and technologies are essential for accelerating basic cancer research and translating those discoveries into tomorrow's patient care. With the goal of encouraging innovation, IMAT supports the development of next-generation analytical methods and tools that have the potential to revolutionize the way cancer research is pursued.

Technology Development Pipeline



Funding Opportunities

Inception → Development → Dissemination

Molecular and Cellular Analysis
R61 and R33 mechanisms
RFA-CA-23-002 and RFA-CA-23-003

Technology development projects that offer novel capabilities for probing, targeting, or measuring molecular and/or cellular features.

Cancer Biospecimen Science
R61 and R33 mechanisms
RFA-CA-23-004 and RFA-CA-23-005

Development of novel technologies that improve the quality and utility of specimens analyzed for cancer research and clinical care. Proposed technologies may introduce new approaches to procure, preserve, or prepare samples or assess pre-analytical degradation of biospecimens and target analytes.

Competitive Revisions

RFA-CA-23-006 through -011

Support to facilitate the integration of IMAT-supported technologies into ongoing basic and clinical research projects.

Active R01, U01, U54, P01, P50, and U2C NCI-supported projects are eligible to apply. Revisions should expand the aims of the parent project and provide independent validation of the IMAT technology.

2023 Due Dates: March 1 and September 1, 2023

Our Investigators

IMAT supports over 100 projects at any given time from diverse scientific fields. Support from the IMAT program has advanced hundreds of cancer-relevant technologies like those developed by the IMAT grantees below.

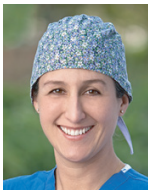
Jenny Zilberberg, PhD
Senior Principal Scientist at Imvax, Inc.

Funding from the IMAT program has enabled us to pursue out-of-the-box ideas to develop a culture platform that supports the ex vivo preservation of patient-derived multiple myeloma cells. We hope that this technological approach will be implemented in the future as a transformative means for pre-clinical and personalized drug evaluation to accelerate therapeutic discoveries and improve patient care.

Kristen E. Naegle, PhD
Associate Professor of Biomedical Engineering and Computer Sciences at the University of Virginia

Funding from the IMAT program has enabled my lab to develop and test a molecular toolkit to produce recombinant, tyrosine phosphorylated proteins. This advance is fundamentally important to our ability to study the effect of tyrosine phosphorylation on protein function. We hope it can additionally be beneficial to the production of phosphospecific antibodies for biomarker use and be expanded for the study of other types of protein modifications in the future.

Melanie Hayden Gephart, MD
Brain Tumor Neurosurgeon at Stanford University Medical Center



IMAT is a unique program that funds innovative proposals with real potential to revolutionize cancer research and treatment. Our work on the small amount of brain tumor DNA in cerebral spinal fluid will allow us to better understand how malignant brain tumors to escape therapy, and could not have been funded through other mechanisms. In addition, IMAT deliberately nurtures collaboration between dedicated cancer researchers, exponentially advancing the field.

Kirk Hansen, PhD
Associate Professor of Biochemistry and Molecular Genetics at the University of Colorado

The IMAT program has allowed us to develop methods that advance extracellular matrix analysis to obtain a detailed view of the tumor microenvironment. Measurements are revealing a level of complexity beyond what was anticipated and insights into metastasis and dormancy. These findings are creating a better understanding of cancer and new strategies for treatment.

For more information, please contact Tony Dickherber or Kelly Crotty:

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