April 18, 2023

The Honorable Patty Murray
Chair
Committee on Appropriations
United States Senate
Room S-128, the Capitol
Washington, DC 20510

The Honorable Susan Collins
Vice Chair
Committee on Appropriations
United States Senate
Room S-128, the Capitol
Washington, DC 205010

The Honorable Tammy Baldwin
Chair
Committee on Appropriations
Subcommittee on Labor, Health and Human Services, Education, and Related Agencies
141 Hart Senate Office Building
Washington, DC 20510

The Honorable Shelly Moore Capito
Ranking Member
Committee on Appropriations
Subcommittee on Labor, Health and Human Services, Education, and Related Agencies
172 Russell Senate Office Building
Washington, DC 20510

The Honorable Kay Granger
Chair
Committee on Appropriations
U.S. House of Representatives
Room H-307, the Capitol
Washington, DC 20515

The Honorable Rosa DeLauro
Ranking Member
Committee on Appropriations
2413 Rayburn HOB
Washington, DC 20515

The Honorable Robert Aderholt
Chair
Committee on Appropriations
Subcommittee on Labor, Health and Human Services, Education, and Related Agencies

Dear Chair Murray, Vice Chair Collins, Chair Granger, Ranking Member DeLauro, Chair Baldwin, Ranking Member Capito, and Chair Aderholt:

The members of the NCATS Alliance (the Alliance) are writing to express our support for robust appropriations in Fiscal Year (FY) 2024 for the National Center for Advancing Translational Sciences (NCATS), one of the 27 Centers and Institutes of the National Institutes of Health (NIH). Congress established NCATS in 2011 with a bold and unique mission – to transform scientific discoveries into new treatments and cures that can be delivered faster to patients by catalyzing the generation of innovative methods and technologies that enhance and accelerate the development, testing and implementation of diagnostics and therapeutics across a wide range of human diseases. In short, NCATS' goal is to get more treatments to more patients more quickly. To achieve these goals, the NCATS Alliance urges that, in FY 2024, Congress allocate to NCATS an **additional** $150 million over its FY 2023 level of $923 million.

The NCATS Alliance is a diverse coalition of organizations with a shared vision of securing for NCATS the resources it needs to accomplish that congressionally assigned mission. The Alliance aims to achieve this through advocacy and education on the critical role NCATS plays in leveraging translational sciences, broadly defined as the field of science that aims to translate findings from the laboratory, clinic, and community into interventions. NCATS' essential role is focusing on what is common across multiple diseases and developing solutions that reduce, remove, or bypass the bottlenecks in biomedical research that are impeding progress toward effective treatments for the rare and common diseases that affect tens of millions of Americans.

NCATS has been a linchpin of the biomedical community for over a decade, making progress on foundational scientific issues by focusing on the scientific and operational roadblocks that slow down research discoveries and their translation into effective therapies for adults and children alike. For children, NCATS' work is particularly impactful as it holds the potential to accelerate the development of therapies (small molecule and gene therapy) to be used early in life, potentially blunting the impact of progressive diseases. For children with catastrophic genetic diseases, this research is even more important as many do not survive long enough to be eligible to benefit from adult research efforts.

NCATS' focus on translational science is unique among the other centers and institutes within the NIH. Through its broadly catalytic efforts and emphasis on high-impact projects, NCATS has accelerated progress on multiple fronts, including (1) advancing progress in gene therapy and gene editing; (2) developing and disseminating new technologies that make preclinical and clinical research more rapid and effective; (3) accelerating research and therapy development in rare diseases, and (4) significantly improving electronic health record and real-world data collection.

If appropriately resourced, NCATS can accomplish its mission by advancing widely applicable solutions for the problems that are slowing progress throughout the biomedical research ecosystem. We, therefore, urge that, in FY 2024, Congress allocate to NCATS an **additional** $150 million over its FY 2023 level of $923 million, resulting in a total of $1.073 billion, or about a 16% increase in funding over FY 2023. Specifically, we encourage you to consider this increase in NCATS funding levels for the following purposes:

- **An additional $50 million for gene therapy and gene editing.** Although considerable progress is being made in gene therapy and gene editing, the field is proving to be far more difficult than anticipated and its tremendous promise is far from being realized. Due to the unique nature of such therapies and technologies, a number of challenges to developing and regulating them exist, contributing to the slower-than-expected pace of final regulatory approval for individual therapies and technologies.[1] All gene therapy and gene editing programs are generally struggling with the same issues and NCATS is uniquely well suited to assemble the multi-stakeholder collaborations needed to resolve those issues and make the solutions available to all gene therapy and gene editing programs, accelerating effective treatments for multiple diseases affecting millions of Americans. An example of how NCATS has already taken steps to solve for this is the Platform Vector-Gene Therapy (PaVe-GT) pilot program which aims to advance a "platform" gene therapy approach for multiple diseases simultaneously. Additionally, NCATS is leading, with the Food and Drug Administration, a public-private partnerships known as the Bespoke Gene Therapy Consortium to develop platforms and standards that will speed the development and delivery of customized, or "bespoke," gene therapies that could treat millions of people with rare diseases.

- **An additional $50 million for pre-clinical translational science**. Despite advances in science, successful clinical trials remain a challenge, and the vast majority of clinical trials fail.[2] In most clinical trials, when positive results are observed in animal and cell models, they are ultimately not replicated in human trial subjects. NCATS is leading the development of humanized preclinical tools, such as Tissue Chips and 3D Bio-Printing models, designed to

[1] *See* Daniela Drago et al., *Global regulatory progress in delivering on the promise of gene therapies for unmet medical needs*. 21 Molecular Therapy Methods Clinical Development 524 (Jun 11, 2021).
[2] *See* Duxin Sun, et al., *Why 90% of Clinical Drug Development Fails and How to Improve it?* 12 ACTA PHARMACEUTICA SINICA B 3049, 3050 (July 11, 2022).

replicate much more closely human tissues and organs and better assess the impact a therapeutic agent will have on them. These pre-clinical tools should result in data that is far more predictive of positive results in human trials. Additionally, through programs like the Therapeutics for Rare and Neglected Diseases (TRND), NCATS, in collaboration with industry and other stakeholders, was able to shepherd two therapies to regulatory approval, including a gene therapy for the rare pediatric condition aromatic L-amino acid decarboxylase (AADC) deficiency.[3] Notably, in 2019 alone, the TRND program led the development of 10 different therapies to human-based clinical trials, shepherding the therapies through the so-called "valley of death."

- **An additional $30 million for rare disease research innovation**. NCATS is the NIH home for the roughly 10,000 rare diseases that afflict approximately 30 million Americans. The Division of Rare Diseases Research Innovation within NCATS facilitates and coordinates NIH-wide rare disease programs and oversees the NIH Genetic and Rare Diseases (GARD) Information Center, the nation-wide Rare Diseases Clinical Research Network (RDCRN), and the Rare Diseases Registry Program. Additionally, for individuals with rare diseases, simply receiving a diagnosis for their disease is a journey that can take up to 4.8 years and more than 7 specialists.[4] This so-called "diagnostic odyssey" not only plagues the individual that has a rare disorder but also adds increased costs to the overall health system. Through the use of sophisticated data collection and analysis, NCATS intends to cut down on the time it takes for an individual to actually receive that diagnosis and shorten the diagnostic odyssey.

- **An additional $20 million to leverage the power of data and information to address broad scientific challenges**. Since its establishment in December 2011, NCATS has led the development and implementation of robust clinical data-sharing programs that are making real differences in clinical outcomes and public health. Most recently, NCATS led the development of the National Clinical Cohort Collaborative (N3C), the largest collection of secure and deidentified data in the United States, with data from more than 18 million patients, supporting 3000 researchers at over 200 medical centers and academic institutions across the country, including NCATS' Clinical and Translational Science Awards (CTSA) Program hubs. Over the last three years, N3C has been instrumental in disseminating a wealth of data to clinical institutions across the country, contributing to foundational research concerning COVID-19 therapeutics and diagnostics. N3C has formulated an approach that enables data silos to be linked without sharing sensitive identifiable information, enabling public-private data sharing, intergovernmental data sharing, sharing among clinicians, researchers, and data scientists demonstrating a novel approach for collaborative health research and data analysis, all without requiring a central data repository. Going forward, the success of the N3C program can be leveraged to accelerate research and discovery for other high-priority diseases such as cancer, Alzheimer's Disease, heart disease, and stroke. Providing NCATS with this additional funding will enable the N3C program to bolster data gathering and analytics efforts to accelerate discovery on a variety of diseases.

Conclusion

In 2011, Congress tasked NCATS with a unique mission that is critically important to the health of the American people and the success of the whole biomedical innovation system. Despite being seriously under-resourced since its inception, NCATS has made tremendous strides in advancing the translational

[3] Received approval by the European Commission.
[4] THE DIAGNOSTIC JOURNEY FOR RARE DISEASE PATIENTS: SCALING SUSTAINABLE SOLUTIONS. AVALERE. June 2021., https://avalere.com/wp-content/uploads/2021/07/Diagnostic_Journey_for_RD_Patients-June-2021.pdf

science and technologies needed to move all biomedical research and development much faster toward effective treatments for rare and common diseases. Congress now has the opportunity to provide NCATS with the funding it needs to accomplish even more and achieve its goal of getting more treatments to more people more quickly.

Sincerely,

NCATS Alliance