NIH RePORTER Announcement:

A "No Cost Extension" indicator is now available on RePORTER! The indicator appears in the "Other Information" section on the "Project Details" page.

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Project Details

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Bridge2AI: Salutogenesis Data Generation Project

Project Number	Contact PI/Project Leader	Awardee Organization
1OT2OD032644-01	LEE, AARON Other PIs	

Description

Abstract Text

Abstract Text The Artificial Intelligence Ready and Exploratory Atlas for Diabetes Insights (AI-READI) project is one of the data generation projects in the NIH Common Fund's Bridge2AI program. The project seeks to create a flagship ethically-sourced dataset to enable future generations of artificial intelligence/machine learning (AI/ML) research to provide critical insights into type 2 diabetes mellitus (T2DM), including salutogenic pathways to return to health. The ability to understand and affect the course of complex, multi-organ diseases such as T2DM has been limited by a lack of well-designed, high quality, and large multimodal datasets. The team of investigators will aim to collect a cross-sectional data of 4,000+ people and longitudinal data from 10% of th

study cohort across the US. The study cohort will be balanced for diabetes disease stage. Data collection will be specifically designed to permit downstream pseudotime manifold analysis, an approach used to predict disease trajectories by collecting and learning from complex, multimodal data from participants with differing disease severity (normal to insulin-dependent T2DM). The long-term objective for this project is to develop a foundational dataset in diabetes, agnostic to existing classification criteria, which can be used to reconstruct a temporal atlas of T2DM development and reversal towards health (i.e., salutogenesis). Six cross-disciplinary project modules involving teams located across eight institutions will work together to develop this flagship dataset. All data will be optimized for downstream AI/ML research and made publicly available. . The AI-READI project will also engage in a tribal consultation to address barriers and facilitators of participation with the goal of collecting similar data within a Native American cohort in an ethical and respectful manner. Specific aims include 1) Collect and share the dataset for AI/ML research according to the Findable, Accessible, Interoperable, Reusable (FAIR) data principles, 2) Create a model for developing large scalable datasets, and 3) Increase access to and quality of AI/ML research by recruiting and training personnel.

Public Health Relevance Statement

Public Health Relevance Statement Recent advances in artificial intelligence (AI) research are poised to provide breakthrough discoveries, but have been limited by the lack of large, well-characterized comprehensive datasets that capture molecular, physiological, pathological, and clinical at various stages of illness. To address these challenges, the AI-READI team of investigators will generate an ethically-sourced and unique dataset with many types of data collected from patients with different severities of type 2 diabetes mellitus (T2DM), which will enable key discoveries about the trajectory of this disease

and how improvements to health (i.e., salutogenesis) can be promoted over time. The project will train future scientists in AI-based research and establish best practices for the generation of future datasets that are ethically sourced and accessible for responsible and scientifically valid use by the greater research community.

NIH Spending Category

American Indian or Alaska Native

Bioengineering Clinical Research

Data Science Diabetes Health Disparities

Machine Learning and Artificial Intelligence

Minority Health

Networking and Information Technology R&D (NITRD)

Prevention

Project Terms

Address Affect Artificial Intelligence

Asian Atlases Awareness Behavioral

Black race Bridge to Artificial Intelligence

Classification Clinical Cohort Studies

Collaborations Communities Complex

Consultations Data Data Collection

Data Set Development Diabetes Mellitus

Disease Ethics FAIR principles

Read More

Details

Contact PI/ Project Leader

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Other PIs

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Country
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Department Type
OPHTHALMOLOGY

Organization Type
SCHOOLS OF MEDICINE

State Code
WA

Congressional District
07

Other Information

Opportunity Number
OTA-21-008

Study Section
Data Coordination, Mapping, and Modeling[DCMM]

Fiscal Year
2022

Award Notice Date
01-September-2022

Administering Institutes or Centers
NIH Office of the Director

Assistance Listing Number
93.310

DUNS Number
605799469

UEI
HD1WMN6945W6

Project Start Date
01-September-2022

Project End Date
31-August-2025

Budget Start Date
01-September-2022

Budget End Date
31-August-2025

No Cost Extension
N

Project Funding Information for 2022

Total Funding
$5,026,499

Direct Costs
$4,569,437

Indirect Costs
$457,062

Year	Funding IC	
2022	NIH Office of the Director	$5,026,499

NIH Categorical Spending

Click here for more information on NIH Categorical Spending

Funding IC	FY Total Cost by IC	NIH Spending Category
RM	$5,878,533	3641; 3584
RM	$7,838,044	44; 101; 176; 4531; 224; 4372; 329; 701

Sub Projects

No Sub Projects information available for 1OT2OD032644-01

Publications

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No Publications available for 1OT2OD032644-01

Patents

No Patents information available for 1OT2OD032644-01

Outcomes

The Project Outcomes shown here are displayed verbatim as submitted by the Principal Investigator (PI) for this award. Any opinions, findings, and conclusions or recommendations expressed are those of the PI and do not necessarily reflect the views of the National Institutes of Health. NIH has not endorsed the content below.

No Outcomes available for 1OT2OD032644-01

Clinical Studies

No Clinical Studies information available for 1OT2OD032644-01

News and More

Related News Releases

No news release information available for 1OT2OD032644-01

History

No Historical information available for 1OT2OD032644-01

Similar Projects

No Similar Projects information available for 1OT2OD032644-01