

Message from the JHU AI & Technology Collaboratory for Aging Research:

We are excited to announce that we are releasing requests for proposals on January 10, 2022. This is a national pilot project competition seeking to fund promising Artificial Intelligence and technology projects that improve the health and well-being of older adults. The JH AITC welcome applications from investigators with engineering, clinical, nursing, public health, and business backgrounds as well as applications from private companies, research organizations, and tech startups. Please visit [Hopkins AITC for Aging Research \(jhu.edu\)](#) for details about the program and application instructions. Proposed budgets can range up to \$200,000 over 1-2 years. Direct links to the requests for pilot proposals are here:

- [Pilot A Funding: Alzheimer's Disease and Related Dementia – Hopkins AITC for Aging Research \(jhu.edu\)](#)
- [Pilot B Funding: Geriatrics and Age-Related Conditions – Hopkins AITC for Aging Research \(jhu.edu\)](#)

Please contact Ann Wiker with questions about these funding opportunities: awiker@jhu.edu. An informational/Q&A webinar for prospective pilot applicants will be held January 18, 2022 at 3pm. Webinar Registration Link: <https://roseliassociates.zoomgov.com/meeting/register/vJIsf--qpjgoGVXtWxxiBDkMDBvpipVtVsE>

The Johns Hopkins Artificial Intelligence and Technology Collaboratory (JH AITC)

Request for Applications, 2021-2022

RFP for Pilot A: Alzheimer's Disease and Related Dementia

The Johns Hopkins Artificial Intelligence and Technology Collaboratory (JH AITC) is seeking proposals that facilitate the rapid development and implementation of novel artificial intelligence (AI) and technology solutions that improve the health and well-being of older persons with Alzheimer's Disease and related disorders (AD/ADRD). The JH AITC welcomes applications from investigators with engineering, clinical, nursing, public health, and business backgrounds and proposes funding approximately \$1,000,000 for pilot projects in 2022. Proposed budgets can range from \$10,000-200,000 over one to two years. Applicants from under-represented racial and ethnic groups, women, and individuals with disabilities are encouraged to apply. Acceptable proposals must demonstrate some viable pathway towards product development and must prioritize the use of engineered and AI based approaches such as robotics, machine learning, big data analytics, image and biometrics scanning, speech and natural language processing, integrated platforms, mobile/smart devices and apps, and nanobiotechnologies. Emergent technologies, as well as the adaptation of existing technologies or AI approaches to address a novel AD/ADRD-related problem, are encouraged. Areas of programmatic interest for funding from this pilot core along with examples of potential projects are listed below.

Areas of Programmatic Interest

AD/ADRD Care and Engagement

- Use of integrated platforms to enhance communication between patients, their advocates, and their providers
- Use of sensing technology/smart devices within home or facility environments to detect, triage, and alert on change in physical/behavioral/cognitive status
- Validation and assessment of methods for assessing, monitoring, and alleviating neuropsychiatric symptoms in dementia
- AI-based precision dementia care planning using EMR data analytics

AD/ADRD Diagnostics and Assessment

- Classification of dementia by type and prognostic prediction of course
- Risk prediction tools for use in patient panels to identify probable dementia in non-identified/non-diagnosed cases using available EHR data
- Risk prediction for likelihood of surgical success, risk, and resilience
- Prediction of future cognitive impairment among cognitively normal persons

AD/ADRD related System Management and Administration

- Analytics to detect health care disparities in given patient population
- Population health monitoring of AD/ADRD patient panels
- Predictive analytics for prospective health care expenditure and population risk for managed care systems

AD/ADRD Caregiver and Workforce Support

- Virtual/augmented/mixed reality for skills training for care providers
- Virtual, integrated platforms for family caregiver dementia support, education
- Technology to enable clinical skills and diagnostic capabilities in resource limited areas
- AI to bridge and support communication between medical and long-term services
- Platforms to support caregiver task management and financial planning/support

***Of note, these pilot awards are not meant to fund projects related to geriatrics and age-related conditions. See Pilot Core B RFP for geriatrics and age-related funding opportunities.

Resource Access: A broad variety of resources are potentially available to facilitate development and completion of pilot projects.

- clinical research personnel to assist with the development and implementation of a clinical study
- a registry of older adults from which to recruit
- older adult stakeholders from urban and rural areas
- a network of potential research subjects from these areas
- technology development and feasibility testing
- data base, data collection, and data analytical expertise
- business community connections and business development opportunities

Application Process:

A common application process is available through this link. The deadline for submitting applications is February 18, 2022. Further information about this program and about JH AITC resources can be directed to Awiker@jhu.edu.

The Johns Hopkins Artificial Intelligence and Technology Collaboratory (JH AITC)

Request for Applications, 2021-2022

RFP for Pilot B: Geriatrics and Age-Related Conditions

The Johns Hopkins Artificial Intelligence and Technology Collaboratory (JH AITC) is seeking proposals that facilitate the rapid development and implementation of novel artificial intelligence (AI) and technology solutions that improve the health and well-being of older persons. The JH AITC welcomes applications from investigators with engineering, clinical, nursing, public health, or business backgrounds and proposes funding approximately \$475,000 for pilot projects in 2022. Proposed budgets can range from \$10,000-200,000 over one to two years. Applicants from under-represented racial and ethnic groups, women, and individuals with disabilities are encouraged to apply. Acceptable proposals must demonstrate some viable pathway towards product development and must prioritize the use of engineered and AI based approaches such as robotics, machine learning, big data analytics, image and biometrics scanning, speech and natural language processing, integrated platforms, mobile/smart devices and apps, and nanobiotechnologies. Emergent technologies, as well as the adaptation of existing technologies or AI approaches to address aging related health problems, are encouraged. Areas of programmatic interest for funding from this pilot core along with examples of potential projects are listed below.

Areas of Programmatic Interest

Patient Care and Engagement

- Personalized diagnostics and treatment
- Behavior training for exercise compliance
- Optimal aging and resiliency
- Frailty and sarcopenia prevention
- Nutritional optimization
- Social engagement
- Telemedicine
- Safety at home

Diagnostics and Assessment

- Geroscience diagnostics approaches
- Polypharmacy detection and treatment
- Pre-procedure risk assessment
- Comorbidity risk assessment

- Early detection of frailty

System Management and Administration

- Clinical workflows
- Population health monitoring
- Rural and urban management systems
- Expenditure and population risk
- Detection of healthcare disparities
- Provider alerts and decision support

Caregiver and Workforce

- Caregiver wellness
- Caregiver education and skills training
- Caregiver emotional and financial support
- Provider training and continuing education
- Communication between diverse services

***Of note, these pilot awards are not meant to fund projects related to Alzheimer's disease (AD) or other dementias. See PILOT Core A RFP for AD/ADRC related funding opportunities.

Resource Access: A broad variety of resources are potentially available to facilitate development and completion of pilot projects.

- clinical research personnel to assist with the development and implementation of a clinical study
- a registry of older adults from which to recruit
- older adult stakeholders from urban and rural areas
- a network of potential research subjects from these areas
- technology development and feasibility testing
- data base, data collection, and data analytical expertise
- business community connections and business development opportunities

Application Process:

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