

## 2018 Alzheimer's Association Grant Awards and Strategic Research Initiatives

### — Portfolio Profile

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In aggressive pursuit of its vision of a world without Alzheimer's, the Alzheimer's Association made its largest-ever research investment in 2018 with grants of over \$30 million to 131 scientific investigations. As the world's leading nonprofit funder of Alzheimer's research, the Association is accelerating the field toward a world without Alzheimer's.

Investments in 2018 include awards to 112 projects funded through the International Research Grant Program. The additional 19 grants are strategic research initiatives developed in partnerships with other organizations.

Since 1982, the Alzheimer's Association has invested over \$435 million in more than 2,900 scientific investigations worldwide. Currently, the Association is investing over \$160 million in more than 450 best-of-field active projects in 25 countries.

#### International Research Grant Program- Research Categories

This represents proposals ranked highest by a peer-reviewed process in an extremely competitive field of 533 applications that were submitted from 1,160 pre-proposal ideas or letters of intent. Grant information by research categories and specific grant competition includes-

**Molecular Pathogenesis and Physiology of Alzheimer's Disease and Alzheimer's Disease-related Dementia – 39%** of the funded projects are exploring disease-related processes including brain inflammation and immunity, cellular transport mechanisms, genetics and the production of beta-amyloid. These projects may also examine the cellular properties and functions that normally protect and maintain neurons in the brain.

**Diagnosis, Assessment and Disease Monitoring – 18%** of the projects are investigating brain imaging, fluid biomarkers including blood tests, and clinical tools that may result in earlier and more accurate diagnoses, timelier interventions, and effective disease monitoring.

**Translational Research and Clinical Interventions – 23%** of the projects are exploring novel treatment strategies and non-drug interventions.

**Dementia Care and Impact of Disease, including population studies – 20%** of the projects are studying ways to improve care for people with dementia through new technologies and exploring the values and customs of diverse cultures that impact the use of health services. The population study projects are examining various factors that may contribute to Alzheimer's and other dementias, including blood vessel damage and genetic risk factors.

#### International Research Grant Program- Specific Grants Competitions

*(Number of grants per competition indicated in parentheses)*

**(26) Alzheimer's Association Research Grants (AARG)** to fund investigators who are less than 15 years past their doctoral or medical degree, or investigators that are new to the Alzheimer's and related dementias field of research. The purpose of this program is to provide funding for innovative ideas that will develop preliminary or pilot data, to test procedures and to develop hypotheses.

**(5) Alzheimer's Association Research Grants-New to the Field (AARG-NTF)** funds investigators who are over 10 years since last terminal degree and are new to Alzheimer's and related dementia field of research.

**(7) Alzheimer's Association Research Grants to Promote Diversity (AARG-D)** similar to the AARG, with focus on investigators who are currently underrepresented at academic institutions in Alzheimer's or related dementias research. The award objective is to increase the number of highly trained investigators from diverse backgrounds whose basic, clinical and social/behavioral research interests are grounded in the advanced methods and experimental approaches needed to solve problems related to Alzheimer's and related dementias in general and in health disparities populations.

**(23) Alzheimer's Association Research Fellowships (AARF)** to support exceptional researchers who are engaged in their post-graduate work (i.e. postdoctoral fellows) and before they have their first independent faculty positions (i.e. Assistant Professor) with the goal of bridging the fellow to a faculty position in research.

**(7) Alzheimer's Association Research Fellowships to Promote Diversity (AARF-D)** similar to the AARF, with focus on increasing support to exceptional researchers who are currently underrepresented at academic institutions in Alzheimer's or related-dementiasresearch.

**(6) Alzheimer's Association Clinical Fellowships (AACSF)** to support research training in Alzheimer's and related dementias for clinical fellows who have completed their residency (MD), postdoctoral fellowship (PhD), or both (MD/PhD). For the purpose of this fellowship, clinical research is defined as patient- oriented research conducted with human subjects, or translational research specifically designed to develop treatments or enhance diagnosis of neurological disease.

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### International Research Grant Program- Specific Grants Competitions contd.

(1) **Alzheimer's Association Clinical Fellowship to Promote Diversity (AACSF-D)** similar to the AACSF, with focus on increasing support to exceptional clinical fellows who are currently underrepresented at academic institutions in clinical research training in Alzheimer's and related dementias.

(1) **Alzheimer's Innovation Award (AIA)** award in collaboration with Johnson and Johnson innovation to promote novelty in new drug discovery and development.

(17) **The Pilot Awards for Global Brain Health Leaders** is a joint effort of the Alzheimer's Association and Global Brain Health Initiative (GBHI) to advance brain health leaders' innovative and unique projects that create social change.

(4) **Zenith Fellows Awards (ZNTH)** to support senior scientists who have made significant contributions to the field of Alzheimer's and related dementia research, and who continue to pursue promising lines of investigation in disease mechanisms, diagnosis, novel treatments, and quality care.

(1) **Alzheimer's Combination Therapy Opportunities (ACTO)** aims to provide pilot funding to explore combination therapy that targets brain inflammation and nerve cell loss in Alzheimer's. The grant was made possible through a joint research funding initiative created by the Alzheimer's Association and the Alzheimer's Drug Discovery Foundation to support clinical trials combining multiple treatment approaches.

(1) **Alzheimer's Association Sex and Gender in Alzheimer's (SAGA)** research grant awards are to advance understanding of the disproportionate effect of Alzheimer's disease on women. SAGA grants are investigating how gender- and sex-related biology, genetics and lifestyle contribute to Alzheimer's. This grant was awarded in partnership with the Women's Alzheimer's Movement.

(8) **Part the Cloud Translational Research Funding for Alzheimer's Disease (PTC)** awards in partnership with the Part the Cloud initiative to increase research efforts in Phase I and Phase II clinical trials directed towards Alzheimer's disease and other dementias internationally and also to accelerate the discovery and testing of innovative compounds to be used for interventions in the earliest stages of Alzheimer's. These awards have been made possible by funding from Part the Cloud, benefiting the Alzheimer's Association.

(5) **Tau Pipeline Enabling Program (T-PEP)** awards, in partnership with the Tau Consortium, to accelerate the discovery of potential new therapies for diseases related to tau protein including Alzheimer's, Progressive Supranuclear Palsy (PSP) etc.

### International Research Grant Program- Peer-Review Evaluation

The Alzheimer's Association Medical and Scientific Relations Division engages a panel of volunteer scientists to evaluate the merits of each proposal anonymously. More than 675 reviewers from 31 countries provided over 1,453 reviews in 2018. The Alzheimer's Association working with the Medical and Scientific Advisory Council (MSAC) evaluates the peer review process and makes recommendations on each year's awards so that the overall portfolio covers established research areas and moves the field forward in important new directions. The Association estimates that approximately 28% percent of the proposals received in 2018 deserved funding. 21% of projects were supported with available resources.

Research grants awarded by the Alzheimer's Association International Research Grant Program have indirect costs capped at 10%. The Association strictly enforces that at least 90% of the grant goes directly to funding the research itself.

### Strategic Research Initiatives

Strategic Research Initiatives are large commitments the Alzheimer's Association makes to help advance high-impact research projects. We leverage our insight, global network and philanthropic investments to proactively identify, accelerate and enhance investigations with elevated potential for advancing the entire field of dementia research. To advance emerging issues and facilitate global collaboration, in 2018 the Association supported **19 new and ongoing studies** that include-

**Alzheimer's Disease Neuroimaging Initiative (ADNI)** is to discover, standardize, and validate biomarkers for AD clinical treatment trial. Support has been provided for **ADNI3**.

**Alzheimer's Prevention Initiative (API) Generation Study** to determine whether therapies targeting amyloid may prevent or delay Alzheimer's symptoms in people who are at high genetic risk for developing the disease because they have the APOE4 gene, a known risk gene for Alzheimer's.

**Autosomal Dominant and Late Onset Alzheimer's Disease (DIAN-ADNI) Comparison Study** to characterize similarities and differences in biomarkers, memory changes and disease

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### Strategic Research Initiatives Contd.

progression in individuals with genetically-based, younger-onset Alzheimer's disease and individuals with the more common sporadic, late-onset Alzheimer's disease.

**Dominantly Inherited Alzheimer's Network Trials Unit (DIAN-TU)** to test therapeutics on individuals with genetically-based, younger-onset Alzheimer's and to expand biomarker use. With innovative trial designs that build on DIAN-TU, the **DIAN-TU Next Generation (NexGen)** study will lay the foundation for the next generation of clinical trials to accelerate timelines and to incorporate amyloid and tau imaging as well as other emerging biomarkers. **DIAN-TU Dose Escalation Study** is part of the DIAN-TU Next Generation prevention trial testing therapies and diagnostic approaches in people with genetically-based, younger-onset Alzheimer's disease. The Dose Escalation Study is an approach to increase the dose of the experimental treatment to maximize its therapeutic benefit.

### Global Alzheimer's Association Interactive Network

**(GAAIN)™** is a cloud-based, digital network that provides researchers access to a vast repository of shared Alzheimer's research data and the sophisticated analytical tools and computational power needed to analyze it. Support from the Alzheimer's Association will facilitate data sharing through GAAIN for the Australian Imaging, Biomarkers & Lifestyle Study of Aging (AIBL).

**Imaging Dementia Evidence for Amyloid Scanning (IDEAS) Study** to determine the clinical value of using brain amyloid PET imaging in diagnosing and managing treatment of individuals age 65 and older with mild cognitive impairment (MCI) or dementia of uncertain cause. The IDEAS Study is led by the Alzheimer's Association and managed by the American College of Radiology (ACR) and the American College of Radiology Imaging Network (ACRIN). The IDEAS study and **The Brain Health Registry (BHR)**- an online registry- are working together to engage interested IDEAS participants with BHR to monitor progression of overall health and cognition. The Alzheimer's Neuroimaging and Genetics Initiative (ANGI) will collect genetic information from IDEAS participants.

**Longitudinal Evaluation of Amyloid Risk and Neurodegeneration (LEARN)** is a first-of-its-kind natural history study to determine whether the rate of cognitive decline during the development of Alzheimer's is directly related to biological markers, such as beta-amyloid and tau. LEARN is a companion study to the Anti-Amyloid Treatment in Asymptomatic Alzheimer's Disease (A4) Study.

**Quality Control Program for CSF Biomarkers (QC-CSF)** to improve the quality of all aspects of cerebrospinal fluid (CSF) biomarker measurements, enabling values to be harmonized worldwide and helping both clinical trials and standard medical practice. QC-CSF is a key initiative of the Alzheimer's Association's Global Biomarker Standardization Consortium (GBSC).

**Study of Knowledge and Reactions to Amyloid Testing (SOKRATES)** will investigate how learning amyloid imaging status impacts social relationships, and perceptions of stigma and discrimination for those individuals.

**U.S. Study to Protect Brain Health Through Lifestyle Intervention to Reduce Risk (U.S. POINTER)** to evaluate whether lifestyle interventions that simultaneously target many risk factors protect cognitive function in older adults (60-79 years old) who are at increased risk for cognitive decline. U.S. POINTER is the **first such study** to be conducted in a large group of Americans across the U.S.

**Understanding Vascular Contributions to Cognitive Impairment and Alzheimer's Disease (VCID)** to further investigate how accumulation of beta-amyloid in the blood vessels of the brain and cellular stress mechanisms are involved in Alzheimer's and related dementias.

**Ante-Amyloid Prevention of Alzheimer's Disease Study Planning Grant (A3)** is a prevention trial to treat individuals as young as 55 who are at risk for late-onset Alzheimer's; This planning grant lays essential groundwork as to how to identify the study population, select them for participating in the trial and how the potential treatment effects would be measured. Individuals with very early amyloid deposition in their brain, but cognitively normal will receive biomarker assessments and an experimental anti-amyloid treatment.

**Japanese Alzheimer's Disease Neuroimaging Initiative (J-ADNI)** is to discover, standardize, and validate biomarkers for AD clinical treatment trials. The goal is to track changes over time in biomarkers in MCI and early AD in the population of Japan.

**TriBEKa** is a multi-national study to develop comprehensive models of Alzheimer's disease focused on starting in midlife. Three leading European dementia research centers in Barcelona, Edinburgh and Karolinska are collaborating to analyze a large collection of normal and Alzheimer's-related imaging data and biological samples in individuals starting at age 40 to model disease onset and progression, as well as identify modifiable and non-modifiable risk factors for Alzheimer's.