

## 2013 Alzheimer's Association® Grant Awards and Strategic Research Initiatives

### — Portfolio Profile

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In 2013 the Alzheimer's Association made investments totaling approximately \$14.8 million in more than 75 scientific investigations. These include grant awards to 66 projects funded through its International Research Grant Program (IRGP), representing proposals ranked highest by peer-reviewers in an extremely competitive field of 605 applications (invited from over 1,000 LOIs), and strategic research initiatives.

Since 1982 the Alzheimer's Association has invested over \$315 million in more than 2,200 scientific investigations. As of August 2013, more than 350 of these investigations are on-going in 22 countries.

#### Research themes

- ⇒ 47 percent of the funded projects are exploring the molecular mechanisms that contribute to disease-related processes including the production of beta-amyloid, the mediators of beta-amyloid's toxicity and its adverse effect on cell-to-cell communication, the abnormal chemical alterations of tau, and the normal functions of related proteins implicated in Alzheimer's disease pathology. These projects may also examine the cellular properties and functions that normally protect and maintain neurons in the brain.
- ⇒ 6 percent of the projects are examining various factors that may contribute to Alzheimer's and other dementias, including blood vessel damage and genetic risk factors.
- ⇒ 23 percent of the projects are investigating brain imaging, biomarkers, and clinical tools that may result in earlier and more accurate diagnoses, timelier interventions, and effective disease monitoring.
- ⇒ 20 percent of the projects are exploring novel treatment strategies, non-pharmacological interventions, ways to improve care for people with dementia through new technologies, and the values and beliefs of diverse cultures that impact the use of health services.
- ⇒ 4 percent of the projects are studying ways to improve care for people with dementia through new technologies and exploring the values and beliefs of diverse cultures that impact the use of health services.

#### Awards by category

**8 Investigator-Initiated Research Grants (IIRG)** have been awarded to established scientists exploring important questions across the entire research spectrum, from basic neurobiology and genetic risk factors to disease-modifying treatments and evidence-based, quality care.

**37 New Investigator Research Grants (NIRG)** are growing the next generation of scientists with funding that enables them to gather preliminary data, test procedures, and develop hypotheses. These grants advance research while supporting the early-career development of researchers who have earned their doctoral degrees within the last 10 years.

#### **2 Everyday Technologies for Alzheimer Care (ETAC)**

**Grants** have been awarded in partnership with Intel Corporation to investigators who are exploring how computers, monitoring devices, and other electronics can be used to meet the day-to-day needs of people with Alzheimer's disease and those who care for them.

**2 New Investigator Research Grants to Promote Diversity (NIRGD)** are funding investigators currently underrepresented at academic institutions in Alzheimer's or other dementias research. They are conducting basic, clinical, and social/behavioral research grounded in the advanced methods and experimental approaches needed to solve problems related to Alzheimer's.

**2 Mentored New Investigator Research Grants to Promote Diversity (MNIRGD)** are helping close the gap between diverse and non-diverse investigator populations, as well as providing a forum for further training and support for a senior scientist. The MNIRGD is intended to enhance the capacity of scientists to conduct basic, clinical, and social/behavioral research.

**5 Understanding the Development and Devising Treatments for Alzheimer's Disease in Individuals with Down Syndrome (DS/AD) Grants** in 2 award programs as part of a new initiative to understand the development of Alzheimer's in individuals with Down Syndrome: **3 DS/AD Investigator Initiated (DSADIIP) Grants** are funding established scientists, and **2 DS/AD New Investigator (DSADNIP) Grants** are supporting the next generation of scientists. This initiative was co-funded by the Alzheimer's Association, Global Down Syndrome Foundation, and the Linda Crnic Institute for Down Syndrome.

**5 Zenith Fellows Awards (ZNTF)** have been made to senior scientists who have made significant contributions to the field and who continue to pursue promising lines of investigation about disease mechanisms, diagnosis, novel treatments, and quality care.

**2 Part the Cloud Translational Research for Alzheimer's Disease (PCTR) Grants** and **3 Part the Cloud Translational Research Bridge for Alzheimer's Disease (PCTRB) Grants** are funding translational research in Northern California in partnership with the Part the Cloud Gala. The Alzheimer's Association launched this new initiative to increase the research efforts in Phase I clinical trials directed toward Alzheimer's disease and other dementias. In addition, Part the Cloud has provided support for the Whole Genome Sequencing in the Alzheimer's Disease Neuroimaging Initiative (WGS-ADNI), a project to sequence the whole genome of more than 800 individuals who are part of the ADNI cohort. The genome data is available on an open-access platform to researchers around the world.

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### Strategic Research Initiatives

A leader in Alzheimer's disease research, the Alzheimer's Association has launched four **New Strategic Research Initiatives** this year to advance emerging issues and establish partnerships around the globe, including the:

**Hippocampal Label Expansion Project** to standardize and validate measures of changes in brain volume;

**Whole Genome Sequencing of ADNI (WGS-ADNI)** participants to obtain the full genome sequencing of more than 800 people, the largest ever undertaken in a single disease;

**Computerized Cognitive Composite for Clinical Trials** project to develop tools for early diagnosis; and

**Robert Katzman, MD, Clinical Research Training Fellowship in Alzheimer's Research**, a collaboration with the American Brain Foundation/American Academy of Neurology to support training for physicians in Alzheimer's disease-related medicine.

In addition, the Alzheimer's Association continues to provide support for **ongoing Strategic Research Initiatives** that are advancing the overall field and growing global collaborations to address Alzheimer's, including the:

**Alzheimer's Disease Neuroimaging Initiative (ADNI-2)** to monitor and assess biological changes associated with Alzheimer's disease, including imaging, cerebrospinal fluid, genetics, and many other measures (started October 2011)

**Alzheimer's Association Multi-Center Program Grant Awards (MCPG)** to enable four scientists to work collaboratively on a common project (started January 2012); and

**Dominantly Inherited Alzheimer's Network Trials Unit (DIAN-TU)** to test therapeutics on individuals with familial Alzheimer's disease (started February 2012).

### Peer-reviewed evaluation

The Alzheimer's Association Medical and Scientific Relations Division engages a panel of three or four volunteer scientists to evaluate the merits of each proposal anonymously. More than 1,400 reviewers participated in 2013. The Association's Medical and Scientific Advisory Council (MSAC) ensures the fairness of these evaluations and fine-tunes each year's awards so that the overall portfolio covers established research areas and moves the field forward in important new directions. Based on the peer-review scores and the MSAC's review, the Association's science staff estimates that approximately 32 percent of the proposals received in 2013 deserved funding. Only about 10.9 percent could be supported with available resources.

With every peer-reviewed research grant awarded by the Alzheimer's Association, all indirect costs are capped at 10 percent (rent for laboratory/ office space is expected to be covered by indirect costs paid to the institution). The Association expects and enforces that 90 percent of the grant goes directly to funding the research itself. No more than 10 percent of the grant can be directed to administrative costs