

## 2012 Alzheimer's Association Research Grants

### — Portfolio Profile

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In 2012, the Alzheimer's Association International Research Grant Program awarded approximately \$12.2 million in funding to 78 scientific investigations. Of these, 74 funded projects represent proposals ranked highest by peer reviewers in an extremely competitive field of 922 applications. In addition to funding individual scientists in 8 grant categories, the Alzheimer's Association awarded 4 special scientific projects. Since 1982, the Alzheimer's Association has committed over \$300 million to more than 2,100 scientific investigations around the world.

#### Research themes

- 32 percent of projects funded in 2012 explore the molecular mechanisms that contribute to the production of beta-amyloid, the mediators of beta-amyloid's toxicity, and its adverse effect on cell-to-cell communication.
- 27 percent investigate the abnormal chemical alterations of tau and the normal functions of related proteins implicated in Alzheimer's pathology, as well as the cellular properties and functions that normally protect and maintain neurons in the brain.
- 7 percent examine other factors that may contribute to Alzheimer's disease and other dementias, including blood vessel damage and genetic risk factors.
- 12 percent investigate brain imaging, biomarkers and clinical tools that may result in earlier and more accurate diagnoses, timely interventions and effective disease monitoring.
- 12 percent explore novel treatment strategies and non-pharmacological interventions.
- 10 percent study ways to improve care for people with dementia through new technologies and explore the values and beliefs of diverse cultures that impact use of health services.

#### Awards by grant category

- **15 Investigator-Initiated Research Grants (IRG)** fund 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. This includes the **Senator Mark Hatfield in Clinical Research (HAT)** award focusing on strategies to make earlier and more accurate diagnoses.
- **47 New Investigator Research Grants (NIRG)** provide 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** were awarded—in partnership with Intel Corporation—to investigators 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.
- **3 New Investigator Research Grants to Promote Diversity (NIRGD)** fund investigators currently underrepresented at academic institutions in Alzheimer's or related dementias research. These investigators are conducting basic, clinical and social/behavioral research grounded in the advanced methods and experimental approaches needed to solve problems related to Alzheimer's disease.
- **2 Mentored New Investigator Research Grant to Promote Diversity (MNIRGD)** helps close the gap between diverse and non-diverse investigator populations, as well as provide a forum for further training and support of a senior scientist. The MNIRGD is intended to enhance the capacity of scientists to conduct basic, clinical and social/behavioral research.
- **1 U.S.-U.K. Young Investigator Exchange Fellowship**, offered in partnership with the Alzheimer's Research UK, provides junior investigators with funding to develop preliminary or pilot data, to test procedures and to develop hypotheses on an international level. This program stimulates cross oceanic collaborations.
- **2 Neuronal Hyper Excitability and Seizures in Alzheimer's Disease (NESAD)** grants promote increased understanding regarding abnormal neural network activity and the development of new pharmacological strategies to prevent or treat seizures in Alzheimer's.
- **2 Development of New Cognitive and Functional Instruments (DNCFI)** grants advance research seeking to investigate and develop cognitive or functional evaluation instruments that can capture the earliest changes in disease, are sensitive to change over time and/or could be used in clinical trials.

#### Peer-reviewed evaluation

The Alzheimer's Association Medical and Scientific Relations Division engages a panel of three or four volunteer scientists for each research proposal to evaluate the merits of the proposal anonymously. The Association's Medical and Scientific Advisory Council (MSAC) ensures the fairness of individual 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 peer-review scores and MSAC review, the Association's science staff estimates that approximately 25 percent of proposals received in 2012 deserved funding. Only about 8.5 percent could be supported with available resources.