

2008 Alzheimer's Association Research Grants

— Portfolio Profile

In fiscal year 2008, the Alzheimer's Association funded more than \$26 million in research initiatives, including \$25.4 million in grants to 131 individual investigators. Funded projects represent the proposals ranked highest by peer reviewers in an extremely competitive field of 599 applications. Since 1982, the Alzheimer's Association has committed over \$250 million to more than 1,700 best-of-field grant proposals.

Awards by grant category

- **5 Zenith Society Awards** support senior scientists who have made significant contributions to the field and continue to pursue promising lines of investigations about disease mechanisms, diagnosis, novel treatments and quality care.
- **73 Investigator-Initiated Research Grants** 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.
- **48 New Investigator Research Grants** 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 early-career development of researchers who have earned their doctoral degrees within the last 10 years.
- **4 Everyday Technologies for Alzheimer Care 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.
- **1 Senator Mark Hatfield Award in Clinical Research** focuses on strategies to make earlier and more accurate diagnoses.

Research themes

- 14 percent of projects funded in 2008 explore the molecular mechanisms that contribute to the production of beta-amyloid, the abnormal chemical alterations of tau and the normal functions of related proteins implicated in Alzheimer pathology.
- 11 percent investigate the toxic properties of beta-amyloid, mediators of this toxicity and the adverse effect of beta-amyloid on cell-to-cell communication.
- 14 percent study the effect of Alzheimer's disease on cellular properties and functions that normally protect and maintain neurons in the brain.
- 17 percent examine other factors that may contribute to Alzheimer's disease, including inflammation, blood vessel damage, nutritional deficits, genetic risk factors and lifestyle factors.

- 11 percent investigate brain imaging, biomarkers and clinical tools that may result in earlier and more accurate diagnoses, timely interventions and effective disease monitoring.
- 18 percent explore novel treatment strategies, including anti-amyloid compounds and nutritional therapies.
- 15 percent study best practices in care for people with dementia living in nursing homes, in assisted-living communities and at home.

Other awards

In addition to funding individual scientists in five grant categories, the Alzheimer's Association 2008 awards provide more than \$600,000 to support two large-scale initiatives and a joint award with other funding organizations.

- **Australian Alzheimer's Disease Neuroimaging Initiative (A-ADNI)** A-ADNI aims to bring key Australian imaging and biomarker studies in line with ADNI protocols. If successful, A-ADNI will greatly expand the pool of ADNI data and samples.
- **ADNI Genotyping Project** Association funding provides an additional year of support to researchers studying the amounts of tau and beta-amyloid in the cerebral spinal fluid (CSF) of individuals who are cognitively normal, individuals with mild cognitive impairment and individuals with Alzheimer's. Documenting changes in tau and beta-amyloid CSF concentrations over time will help establish the potential role of these biomarkers in early detection.
- **Tomorrow's Leaders Award** The Alzheimer's Association joined with the Cure Alzheimer's Fund and Lou Ruvo Brain Institute to establish this award, which recognizes outstanding new M.D. or Ph.D. Alzheimer's disease investigators who have made pivotal contributions to early detection, treatment and prevention. Each organization contributed \$100,000 to the award program, supporting the work of three investigators.

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 37 percent of proposals received in 2008 deserved funding. Only about 21 percent could be supported with available resources.