



INTERNATIONAL RESEARCH GRANT PROGRAM ANNOUNCEMENT JUNE 2017 PROGRAM (January 2017-August 2017)

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The purpose of the International Research Grant Program Announcement is to help applicants understand the context and history of the Alzheimer's Association International Research Grant Program and to publicize high-priority areas of focus for the current fiscal year. However, applicants should not consider areas of focus restrictive—projects exploring other topics are actively encouraged, even if they fall outside the areas discussed below.

I. BACKGROUND: ASSOCIATION MISSION AND SCIENTIFIC AGENDA

The Alzheimer's Association was founded in 1980 by a small group of family members caring for loved ones with Alzheimer's disease. These individuals were united in disappointment with the quality of information available to them and in dissatisfaction with the lack of medical and social awareness of this devastating condition. Two years after its founding, the fledgling organization funded its first research grant, awarding a total of about \$80,000 to a handful of investigators. Since then, the Association has grown into the largest nonprofit funder of Alzheimer's research, awarding over \$25 million during the fiscal year 2016 to more than 100 scientific investigations to bring the cumulative total of Association-funded research to more than \$385 million to more than 2,500 scientific investigations. Currently, the Alzheimer's Association is funding over \$90 million to nearly 400 scientific investigations in 20 countries.

The Association supplements its own funding efforts with public policy initiatives directed toward increasing Alzheimer's research funding at the federal level. As a result of those efforts, in December 2015, there was a historic \$350M increase in US Federal Funding for Alzheimer's and the Association continues to advocate for the needed research funding. The Association also works tirelessly to support and educate its constituents by providing high-quality information in non-specialist language about its grants program and general issues in Alzheimer's research, prevention, treatment and care.

The Association's International Research Grant Program has served historically as an incubator for novel ideas, complementing the programs of the National Institute on Aging and the other institutes of the National Institutes of Health as well as other federal agencies around the world. As our funding initiative has grown and matured, grant categories have expanded to support researchers at every stage in their careers. Funded projects now explore the broadest possible spectrum of biological approaches to understanding, preventing and treating Alzheimer's; social and behavioral strategies for ameliorating the effects of the disease on individuals and their families and professional caregivers; clinical studies; and adaptive technologies.

Surveys conducted on behalf of the Association continue to affirm that research support is the highest priority of our constituents and the general public. In response to this overwhelming sentiment, the Association's National Board mandates research as an ongoing major emphasis of the Association.

II. AREAS OF FOCUS FOR THE 2017 INTERNATIONAL RESEARCH GRANT PROGRAM

Areas of focus are high-priority research areas in which the Association actively seeks proposals. The areas are defined broadly, and the examples cited are not intended to preclude or constrain other projects or proposals. Potential applicants are strongly encouraged to submit proposals in their own areas of interest or formulate questions different from those presented in this announcement. Innovative and novel ideas to address challenges in research are the core of the Association's scientific program.

i. Research in Diverse Populations: Closing the Gap

Results of the 2000 census confirm that the overall population of the United States is rapidly becoming more diverse. However, the language and techniques often used to characterize diverse populations fail to reflect the true richness of origin, culture, and genetic variation represented in our society. This failure is well illustrated by the following excerpt: "Today, discussion of cultural diversity—ethnicity—most often identifies four major U.S. ethnic subgroups: African Americans (Blacks), Asian Americans and Pacific Islanders (or Pan Asian populations), American Indians and Alaska Natives, and Hispanics (or Latinos). Indeed, the term 'Asian Americans' represents more than 50 distinct linguistic groups. African Americans include persons who trace their roots to Africa, who were born in Africa, or who were born in the Caribbean Islands. Hispanics count more than 25 different countries of national origin. American Indians and Alaska Natives encompass over 500 federally recognized tribes and groups, with at least 30 different languages." (From *The Fourth Report of the Advisory Panel on Alzheimer's Disease, 1992: A Report to the U.S. Congress and the U.S. Department of Health and Human Services*; NIH Publication 03-3520.)

As the general population reflects a richer ethnic mix, subpopulations of older adults and those at risk for Alzheimer's disease are also growing more diverse. These extraordinarily rapid demographic changes are forcing organizations to re-evaluate whether they have sufficient knowledge of all groups within their potential clientele to deliver programs and services effectively. The Alzheimer's Association has concluded that there are significant information and data deficits about ethnic and cultural groups in most major research areas in Alzheimer's disease. These include screening and neuropsychological testing instruments; diagnostic procedures; recruitment and retention in research protocols and clinical trials; clinical and neuropathological correlative studies; caregiving and family studies; basic laboratory investigations; genetics projects; development of new models of long-term care and management of these services; epidemiological and health services

research; and the economics of care.

Our understanding of Alzheimer's disease is limited by the characteristics of the people who have traditionally been included in investigations. There is a need for basic sociological and anthropological data about Alzheimer's disease, families and caregiving in specific cultural, social, and regional contexts to provide a working platform for effective service, education and program delivery.

To fill these gaps in knowledge, projects must address the following issues:

Socioeconomic status: What is the effect of high or low socioeconomic status on Alzheimer's disease and its meaning in diverse populations? How can services for people with Alzheimer's disease and their families be developed to most effectively reach a large range of socioeconomic levels and people from minority-groups?. What is the best method to convey information about Alzheimer's disease to specific diverse groups?

Values and beliefs: How do values and beliefs shape receptivity to and perceptions about community-based and institutional services for Alzheimer's disease? How do values, beliefs, and perceptions vary among groups? How do the beliefs about Alzheimer's disease and normal aging encourage or prevent use of services? How must services and programs respond to be effective in the face of values and beliefs?

Role of the family and community: In specific diverse groups, how does the role of family differ in the long-term care of older members with dementia? How does the decision-making process differ in these groups? Is it necessary to understand family dynamics before planning interventions and services?

Geographical and regional variation: How do these factors affect the development and provision of services and programs? How do they interact with socioeconomic status and minority group membership in majority locales?

Interactions among factors: How do socioeconomic status, values and beliefs, the role of the family, and geographical and regional differences interact to influence care and service delivery to people with Alzheimer's disease and their families?

Incidence, prevalence and risk factors—key facts about the epidemiology of Alzheimer's disease—remain unknown in many defined ethnic and cultural groups. To better quantify the public health implications of Alzheimer's and support the development of necessary programs and services, reliable and valid data on the distribution of the disease in the U.S. population must be obtained.

Acquiring meaningful epidemiological data for diverse groups will require the ability to accurately detect and monitor Alzheimer's disease in the target population. In most cases, adequate tools for detection and monitoring do not exist. These research instrument deficits inhibit epidemiological investigations and limit the conduct of behavioral, social and clinical studies.

The following points outline some of the tools, instruments and strategies needed to address these deficiencies. Although very large population studies fall outside the funding scope of the Alzheimer's Association, smaller, well-designed studies can effectively address a number of the information and instrument gaps that must be filled. This list is not exhaustive but is intended to highlight the types of research needed:

Screening and assessment instruments that are valid and reliable for specific age, gender, cultural, language, and ethnic groups, as well as for different levels of education and literacy, are needed as soon as possible. Expansion of epidemiological, behavioral, social and clinical research is hampered by the lack of these instruments.

Test norms standardized for age and gender for specific ethnic groups are also needed urgently. These norms must take into account language, education level, and literacy as well as educational equivalency between cultures and countries of origin. Norms derived from majority group data are often applied to minority groups and can result in misleading interpretations. This misapplication is especially serious for people with little or no formal education.

In research on Alzheimer's disease—especially in clinical drug trials— identification, recruitment, enrollment and retention of members of diverse cultural groups have lagged. Minority group members have been underrepresented in much of the research in Alzheimer's disease. The published literature on barriers to enrollment and retention has been largely descriptive and anecdotal. It is time to initiate a program of hypothesis-driven research to determine the efficacy of specific methods to enlist and retain ethnic minority and cultural group members in Alzheimer's disease research. Some of the issues of interest include:

Cross validation: Programs that are successful in the recruitment, enrollment, and retention of cultural group members must be cross-validated with other cultural groups and in different geographic areas to determine their broad-based usefulness in research.

Contacts: The differences in the effectiveness of recruitment approaches for clinical studies, and the mechanisms underlying these differences, must be explored. For example, under what circumstances are individual or local community-rooted approaches more effective than large mass media or marketing approaches? How do specific, clearly defined cultural groups differ from one another in the acceptability of various approaches and methods of contact?

Culturally competent investigators or investigators who are members of the cultural group: What difference does the cultural identity of the investigator make in successful identification, recruitment, enrollment and retention of specific cultural group members in clinical studies? Does it enhance long-term successful retention to have investigators who are of the same cultural group as the people to be recruited? Or, is it adequate that the investigator be culturally competent? And what, precisely, does it mean to be culturally competent for the purposes of Alzheimer's research?

Community barriers: What are the real and perceived barriers to participation in Alzheimer's disease research in specific cultural groups? How can these barriers be overcome?

ii. Social/Behavioral and Cognitive/Functional Focus: Evaluating Interventions and Translating Knowledge into Practice

Social and behavioral research has the potential to increase our understanding of the effects of Alzheimer's disease and other dementias on individuals with the disease, their families and other caregivers. At the same time, it can increase our knowledge about interventions that improve care practices, health, functional and emotional outcomes and quality of life, as well as prevent or reduce symptoms for millions of individuals and their families.

It is important to consider the influence of socioeconomic status, cultural and ethnic diversity, health/lifestyle practices, stigma and family attitudes about seeking care, availability of services and regional variation when proposing research about social and behavioral issues. Alzheimer's disease is heterogeneous, and the people with Alzheimer's disease are heterogeneous. Research into understanding these factors and how they might influence treatment outcomes (both in pharmacological and non-pharmacological trials) as well as the natural course of the disease are needed.

In addition, earlier detection and diagnosis are increasing the number of individuals identified with early-stage dementia. The characteristics and care needs of diagnosed individuals and their families in early, middle and late stages of Alzheimer's disease differ greatly. Social and behavioral research proposals should consider these differences in the design of proposed studies and the translation of findings from research into practice.

A wide range of questions in the social and behavioral arenas are applicable for research. The answers to these questions, if broadly applied, would improve the quality of daily life for people with Alzheimer's disease and their families. The questions under each domain are provided as examples to facilitate the development of more specific research questions. Each investigator is encouraged to tailor his or her question to particular populations.

(1) Person with dementia: Over time, we have been able to gain an understanding of the experience of the person with dementia. This can be attributed to such things as people in the early stages speaking and writing about their experiences and the development of individualized approaches to care. Some questions include, but are not limited to:

- How can the experience of the person with dementia be characterized throughout the disease course to provide insight into areas such as decision-making capacity, quality of life and advance planning?
- How can the perspective of the person early in the disease process help shape decisions and care?

- Do personal or social factors influence the experience of the person with dementia in important and measurable ways?

(2) Physical and social environment: Environmental design for persons with dementia is a multi-dimensional construct that purports to satisfy the need for autonomy, dignity, safety, comfort and community as well as enhance one's mobility, cognition and memory. We need to gain a better understanding of the specific dimensions of the environment, as well as their interaction, and how they produce desired outcomes, such as:

- What characteristics of one's physical and social environment contribute to an individual's quality of life? How do these characteristics change through the course of illness?
- What are the components of a supportive environment in the home or residential care setting for someone with cognitive impairment? How do these components change through the course of illness?

(3) Family and household: The family of a person with dementia often plays a critical role in providing care and navigating the health and long-term care systems. Although caregiving has been studied intensively, there is still a need to understand how best to support the families that provide care and enhance (or ameliorate) the impact on the family. Research in this area may include, but is not limited to:

- What unique problems are encountered by families of persons with various types of dementia (e.g., early-onset dementia), and what interventions, services and policies are needed to mitigate those problems? How are these problems affected by the characteristics (e.g., socioeconomic status, culture and ethnicity, region of the country) of the families?
- What interventions can improve communication among family caregivers, persons with dementia and their health and long-term care providers and have a positive effect on care and outcomes?
- What effect do family attitudes about dementia have on the self-image and functioning of persons with dementia?

(4) Identification and evaluation of services and interventions: Researchers and care providers together must identify and evaluate the broad range of factors that can affect programmatic interventions. Examples include:

- What interventions or programs are most likely to have positive effects for people with Alzheimer's disease and/or their families in the community?
- What interventions or programs are most likely to have positive impact on people with Alzheimer's and the staff providing care in residential care settings?
- What characteristics of programs and services render them most acceptable to people with the illness and their families?
- What are the most effective strategies to motivate physicians and other health care providers to improve the quality of care they provide to people with dementia in clinical and long-term care settings?
- How can we translate programs developed in research settings to be effectively delivered in the community?

- What are the best strategies for effectively sustaining improved practices – either in the home or care setting?

(5) Health policy: Research can guide the adoption of policies that reshape systems of support in the home, community and health and long-term care settings. Researchers and policy makers together must ensure that public and private policies respond to the unique needs of those with dementia. Research may investigate questions like:

1. What techniques should be used to determine consumer preferences for and satisfaction with their health and long-term care when the consumers have dementia?
2. What techniques should publicly funded programs use to identify and properly care for people with dementia, including those with multiple chronic conditions?

(6) Behavioral modifications to help maintain cognitive function: Growing evidence suggests that lifestyle factors and behaviors interact with biological mechanisms in maintaining cognitive function. It is important to find ways to effectively share information about prevention and about the potential benefits of changing behaviors.

(7) Implementation and dissemination of knowledge: With the development of novel interventions and the investigation of these interventions in scientifically valid ways, strategies for disseminating them must be established. Studies must bridge the gap between what has been demonstrated empirically and the daily care practices for people with Alzheimer's disease. Often, lack of knowledge about what constitutes a successful intervention hinders the transfer of the technique to everyday care settings. The research world is fragmented and disseminates its findings in ways that are not easily or routinely available to various audiences. Finding ways to meet this challenge and getting the information out to those who need it is essential.

- What strategies are effective for getting the science of prevention and treatment out to the general public?
- How can we measure and evaluate public response to (or acceptance of) such information?
- How can we measure and evaluate people's use of the information to change important behaviors? What help do people need to support important lifestyle changes?
- How can the effect of these strategies be measured in relation to their impact on cognitive decline?

(8) Cognitive/functional focus

By definition, dementia impacts cognitive function and day-to-day abilities. It is important to understand the nature of these changes, as well as their biological basis. This can lead to better diagnoses, potential targets for treatment, and better understanding of the disease itself.

There are several themes that are considered important foci of potential proposals, including but not limited to:

1. Identification of cognitive/functional profiles:
 - Differentiation of cognitive/functional profiles in different forms of dementia
 - Identification of earliest cognitive/functional changes in the MCI or “predementia phase”
2. Development of better measures for diagnosis, testing, clinical trials
3. Identification of neural/biological correlates of cognition/function:
 - Identification of underpinnings of cognitive change
 - Correlation of imaging measures such as brain volume, cortical thickness, white matter hyperintensities, regional cerebral blood flow, brain amyloid with cognitive and functional changes
 - Correlation of biological measures from blood or CSF with cognitive and functional changes
4. Investigation of how cognitive and functional changes impact medical, legal, and day-to-day issues:
 - Relation of cognitive changes to the ability to consent
 - Exploring the impact of disease on medical or financial decision-making
 - Exploring metacognition, the recognition of deficit
5. Use the cognitive neuroscience approach to better understand and characterize cognitive/functional changes:
 - Use functional MRI, EEG, or other functional imaging measures to help identify functional brain changes underlying cognitive/functional change

iii. Biological Focus: Causes, Early Detection, Treatment, Models, Prevention and Risk Factors

Although vast advances have been made in Alzheimer’s research, the field still faces a great number of serious impediments to progress in translating basic science discoveries into effective treatments and evidence-based clinical practices for dementia. Some of the many challenges that remain for investigators to address include:

Cause(s) of the Disease: How and why do specific sets of neurons in select brain structures become dysfunctional? Why is there selective neuronal death in specific brain regions and not in others? What initiates these processes? What is the key step in the cascade of events leading to cell death? How do genetic factors interact with other factors to influence these processes?

The primary neuropathological events in Alzheimer’s disease involve abnormal expression and processing of proteins. Advances in molecular biology have provided the tools needed to begin to unravel the mechanisms of synthesis, trafficking and accumulation of these proteins in the brain. Research in this area has begun to produce promising leads about the role of these proteins in neural function, dysfunction, and cell death and to suggest strategies to correct this molecular damage. Although these insights into the neurobiology of the disease have generated a number of ideas, the precise etiology of the disease is still not known. While there are many theories on possible mechanisms of neural dysfunction

and/or cell death, critical questions remain unanswered.

None of these theories has been validated by crucial experiments designed to demonstrate the functional relationship(s) between characteristic molecular aberrations and the clinical manifestations of the disease. One of the most difficult challenges for the field is to link the perspectives of investigators inhabiting two totally different worlds: those who view Alzheimer's disease through the prism of molecular/neuropathological events and those who know it through its behavioral and clinical manifestations.

The precise relationships between the clinical symptomatology and the neuropathology of the disease are not well defined. There is a critical need to understand not only the presumptive causal links between the neurobiology and clinical course of the disease but also the mechanisms for the heterogeneity of presentation. These mechanisms may vary widely and may influence differential diagnosis and differences in adverse events/responses to treatments.

Early and Accurate Detection and Diagnosis: What are the most sensitive, specific and cost-effective diagnostic procedures? What are the most sensitive, specific and cost-effective procedures for assessing change through the course of the disease?

Several converging lines of evidence suggest that the neurodegenerative processes associated with dementia begin several years before the first clinical features can be detected with current instruments. The precise duration of the preclinical period and the details of the early molecular events are not known. This uncertainty about symptom-free early stages of the disease stems from the lack of well-validated tools or technologies for detection.

Although clinical information can be gleaned from longitudinal studies, even these data are usually obtained in the middle to later stages of the disease when some of the cognitive and behavioral signs appear. As a result, there is little or no information on manifestations of the disease during its earliest preclinical stages or the very earliest behaviors of individuals at risk. These gaps result from the lack of appropriate technologies for noninvasive observation and early detection of the disease. Finding sensitive and specific markers will become even more important as pressure increases to develop very early treatments, especially if these early interventions have the potential for harmful side effects, it is crucial that they be targeted appropriately. Thus, there is an urgent need to find accurate biological markers of the disease, including improved imaging techniques and more sensitive cognitive and behavioral assessment instruments.

Any effective biomarker must not only detect a fundamental biological process in the disease, but should also be validated in an adequately powered study with neuropathologically confirmed cases. Testing for the marker should be reliable, reproducible, non-invasive, simple to perform and inexpensive. In addition, a putative biomarker should have confirmation by at least two independent studies conducted by qualified investigators. Currently, none of the putative biochemical markers have been validated in adequately powered investigations.

Well-tested biological markers for Alzheimer's disease are not the only critical need—it is also important for investigators to explore the observational and subjective perspective that family members, care providers and people with the illness can provide about the very earliest events. The observations of family members, nurses, social workers and other care providers have already provided some important insights about early cognitive and behavioral events.

Treatment: What are the most effective and safe pharmacological treatment strategies, behavioral management techniques, and combinations of therapies?

Research on interventions is poised for a revolution. The timing of the revolution is open to speculation—it may take two years, it may take ten—but it will happen. Dramatic advances in understanding the neurobiology of Alzheimer's—including elucidation of many genetic and molecular mechanisms involved in the disease—have provided numerous promising leads for drug development. It is now generally agreed that the most critical neurobiological events underlying the behavioral problems and clinical manifestations of the disease concern dysfunctions in nerve cell signal transduction, loss of synapses, and premature cell death. The primary scientific dispute revolves around theories concerning the precise cause or source of these destructive processes. Currently, the field of Alzheimer's therapy has a rich array of promising leads as therapeutic targets. If such potential treatments, using a variety of approaches, could be validated by well-powered clinical trials, they will have a profound effect on addressing the disease. The eventual utility/efficacy of any intervention can only be evaluated through clinical trials, which are expensive.

Until recently, strategies for developing interventions focused primarily on symptomatic treatments for middle and late stages of the disease. It is anticipated that as new therapeutic targets are discovered, it will be possible to improve the quality of signal transduction and the ability of nerve cells to communicate. As even more is learned about the neurobiology of Alzheimer's disease, there will be greater reliance on techniques to design specific molecules aimed at correcting a particular cellular dysfunction. Some important therapeutic approaches should involve the discovery of interventions aimed at preventing premature cell death and restoring or prolonging the function of surviving damaged nerve cells.

Until effective pharmacological treatments are discovered, family and facility-based care providers must rely on a variety of behavioral and social interventions to assist in managing symptoms and maintaining the highest quality of life for people with Alzheimer's disease. The development and testing of new social and behavioral interventions, in the appropriate cultural context, is a priority and is discussed under Social/ Behavioral Research and Cognitive/Functional Focus.

Experimental Models of the Disease: Advances and Limitations

Considerable advances have been made in the development of animal models—especially transgenic mice carrying human genes for key Alzheimer proteins and variant forms of genes shown to be involved in dementia. Because these models make it possible to study the effects of specific factors such as A β , tau, and apolipoprotein E4 (apoE4) on memory

and other cognitive functions, they have shed light on what each of these proteins may contribute to the development of Alzheimer's disease. For example, transgenic mice producing human amyloid precursor proteins have revealed that A β can cause neuronal dysfunction and memory problems even when it is not clumped together in large amyloid plaques, which can be visualized in live individuals by radiological imaging. They have revealed similar dissociations between neurofibrillary tangles and memory problems and highlighted the disease-causing potential of smaller clusters of A β and tau that cannot yet be detected in brains of live individuals. In addition, these models have helped unravel the intricate processes by which these poisonous aggregates impair brain functions.

However, a limitation of these models is that they do not capture the full complexity of the human condition, which is problematic if one wants to use them to predict the success of specific therapeutic interventions in individuals with Alzheimer's disease. For example, anti-A β treatments may be effective if the only protein causing problems is A β , but it may not be enough to treat Alzheimer's disease in an individual who also has two apoE4 genes causing additional problems. To address these complexities, scientists are developing animal models that combine different factors. Determining whether these compound models can predict the success of therapeutic interventions for Alzheimer's disease will have to await the first truly effective drug trial in humans. This benchmark will prove or disprove these models.

To circumvent species differences that may complicate the use of rodent models for human disorders, investigators are now turning to new technologies that make it possible to turn a person's skin or blood cells back into stem cells and from there into mature neurons. Through this "induced pluripotent stem cell (iPSC)" approach, researchers can create individual- and disease-specific cell culture models that could have advantages over animal models. However, the full potential of this technology remains to be determined.

Prevention: What are the prospects and strategies for prevention?

One of the most important priorities is research on strategies to prevent Alzheimer's. The importance of prevention is rooted in the severe effects of the disease on individuals and their families, the very large number of people with the illness and the anticipated growth of these numbers with the aging of populations in the United States and other countries. Developing effective preventive strategies will bring significant benefit in reducing the economic and social costs, preserving the economic productivity of those who are or will be family caregivers, and lessening the impact on the health care system.

The most convincing argument, however, is the humanitarian one—effective prevention can spare future generations from one of the most feared and disabling infirmities associated with advancing age.

Research into basic disease mechanisms can have immense benefit for development of strategies for disease prevention, but there is not always a tight link between understanding the mechanisms of a disease and preventing it. In fact, highly successful prevention efforts have been designed and conducted under circumstances in which disease mechanisms were understood poorly, or not at all.

In general, it makes sense that intervening early in the process that causes a disease is easier and more effective than intervening at later stages when the disease has already taken its toll and has gained momentum. The prevention of cardiovascular disease by early and aggressive treatment of high blood pressure or high cholesterol levels is a good case in point. Besides genotyping for apoE4 and other risk genes, there is currently no measurement that can identify people at increased risk for Alzheimer's decades before the typical onset of the disease. Extensive efforts have been launched to change this situation. However, widespread genotyping for apoE4 is not currently recommended because of the lack of effective treatments for Alzheimer's disease.

Risk Factors: What are the characteristics, either genetic or acquired, that increase the risk of Alzheimer's disease or offer protection against or delay the onset? How do the risk factors vary among specific diverse populations? Are any risk factors modifiable?

Epidemiological studies reveal growing evidence that most cases of Alzheimer's disease likely involve a combination of genetic and environmental risk factors. Identifying and validating these risk factors remains one of the most critical scientific challenges. The main risk factors so far validated for late-onset disease are age, family history and certain susceptibility genes.

The potential link between cerebral blood vessel disease and Alzheimer's is one promising area of research. Vascular disease in the aged appears to have strong implications for neurodegeneration leading to dementia. Preliminary studies indicate that a broad spectrum of cerebrovascular lesions could lead to a decline in cognitive function. In addition, recent epidemiological studies have begun to implicate vascular conditions outside the central nervous system—such as heart disease and high blood pressure—as potential risk factors for dementia. The broader implication is the hypothesis that systemic vascular factors are risk factors for developing Alzheimer's disease. This risk encompasses different forms of cardiovascular disease, including coronary artery disease, carotid atherosclerosis, history of hypertension or high cholesterol, Type II diabetes and stroke or transient ischemic attacks.

The e4 allele of the apolipoprotein E gene (apoE4)—which has been associated with increased risk of cardiovascular disease—is the best-validated susceptibility gene to date, with more widespread effects than any other genetic factor implicated in the late-onset, sporadic form of Alzheimer's. Several mechanisms have been identified by which apoE4 could increase the risk of developing Alzheimer's disease; most of them involve detrimental effects on brain cells rather than effects on the cardiovascular system.

III. International Research Grant Program - Program Summary and Key Dates

JUNE 2017 PROGRAM

Grant Competition	Alzheimer's Association Research Grant (AARG)	Alzheimer's Association Research Grant to Promote Diversity (AARG-D)	Alzheimer's Association Research Fellowship (AARF) *	Alzheimer's Association Research Fellowship to Promote Diversity (AARF-D) *	Alzheimer's Association Clinician Scientist Fellowship (AACSF) *	Alzheimer's Association Clinician Scientist Fellowship to Promote Diversity (AACSF-D) *	Zenith Fellows Award (ZENITH)
Letter of Intent:	Open Receipt Date: January 2017 LOI Deadline Date: March 1, 2017, 5:00 PM EST						
Application Deadline Date:	April 18, 2017, 5:00 PM EST						
Review Process:	May – June 2017						
Award Announcement	August 30, 2017 (Zenith – November 30, 2017)						
Request per year (in any given year) may not exceed:	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$250,000
Maximum per award:	\$150,000	\$150,000	\$155,000	\$155,000	\$155,000	\$155,000	\$450,000
Maximum number of years:	2 to 3 years	2 to 3 years	2 to 3 years	2 to 3 years	2 to 3 years	2 to 3 years	3 (minimum, 2 years)

*These programs, in addition to the award total listed, also include a \$10,000 stipend for both the awardee and the mentor at the conclusion of the award provided specific milestones are met.

Scientists from underrepresented groups are encouraged to apply.

The Alzheimer's Association Research Grant Programs share the preceding areas of focus for fiscal year 2017, covered in Section II. Section IV of this program announcement provides complete details about each individual competition, including areas of focus for other specified programs, program objectives, funding and award period, eligibility, receipt and award dates, mechanism of award, reporting requirements and allowable costs.

Procedures and processes common to all of the grant competitions are discussed here.

i. Scientific Categories of Proposals

Each proposal must be submitted to a specific grant competition. In addition, all applicants in every competition are asked to classify their proposals according to five broad categories of scientific inquiry: (1) social and behavioral research, (2) clinical investigations, (3) basic biology, (4) adaptive technology, and (5) cognitive/functional. During second-level review, these categories help the Alzheimer's Association Medical and Scientific Advisory Council ensure a balanced, well-distributed award portfolio.

Topics that would fall into the five cross-competition categories might include, but are not limited to:

1. Social and behavioral research (relevant to all competitions except ZENITH): research in diverse populations; assessment of novel approaches to care and support diagnosed individuals and caregivers; special needs of early-stage and early-onset individuals; analysis of the impact of the physical and social environment; evaluation of services and interventions; quality of life; ethical issues; and health policy.

2. Clinical investigations (relevant to all competitions): projects in which the majority of data is derived directly from studies involving active participation of human subjects. Examples include pilot studies of new therapies; neuropsychological testing; drug administration; biomarker collection; imaging technology; and risk factors including genetics, cardiovascular issues, diabetes and metabolic factors and lifestyle issues. *In vitro* projects conducted in human samples should be categorized as basic biology (the category below) rather than clinical investigations.

3. Basic biology (relevant to all competitions.): these are bench science projects involving *in vitro* or animal work pertaining to the causes of dementia; early and accurate detection and diagnosis; animal models; treatments; and prevention. Please note that *in vitro* work involving human samples falls into this category.

4. Adaptive technology (relevant to all competitions except ZENITH): research focusing on the use of emerging technologies and their clinical and social implications, including mobile computing, high-bandwidth sensing, "smart" environments, robotics, imaging, face recognition, natural language processing and behavioral monitoring for early detection.

5. Cognitive/ functional (relevant to all competitions except ZENITH): research focusing on identification of cognitive/functional profiles, development of better measures for diagnosis, testing, clinical trials, identification of neural/biological correlates of cognition/function, investigation of how cognitive and functional changes impact on medical, legal, and day-to-day issues; and the use of the cognitive neuroscience approach to better understand and characterize cognitive/functional changes.

Please note: There are a few cases in which certain scientific categories do not apply to

specific grant competitions. Applicability of categories to competitions is summarized in the table below. An empty box indicates the category does not apply.

Scientific Category	AARG and AARG-D	AARF and AARF-D	AACSF and AACSF-D	ZENITH
Social/ behavioral	X	X	X	
Clinical investigations	X	X	X	X
Basic biology	X	X	X	X
Adaptive technology	X	X	X	
Cognitive/ functional	X	X	X	

IV. SPECIFIC GRANT COMPETITIONS

i. Alzheimer's Association Research Grant (AARG)

Competition objectives: The Alzheimer's Association Research Grant aims to fund investigators who are less than **10 years** past their doctoral or post residency (MD or DO) or investigators that are new to Alzheimer's and related dementia field of research even if past the 10yrs. **Individuals who are new to the field of Neuroscience/Alzheimer's will need to contact the Association at grantsapp@alz.org to receive an exception prior to submitting an LOI.** The purpose of this program is to provide newly independent investigators with funding that will allow them to develop preliminary or pilot data, to test procedures and to develop hypotheses. The intent is to support early-career development that will lay the groundwork for future research grant applications to the National Institutes of Health, National Science Foundation and other funding agencies and groups, including future proposals to the Alzheimer's Association. All AARG applications must target defined areas of focus for fiscal year 2017 to be considered responsive to the program announcement (see Section II).

The Alzheimer's Association recognizes the need to increase the number of scientists from underrepresented groups in the research enterprise. Young scientists from these groups are encouraged to apply.

Funding and award period: Each AARG total award is limited to \$150,000 (direct and indirect costs) for up to three years (minimum 2 years). Requests in any given year may not exceed \$60,000 (direct and indirect costs). Indirect costs are capped at 10 percent (rent for laboratory/office space is expected to be covered by indirect costs paid to the institution).

Eligibility: Applicants must be Assistant Professors or above at their respective institution. For individuals who are at non-academic institutions, please contact the Alzheimer's Association at grantsapp@alz.org to verify your eligibility.

Eligibility to apply for this grant competition is restricted to investigators who have less than 10 years of research experience after receipt of their terminal degree (doctorate or post residency (MD or DO) or investigators that are new to Alzheimer's and related dementia field of research even if past the 10yrs. **Individuals who are new to the field of Neuroscience/Alzheimer's will need to contact the Association at grantsapp@alz.org to receive an exception prior to submitting an LOI.**

The 10-year period applies to the date of submission of the grant application. Adjustments for career interruptions can be made. These would include, but are not limited to, family leave, military service, and major illness or injury. It is the responsibility of the applicant to point out and document such interruptions within their application. **Applicants must contact the Alzheimer's Association at grantsapp@alz.org regarding any possible exception prior to submitting an LOI due to review process; no exceptions will be made after the LOI deadline has passed.**

Applications to the Alzheimer's Association Research Grant Program (AARG) program will be accepted from postdoctoral fellows and other junior faculty members (for example: Instructor, Research Associate Scientist, etc.) who can provide a letter of employment verification indicating they will have a full-time faculty position of an Assistant Professor and above by the award date should the proposal be in funding range and funded.

The letter of employment must be uploaded to the application, dated within 3 months from application submission date, printed on the hiring institution letterhead, signed by an authorized institutional official (i.e. Grants and Contracts officer) and must indicate that the position will be activated by the grant award date. If the anticipated position is not activated by the award date for any reason, any offer of funding will be withdrawn. There will be no exceptions. In the event your application is funded, you will be required to provide an official letter on organizational letterhead, signed by an institutional signing official, stating you have a full-time faculty position of an Assistant Professor and above.

Please note: If the applicant's institution does not have an Assistant Professor position, the letter of employment should include sufficient information to allow the Alzheimer's Association staff to evaluate the eligibility of the applicant.

Ineligibility: The Alzheimer's Association will not accept new grant applications from currently funded investigators who are delinquent in submitting required reports and other deliverables on active grants. Investigators that have previous Alzheimer's Association awards closed as 'Incomplete' are not eligible to apply without exception. **This policy will be strictly adhered to with no exceptions.**

Deadlines and award dates: Letters of Intent must be received by 5:00 PM EASTERN STANDARD TIME, **March 1, 2017**. Letters of Intent will not be accepted after this date. No exceptions will be made.

Applications must be received by 5:00 PM EASTERN STANDARD TIME, April 18, 2017.

Scientific and technical review will be conducted from May through June 2017. The second-level review by the Medical and Scientific Advisory Council will be conducted during June 2017. Funding will be awarded by **August 30, 2017**.

LOI Review Procedures

All LOIs will be evaluated prior to invitation. Only LOIs that meet program specific guidelines will be invited to submit full applications. LOIs will also be reviewed by the Alzheimer's Association Medical and Scientific Advisory Council with special attention to:

1. Demonstrable innovation/novelty of the proposed project (especially in the context of the PIs recently funded work)
2. Alignment with the research priorities of the Alzheimer's Association
3. Impact of project on Alzheimer's disease and related dementia research
4. Evidence of methodological rigor that address the research question(s) being proposed

Applications will be reviewed with special attention to:

- Significance of the question being studied
- Applicant information – including the training of the PI insofar as it enables them to perform the work proposed and qualifications of the collaborators and the expertise they bring to the project
- Quality of the work plan, including novelty and innovation of the proposed project
- Quality and adequacy of available resources and budget
- Impact-Risk

Mechanism of Award, Reporting Requirements and Allowable Costs: The mechanism of the award is the individual research grant. The maximum allowable duration is three years (minimum 2 years). Annual scientific progress and financial reports are required. **Continuation of the grant over the awarded duration is contingent upon the timely receipt of scientific progress and financial reports.**

Budget: A “budget summary” for the proposed research project is required and must be submitted with the application and within the allowable two-page limit. However, if the application is to be awarded, a more detailed budget will be required and must be approved before the disbursement of funds. **Your budget must not exceed the maximum amount of the award, \$150,000 or \$60,000 per year for up to three years (minimum 2 years).** **Note:** If you only request the award for two years the max amount you can request is \$120,000.

Allowable costs under this award:

It is required that most of the funds awarded under this program be used for direct research support.

- Purchase and care of laboratory animals
- Small pieces of laboratory equipment and laboratory supplies **(purchases over \$10,000 require prior approval)**
- Computer software if used strictly for data collection, **(require prior approval)**
- Salary for the principal investigator, scientific (including postdoctoral fellows) and technical staff (including laboratory technicians and administrative support directly related to the funded grant)
- Support for travel to scientific and professional meetings not to exceed \$2,000 per year
- Additional support for travel expenses necessary to carry out research planned not to exceed \$1,000 per year; this may include site visits.

Direct Costs not allowed under this award include:

- Computer hardware or standard software (e.g. Microsoft Office)
- Construction or renovation costs
- Tuition
- Rent for laboratory/office space
- Salary and/or compensation for Alzheimer’s Association Staff or members of the Alzheimer’s Association Medical and Scientific Advisory Council (MSAC)

For more information: Contact grantsapp@alz.org or call 1.312.335-5747 or 1.312.335.5862.

ii. **Alzheimer's Association Research Grant to Promote Diversity (AARG-D)**

Competition objectives: The Alzheimer's Association Research Grant to Promote Diversity program award is up to three years (minimum 2 years) to increase the number of scientist from underrepresented groups at academic institutions in Alzheimer's or related dementias research. The AARG-D aims to fund investigators who are less than **10 years** past their doctoral or post residency (MD or DO) or investigators that are new to Alzheimer's and related dementia field of research even if past the 10yrs. **Individuals who are new to the field of Neuroscience/Alzheimer's will need to contact the Association at grantsapp@alz.org to receive an exception prior to submitting an LOI.**

The objective of this award 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. The Alzheimer's Association recognizes the need to increase the number of scientist from underrepresented groups participating in biomedical and behavioral research. The Association anticipates that by providing these research opportunities, the number of scientist from underrepresented groups entering and remaining in biomedical research careers in Alzheimer's disease will increase.

The purpose of this program is to provide new scientist from underrepresented groups with funding that will allow them to develop preliminary or pilot data, to test procedures, and to develop hypotheses. The intent is to support early-career development that will lay the groundwork for future research grant applications to the National Institutes of Health, National Science Foundation and other funding agencies and groups, including future proposals to the Alzheimer's Association. All AARG-D applications must target defined areas of focus outlined in this Program Announcement (see Section II).

Funding and award period: Each AARG-D award is limited to \$150,000 (direct and indirect costs) for up to three years (minimum 2 years). Requests in any given year may not exceed \$60,000 (direct and indirect costs). Indirect costs are capped at 10 percent (rent for laboratory/office space is expected to be covered by indirect costs paid to the institution).

Eligibility: Applicants must be Assistant Professors or above at their respective institution. For individuals who are at non-academic institutions, please contact the Alzheimer's Association at grantsapp@alz.org to verify your eligibility.

Eligibility to apply for this grant competition is restricted to investigators who have less than 10 years of research experience after receipt of their terminal degree or investigators that are new to Alzheimer's and related dementia field of research even if past the 10yrs. **Individuals who are new to the field of Neuroscience/Alzheimer's will need to contact the Association at grantsapp@alz.org to receive an exception prior to submitting an LOI.**

The 10-year period applies to the date of submission of the grant application. Adjustments for career interruptions can be made. These would include, but are not limited to, family leave, military service, and major illness or injury. It is the responsibility of the applicant to point out and document such interruptions within their application. **Applicants must contact the Alzheimer's Association at grantsapp@alz.org regarding any possible exception prior to submitting an LOI due to review process; no exceptions will be made after the LOI deadline has passed.**

Specific for the AARG-D program, eligible applicants are faculty members who have been determined from underrepresented groups in biomedical and behavioral research on a national or institutional basis. The Alzheimer's Association will require documentation to support the faculty member's underrepresented status at their institution. Applicants in the United States will be subject to the definitions as stated by the National Institutes of Health:

1. Individuals from racial and ethnic groups that have been shown by the National Science Foundation to be underrepresented in health-related sciences on a national basis. The following racial and ethnic groups have been shown to be underrepresented in biomedical research: African Americans, Hispanic Americans, American Indians, Alaska Natives, Native Hawaiians, and other Pacific Islanders. In addition, it is recognized that underrepresentation can vary from setting to setting; individuals from racial or ethnic groups that can be convincingly demonstrated to be underrepresented by the grantee institution should be encouraged to participate in this program.
2. Individuals with disabilities, who are defined as those with a physical or mental impairment that substantially limits one or more major life activities.
3. Individuals from disadvantaged backgrounds who are defined as:
 - Individuals who come from a family with an annual income below established low-income thresholds. These thresholds are based on family size; published by the U.S. Bureau of the Census; adjusted annually for changes in the Consumer Price Index; and adjusted by the Secretary for use in all health professions programs. The Secretary periodically publishes these income levels at HHS - Poverty Guidelines, Research, and Measurement. For individuals from low income backgrounds, the institution must be able to demonstrate that such participants have qualified for Federal disadvantaged assistance or they have received any of the following student loans: Health Professions Student Loans (HPSL), Loans for Disadvantaged Student Program, or they have received scholarships from the U.S. Department of Health and Human Services under the Scholarship for Individuals with Exceptional Financial Need.
 - Individuals who come from a social, cultural, or educational environment such as that found in certain rural or inner-city environments that have demonstrably and recently directly inhibited the individual from obtaining the knowledge, skills, and abilities necessary to develop and participate in a

research career.

Applicants must submit a Letter of Assurance printed on the hiring institution letterhead, signed by an authorized institutional official (i.e. Grants and Contracts officer) that states you have been determined by your institution to be underrepresented in the above areas at the time of Letter of Intent (LOI) for verification. The Alzheimer's Association reserves the right to require additional documentation to help confirm the applicant's eligibility.

Non-US Applicants in addition to the letter must provide official documentation from their institutional materials, such as, website, manual or other legal documentation that indicates their eligibility for this program.

Applications for a Alzheimer's Association Research Grant (AARG) and Alzheimer's Association Research Grant to Promote Diversity (AARG-D) programs will be accepted from postdoctoral fellows and other junior faculty members (for example: Instructor, Research Associate Scientist, etc.) who can provide a letter of employment verification indicating you will have a full-time faculty position of an Assistant Professor and above by the award date should the proposal be in funding range and funded.

The letter of employment must be uploaded to your application dated within 3 months from application submission date, printed on the hiring institution letterhead, signed by an authorized institutional official (i.e. Grants and Contracts officer) and must indicate that the position will be activated by the grant award date. If the anticipated position is not activated by the award date for any reason, any offer of funding will be withdrawn. There will be no exceptions. In the event your application is funded, you will be required to provide an official letter on organizational letterhead, signed by an institutional signing official, stating you will have a full-time faculty position of an Assistant Professor and above.

Please note: If the applicant institution does not have an Assistant Professor position, the letter of employment should include sufficient information to allow the Alzheimer's Association staff to evaluate the eligibility of the applicant.

Ineligibility: The Alzheimer's Association will not accept new grant applications from currently funded investigators who are delinquent in submitting required reports and other deliverables on active grants. Investigators that have previous Alzheimer's Association awards closed as 'Incomplete' are not eligible to apply without exception. **This policy will be strictly adhered to with no exceptions.**

Deadlines and award dates: Letters of Intent must be received by 5:00 PM EASTERN STANDARD TIME, **March 1, 2017**. Letters of Intent will not be accepted after this date. No exceptions will be made.

Applications must be received by 5:00 PM EASTERN STANDARD TIME, April 18, 2017.

Scientific and technical review will be conducted from May through June 2017. The second-level review by the Medical and Scientific Advisory Council will be conducted during June 2017. Funding will be awarded by **August 30, 2017**.

LOI Review Procedures

All LOIs will be evaluated prior to invitation to submit a full application. Only LOIs that meet program specific guidelines will be invited to submit full applications. LOIs will also be reviewed by the Alzheimer's Association Medical and Scientific Advisory Council with special attention to:

1. Demonstrable innovation/novelty of the proposed project (especially in the context of the PIs recently funded work)
2. Alignment with the research priorities of the Alzheimer's Association
3. Impact of project on Alzheimer's disease and related dementia research
4. Evidence of methodological rigor that address the research question(s) being proposed

Applications will be reviewed with special attention to:

- Significance of the question being studied
- Applicant information– including the training of the PI insofar as it enables them to perform the work proposed and qualifications of the collaborators and the expertise they bring to the project
- Quality of the work plan, including novelty and innovation of the proposed project
- Quality and adequacy of available resources and budget
- Impact-Risk

Mechanism of award, reporting requirements and allowable costs: The mechanism of the award is the individual research grant. The maximum allowable duration is three years (minimum 2 years). Annual scientific progress and financial reports are required.

Continuation of the grant over the awarded duration is contingent upon the timely receipt of scientific progress and financial reports.

Budget: A “budget summary” for the proposed research project is required and must be submitted with the application and within the allowable two-page limit. However, if the application is to be awarded, a more detailed budget will be required and must be approved before the disbursement of funds. **Your budget must not exceed the maximum amount of the award, \$150,000 or \$60,000 per year for up to three years (minimum 2 years).** **Note:** If you only request the award for two years the max amount you can request is \$120,000.

Allowable costs under this award:

It is required that most of the funds awarded under this program be used for direct research support.

Allowable costs under this award include:

- Purchase and care of laboratory animals
- Small pieces of laboratory equipment and laboratory supplies **(purchases over \$10,000 require prior approval)**

- Computer equipment if used strictly for data collection **(require prior approval)**
- Support for travel to scientific and professional meetings not to exceed \$2,000 per year
- Additional support for travel expenses necessary to carry out research planned not to exceed \$1,000 per year; this may include site visits
- Salary for the principal investigator, scientific (including post-doctoral fellows) and technical staff (including laboratory technicians and administrative support related directly to the funded project)

Direct Costs not allowed under this award include:

- Tuition
- Computer hardware or software for investigators
- Rent for laboratory/office space
- Construction or renovation costs
- Salary and/or compensation for Alzheimer's Association Staff or members of the Alzheimer's Association Medical and Scientific Advisory Council (MSAC)

For more information: Contact grantsapp@alz.org or call 1.312.335-5747 or 1.312.335.5862.

iii. **Alzheimer's Association Research Fellowship (AARF) Program**

Competition objectives: The Alzheimer's Association Research Fellowship Award Program is up to three years (minimum 2 years) intended 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) and working in diverse areas of research, including basic, translational, clinical, functional and social-behavioral research. Investigators doing clinically-focused research without clinical practice are encouraged to apply to the AARF program. The Alzheimer's Association feels strongly that the mentoring and involvement of researchers from diverse backgrounds and perspectives is essential to engaging cutting edge ideas and thinking in addressing scientific gaps for Alzheimer's and related dementias.

Funding and award period: Each Alzheimer's Association Research Fellowship award is limited to \$175,000. A total of **\$155,000** will be awarded for costs related to the proposed research for up to three years (minimum 2 years) for direct and indirect costs. Requests in any given year may not exceed \$60,000 (direct and indirect costs). 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 Principal Investigator must commit to a 50 percent effort toward the proposed project each funding year.

The remaining funds, \$10,000 to the applicant and \$10,000 to the primary mentor, will be awarded upon successful completion of the three year (minimum 2 years). These additional funds are to be applied to sustaining ongoing research in the Alzheimer's field and will be awarded through the applicant's and mentor's institutions. Successful completion of the program includes, but is not limited to, reaching all of the demonstrable benchmarks listed. **Please note:** A total of \$5,000 over a three year period not to exceed \$2,500 per year (*if you request the full \$2,500 for 2 years and are requesting a 3 year award you will not be able to request travel funds for one of those years*) must be allocated to support registration and travel to the annual Alzheimer's Association International Conference (AAIC), a condition of the award.

Application: The mentor should be experienced in conducting Alzheimer's and related dementia research and in mentoring junior investigators. The application must include a 2-3 page statement from the selected mentor that includes information on his/her research qualifications and experience as a research supervisor, commitment to the applicant. This statement will be a significant part of the application review. The application must also include information to describe the mentor's research support relevant to the applicant's research plan and the nature and extent of supervision and training that he/she will provide during the period of the award. The primary mentor must agree to provide annual evaluations of the applicant's progress for the duration of the award, as required for the yearly progress report. Only one primary mentor can be included. Additional team members who might function as mentors can be listed as key personnel.

The full grant application for the AARF, AARF-D, AACSF and AACSF-D programs consists of the following:

1. Statement of Mentorship - 2-3 pages

Written by mentor to outline plan for the individual's training.

- the mentor should be experienced in conducting Alzheimer's and related dementia research and in mentoring junior investigators.
- the mentor should include information on his/her research qualifications and experience as a research supervisor, commitment to the applicant (this statement will be a significant part of the application review).

2. Statement of Commitment – 2 pages

Written by applicant to highlight their interest in Alzheimer's and related dementia research)

- information to describe the mentor's research support relevant to the applicant's research plan and the nature and extent of supervision and training that he/she will provide during the period of the award.
- the primary mentor must agree to provide annual evaluations of the applicant's progress for the duration of the award, as required for the yearly progress report.

3. Area of Research – 3 pages

Written by mentor and applicant; Summary of the specific area of research and project that applicant is pursuing.

- The experimental design and methods, technical procedures, instruments, characteristics of human subjects and animal populations, recruitment and retention plans, model systems, data management, quality control and analytic procedures are to be discussed as appropriate to the proposed investigation. Preliminary data/results that support the hypotheses or research strategies chosen should be discussed in this section.
- A brief justification of the experimental design selected should be included, in addition to the alternative strategies considered during the development of the project plans. Brief justifications or arguments supporting the choices of instruments, methods or models chosen will be helpful to reviewers. Outline the plans for data management, quality control and analysis.
- Mention alternative strategies where appropriate. If relevant to the project and nature of the research work, discuss plans for sharing data, samples or resources with other investigators. Describe any significant collaborations that are beyond the budget of this proposal and have not been previously described. All references, figures and photographs must be included in the three pages allowed for this section. Use the reference style that is most common in the major journal(s) discipline, specialty or sub- specialty.

4. Available Resources & Budget Justification - 2 pages

Template and instructions located under the WorkPlan and Other Attachments link. A total of \$5,000 over a two-three year period not to exceed \$2,500 per year (*if you request the full \$2,500 for 2 years and are requesting a 3 year award you will not be able to request travel funds for one of those years*) must be allocated to support registration and travel to the annual Alzheimer's Association International Conference (AAIC), a condition of the award.

5. Biosketch – 4 pages each

A biosketch should be included for both the **applicant and mentor**.

6. Letters of Reference

Limited to 3 letters and no more than 3 pages each. *A letter of reference from the mentor is not necessary as they are submitting a statement of mentorship.*

Mentoring selections may include early-career researchers and/or mid-career scientists who choose to shift into Alzheimer's and related dementia research. The applicant and proposed mentor must specify a mechanism for ensuring effective mentoring. The application should contain a plan for and an evaluation strategy of the mentoring process for enhancing diversity in the professional research workforce. Specific benchmarks are outlined below and considered by the Alzheimer's Association as critical for the development of early-career investigators. A successful mentorship plan should include some of these benchmarks but should not be limited to these alone.

REQUIRED benchmarks:

- Attendance at an Association-sponsored event for new investigators at the Alzheimer's Association's International Conference (AAIC)
- Acceptance of an abstract at AAIC
- Mandatory documentation of hours spent on face-to-face mentoring
- Citation of specific exercises of mentorship such as supervision of manuscript writing and submission or grant writing and submission
- Specific instances of the facilitation of networking, introductions to colleagues and/or inclusion in discussions at scientific meetings
- Submission of funding proposal(s) to other funding agencies, including Alzheimer's Association, National Institutes of Health or National Science Foundation, Medical Research Council (UK), Canadian Institutes of Health Research, etc.

SUGGESTED benchmark (not required)

- Submission of an application to the National Institute on Aging's Summer Institute

Eligibility: Please note, individuals applying to the program will be accepted from postdoctoral fellows with full time positions at their respective institution. Individuals who have a position of an Assistant Professorship or above are not eligible. For individuals who are at non-academic institutions, please contact the

Alzheimer's Association at grantsapp@alz.org to verify your eligibility.

Ineligibility: Although it is unlikely that individuals will have current Alzheimer's Association awards, applications from currently funded investigators who are delinquent in submitting required reports and other deliverables on active grants. Investigators that have previous Alzheimer's Association awards closed as 'Incomplete' are not eligible to apply without exception. **This policy will be strictly adhered to with no exceptions.**

Deadlines and award dates: Letters of Intent must be received by 5:00 PM EASTERN STANDARD TIME, **March 1, 2017**. Letters of Intent will not be accepted after this date. No exceptions will be made.

Applications must be received by 5:00 PM EASTERN STANDARD TIME, April 18, 2017.

Scientific and technical review will be conducted from May through June 2017. The second-level review by the Medical and Scientific Advisory Council will be conducted during June 2017. Funding will be awarded by **August 30, 2017**.

Applications will be reviewed with special attention to:

- Quality and nature of the training to be provided and the institutional, departmental, and mentor-specific training environment, this includes available resources to support the applicant in their training (30 percent)
- Quality and emphasis of applicant and originality of the research plan (40 percent)
- Significance of the question being studied, quality of the work plan and the impact-risk of the proposal (30 percent)

Mechanism of award, reporting requirements and allowable costs: The mechanism of the award is an individual research grant; this award is made to the individual and managed by their institution. Significant emphasis will be on the mentor and letters of reference provided in the application. The mentor is expected to contribute a statement regarding commitment to the applicant. The maximum allowable duration is three years (minimum 2 years). Annual scientific progress and financial reports are required from both the applicant and the mentor throughout the award period. **Continuation of the grant over the awarded duration is contingent upon the timely receipt of scientific progress and financial reports as well as a mentor's report outlining progress toward meeting required benchmarks.**

Budget: A "budget summary" for the proposed research project is required and must be submitted with the application and within the allowable two-page limit. However, if the application is to be awarded, a more detailed budget will be required and must be approved before the disbursement of funds. **Your budget must not exceed the maximum amount of the award, \$155,000 (\$150K for direct research and \$5K for travel) and may not exceed \$60,000 (direct and indirect costs) in a given year.** A total of \$5,000 over a three year period not to exceed \$2,500 per year *(if you request the full \$2,500 for 2 years and are requesting a 3 year award you will not be able to request travel*

funds for one of those years) must be allocated to support registration and travel to the annual Alzheimer's Association International Conference (AAIC), a condition of the award. Indirect costs are capped at no more than ten percent (10%). The remaining funds, \$10,000 to the applicant and \$10,000 to the primary mentor, will be awarded upon successful completion of the three year (minimum 2 years) program and should not be included in your budget.

Allowable costs under this award:

It is required that most of the funds awarded under this program be used for direct research support.

- Purchase and care of laboratory animals
- Small pieces of laboratory equipment and laboratory supplies (**purchases over \$10,000 require prior approval**)
- Computer equipment if used strictly for data collection (**require prior approval**)
- Travel (up to \$5,000 max over 2-3yr award to travel to the annual Alzheimer's Association International Conference (AAIC), a condition of the award)
- Salary for the principal investigator, scientific (including post-doctoral fellows) and technical staff (including laboratory technicians and administrative support related directly to the funded project)

Direct Costs not allowed under this award include:

- Tuition
- Computer hardware or software for investigators
- Rent for laboratory/office space (should be included in the indirect costs)
- Construction or renovation costs
- Facilities fee
- Salary and/or compensation for Alzheimer's Association Staff or members of the Alzheimer's Association Medical and Scientific Advisory Council (MSAC)

For more information: Contact grantsapp@alz.org or call 1.312.335.5747 or 1.312.335.5862.

iv. Alzheimer's Association Research Fellowship to Promote Diversity (AARF-D) Program

Competition objectives: The Alzheimer's Association Research Fellowship Award to Promote Diversity Program is up to three years (minimum 2 years) intended to support exceptional scientist from underrepresented groups working in Alzheimer's or related dementias research and 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) and working in diverse areas of research, including basic, translational, clinical, functional and social-behavioral research. Investigators doing clinically-focused research without clinical practice are encouraged to apply to the AARF-D program. The objective of this award 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. The Alzheimer's Association recognizes the need to increase the number of scientist from underrepresented groups participating in biomedical and behavioral research. The Association anticipates that by providing these research opportunities, the number of scientist from underrepresented groups entering and remaining in biomedical research careers in Alzheimer's disease will increase.

The Alzheimer's Association feels strongly that the mentoring and involvement of researchers from diverse backgrounds and perspectives is essential to engaging cutting edge ideas and thinking in addressing scientific gaps for Alzheimer's and related dementias.

Funding and award period: Each Alzheimer's Association Research Fellowship to Promote Diversity award is limited to \$175,000. A total of **\$155,000** will be awarded for costs related to the proposed research for up to three years (minimum 2 years) for direct and indirect costs. Requests in any given year may not exceed \$60,000 (direct and indirect costs). 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 Principal Investigator must commit to a 50 percent effort toward the proposed project each funding year.

The remaining funds, \$10,000 to the applicant and \$10,000 to the primary mentor, will be awarded upon successful completion of the three year (minimum 2 years) program. These additional funds are to be applied to sustaining ongoing research in the Alzheimer's field and will be awarded through the applicant's and mentor's institutions. Successful completion of the program includes, but is not limited to, reaching all of the demonstrable benchmarks listed. **Please note:** A total of \$5,000 over a three year period not to exceed \$2,500 per year (*if you request the full \$2,500 for 2 years and are requesting a 3 year award you will not be able to request travel funds for one of those years*) must be allocated to support registration and travel to the annual Alzheimer's Association International Conference (AAIC), a condition of the award.

Application: The mentor should be experienced in conducting Alzheimer's and related

dementia research and in mentoring junior investigators. The application must include a 2-3 page statement from the selected mentor that includes information on his/her research qualifications and experience as a research supervisor, commitment to the applicant. This statement will be a significant part of the application review. The application must also include information to describe the mentor's research support relevant to the applicant's research plan and the nature and extent of supervision and training that he/she will provide during the period of the award. The primary mentor must agree to provide annual evaluations of the applicant's progress for the duration of the award, as required for the yearly progress report. Only one primary mentor can be included. Additional team members who might function as mentors can be listed as key personnel.

The full grant application for the AARF, AARF-D, AACSF and AACSF-D programs consists of the following:

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Written by mentor to outline plan for the individual's training.

- the mentor should be experienced in conducting Alzheimer's and related dementia research and in mentoring junior investigators.
- the mentor should include information on his/her research qualifications and experience as a research supervisor, commitment to the applicant (this statement will be a significant part of the application review).

2. Statement of Commitment – 2 pages

Written by applicant to highlight their interest in Alzheimer's and related dementia research)

- information to describe the mentor's research support relevant to the applicant's research plan and the nature and extent of supervision and training that he/she will provide during the period of the award.
- the primary mentor must agree to provide annual evaluations of the applicant's progress for the duration of the award, as required for the yearly progress report.

3. Area of Research – 3 pages

Written by mentor and applicant; Summary of the specific area of research and project that applicant is pursuing.

- The experimental design and methods, technical procedures, instruments, characteristics of human subjects and animal populations, recruitment and retention plans, model systems, data management, quality control and analytic procedures are to be discussed as appropriate to the proposed investigation. Preliminary data/results that support the hypotheses or research strategies chosen should be discussed in this section.
- A brief justification of the experimental design selected should be included, in addition to the alternative strategies considered during the development of the project plans. Brief justifications or arguments supporting the choices of instruments, methods or models chosen will be helpful to reviewers. Outline the plans for data management, quality control and analysis.

- Mention alternative strategies where appropriate. If relevant to the project and nature of the research work, discuss plans for sharing data, samples or resources with other investigators. Describe any significant collaborations that are beyond the budget of this proposal and have not been previously described. All references, figures and photographs must be included in the three pages allowed for this section. Use the reference style that is most common in the major journal(s) discipline, specialty or sub- specialty.

4. Available Resources & Budget Justification - 2 pages

Template and instructions located under the WorkPlan and Other Attachments link. A total of \$5,000 over a two-three year period not to exceed \$2,500 per year (*if you request the full \$2,500 for 2 years and are requesting a 3 year award you will not be able to request travel funds for one of those years*) must be allocated to support registration and travel to the annual Alzheimer's Association International Conference (AAIC), a condition of the award.

5. Biosketch – 4 pages each

A biosketch should be included for both the **applicant and mentor**.

6. Letters of Reference

Limited to 3 letters and no more than 3 pages each. *A letter of reference from the mentor is not necessary as they are submitting a statement of mentorship.*

Mentoring selections may include early-career researchers and/or mid-career scientists who choose to shift into Alzheimer's and related dementia research. The applicant and proposed mentor must specify a mechanism for ensuring effective mentoring. The application should contain a plan for and an evaluation strategy of the mentoring process for enhancing diversity in the professional research workforce. Specific benchmarks are outlined below and considered by the Alzheimer's Association as critical for the development of early-career investigators. A successful mentorship plan should include some of these benchmarks but should not be limited to these alone.

REQUIRED benchmarks:

- Attendance at an Association-sponsored event for new investigators at the Alzheimer's Association's International Conference (AAIC)
- Acceptance of an abstract at AAIC
- Mandatory documentation of hours spent on face-to-face mentoring
- Citation of specific exercises of mentorship such as supervision of manuscript writing and submission or grant writing and submission
- Specific instances of the facilitation of networking, introductions to colleagues and/or inclusion in discussions at scientific meetings
- Submission of funding proposal(s) to other funding agencies, including Alzheimer's Association, National Institutes of Health or National Science Foundation, Medical Research Council (UK), Canadian Institutes of Health Research, etc.

SUGGESTED benchmark (not required)

- Submission of an application to the National Institute on Aging's Summer Institute

Eligibility: Please note, individuals applying to the program will be accepted from postdoctoral fellows with full time positions at their respective institution. Individuals who have a position of an Assistant Professorship or above are not eligible. For individuals who are at non-academic institutions, please contact the Alzheimer's Association at grantsapp@alz.org to verify your eligibility.

Specific for the AARF-D program, eligible applicants are faculty members who have been determined to be scientist from underrepresented groups in biomedical and behavioral research on a national or institutional basis. The Alzheimer's Association will require documentation to support the faculty member's underrepresented status at their institution. Applicants in the United States will be subject to the definitions as stated by the National Institutes of Health:

1. Individuals from racial and ethnic groups that have been shown by the National Science Foundation to be underrepresented in health-related sciences on a national basis. The following racial and ethnic groups have been shown to be underrepresented in biomedical research: African Americans, Hispanic Americans, American Indians, Alaska Natives, Native Hawaiians, and other Pacific Islanders. In addition, it is recognized that underrepresentation can vary from setting to setting; individuals from racial or ethnic groups that can be convincingly demonstrated to be underrepresented by the grantee institution should be encouraged to participate in this program.
2. Individuals with disabilities, who are defined as those with a physical or mental impairment that substantially limits one or more major life activities.
3. Individuals from disadvantaged backgrounds who are defined as:
 - Individuals who come from a family with an annual income below established low-income thresholds. These thresholds are based on family size; published by the U.S. Bureau of the Census; adjusted annually for changes in the Consumer Price Index; and adjusted by the Secretary for use in all health professions programs. The Secretary periodically publishes these income levels at HHS - Poverty Guidelines, Research, and Measurement. For individuals from low income backgrounds, the institution must be able to demonstrate that such participants have qualified for Federal disadvantaged assistance or they have received any of the following student loans: Health Professions Student Loans (HPSL), Loans for Disadvantaged Student Program, or they have received scholarships from the U.S. Department of Health and Human Services under the Scholarship for Individuals with Exceptional Financial Need.
 - Individuals who come from a social, cultural, or educational environment such as that found in certain rural or inner-city environments that have demonstrably and recently directly inhibited the individual from obtaining the knowledge, skills, and abilities necessary to develop and participate in a

research career.

Applicants must submit a Letter of Assurance letter printed on the hiring institution letterhead with the current date, signed by an authorized institutional official (i.e. Grants and Contracts officer) that states you have been determined by your institution to be underrepresented in the above areas at the time of Letter of Intent (LOI) for verification. The Alzheimer's Association reserves the right to require additional documentation to help confirm the applicant's eligibility. **Non-US Applicants in addition to the letter must provide official documentation from their institutional materials, such as, website, manual or other legal documentation that indicates their eligibility for this program.**

Ineligibility: Although it is unlikely that individuals will have current Alzheimer's Association awards, applications from currently funded investigators who are delinquent in submitting required reports and other deliverables on active grants. Investigators that have previous Alzheimer's Association awards closed as 'Incomplete' are not eligible to apply without exception. **This policy will be strictly adhered to with no exceptions.**

Deadlines and award dates: Letters of Intent must be received by 5:00 PM EASTERN STANDARD TIME, **March 1, 2017**. Letters of Intent will not be accepted after this date. No exceptions will be made.

Applications must be received by 5:00 PM EASTERN STANDARD TIME, April 18, 2017.

Scientific and technical review will be conducted from May through June 2017. The second-level review by the Medical and Scientific Advisory Council will be conducted during June 2017. Funding will be awarded by **August 30, 2017**.

Applications will be reviewed with special attention to:

- Quality and nature of the training to be provided and the institutional, departmental, and mentor-specific training environment, this includes available resources to support the applicant in their training (30 percent)
- Quality and emphasis of applicant and originality of the research plan (40 percent)
- Significance of the question being studied, quality of the work plan and the impact-risk of the proposal (30 percent)

Mechanism of award, reporting requirements and allowable costs: The mechanism of the award is an individual research grant; this award is made to the individual and managed by their institution. Significant emphasis will be on the mentor and letters of reference provided in the application. The mentor is expected to contribute a statement regarding commitment to the applicant. The maximum allowable duration is three years (minimum 2 years). Annual scientific progress and financial reports are required from both the applicant and the mentor throughout the award period. **Continuation of the grant over the awarded duration is contingent upon the timely receipt of scientific progress and financial reports as well as a mentor's report outlining progress toward meeting required benchmarks.**

Budget: A “budget summary” for the proposed research project is required and must be submitted with the application and within the allowable two-page limit. However, if the application is to be awarded, a more detailed budget will be required and must be approved before the disbursement of funds. **Your budget must not exceed the maximum amount of the award, \$155,000 (\$150K for direct research and \$5K for travel) and may not exceed \$60,000 (direct and indirect costs) in a given year.** A total of \$5,000 over a three year period not to exceed \$2,500 per year *(if you request the full \$2,500 for 2 years and are requesting a 3 year award you will not be able to request travel funds for one of those years)* must be allocated to support registration and travel to the annual Alzheimer’s Association International Conference (AAIC), a condition of the award. Indirect costs are capped at no more than ten percent (10%). The remaining funds, \$10,000 to the applicant and \$10,000 to the primary mentor, will be awarded upon successful completion of the three year (minimum 2 years) program and should not be included in your budget.

Allowable costs under this award:

It is required that most of the funds awarded under this program be used for direct research support.

- Purchase and care of laboratory animals
- Small pieces of laboratory equipment and laboratory supplies **(purchases over \$10,000 require prior approval)**
- Computer equipment if used strictly for data collection **(require prior approval)**
- Travel (up to \$5,000 max over 2-3yr award to travel to the annual Alzheimer’s Association International Conference (AAIC), a condition of the award)
- Salary for the principal investigator, scientific (including post-doctoral fellows) and technical staff (including laboratory technicians and administrative support related directly to the funded project)

Direct Costs not allowed under this award include:

- Tuition
- Computer hardware or software for investigators
- Rent for laboratory/office space (should be included in the indirect costs)
- Construction or renovation costs
- Facilities fee
- Salary and/or compensation for Alzheimer’s Association Staff or members of the Alzheimer’s Association Medical and Scientific Advisory Council (MSAC)

For more information: Contact grantsapp@alz.org or call 1.312.335.5747 or 1.312.335.5862.

v. Alzheimer's Association Clinician Scientist Fellowship (AACSF) Program

Competition Objectives: The Alzheimer's Association recognizes the need to support the training of clinician scientists in Alzheimer's and related dementias. For the purpose of this program, a clinician scientist is defined as an individual already trained, licensed and practicing in a clinical field that includes patient contact (e.g., neurology, psychiatry, geriatrics, psychology) or patient-related diagnostic studies (e.g., neuropathology and radiology). Applicants who hold an M.D. or D.O. degree or applicants with a Ph.D. who have licensure for clinical practice are eligible. The areas of research that the clinician scientist proposes for funding are not limited to patient-oriented, human subject research, but may also include translational research specifically designed to develop treatments or enhance diagnosis of neurological disease. These translational areas of research include epidemiologic or behavioral studies, clinical trials, studies of disease mechanisms, the development of new technologies, and health services and outcomes research. Disease related basic science studies not directly involving humans or human tissue are also encouraged if the primary goal is the development of therapies, diagnostic tests, or other tools to prevent or mitigate neurological diseases.

Funding and award period: Each Alzheimer's Association Clinician Scientist Fellowship is limited to \$175,000. A total of **\$155,000** will be awarded for costs related to the proposed research for up to three years (minimum 2 years) for direct and indirect costs. Requests in any given year may not exceed \$60,000 (direct and indirect costs). 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 Principal Investigator must commit to a 50 percent effort toward the proposed project each funding year.

Please Note: Applicant's additional funding will be considered, please include all funding applicant has received.

The remaining funds, \$10,000 to the applicant and \$10,000 to the primary mentor, will be awarded upon successful completion of the three year (minimum 2 years) program. These additional funds are to be applied to sustaining ongoing research in the Alzheimer's field and will be awarded through the applicant's and mentor's institutions. Successful completion of the program includes, but is not limited to, reaching all of the demonstrable benchmarks listed. **Please note:** A total of \$5,000 over a three year period not to exceed \$2,500 per year (*if you request the full \$2,500 for 2 years and are requesting a 3 year award you will not be able to request travel funds for one of those years*) must be allocated to support registration and travel to the annual Alzheimer's Association International Conference (AAIC), a condition of the award.

Eligibility: Applicant must be a clinician who is interested in an academic career in research and has completed residency for an M.D. or D.O. (i.e. any degree that allows the applicant to achieve licensure to practice medicine) or a post-doctoral fellowship (Ph.D.) in a clinical practice field or both within the past five years. Individuals who are early in their clinician scientist careers will be given priority. Proposals are strongly encouraged from individuals training in specialties of behavioral neurology and neuropathology, geriatrics

with focus on dementia/cognitive disorders, geriatric psychiatry with focus on dementia/cognitive disorders or neuropsychology with focus on dementia/cognitive disorders.

The applicant must be at a recognized academic institution. The Alzheimer's Association reserves the right to request additional information to confirm that the institution meets not-for-profit requirements of the Association. **For questions as to whether an applicant or organization is eligible, please contact the Alzheimer's Association at grantsapp@alz.org** prior to submitting an LOI, no exceptions will be made after the LOI deadline has passed.

Ineligibility: Although it is unlikely individuals will have current Alzheimer's Association awards, applications from currently funded investigators (including the mentor) who are delinquent in submitting required reports and other deliverables on active grants are ineligible. Investigators (or mentors) that have previous Alzheimer's Association awards closed as 'Incomplete' are not eligible to apply. **This policy will be strictly adhered to with no exceptions.**

Deadlines and award dates: Letters of Intent must be received by 5:00 PM EASTERN STANDARD TIME, **March 1, 2017**. Letters of Intent will not be accepted after this date. No exceptions will be made.

Applications must be received by 5:00 PM EASTERN STANDARD TIME, April 18, 2017.

Scientific and technical review will be conducted from May through June 2017. The second-level review by the Medical and Scientific Advisory Council will be conducted during June 2017. Funding will be awarded by **August 30, 2017**.

Applications will be reviewed with special attention to:

- Applicant's ability and promise as a clinician scientist based on prior record of achievement and career plan, letters of reference, and curriculum vitae (30 percent)
- Quality and nature of the training to be provided and the institutional, departmental, and mentor-specific training environment, this includes available resources to support the applicant in their training (30 percent)
- Quality and originality of the research plan (40 percent)

Mechanism of award, reporting requirements and allowable costs: The mechanism of the award is an individual research grant; this award is made to the individual and managed by their institution. Significant emphasis will be on the mentor and letters of reference provided in the application. The mentor is expected to contribute a statement regarding commitment to the applicant. The maximum allowable duration is three years (minimum 2 years). Annual scientific progress and financial reports are required from both the applicant and the mentor throughout the award period. **Continuation of the grant over the awarded duration is contingent upon the timely receipt of scientific progress and financial reports as well as a mentor's report outlining progress**

toward meeting required benchmarks.

Application: The mentor should be experienced in conducting Alzheimer's and related dementia research and in mentoring junior investigators. The application must include a 2-3 page statement from the selected mentor that includes information on his/her research qualifications and experience as a research supervisor, commitment to the applicant. This statement will be a significant part of the application review. The application must also include information to describe the mentor's research support relevant to the applicant's research plan and the nature and extent of supervision and training that he/she will provide during the period of the award. The primary mentor must agree to provide annual evaluations of the applicant's progress for the duration of the award, as required for the yearly progress report. Only one primary mentor can be included. Additional team members who might function as mentors can be listed as key personnel.

The full grant application for the AARF, AARF-D, AACSA and AACSA-D programs consists of the following:

1. Statement of Mentorship - 2-3 pages

Written by mentor to outline plan for the individual's training.

- the mentor should be experienced in conducting Alzheimer's and related dementia research and in mentoring junior investigators.
- the mentor should include information on his/her research qualifications and experience as a research supervisor, commitment to the applicant (this statement will be a significant part of the application review).

2. Statement of Commitment – 2 pages

Written by applicant to highlight their interest in Alzheimer's and related dementia research)

- information to describe the mentor's research support relevant to the applicant's research plan and the nature and extent of supervision and training that he/she will provide during the period of the award.
- the primary mentor must agree to provide annual evaluations of the applicant's progress for the duration of the award, as required for the yearly progress report.

3. Area of Research – 3 pages

Written by mentor and applicant; Summary of the specific area of research and project that applicant is pursuing.

- The experimental design and methods, technical procedures, instruments, characteristics of human subjects and animal populations, recruitment and retention plans, model systems, data management, quality control and analytic procedures are to be discussed as appropriate to the proposed investigation. Preliminary data/results that support the hypotheses or research strategies chosen should be discussed in this section.
- A brief justification of the experimental design selected should be included, in addition to the alternative strategies considered during the development of the project plans. Brief justifications or arguments supporting the choices of

instruments, methods or models chosen will be helpful to reviewers. Outline the plans for data management, quality control and analysis.

- Mention alternative strategies where appropriate. If relevant to the project and nature of the research work, discuss plans for sharing data, samples or resources with other investigators. Describe any significant collaborations that are beyond the budget of this proposal and have not been previously described. All references, figures and photographs must be included in the three pages allowed for this section. Use the reference style that is most common in the major journal(s) discipline, specialty or sub- specialty.

4. Available Resources & Budget Justification - 2 pages

Template and instructions located under the WorkPlan and Other Attachments link. A total of \$5,000 over a two-three year period not to exceed \$2,500 per year (*if you request the full \$2,500 for 2 years and are requesting a 3 year award you will not be able to request travel funds for one of those years*) must be allocated to support registration and travel to the annual Alzheimer's Association International Conference (AAIC), a condition of the award.

5. Biosketch – 4 pages each

A biosketch should be included for both the **applicant and mentor**.

6. Letters of Reference

Limited to 3 letters and no more than 3 pages each. *A letter of reference from the mentor is not necessary as they are submitting a statement of mentorship.*

Budget: A “budget summary” for the proposed research project is required and must be submitted with the application and within the allowable two-page limit. However, if the application is to be awarded, a more detailed budget will be required and must be approved before the disbursement of funds. **Your budget must not exceed the maximum amount of the award, \$155,000 (\$150K for direct research and \$5K for travel) and may not exceed \$60,000 (direct and indirect costs) in a given year.** A total of \$5,000 over a three year period not to exceed \$2,500 per year (*if you request the full \$2,500 for 2 years and are requesting a 3 year award you will not be able to request travel funds for one of those years*) must be allocated to support registration and travel to the annual Alzheimer's Association International Conference (AAIC), a condition of the award. Indirect costs are capped at no more than ten percent (10%). The remaining funds, \$10,000 to the applicant and \$10,000 to the primary mentor, will be awarded upon successful completion of the three year (minimum 2 years) program and should not be included in your budget.

Allowable costs under this award:

It is required that most of the funds awarded under this program be used for direct research support.

Other allowable costs include:

- Purchase and care of laboratory animals

- Small pieces of laboratory equipment and laboratory supplies (**purchases over \$10,000 require prior approval**)
- Computer software if used strictly for data collection, (**require prior approval**)
- Salary for the principal investigator, scientific (including postdoctoral fellows) and technical staff (including laboratory technicians and administrative support directly related to the funded grant)
- Travel (up to \$5,000 max over 2-3yr award to travel to the annual Alzheimer's Association International Conference (AAIC), a condition of the award)

Direct Costs not allowed under this award include:

- Computer hardware or standard software (e.g. Microsoft Office)
- Construction or renovation costs
- Rent for laboratory/office space
- Salary and/or compensation for Alzheimer's Association Staff or members of the Alzheimer's Association Medical and Scientific Advisory Council (MSAC)

For more information: Contact grantsapp@alz.org or call 1.312.335-5747 or 1.312.335.5862.

vi. **Alzheimer's Association Clinician Scientist Fellowship to Promote Diversity (AACSF-D) Program**

Competition Objectives: The Alzheimer's Association Clinician Scientist Fellowship to Promote Diversity is up to three years (minimum 2 years) and is intended to support exceptional clinician scientist who are currently underrepresented at academic institutions in clinical research training in Alzheimer's and related dementias. Applicants who hold an M.D. or D.O. degree or applicants with a Ph.D. who have licensure for clinical practice are eligible. 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. These areas of research include epidemiologic or behavioral studies, clinical trials, studies of disease mechanisms, the development of new technologies, and health services and outcomes research." Disease related studies not directly involving humans or human tissue are also encouraged if the primary goal is the development of therapies, diagnostic tests, or other tools to prevent or mitigate neurological diseases. The Alzheimer's Association recognizes the need to increase the number of underrepresented clinicians participating in clinical research. The Association anticipates that by providing this funding opportunity, the number of underrepresented physicians entering and remaining in clinical careers in Alzheimer's disease will increase.

Funding and award period: Each Alzheimer's Association Clinician Scientist Fellowship to Promote Diversity award is limited to \$175,000. A total of **\$155,000** will be awarded for costs related to the proposed research for up to three years (minimum 2 years) for direct and indirect costs. Requests in any given year may not exceed \$60,000 (direct and indirect costs). 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 Principal Investigator must commit to a 50 percent effort toward the proposed project each funding year.

Please Note: Applicant's additional funding will be considered, please include all funding applicant has received.

The remaining funds, \$10,000 to the applicant and \$10,000 to the primary mentor, will be awarded upon successful completion of the three year (minimum 2 years) program. These additional funds are to be applied to sustaining ongoing research in the Alzheimer's field and will be awarded through the applicant's and mentor's institutions. Successful completion of the program includes, but is not limited to, reaching all of the demonstrable benchmarks listed. **Please note:** A total of \$5,000 over a three year period not to exceed \$2,500 per year (*if you request the full \$2,500 for 2 years and are requesting a 3 year award you will not be able to request travel funds for one of those years*) must be allocated to support registration and travel to the annual Alzheimer's Association International Conference (AAIC), a condition of the award.

Eligibility: Applicant must be a clinician who is interested in an academic career in research and has completed residency for an M.D. or D.O. (i.e. any degree that allows the applicant to achieve licensure to practice medicine) or a post-doctoral fellowship (Ph.D.) in a clinical practice field or both within the past five years. Individuals who are early in their clinician scientist careers will be given priority. Proposals are strongly encouraged from individuals training in specialties of behavioral neurology and neuropathology, geriatrics with focus on dementia/cognitive disorders, geriatric psychiatry with focus on dementia/cognitive disorders or neuropsychology with focus on dementia/cognitive disorders.

Specific for the AACSF-D program, eligible applicants are faculty members who have been determined to be underrepresented faculty in biomedical and behavioral research on a national or institutional basis. The Alzheimer's Association will require documentation to support the faculty member's underrepresented status at their institution. Applicants in the United States will be subject to the definitions as stated by the National Institutes of Health:

1. Individuals from racial and ethnic groups that have been shown by the National Science Foundation to be underrepresented in health-related sciences on a national basis. The following racial and ethnic groups have been shown to be underrepresented in biomedical research: African Americans, Hispanic Americans, American Indians, Alaska Natives, Native Hawaiians, and other Pacific Islanders. In addition, it is recognized that underrepresentation can vary from setting to setting; individuals from racial or ethnic groups that can be convincingly demonstrated to be underrepresented by the grantee institution should be encouraged to participate in this program.
2. Individuals with disabilities, who are defined as those with a physical or mental impairment that substantially limits one or more major life activities.
3. Individuals from disadvantaged backgrounds who are defined as:
 - Individuals who come from a family with an annual income below established low-income thresholds. These thresholds are based on family size; published by the U.S. Bureau of the Census; adjusted annually for changes in the Consumer Price Index; and adjusted by the Secretary for use in all health professions programs. The Secretary periodically publishes these income levels at HHS - Poverty Guidelines, Research, and Measurement. For individuals from low income backgrounds, the institution must be able to demonstrate that such participants have qualified for Federal disadvantaged assistance or they have received any of the following student loans: Health Professions Student Loans (HPSL), Loans for Disadvantaged Student Program, or they have received scholarships from the U.S. Department of Health and Human Services under the Scholarship for Individuals with Exceptional Financial Need.
 - Individuals who come from a social, cultural, or educational environment such as that found in certain rural or inner-city environments that have

demonstrably and recently directly inhibited the individual from obtaining the knowledge, skills, and abilities necessary to develop and participate in a research career.

Applicants must submit a Letter of Assurance letter printed on the hiring institution letterhead with the current date, signed by an authorized institutional official (i.e. Grants and Contracts officer) that states you have been determined by your institution to be underrepresented in the above areas at the time of Letter of Intent (LOI) for verification. The Alzheimer's Association reserves the right to require additional documentation to help confirm the applicant's eligibility. **Non-US Applicants in addition to the letter must provide official documentation from their institutional materials, such as, website, manual or other legal documentation that indicates their eligibility for this program.**

The applicant must be at a recognized academic institution. The Alzheimer's Association reserves the right to request additional information to confirm that the institution meets not-for-profit requirements of the Association. **For questions as to whether an applicant or organization is eligible, please contact the Alzheimer's Association at grantsapp@alz.org prior to submitting an LOI, no exceptions will be made after the LOI deadline has passed.**

Ineligibility: Although it is unlikely individuals will have current Alzheimer's Association awards, applications from currently funded investigators (including the mentor) who are delinquent in submitting required reports and other deliverables on active grants are ineligible. Investigators (or mentors) that have previous Alzheimer's Association awards closed as 'Incomplete' are not eligible to apply. **This policy will be strictly adhered to with no exceptions.**

Deadlines and award dates: Letters of Intent must be received by 5:00 PM EASTERN STANDARD TIME, **March 1, 2017**. Letters of Intent will not be accepted after this date. No exceptions will be made.

Applications must be received by 5:00 PM EASTERN STANDARD TIME, **April 18, 2017.**

Scientific and technical review will be conducted from May through June 2017. The second-level review by the Medical and Scientific Advisory Council will be conducted during June 2017. Funding will be awarded by **August 30, 2017**.

Applications will be reviewed with special attention to:

- Applicant's ability and promise as a clinician-scientist based on prior record of achievement and career plan, letters of reference, and curriculum vitae (30 percent)
- Quality and nature of the training to be provided and the institutional, departmental, and mentor-specific training environment, this includes available resources to support the applicant in their training (30 percent)
- Quality and originality of the research plan (40 percent)

Mechanism of award, reporting requirements and allowable costs: The mechanism of the award is an individual research grant; this award is made to the individual and managed by their institution. Significant emphasis will be on the mentor and letters of reference provided in the application. The mentor is expected to contribute a statement regarding commitment to the applicant. The maximum allowable duration is three years (minimum 2 years). Annual scientific progress and financial reports are required from both the applicant and the mentor throughout the award period. **Continuation of the grant over the awarded duration is contingent upon the timely receipt of scientific progress and financial reports as well as a mentor's report outlining progress toward meeting required benchmarks.**

Application: The mentor should be experienced in conducting Alzheimer's and related dementia research and in mentoring junior investigators. The application must include a 2-3 page statement from the selected mentor that includes information on his/her research qualifications and experience as a research supervisor, commitment to the applicant. This statement will be a significant part of the application review. The application must also include information to describe the mentor's research support relevant to the applicant's research plan and the nature and extent of supervision and training that he/she will provide during the period of the award. The primary mentor must agree to provide annual evaluations of the applicant's progress for the duration of the award, as required for the yearly progress report. Only one primary mentor can be included. Additional team members who might function as mentors can be listed as key personnel.

The full grant application for the AARF, AARF-D, AACSF and AACSF-D programs consists of the following:

1. Statement of Mentorship - 2-3 pages

Written by mentor to outline plan for the individual's training.

- the mentor should be experienced in conducting Alzheimer's and related dementia research and in mentoring junior investigators.
- the mentor should include information on his/her research qualifications and experience as a research supervisor, commitment to the applicant (this statement will be a significant part of the application review).

2. Statement of Commitment – 2 pages

Written by applicant to highlight their interest in Alzheimer's and related dementia research)

- information to describe the mentor's research support relevant to the applicant's research plan and the nature and extent of supervision and training that he/she will provide during the period of the award.
- the primary mentor must agree to provide annual evaluations of the applicant's progress for the duration of the award, as required for the yearly progress report.

3. Area of Research – 3 pages

Written by mentor and applicant; Summary of the specific area of research and project that applicant is pursuing.

- The experimental design and methods, technical procedures, instruments, characteristics of human subjects and animal populations, recruitment and retention plans, model systems, data management, quality control and analytic procedures are to be discussed as appropriate to the proposed investigation. Preliminary data/results that support the hypotheses or research strategies chosen should be discussed in this section.
- A brief justification of the experimental design selected should be included, in addition to the alternative strategies considered during the development of the project plans. Brief justifications or arguments supporting the choices of instruments, methods or models chosen will be helpful to reviewers. Outline the plans for data management, quality control and analysis.
- Mention alternative strategies where appropriate. If relevant to the project and nature of the research work, discuss plans for sharing data, samples or resources with other investigators. Describe any significant collaborations that are beyond the budget of this proposal and have not been previously described. All references, figures and photographs must be included in the three pages allowed for this section. Use the reference style that is most common in the major journal(s) discipline, specialty or sub- specialty.

4. Available Resources & Budget Justification - 2 pages

Template and instructions located under the WorkPlan and Other Attachments link. A total of \$5,000 over a two-three year period not to exceed \$2,500 per year (*if you request the full \$2,500 for 2 years and are requesting a 3 year award you will not be able to request travel funds for one of those years*) must be allocated to support registration and travel to the annual Alzheimer's Association International Conference (AAIC), a condition of the award.

5. Biosketch – 4 pages each

A biosketch should be included for both the **applicant and mentor**.

6. Letters of Reference

Limited to 3 letters and no more than 3 pages each. *A letter of reference from the mentor is not necessary as they are submitting a statement of mentorship.*

Mentoring selections may include early-career researchers and/or mid-career scientists who choose to shift into Alzheimer's and related dementia research. The applicant and proposed mentor must specify a mechanism for ensuring effective mentoring. The application should contain a plan for and an evaluation strategy of the mentoring process for enhancing diversity in the professional research workforce. Specific benchmarks are outlined below and considered by the Alzheimer's Association as critical for the development of early-career investigators. A successful mentorship plan should include some of these benchmarks but should not be limited to these alone.

Budget: A “budget summary” for the proposed research project is required and must be submitted with the application and within the allowable two-page limit. However, if the application is to be awarded, a more detailed budget will be required and must be approved before the disbursement of funds. **Your budget must not exceed the maximum amount of the award, \$155,000 (\$150K for direct research and \$5K for travel) and may not exceed \$60,000 (direct and indirect costs) in a given year.** A total of \$5,000 over a three year period not to exceed \$2,500 per year *(if you request the full \$2,500 for 2 years and are requesting a 3 year award you will not be able to request travel funds for one of those years)* must be allocated to support registration and travel to the annual Alzheimer’s Association International Conference (AAIC), a condition of the award. Indirect costs are capped at no more than ten percent (10%). The remaining funds, \$10,000 to the applicant and \$10,000 to the primary mentor, will be awarded upon successful completion of the three year (minimum 2 years) program and should not be included in your budget.

Allowable costs under this award:

It is required that most of the funds awarded under this program be used for direct research support.

Other allowable costs include:

- Purchase and care of laboratory animals
- Small pieces of laboratory equipment and laboratory supplies **(purchases over \$10,000 require prior approval)**
- Computer software if used strictly for data collection, **(require prior approval)**
- Salary for the principal investigator, scientific (including postdoctoral fellows) and technical staff (including laboratory technicians and administrative support directly related to the funded grant)
- Travel (up to \$5,000 max over 2-3yr award to travel to the annual Alzheimer’s Association International Conference (AAIC), a condition of the award)

Direct Costs not allowed under this award include:

- Computer hardware or standard software (e.g. Microsoft Office)
- Construction or renovation costs
- Rent for laboratory/office space
- Salary and/or compensation for Alzheimer’s Association Staff or members of the Alzheimer’s Association Medical and Scientific Advisory Council (MSAC)

For more information: Contact grantsapp@alz.org or call 1.312.335-5747 or 1.312.335.5862.

vii. The Zenith Fellows Award Program (Zenith)

Competition objectives: The Zenith Fellows award was initiated in 1991 to provide a vehicle for research support for donors with a substantial personal commitment to the advancement of Alzheimer's disease research. The awards are made possible by the generosity of a group of individuals and organizations (Zenith Society) that have each committed \$1 million to the Alzheimer's Association for support of the program.

The objective of the 2017 Zenith Fellows Awards competition is to provide major support for investigators who have:

- Contributed significantly to the field of Alzheimer's disease research,
- Made significant contributions to other areas of science and are now beginning to focus more directly on problems related to Alzheimer's disease, and
- Are likely to make substantial contributions in the future.

The proposed research must be "on the cutting edge" of basic science or biomedical research and thus may not conform to current conventional scientific wisdom or may challenge the prevailing orthodoxy. The proposed research should address fundamental problems related to early detection, etiology, pathogenesis, treatment and/or prevention of Alzheimer's disease.

In addition to the two tier peer-review process, the Zenith Fellows Award includes an additional level of review that engages the Alzheimer's Association Zenith Society to select final award recipients based on project topics in which they are most interested. Many of the Zenith Society members have family and friends affected by Alzheimer's disease and have a deep commitment to advancing the research.

The Alzheimer's Association recognizes the need to increase the number of scientists from underrepresented groups in the research enterprise. Researchers from these groups are encouraged to apply.

Funding and award period: Each award is limited to \$450,000 (direct and indirect costs) for three years. Requests in any given year may not exceed \$250,000 (direct and indirect costs). Indirect costs are capped at 10 percent (rent for laboratory/office space is expected to be covered by indirect costs paid to the institution).

Eligibility: Only established independent investigators are eligible as evidenced by:

- 1) Academic appointment;
- 2) Major, peer-reviewed, external multi-year grant support on which the applicant is the principal investigator (PI);
- 3) Independent laboratory operation; and
- 4) Quality and independence of publication record.

Only applicants who have already contributed significantly to the field of Alzheimer's disease research or have the clear likelihood of making significant contributions will be seriously considered. **Previous recipients of Zenith Awards, Medical and Scientific**

Advisory Council members and members of the National Board of the Alzheimer's Association are ineligible to apply.

Ineligibility: The Alzheimer's Association will not accept new grant applications from currently funded investigators who are delinquent in submitting required reports and other deliverables on active grants. Investigators that have previous Alzheimer's Association awards closed as 'Incomplete' are not eligible to apply without exception. **This policy will be strictly adhered to with no exceptions.**

Deadlines and award dates: Letters of Intent must be received by 5:00 PM EASTERN STANDARD TIME, **March 1, 2017**. Letters of Intent will not be accepted after this date. No exceptions will be made.

Applications must be received by 5:00 PM EASTERN STANDARD TIME, April 18, 2017.

Scientific and technical review will be conducted from May through June 2017. The second-level review by the Medical and Scientific Advisory Council will be conducted during June 2017. The Zenith Society review will occur in November, 2017. **Funding decisions will be sent no later than November 30, 2017.**

Please note: LOI Review Procedures

All LOIs will be evaluated prior to invitation to submit a full application. Only LOIs that meet program specific guidelines will be invited to submit full applications. LOIs will also be reviewed by the Alzheimer's Association Medical and Scientific Advisory Council with special attention to:

- Demonstrable innovation/novelty of the proposed project (especially in the context of the PIs recently funded work)
- Alignment with the research priorities of the Alzheimer's Association
Impact of project on Alzheimer's disease and related dementia research
- Evidence of methodological rigor that address the research question(s) being proposed

Applications will be reviewed with special attention to:

- Significance of the question being studied
- Applicant information
- Quality of the work plan
- Quality and adequacy of available resources and budget
- Impact-Risk

Mechanism of award, reporting requirements and allowable costs: The mechanism of award is the individual research grant. The maximum duration of award is three years—there is no program for competing continuation applications (3-year) funding as was the case in the early years of the Zenith program. Annual scientific progress and financial reports are required. Continuation of the grant over the awarded duration is contingent

upon receipt of scientific progress and financial reports.

Budget: A "budget summary" for the proposed research project is required and must be submitted with the application and within the allowable page limits. However, if the application is to be awarded, a more detailed budget will be required and must be approved before the disbursement of funds. **Your budget must not exceed the maximum amount of the award, \$450,000 or \$250,000 per year.**

Allowable costs under this award:

It is required that most of the funds awarded under this program be used for direct research support.

Other allowable costs include:

- Purchase and care of laboratory animals
- Small pieces of laboratory equipment and laboratory supplies
- Computer software if used strictly for data collection
- Salary for the principal investigator, scientific (including postdoctoral fellows) and technical staff (including laboratory technicians and modest administrative support)
- Support for travel to scientific and professional meetings, not to exceed \$1,000 per year

Direct Costs not allowed under this award include:

- Computer hardware or standard software (e.g., Microsoft Office)
- Construction or renovation costs
- Tuition
- Rent for laboratory/office space
- Salary and/or compensation for Alzheimer's Association Staff or members of the Alzheimer's Association Medical and Scientific Advisory Council (MSAC)

For more information: Contact grantsapp@alz.org or call 1.312.335-5747 or 1.312.335.5862.

V. INTERNATIONAL RESEARCH GRANT PROGRAM - GENERAL CONSIDERATIONS

i. Eligibility, Ineligibility and Nondiscrimination Statement

To avoid disqualification, investigators are encouraged to carefully consider these eligibility and ineligibility requirements before applying. The Alzheimer's Association reserves the right to find an investigator ineligible to submit for a particular program, based on the below guidelines.

Eligibility

In general, public, private, domestic and foreign research laboratories, medical centers, hospitals and universities are eligible to apply. State and federal government-appropriated laboratories in the U.S. and abroad and for-profit organizations are prohibited from serving as the applicant institution. However, state and federal government scientists can participate as collaborating scientists with research teams from other eligible applicant institutions. For the Letter of Intent, you will be required to upload proof of your organization's not-for-profit status, ***the IRS determination letter needs to be within the last 5 years***. For non-profit organizations (non-academic), additional documentation may be required to confirm your organization has segregation of duties between transaction execution and transaction recording.

Ineligibility

This section describes general exclusion criteria. Specific requirements and additional exclusions to eligibility are noted in some detailed competition descriptions.

1.) Overlapping funding of more than one Alzheimer's Association grant **is not allowed**. Investigators who currently have an active Association grant may apply for another award in the last year of their grant if that last year concludes by June 30th before the start of the new funding year on July 1.

2.) Investigators delinquent in reporting: The Alzheimer's Association will not accept new grant applications from currently funded investigators who are delinquent in submitting required reports and other deliverables on active grants. Investigators that have previous Alzheimer's Association awards closed as 'Incomplete' are not eligible to apply without exception. **This policy will be strictly adhered to with no exceptions.**

3.) Active members of the Association's Medical and Scientific Advisory Council (MSAC) are ineligible to compete for any research grant. In addition, active MSAC members are ineligible to be included as co-investigator or to receive any financial benefit from an application.

4.) Applications for a Alzheimer's Association Research Grant (AARG) and Alzheimer's Association Research Grant to Promote Diversity (AARG-D) programs will be accepted from postdoctoral fellows and other junior faculty members (for example: Instructor, Research Associate Scientist, etc) who can provide a letter of employment verification indicating they will have a full-time

faculty position as an Assistant Professor or above by the application deadline.

The letter of employment for **AARG** and **AARG-D** programs must be uploaded to your application, dated within 3 months from application submission date, printed on the hiring institution letterhead, signed by an authorized institutional official (i.e. Grants and Contracts officer or authorized organizational signature) and must indicate that the position will be activated by the grant award date. If the anticipated position is not activated by the award date for any reason, any offer of funding will be withdrawn. There will be no exceptions. In the event your application is funded, you will be required to provide an official letter on organizational letterhead, signed by an institutional signing official, stating you have a full-time faculty position of an Assistant Professor and above.

If the applicant institution does not have an Assistant Professor position, the letter of employment should include sufficient information to allow the Alzheimer's Association staff to evaluate the eligibility of the applicant.

5.) Applications for the Alzheimer's Association Research Fellowship (AARF and AARF-D) and Alzheimer's Association Clinician Scientist Fellowship (AACSF and AACSF-D) will be accepted from individuals who have completed their graduate work and are not yet an independent investigator (Post-doctoral fellow, Instructor, Research Associate Scientist, etc.). The Alzheimer's Association reserves the right to request a letter of employment verification indicating the individual is full time and understanding the structure of an organization's professional rank system. This is not required at the time of application.

6.) Checks are awarded to the institution, not to the individual principal investigator. The principal investigator or a first degree relative cannot be listed as the signing official or financial officer, or have checks sent to their attention if awarded. However, fellowship awards are expected to transition with the investigator and are not eligible for PI transfer.

7.) The Alzheimer's Association reserves the right to request additional documentation and/or materials to verify an applicant's status should any of the eligibility requirements be unconfirmed.

Nondiscrimination statement

The Alzheimer's Association values diversity and seeks applicants from diverse backgrounds. The Alzheimer's Association does not discriminate on the basis of race, sex, sexual orientation, religion, color, nationality or ethnic origin, age, disability, or status as a Vietnam Era Veteran or disabled veteran, in the administration of educational policies, programs or activities.

ii. Application Procedures

Submitting a Letter of Intent on-line via proposalCENTRAL

The first step in applying to the Alzheimer's Association for any research grant is to submit a Letter of Intent (LOI) through the Proposal Central on-line application system at <http://proposalcentral.altum.com>. Applications will not be accepted without an approved LOI. First-time users **must** register and fill out a Professional Profile to begin the LOI/application process. The Alzheimer's Association requires that all applicants must be registered as a reviewer with the Association to submit a letter of Intent. If you submit a letter of intent/application and are NOT currently registered as a reviewer, you will be **automatically** added to the Alzheimer's Association reviewer roster. **Additionally, it is required that you review at least one grant proposal within your area of expertise, outside the grant competition to which you are applying.**

The application materials, including the application format, templates, and instructions, will be available online thru Proposal Central after your LOI has been approved.

The LOI and completed application must be submitted by a single Principal Investigator (PI). Additionally, a PI cannot submit an LOI that had been approved or rejected during a previous grant cycle. All LOIs must be approved or rejected in the current grant cycle. Hard copies of the LOI will not be accepted. The purpose of the LOI is to ensure that all applicants are eligible for the competition they are applying to and to assist Association staff in planning for peer reviews. **LOIs will not be accepted after the deadline date. No exceptions will be made.** The applicant is responsible for adhering to the space limitations (described below) and any decision regarding moving an LOI forward will be evaluated based on the submitted information.

The LOI must include: (All LOIs must be submitted online thru Proposal Central no hardcopies or emails will be accepted)

- Name of the principal investigator
- Contact information for the principal investigator (**complete** mailing address, telephone number, fax number and primary institution e-mail address (do not list Yahoo, Google or other g-mail accounts as your primary e-mail))
- Institution involved in the research proposal (***institution/organization name must be in English***)
- Academic rank/position title
- Title of the investigation limited to 75 characters including spaces
- Area of focus of the submission, such as diverse populations, social and behavioral or biological, as outlined in Section II
- Grant competition for which you are applying
- Brief project description, including methodology, specific aims of the project, innovation/novelty of the project, and the impact of the Alzheimer's disease and related dementia field are required. **Each section is limited to 1,000 characters, including spaces and *it is the responsibility of the applicant to ensure space limit is adhered.***

- Employer (institution) Identification Number (EIN), *must match the EIN on the non-profit documentation*
- A current (within the last five (5) years) non-profit verification for the institution or organization of the applicant; if the documentation is not dated within the last five (5) years, please provide a signed and dated letter on organizational letterhead with authorized signature stating there has been no change in the status.
- Employment verification letter confirming applicant's academic rank as an Assistant Professor and above (see Eligibility requirements for more information).
- Biosketch (**only** the primary applicant and, if applicable, the mentor at the LOI stage) – 4 pages each

LOI Review Procedures

All LOIs will be evaluated prior to invitation to submit a full application. Only LOIs that meet program specific guidelines will be invited to submit full applications. LOIs will also be reviewed by the Alzheimer's Association Medical and Scientific Advisory Council (MSAC) with special attention to:

1. Demonstrable innovation/novelty of the proposed project (especially in the context of the PIs recently funded work)
2. Alignment with the research priorities of the Alzheimer's Association
3. Impact of project on Alzheimer's disease and related dementia research
4. Evidence of methodological rigor that address the research question(s) being proposed

Full Grant Application via proposalCENTRAL

Once the on-line LOI is approved and invited to submit a full proposal, an email notification will be sent from **proposalCENTRAL** granting access to the on-line application at *proposalCENTRAL*. **The online system must be used to submit a grant application—**hard copies of the application will not be accepted.

The full grant application for AARG, AARG-D and Zenith consists of the following

1. Problem Statement – 1 page
2. Work Plan – 5 pages
3. Available Resources & Budget Justification – 2 pages
4. Biosketch (PI/Co-PI) – 4 pages each

The full grant application for the AARF, AARF-D, AACSF and AACSF-D programs consists of the following:

1. Statement of Mentorship – 2-3 pages (written by mentor to outline plan for the individual's training)
2. Statement of Commitment – 2 pages (written by applicant to highlight their interest in Alzheimer's and related dementia research)
3. Area of Research – 3 pages (summary of the area of research applicant is pursuing; written by mentor and applicant)

4. Available Resources & Budget Justification – 2 pages (template and instructions located under the WorkPlan and Other Attachments link)
5. Biosketch – 4 pages each, bio for the applicant and the mentor must be included.
6. Letters of reference are limited to 3 letters and no more than 3 pages each.

The application materials, including the application format, templates, and instructions, will be available online at proposalCENTRAL after your LOI has been approved.

The PI who submits the LOI must be the same PI who submits the application. LOIs submitted on behalf of other applicants or administrators will result in a rejected LOI. Once the applicant enters the application system, on-screen instructions will be provided to complete the application process. The application does not need to be completed in one session; a partially completed application can be saved and completed at any time before the deadline. **(Important Note: It is imperative that you proofread your application before submission; you will not be allowed to make any changes to the application after the deadline or once applications are under review).** **For AARF, AARF-D, AACSF and AACSF-D, the PI is the applicant and the co-PI is the mentor.**

It is the responsibility of the applicant to ensure and verify that:

- (1) The application is submitted by the receipt date/time deadline. **Once submitted, you will receive a confirmation e-mail from proposalCENTRAL that your application was successfully accepted.**
- (2) The application is complete and accurate before submission. Only a single copy of an application will be accepted. **Signatures are not required at the time of submission, the signature page provided is for your use should your institution/organization require signatures, please do not submit with your application.**
- (3) Revisions, additional materials, letters of collaboration/support and/or reference, manuscripts, appendices, etc., are not allowed and if attached, will be removed from your application. **Letters of support will be accepted for those applying to the AARF, AARF-D, AACSF and AACSF-D programs only, see sections iii, iv, v and vi for details.**
- (4) Application biosketch attachment(s) are on the Alzheimer's Association-provided template (available at proposalCENTRAL – under the Workplan and Other Attachments link)

iii. Multiple and Overlapping Submissions

If an applicant submits proposals to different grant competitions in the same grant cycle, each proposal submitted must address **a distinctly different topic**. Only one proposal will be funded if scores for multiple submissions fall within the funding range of different grant competitions.

Applicants *cannot* submit more than one proposal in the same grant competition—even if the proposals cover distinctly different topics (i.e. only one application is allowed regardless of the distinct areas of focus).

Applicants may revise and resubmit an application that was previously submitted for an earlier grant cycle; however, a new LOI is required each year. A current LOI corresponding to the application year must accompany each application. **Revisions of previous submissions will be treated as new applications. Efforts will be made to provide some continuity in reviews.**

Overlapping funding of more than one Alzheimer's Association grant is not allowed. Investigators who are receiving an **active** Association grant may apply for another award in the last year of their grant **if** that last year concludes by June 30th before the start of the new funding year, which begins on July 1.

iv. Review Procedures

All proposals are subject to a multiple stage peer-review process carried out with an on-line system. Certain grant programs have an additional review process as described. In the first stage, applications are reviewed and rated by a minimum of three peer scientists with expertise in the proposed area of research. Applicants may include recommended reviewers or may exclude specific reviewers from evaluating their application. **Conflict of Interest includes:**

- (1) The Applicant trained with/ by the reviewer.
- (2) Reviewer published with the Applicant in the last four (4) years. This excludes workshop or large consortia (i.e. ADNI, IGAP, etc).
- (3) Reviewer has been a co-investigator on a grant application or award with the Applicant in the last four (4) years.
- (4) Reviewer has a conceptual difference of opinion with the Applicant that will prevent a fair review.
- (5) Reviewer will receive financial benefit from the Applicant receiving an award.

The second stage includes further review and discussion of the scores and comments resulting from the initial review process. This second review is carried out by the Alzheimer's Association Medical and Scientific Advisory Council (MSAC) to ensure fairness and equity in the initial review procedures and to make funding recommendations to the Association. Members of the MSAC are internationally recognized experts with distinguished careers in Alzheimer's and related dementias. A complete list of current MSAC members is available on the Alzheimer's Association Web site (http://www.alz.org/research/funding/advisory_council_alzheimers_association.asp).

This two-stage process is central to our award decisions and is designed to ensure both scientific rigor and fairness in the review of all submitted applications.

Applicants Please Note: During peer-review, we are not able to contact reviewers with additional information to update, change or adjust your application such as recent publication, published manuscripts, new data etc.

If you are interested in being considered a reviewer for the Alzheimer's Association International Research Grant Program, please submit your CV to grantsapp@alz.org.

General Requirements

- You must be a recognized authority in your field.
- You must be dedicated to conducting high-quality, fair reviews.
- You must be able to articulate your views succinctly, engage in productive exchanges and actively participate in the on-line discussion of applications.

v. Appeals of Scientific Peer Review

To maintain a fair and rigorous review system, the Alzheimer's Association has established a process for appeal of funding decisions. An appeal is intended to address extraordinary circumstances. Appropriate reasons for initiating an appeal might include:

- Evidence that a reviewer has an undeclared conflict of interest
- An egregious error or misunderstanding in the review process
- Active malfeasance or demonstrable lack of due diligence

The appeal process is not intended to provide a mechanism for routine protest of failure to receive a grant. Disparities in peer reviewers' enthusiasm for a proposal and the scores they assign are nearly always considered part of the normal variation in human judgment. The reality is that the Alzheimer's Association International Research Grant Program is extremely competitive and is limited by availability of funds. In recent grant cycles, 10 to 15 percent of full applications have been awarded grants, although about twice that number fall into the "fundable" category based on overall score.

If an applicant believes an extraordinary circumstance has contributed to failure to receive funding, the principal investigator may send as a Word document, a two-page, double-spaced formal letter of appeal to grantsappeals@alz.org – supporting documents must be submitted in PDF. **Appeals must be submitted within two weeks from the date your application outcome notification is sent to be considered by the Alzheimer's Association.** Notification of action on the appeal will be made via email, usually within 90 days of the appeal deadline.

vi. Animal and Human Subject Assurances

Animal welfare and human subject certifications are not required at the time of application. Investigators have up to 90 days after receipt of their award notification to submit these documents. **However, the Alzheimer's Association encourages investigators to initiate their certification applications on a schedule that recognizes that rDNA, IRB/IACUC approval at many institutions can take more than 90 days.** The Association accepts only certifications that apply specifically to the funded project and

must include the name of the awardee. An award letter will not be issued unless the appropriate certifications are in place and include the name of the awardee within the 90 days from award notification.

vii. Reporting Requirements

Interim and final scientific progress reports

Investigators receiving Alzheimer's Association research grants are required to file annual progress reports.

- An Interim Scientific Progress Report must be filed at the end of each reporting period as long as the grant remains active.
- A Final Scientific Progress Report **must** be filed within 90 days of the grant's end date.
- **For some programs, six-month milestones and updates may be requested (see specific program details)**

Financial progress report

Annual financial progress reports must be filed at the end of each reporting period while the grant remains active and within 90 days after the grant ends. These reports must be submitted **ELECTRONICALLY** by the signing official or someone else with financial authority in the Office of Research and Sponsored Programs at the recipient's institution.

For questions about reporting requirements or these forms, please contact Mary Grilli, (mgrilli@alz.org) or Rita Freeman (rfreeman@alz.org), the Alzheimer's Association Post-Award Grant Specialists.

Publications, Presentation and Abstracts

Electronic copies of publications, presentations and abstracts that report research supported by funds from the Alzheimer's Association must be submitted

ELECTRONICALLY at the time of publication. These copies will become part of the official file of the grant and will be provided to the Communications Division of the Alzheimer's Association to assist in the efforts to further inform the public about the International Research Grant Program of the Association.

viii. Contact Information

This program announcement is posted on the website of the Alzheimer's Association at http://www.alz.org/research/alzheimers_grants/overview.asp. For additional information, send inquiries to grantsapp@alz.org or call 1.312.335.5747 or 1.312.335.5862.