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REVOLUTIONARY PROJECT WILL OBTAIN WHOLE GENOME SEQUENCES ON LARGEST COHORT FOR A SINGLE DISEASE – ALZHEIMER'S

Innovative Partnership Formed Between the Alzheimer's Association, Brin Wojcicki Foundation, and Alzheimer's Disease Neuroimaging Initiative

CHICAGO and MENLO PARK, CA, July 2, 2012 – The first, pioneering "Big Data" project for Alzheimer's disease was announced today by a visionary new partnership.

New research funding from the Alzheimer's Association and the Brin Wojcicki Foundation will enable scientists to obtain whole genome sequences on the largest cohort of individuals related to a single disease – more than 800 people enrolled in the Alzheimer's Disease Neuroimaging Initiative (ADNI). This work is expected to generate at least 165 terabytes of new genetic data.

"The movement to find preventions and a cure for Alzheimer's will soon take a significant step forward," said Harry Johns, Alzheimer's Association President and CEO. "This new initiative will rapidly create an unprecedented tool for researchers to create a world without Alzheimer's."

ADNI is a public-private research project led by the National Institutes of Health (NIH) with private sector support through the Foundation for NIH. Launched in 2004, ADNI's public-private funding consortium includes pharmaceutical companies, science-related businesses, and nonprofit organizations including the Alzheimer's Association and the Northern California Institute for Research and Education.

This new project is a significant extension of ADNI, whose research participants will have their genomes sequenced to establish this unprecedented database. ADNI now enrolls people with Alzheimer's disease, mild cognitive impairment, and normal cognition who have agreed to be studied in great detail over time. The goal is to identify and understand markers of the disease in body fluids, structural changes in the brain, and measures of memory; the hope is to improve early diagnosis and accelerate the discovery of new treatments.

Whole genome sequencing determines all six billion letters in an individual's DNA in one comprehensive analysis. Once the sequences are completed – roughly 16 weeks after the sequencing project starts – the raw data will rapidly be made available to qualified scientists around the globe to mine for novel targets for risk assessment, new therapies, and much-needed insight into the causes of the devastating brain disease.

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"Sequencing the ADNI participants and making the genetic data immediately available to researchers around the world will significantly improve our understanding and approach to Alzheimer's disease. The ADNI team and the Alzheimer's Association are impressive in their ability to quickly make decisions that are truly in the best interest of people with Alzheimer's," said Anne Wojcicki from the Brin Wojcicki Foundation.

Scientific leaders directing this project emphasize the potentially groundbreaking importance of the ability to match existing data from ADNI about Alzheimer's disease markers, indicators, and changes with newly-generated gene sequence data. The new data may enable scientists to better understand how our genes cause and are affected by bodily changes associated with Alzheimer's disease.

A distinguishing feature of ADNI is that its research data – including brain scans, blood and cerebrospinal fluid samples, and cognitive profiles – are made freely available without delay to scientists around the globe, resulting in more than 500 scientific manuscripts so far.

"The current ADNI database already includes detailed, long-term assessments of neuropsychological measures, standardized structural and functional imaging, and precise biomarker measures from blood and spinal fluid. Adding whole genome sequences to this rich repository will allow investigators all over the world to discover new associations between these disease features and rare genetic variants, offering new clues to diagnosis and treatment," said Robert C. Green, M.D., M.P.H., of Brigham and Women's Hospital and Harvard Medical School, who will lead coordination of sequencing efforts within ADNI.

ADNI is led by Principal Investigator Michael W. Weiner, M.D., of the University of California San Francisco and the San Francisco VA Medical Center. Dr. Green will collaborate on managing the sequencing efforts with Arthur Toga, Ph.D., of UCLA and Andrew J. Saykin, Psy.D., of Indiana University. The actual genome sequencing will be performed at Illumina, Inc.

"Illumina is very excited to be part of this groundbreaking research to better understand Alzheimer's disease through whole genome sequencing," said Jay Flatley, President and Chief Executive Officer of Illumina. "We believe that the unprecedented scope of the project and the data that will be generated will enable researchers to identify new genetic components of the disease, and lead them to new approaches for early detection and treatment."

The Expanding Impact of Alzheimer's Disease and Dementia
"Ridding the world of Alzheimer's disease is a global challenge of the utmost importance," Johns said. "With the aging population and the growing prevalence of Alzheimer's, caring for people with dementia will cost more than $1 trillion annually by 2050 in the U.S. alone, creating an enormous strain on the already stressed healthcare system, families, and federal and state budgets."

Today, an estimated 5.4 million Americans are living with Alzheimer's disease, but Alzheimer's affects entire families. There are 15.2 million friends and family members of individuals with Alzheimer's and other dementias in the United States who provide 17.4 billion hours of unpaid care valued at more than $210 billion, according to the Alzheimer's Association 2012 Alzheimer's Disease Facts and Figures report.

Right now, someone develops the disease every 68 seconds. Alzheimer's is the sixth-leading cause of death in the U.S. and the only cause of death among the top 10 in the country that cannot be prevented, cured or even slowed. Based on final mortality data from 2000-2008, death rates have declined for most major diseases – heart disease (-13 percent), breast cancer (-3 percent), prostate cancer (-8 percent), stroke (-20 percent) and HIV/AIDS (-29) − while deaths from Alzheimer's have risen 66 percent.

About the Alzheimer's Association
The Alzheimer's Association is the world's leading voluntary health organization in Alzheimer care, support and research. Its mission is to eliminate Alzheimer's disease through the advancement of research, to provide and enhance care and support for all affected, and to reduce the risk of dementia through the promotion of brain health. The Association's vision is a world without Alzheimer's. For more information, visit www.alz.org or call 800-272-3900.

About the Brin Wojcicki Foundation
The Brin Wojcicki Foundation was established by Sergey Brin, the co-founder of Google and Anne Wojcicki, the co-founder of 23andMe, a leading personal genetics company. The Brin Wojcicki Foundation's mission is to effect world change in Parkinson's research and neurodegenerative diseases, to support individual rights and freedom from oppression, to develop opportunities for those in need in poverty, health and education and to support transformational and disruptive research.

About the Alzheimer's Disease Neuroimaging Initiative
Launched in 2004 by the NIH as the largest public-private partnership supporting Alzheimer's research, the original goal of Alzheimer's Disease Neuroimaging Initiative (ADNI) was to define biomarkers for use in clinical trials and determine the best way to measure treatment effects of Alzheimer's. Now in its third phase (ADNI 2), the goal has been expanded to include the use of biomarkers to detect Alzheimer's at a pre-dementia stage. Results from ADNI are expected to provide researchers with a better understanding of Alzheimer's progression in its earliest stages, when treatments may be the most effective. The ADNI study is taking place at 55 major academic medical centers and clinics in North America and the model is being adopted in other countries worldwide. For additional information, please visit www.adni-info.org or www.nia.nih.gov/adni2.

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