

Fueling Research Aimed at Preventing Alzheimer's Disease for Future Generations

- **The Josephine and John Marr Alzheimer's Research Fund was established in 2015 in partnership with Brigham and Women's Hospital, with the goal of supporting the Alzheimer's research of Drs. Dennis Selkoe, Reisa Sperling and their teams.** Their work focused on identifying disease predictors starting as early as age 50—which was 10 to 15 years earlier than other studies in progress at that time.
- **One of the key outcomes of Marr Fund support was the creation of the Marr Cohort,** an observational group of individuals aged 50- to 64-years-old who are at high risk for Alzheimer's, but do not yet have the hallmark signs of the disease in their brains. This effort included developing specialized cognitive testing as well as novel imaging techniques, and—importantly—following the group over time.
- **Marr Fund support helped the doctors confirm that the brain changes responsible for Alzheimer's begin decades before the onset of memory and cognitive symptoms.** The Marr Fund also helped them confirm that amyloid is particularly important early in the disease.
- **Data from the Marr Cohort allowed Dr. Sperling to apply for NIH funding to launch two global Alzheimer's prevention trials known as the AHEAD Study,** which include people as young as age 55. Data from the Marr Cohort also played a major role in shaping the study design. The AHEAD Study has been funded through a combination of support from philanthropy, industry, and the NIH.
- **Importantly, vital data from the Marr Cohort continues to be collected as part of the Harvard Aging Brain Study** and is now being funded through the NIH—thanks to seed investment from the Marr Fund. These data are publically available to researchers, helping to further Alzheimer's clinical research worldwide.
- **The Marr Fund has also launched a generosity network.** Since the fund was established, many thousands of gifts have been received from friends and strangers alike, totaling \$4.19M (as of 5/31/2022). It has also inspired others to philanthropically support parallel research efforts, engaging their own social networks and raising millions in additional funds, including a \$25 million gift from Andrew and Kate Davis and the Shelby Cullom Davis Charitable Fund.
- **The Marr Fund support is currently being directed to two key projects:**
 - **The Genetic and Biological Roadmap to Alzheimer's Disease.** Increasingly, research has shown that Alzheimer's does not have a single cause—there are different genetic pathways contributing to risk. Dr. Tracy Young-Pearse is using stem cells to better understand genetic risk in different people and identify paths toward novel treatments.
 - **Resiliency to Alzheimer's Disease.** Dr. Rachel Buckley aims to identify the characteristics (genetic, lifestyle, brain health, demographics) that make some people more resilient to Alzheimer's. She is also examining whether women are more vulnerable or resilient to Alzheimer's compared with men, and the sex biological mechanisms driving this difference.