

## JUST THE FACTS<sup>1</sup>

**5+ MILLION**

AMERICANS HAVE ALZHEIMER'S DISEASE

**6<sup>TH</sup> LEADING**

CAUSE OF DEATH IN THE UNITED STATES IS ALZHEIMER'S DISEASE

**15 MILLION**

AMERICANS PROVIDE UNPAID CARE FOR PEOPLE WITH ALZHEIMER'S AND OTHER DEMENTIAS

**\$259 BILLION**

ESTIMATED COST OF ALZHEIMER'S AND OTHER DEMENTIAS IN THE UNITED STATES IN 2017

### Sources:

1. 2017 Alzheimer's Disease Facts and Figures, Alzheimer's Association.
2. Changing the Trajectory of Alzheimer's Disease: How a Treatment by 2025 Saves Lives and Dollars, Alzheimer's Association.
3. Number of medicines obtained through public, government and industry sources, and the Springer "Adis Insight" database. Current as of September 1, 2017.
4. PhRMA, "Researching Alzheimer's Medicines: Setbacks and Stepping Stones," 2015.  
<http://www.phrma.org/sites/default/files/pdf/alzheimersetbacksreportfinal912.pdf>
5. Schneider LS, Sano M. Current Alzheimer's disease clinical trials: methods and placebo outcomes. *Alzheimer's Dement.* 2009; 5:388-97.

# ALZHEIMER'S DISEASE

## Biopharmaceutical Research Companies Are Developing More Than **85 Medicines** for Alzheimer's Disease

Alzheimer's disease devastates the minds of patients, creates substantial burdens for families and caregivers and costs the United States billions of dollars each year. According to the Alzheimer's Association, more than 5 million Americans are living with Alzheimer's today. By 2050, that number could be as high as 16 million if there is no new breakthrough to prevent or treat the disease.

Deaths from Alzheimer's disease have increased 89 percent since 2000, while deaths from heart disease decreased 14 percent in that same time. It is estimated that Alzheimer's and other dementias will cost the U.S. health care system more than \$259 billion in 2017, with costs potentially increasing to \$1.1 trillion by 2050. There is hope that even modest progress in treating Alzheimer's disease can drastically change this trajectory. If a new medicine could delay the onset of Alzheimer's disease by five years, roughly \$367 billion annually in long-term care and other health care costs could be avoided by 2050.<sup>2</sup>

America's biopharmaceutical companies are committed to combatting this devastating disease, with 87 potential new treatments<sup>3</sup> in clinical trials today. However, the path from research to a new medicine is extremely long and complex with many setbacks along the way, particularly in the case of Alzheimer's. Scientists have made progress in unraveling the complexities of the brain and identifying the underpinnings of Alzheimer's, but finding an effective treatment remains a daunting challenge.

Between 1998 and 2014, 123 potential medicines for Alzheimer's were halted in clinical trials, while just four medicines were approved.<sup>4</sup> Though deeply frustrating, these research setbacks are critical in advancing knowledge and laying the foundation for future successes. All the while, biopharmaceutical researchers remain steadfast in advancing research for this devastating disease.

## ALZHEIMERS MEDICINES IN THE PIPELINE

Medicines currently available for Alzheimer's disease treat the symptoms of the disease—helping to address memory loss, confusion and problems with thinking – but do not affect the underlying causes of the disease and do not slow the rate of decline.<sup>5</sup> Current research is focused on disease-modifying treatments that may stop or slow down disease progression by targeting one or more of the brain changes caused by Alzheimer's. These targets include beta-amyloid plaques that appear between nerve cells, tau protein tangles that damage and kill brain cells and a receptor that decreases a neurotransmitter necessary for the brain to think and function normally. Potential medicines are also aimed at decreasing inflammation in the brain that is associated with Alzheimer's and targeting the immune system to enable it to fight the disease. Researchers are also investigating ways to prevent the disease in patients with gene mutations associated with Alzheimer's.