

JUST THE FACTS<sup>1</sup>**5.3 MILLION**

Americans have Alzheimer's disease

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

cause of death in the United States

**1 IN 3**

American seniors die with Alzheimer's or another dementia

**\$226 BILLION**

Cost of Alzheimer's and other dementias in the United States in 2015

# MEDICINES IN DEVELOPMENT FOR ALZHEIMER'S DISEASE

## Biopharmaceutical Research Companies Are Developing More Than 70 Medicines for Alzheimer's Disease

Today, more than 5 million Americans have Alzheimer's disease. The disease devastates the minds of patients, creates substantial burdens for families and caregivers, and currently costs the health care system more than \$200 billion a year. These sobering statistics are projected to get much worse as the 76 million American baby boomers age.

If no new medicines are found to prevent, delay or stop the progression of Alzheimer's disease, the number of people age 65 and older diagnosed in the United States will increase to 13.8 million, and cost of care will increase to \$1.1 trillion by 2050, according to the Alzheimer's Association.

Even modest progress can drastically change this trajectory. A new medicine that delays the onset of Alzheimer's disease by just five years would avoid \$367 billion annually in long-term care and other health care costs by 2050.<sup>2</sup>

Alzheimer's disease has proven to be complex and challenging to treat. Innovative new medicines are desperately needed for Alzheimer's patients. Biopharmaceutical research companies are currently studying 77 potential new treatments<sup>3</sup> in clinical trials. However, the path from basic research to new medicines is extremely complex with setbacks along the way, particularly in the case of Alzheimer's.

A recent analysis<sup>4</sup> by the Pharmaceutical Research and Manufacturers of America (PhRMA) found that between 1998 through 2014, 123 potential medicines for Alzheimer's were halted in clinical trials, while just four medicines were approved. This ratio of setbacks to successes demonstrates the challenge of Alzheimer's research. Yet, it is also important to recognize the role of these setbacks in advancing knowledge and laying the foundation for future successes.

## Alzheimer's Medicines in the Pipeline

Medicines currently available for Alzheimer's treat the cognitive symptoms of the disease — helping to address memory loss, confusion and problems with thinking — but do not affect the underlying causes of the disease. Ongoing research is focused on treatments — called disease-modifying agents — that may stop or slow down the disease progression by targeting two key hallmarks of the disease, the appearance of amyloid plaques and neurofibrillary tangles in the brain. Plaques are abnormal clusters of beta-amyloid protein fragments between nerve cells, while tangles are twisted fibers made primarily of a protein called “tau” that accumulates in brain cells, damaging and killing them. Researchers are also looking at the role inflammation and insulin resistance play in Alzheimer's disease.

For a complete list of the 77 medicines in development, please visit:

<http://phrma.org/sites/default/files/pdf/medicines-in-development-drug-list-alzheimers.pdf>

## Sources:

1. *2015 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 February 29, 2016.
4. PhRMA, “Researching Alzheimer's Medicines: Setbacks and Stepping Stones,” 2015. <http://www.phrma.org/sites/default/files/pdf/alzheimersetbacksreportfinal912.pdf>.