Alzheimer’s Association: Global Funder of Research

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Medical & Scientific Relations
Alzheimer’s Association: Who We Are

OUR VISION:
A world without Alzheimer’s disease®.

OUR MISSION: 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.
Dementia

An “umbrella” term used to describe a range of symptoms associated with cognitive impairment.

Alzheimer’s 50%-75%

Vascular 20%-30%

Lewy Bodies 10%-25%

Frontotemporal 10%-15%

Mixed Dementia = >1 neuropathology - prevalence unknown
Global Funding for Dementia Research
Map of Global Funded Dementia Research, According to IADRP

2008-2014
11,000 projects
33 countries
$3.4 billion

* Based on 30+ funding organizations who provide data to ADRP
# Impact of Funding Agencies

<table>
<thead>
<tr>
<th>Top Five Organizations, Dementia</th>
<th>Records</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Institutes of Health</td>
<td>6560</td>
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<tr>
<td>Alzheimer's Association</td>
<td>856</td>
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<tr>
<td>National Natural Science Foundation of China</td>
<td>595</td>
</tr>
<tr>
<td>Canadian Institutes of Health Research</td>
<td>558</td>
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<tr>
<td>Swedish Research Council</td>
<td>431</td>
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<th>Top Five Organizations, Alzheimer’s Disease</th>
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<tr>
<td>National Institutes of Health</td>
<td>13057</td>
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<tr>
<td>National Natural Science Foundation of China</td>
<td>3305</td>
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<tr>
<td>Alzheimer's Association</td>
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<td>Canadian Institutes of Health Research</td>
<td>1309</td>
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<tr>
<td>Wellcome Trust</td>
<td>710</td>
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U.S. National Plan to Address Alzheimer’s disease

• Goal: “To Prevent & Effectively Treat Alzheimer’s by 2025”

• Key strategies include:
  – Increase clinical studies enrollment
  – Expand scale and scope of research
  – Accelerate drug development
The wins began....

- **2012**: $50 million per year ‘reprogrammed’ by the Administration
- **2013**: Unique ‘sequester relief’ from NIH
- **2014**: $125 million per year *added by Congress*
- **2015**: An historic increase of $350M!
Global Funder of Alzheimer’s & Related Dementia Research

Since 1982, granted >$350 million to more than 2,300 investigations.

- Currently funding $85+ million to ~400 active projects in 20 countries
- Most Impactful Non-Profit Funder of Dementia

Thompson Reuters Web of Science, 2015
Alzheimer’s Association
Funding the Future

• Foster new, innovative ideas of emerging stars
• Research & clinical training
• Emerging areas & gaps
  – Targeted Funding Opportunities
Targeted Funding Opportunities…

Filling the Gaps in Global Research
DIAN-TU: ADAD Trial

- Dominant Inherited Alzheimer’s Network Trials Unit of Familial Alzheimer’s Disease Participants
- 2° prevention trial & biomarker validation, based on Parental Age of Onset (PAO)
- Two drugs being tested: solanezumab and gantenerumab
- $4.7 million invested by the Association to launch the trial
OVER 60% of Alzheimer's and dementia caregivers are WOMEN.

WOMEN are at the epicenter of the ALZHEIMER'S EPIDEMIC.

IN HER 60's, a woman's estimated lifetime risk of developing Alzheimer's is 1 in 6. For breast cancer, it is 1 in 11.

Today, nearly 2/3 of Americans living with Alzheimer's are WOMEN.

More WOMEN than MEN stopped working to provide care for someone with ALZHEIMER'S.
Women’s Alzheimer’s Research Initiative

• Convened think tank on Gender Vulnerabilities for Alzheimer’s in May 2015
• Focus biological mechanisms, lifestyle factors
• Launched Sex & Gender in Alzheimer’s (SAGA)
• Received over 150+ applications from 16 countries
• Expect have $$$ for ~8 awards
• Estimate 25-30 meritorious
Pathway to Approved Drug

Drug Discovery and Development: A Long, Risky Road

Drug Discovery
- 5,000 - 10,000 Compounds
- 3 - 6 Years

Preclinical
- 250

Clinical Trials
- Phase 1: 20 - 100 Volunteers
- Phase 2: 100 - 500 Volunteers
- Phase 3: 1,000 - 5,000 Volunteers
- 6 - 7 Years

FDA Review
- NDA Submitted
- 0.5 - 2 Years

LG-Scale MFG
- One FDA-Approved Drug

IND Submitted
- Post-Marketing Surveillance

PhRMA 2012 Annual Report
Current Pipeline for Clinical Studies in Alzheimer’s Disease

<table>
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<tr>
<th>Condition</th>
<th>Preclinical</th>
<th>Phase I</th>
<th>Phase II</th>
<th>Phase III</th>
<th>Registration</th>
<th>Launch</th>
<th>Overall success rate</th>
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<tbody>
<tr>
<td>HCV</td>
<td>30.2</td>
<td>10.5</td>
<td>6.6</td>
<td>1.7</td>
<td>1.1</td>
<td>1.0</td>
<td>2.0%</td>
</tr>
<tr>
<td>Alzheimer</td>
<td>119.3</td>
<td>33.6</td>
<td>23.0</td>
<td>5.8</td>
<td>1.0</td>
<td>1.0</td>
<td>0.5%</td>
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<tr>
<td>MRSA</td>
<td>13.0</td>
<td>4.7</td>
<td>2.9</td>
<td>1.8</td>
<td>1.1</td>
<td>1.0</td>
<td>4.6%</td>
</tr>
<tr>
<td>Industry avg</td>
<td>14.6</td>
<td>8.6</td>
<td>4.6</td>
<td>1.6</td>
<td>1.1</td>
<td>1.0</td>
<td>4.1%</td>
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Moving the Needle Forward: Advancing Potential Therapies into Clinical Trials

PhRMA 2012 Annual Report
• Funded nearly $7 million (13 awards) in translational research/ early stage human clinical trials
• Diverse targets for studies; now international
• 100% of PTC directly fund research projects
• Launched the PTC Challenge in Inflammation; 2 year timeline
PTC Challenge on Immunity and Neuroinflammation

- Award most advanced target USD$3M to move forward
- Fund 3 awards for USD$1M to advance trial
- Seek proposals of Phase I or Phase 2 Compounds Targeting Inflammation or Immunity
Future of Therapy and Even Beyond...
DEMENTIA

An “umbrella” term used to describe a range of symptoms associated with cognitive impairment.

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50%-75%

VASCULAR
20%-30%

LEWY BODIES
10%-25%

FRONTOTEMPORAL
10%-15%

MIXED DEMENTIA = >1 NEUROPATHOLOGY - PREVALENCE UNKNOWN
Brain Changes

Adapted from Dr. Ronald Petersen, Mayo Clinic
Brain Changes Biomarker Therapy

Adapted from Dr. Ronald Petersen, Mayo Clinic
Need For Therapies

- Expand pipeline of potential targets
- Validation of those targets
- Translation into early phase human trials
Alzheimer’s Combination Therapies Opportunity (ACTO)

- Combination therapies treat complex diseases (cancer, HIV/AIDS, TB & heart diseases)
- Launched ACTO in partnership with ADDF and Alzheimer’s Society in the UK
- Goal: To facilitate & launch clinical trials with new investigational drugs in combo in late 2016/early 2017
Alzheimer’s Association International Conference® 2016
July 24–28 Annual Conference • July 22–23 Preconferences
Toronto, Canada • alz.org/AAIC
THE END OF ALZHEIMER’S STARTS WITH YOU

alzheimer’s association

alz.org