<table>
<thead>
<tr>
<th>Drug</th>
<th>Mechanism of Action</th>
<th>Drug Development Phase</th>
<th>Organisations</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSI 189</td>
<td>NSAID</td>
<td>Preclinical</td>
<td>StemCells, USA, South Korea</td>
</tr>
<tr>
<td>NSI-566RSC</td>
<td>Rho kinase inhibitor</td>
<td>Preclinical</td>
<td>Neuralstem, USA, South Korea</td>
</tr>
<tr>
<td>IRX 4204</td>
<td>Retinoid X receptor agonists</td>
<td>Preclinical</td>
<td>Transition Therapeutics, USA, USA</td>
</tr>
</tbody>
</table>

**IRX 4204** is a novel, orally available, first-in-class, small molecule neurogenic factor designed to activated, mature, physiologically relevant human neurons and glia, and to produce repair or protect against CNS damage.

The compound can cross the blood-brain barrier and is designed to activate glial cells and promote CNS repair. IRX 4204 demonstrated activity in animal models of amyotrophic lateral sclerosis (ALS), Parkinson's disease, multiple sclerosis, Alzheimer's disease, and HIV-associated neurocognitive disorders. It is currently in preclinical development for a range of neurological disorders, including ALS, Parkinson's disease, multiple sclerosis, and Alzheimer's disease.

**NSI 189** is a nonsteroidal anti-inflammatory drug (NSAID) that is currently in preclinical development for a variety of diseases, including inflammatory bowel disease, arthritis, and pain.

**NSI-566RSC** is a Rho kinase inhibitor that is currently in preclinical development for the treatment of inflammatory diseases, including inflammatory bowel disease, arthritis, and pain.

**IRX 4204** is an orally bioavailable, first-in-class, small molecule neurogenic factor designed to activate, mature, physiologically relevant human neurons and glia, and to produce repair or protect against CNS damage.
Phase I

Biopharmaceutical Owner
Canada
Biotechnology Owner
USA
Nymox Pharmaceutical Corporation is a pharmaceutical company headquartered in the USA. It has a focus on the development of small molecule drugs.

Investor
Canada
N/A
Preclinical

Acetylcholinesterase inhibitors
USA
Technology provider
PO
Large Pharma, Pharmaceutical

Alzheimer's disease
Cathepsin S inhibitors

Nymox Pharmaceutical Corporation
Pharmaceutical
Preclinical

World
PO
Nippon Chemiphar

Originator
AstraZeneca is developing AZD 6319, a selective cathepsin S inhibitor. This compound is being developed for the treatment of Alzheimer's disease.

Sub-licensee
Public
USA
Preclinical

USA
PO
Preclinical

USA
Injection
Preclinical

Market Licensee
Research
Pharmaceutical
Discontinued (Clinical)

Company
National Institute on Aging
USA
PO
USA
Institution
Canada
USA
Biopharmaceutical
Owner
Preclinical

Owner
N/A
Sub-licensee
South Korea
Public
Public
Preclinical

Originator
AstraZeneca

Injection
Phenserine is a phenylcarbamate analogue of arginine-vasopressin, NC 1900, for the treatment of Alzheimer's disease. It has been developed with the aim of obtaining a multifunctional molecule relevant for Alzheimer's-like pathology.

Originator
Parenteral
Private
Italy
Public
University
Unknown route
Large Pharma, Pharmaceutical
Daewoong Pharmaceutical
Private
USA
Medifron DBT
USA
Pharmaceutical
USA
Originator
PO
Virobay
Poisoning
Virobay
Originator
Japan-based pharmaceutical company Nippon-Chipharma is developing NBY 106, a cathepsin S inhibitor, as an oral formulation for the treatment of Alzheimer's disease.

Cathepsin inhibitors
Private
Owner
Nymox Pharmaceutical Corporation
Pharmaceutical
Pharmaceutical
USA
World
Preclinical

Cognition disorders
Alzheimer's disease
Alzheimer's disease
<table>
<thead>
<tr>
<th>Condition</th>
<th>Originator</th>
<th>Route</th>
<th>Licensee</th>
<th>Route</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schizophrenia</td>
<td>Lay Line Genomics</td>
<td>Germany, Netherlands</td>
<td>Unknown route</td>
<td>Switzerland</td>
<td>Preclinical</td>
<td>Orexin receptor type 2 modulators</td>
</tr>
<tr>
<td>Type 2 diabetes mellitus</td>
<td>Lay Line Genomics</td>
<td>USA</td>
<td>Unknown route</td>
<td>Switzerland</td>
<td>Public</td>
<td>Adenosine A2 receptor modulators</td>
</tr>
<tr>
<td>Psoriasis</td>
<td>Bionomics</td>
<td>USA</td>
<td>USA</td>
<td>Switzerland</td>
<td>Public</td>
<td>Prostate cancer</td>
</tr>
<tr>
<td>Pain</td>
<td>Addex Therapeutics</td>
<td>Switzerland</td>
<td>Switzerland</td>
<td>Switzerland</td>
<td>Public</td>
<td>Alzheimer's disease</td>
</tr>
<tr>
<td>Sleep disorders</td>
<td>Unknown route</td>
<td>Switzerland</td>
<td>Switzerland</td>
<td>Switzerland</td>
<td>Public</td>
<td>Alzheimer's disease</td>
</tr>
<tr>
<td>Alzheimer's disease</td>
<td>INVENT</td>
<td>Switzerland</td>
<td>Switzerland</td>
<td>Switzerland</td>
<td>Switzerland</td>
<td>Ovarian follicle modulators</td>
</tr>
<tr>
<td>Alzheimer's disease</td>
<td>NasVax in Israel</td>
<td>USA</td>
<td>Unknown route</td>
<td>Switzerland</td>
<td>Public</td>
<td>Charcot-Marie-Tooth disease</td>
</tr>
<tr>
<td>Major depressive disorder</td>
<td>Unknown route</td>
<td>USA</td>
<td>USA</td>
<td>Switzerland</td>
<td>Public</td>
<td>Osteoarthritis</td>
</tr>
<tr>
<td>Inflammatory bowel diseases</td>
<td>Unknown route</td>
<td>Switzerland</td>
<td>Switzerland</td>
<td>Switzerland</td>
<td>Public</td>
<td>Alzheimer's disease</td>
</tr>
<tr>
<td>Overactive bladder</td>
<td>Addex Pharmaceuticals</td>
<td>Switzerland</td>
<td>Switzerland</td>
<td>Switzerland</td>
<td>Public</td>
<td>Alzheimer's disease</td>
</tr>
<tr>
<td>Charcot-Marie-Tooth disease</td>
<td>Unknown route</td>
<td>Australia</td>
<td>Australia</td>
<td>Australia</td>
<td>Discontinued(Preclinical)</td>
<td>Alzheimer's disease</td>
</tr>
<tr>
<td>Alzheimer's disease (Diagnosis)</td>
<td>Addex Pharmaceuticals</td>
<td>USA</td>
<td>Switzerland</td>
<td>Switzerland</td>
<td>Public</td>
<td>Alzheimer's disease</td>
</tr>
<tr>
<td>Alzheimer's disease</td>
<td>Addex Pharmaceuticals</td>
<td>USA</td>
<td>Switzerland</td>
<td>Switzerland</td>
<td>Public</td>
<td>Alzheimer's disease</td>
</tr>
<tr>
<td>Alzheimer's disease</td>
<td>Addex Pharmaceuticals</td>
<td>USA</td>
<td>Switzerland</td>
<td>Switzerland</td>
<td>Public</td>
<td>Alzheimer's disease</td>
</tr>
<tr>
<td>Alzheimer's disease</td>
<td>Addex Pharmaceuticals</td>
<td>USA</td>
<td>Switzerland</td>
<td>Switzerland</td>
<td>Public</td>
<td>Alzheimer's disease</td>
</tr>
</tbody>
</table>

**Research Programme Details**

- **Amyloid beta-protein inhibitors** - Public
- **Nicotinic acetylcholine receptor agonists** - Roche
- **Alpha-7 (alpha7) receptor agonists** - EnVivo Pharmaceuticals
- **Alpha-7 (alpha7) receptor modulators** - Medifron
- **Advanced glycosylation end-product receptors** - Medifron DBT

**Candidate Names**

- **NasVax** in Israel is developing a vaccine for AD, this vaccine does not contain Abeta and is underway in Italy.
- **BLX101** is a recombinant human monoclonal antibody to Abeta with specificity to the MAb. Development is at the preclinical stage.
- **NasVax** in Israel is developing a vaccine for AD, this vaccine does not contain Abeta and is underway in Italy.
- **BLX101** is a recombinant human monoclonal antibody to Abeta with specificity to the MAb. Development is at the preclinical stage.
- **BLX101** is a recombinant human monoclonal antibody to Abeta with specificity to the MAb. Development is at the preclinical stage.

**Additional Notes**

- The table includes various research programmes and candidate names for diseases including Alzheimer's disease, schizophrenia, and others.
- The table highlights the originators, routes, and types of research related to these conditions.
- The table also mentions specific mechanisms of action for some condition-specific candidates, such as the alpha-7 (alpha7) receptor agonists for Alzheimer's disease.
<table>
<thead>
<tr>
<th>Research programme: Alzheimer's disease therapeutics</th>
<th>Company</th>
<th>Stage</th>
<th>Route</th>
<th>Owner</th>
<th>Location</th>
<th>Product Type</th>
<th>Therapy Area</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>- BTG/Senexis</td>
<td>- Senexis</td>
<td>Preclinical</td>
<td>Injection</td>
<td>Public</td>
<td>Switzerland</td>
<td>Amyloid beta-protein inhibitors</td>
<td>Alzheimer's disease</td>
<td>Identify lead structures and preclinical development</td>
</tr>
<tr>
<td>- Evotec AG</td>
<td>- Evotec AG</td>
<td>Preclinical</td>
<td>Intracerebro ventricular</td>
<td>Public</td>
<td>USA</td>
<td>Amyloid precursor protein secretase inhibitors</td>
<td>Alzheimer's disease</td>
<td>Preclinical development with Merck Serono</td>
</tr>
<tr>
<td>- Acumen Pharmaceuticals</td>
<td>- Acumen Pharmaceuticals</td>
<td>Preclinical</td>
<td>Intracerebro ventricular</td>
<td>Private</td>
<td>Switzerland</td>
<td>Amyloid-beta oligomerisation inhibitors</td>
<td>Alzheimer's disease</td>
<td>Investigating Morphomers™ which are non-peptidic therapeutics for the treatment of Alzheimer's disease</td>
</tr>
<tr>
<td>- AC Immune</td>
<td>- AC Immune</td>
<td>Preclinical</td>
<td>Intracerebro ventricular</td>
<td>Public</td>
<td>Switzerland</td>
<td>Anti-ADDL antibodies</td>
<td>Alzheimer's disease</td>
<td>IMD 4690 is undergoing clinical development</td>
</tr>
<tr>
<td>- Prana Biotechnology</td>
<td>- Prana Biotechnology</td>
<td>Preclinical</td>
<td>Intracerebro ventricular</td>
<td>Private</td>
<td>Finland</td>
<td>Amyloid beta-protein inhibitors</td>
<td>Alzheimer's disease</td>
<td>Clinical trials planned</td>
</tr>
<tr>
<td>- Medeia Therapeutics</td>
<td>- Medeia Therapeutics</td>
<td>Preclinical</td>
<td>Intracerebro ventricular</td>
<td>Public</td>
<td>USA</td>
<td>Tau protein inhibitors</td>
<td>Alzheimer's disease</td>
<td>Investigating therapeutics for the treatment of Alzheimer's disease</td>
</tr>
<tr>
<td>- Applied NeuroSolutions</td>
<td>- Applied NeuroSolutions</td>
<td>Preclinical</td>
<td>Intracerebro ventricular</td>
<td>Private</td>
<td>USA</td>
<td>Pearl™ technology</td>
<td>Alzheimer's disease</td>
<td>Investigating therapeutics for the treatment of Alzheimer's disease</td>
</tr>
</tbody>
</table>

**Legend:**
- **BTG/Senexis**
- **Evotec AG**
- **Senexis**
- **Prana Biotechnology**
- **Medeia Therapeutics**
- **AC Immune**
- **Prana Biotechnology**
- **Applied NeuroSolutions**
- **Medeia Therapeutics**
- **AC Immune**
- **Prana Biotechnology**
- **Applied NeuroSolutions**

**Products:**
- **BGC 201178**
- **ARC 069**
- **AMG-0683**
- **ACI-636**
- **ACI-518**
- **IMD-4690**
- **anti-ADDL antibodies**
- **Morphomers™**

**Therapy Areas:**
- Alzheimer's disease
- Tau protein inhibitors
- Amyloid-beta oligomerisation inhibitors
- Amyloid beta-protein inhibitors
- Tau protein inhibitors
- Amyloid beta-protein inhibitors

**Statuses:**
- Preclinical
- Clinical trials planned
### Alzheimer's Disease Therapeutics

<table>
<thead>
<tr>
<th>Originator</th>
<th>Collaborator</th>
<th>Technology Provider</th>
<th>Country</th>
<th>Phase</th>
<th>Disease</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neuro-Hitech</td>
<td>PTI-125</td>
<td>N/A</td>
<td>Switzerland</td>
<td>Preclinical</td>
<td>Alzheimer's disease</td>
</tr>
<tr>
<td>CoPlex</td>
<td>N/A</td>
<td>N/A</td>
<td>USA</td>
<td>Preclinical</td>
<td>Alzheimer's disease</td>
</tr>
<tr>
<td>KaloBios Pharmaceuticals</td>
<td>N/A</td>
<td>N/A</td>
<td>Israel</td>
<td>Preclinical</td>
<td>Alzheimer's disease</td>
</tr>
</tbody>
</table>

#### Research Programmes

- **Kareus Therapeutics** is developing compounds for the treatment of Alzheimer's disease. The mechanism of action is undisclosed. The company aims to create therapeutics that intervene in the disease causing mechanism, to slow down or block its progression.

- **CoPlex Therapeutics** is undertaking a research programme in Germany and Israel. The programme is being conducted in the preclinical stage in the US.

- **Mithridion Biopharmaceuticals** is undertaking a research programme in Denmark. The programme is intended to delay or halt AD progression. Mithridion is undertaking a research programme in Germany and Israel.

- **Daewoong Pharmaceutical** is developing hawAD14, an orally-administered small molecule originated by CoPlex Therapeutics, which may have potential in the treatment of Alzheimer's disease. The programme is being conducted in South Korea.

- **Hawthorn Therapeutics** is developing hawAD14, an orally-administered small molecule originated by CoPlex Therapeutics, which may have potential in the treatment of Alzheimer's disease. The programme is being conducted in South Korea.

### Key Components of the Amyloid Pathology

- Analysis of brain tissue from patients with Alzheimer's disease (AD) has shown that the amyloid beta-protein (Abeta) is deposited in the brain as insoluble amyloid plaques. Abeta is derived from the amyloid precursor protein (APP), which is cleaved by beta- and gamma-secretase.

- The deposition of Abeta is thought to lead to the formation of toxic oligomers that aggregate into aggregates that can be secreted into the cerebrospinal fluid (CSF) and deposited in the brain as plaques. These aggregates are thought to be the primary cause of neurodegeneration in AD.

### Therapeutic Agents

- **PTI-125** is a small molecule that inhibits gamma-secretase and reduces Abeta production.
- **FGL-S** is a family of compounds known as FGL (or FGL-selective) small molecules that are being developed as potential therapies for AD. FGL-S is one of several classes of small molecules that are being developed as potential therapies for AD.
- **Neu-AZ1** is a small molecule that inhibits beta-secretase and reduces Abeta production.
- **hawAD14** is a small molecule that inhibits beta-secretase and reduces Abeta production.
- **SEN1269** is a small molecule that inhibits beta-secretase and reduces Abeta production.
- **RS 0406** and **RS 0466** are small molecules that inhibit beta-secretase and reduce Abeta production.
- **RS 0466** is a small molecule that inhibits beta-secretase and reduces Abeta production.
- **RS 0406** is a small molecule that inhibits beta-secretase and reduces Abeta production.

#### Additional Notes

- **Kareus Therapeutics** is also conducting research to identify new chemical entities that can be developed as potential therapies for AD.
- **KaloBios Pharmaceuticals** is investigating an allosteric fibroblast growth factor (FGF) receptor antagonist as a potential AD therapy.
- **Hawthorn Therapeutics** is developing hawAD14, an orally-administered small molecule originated by CoPlex Therapeutics, which may have potential in the treatment of Alzheimer's disease.

### Other Therapeutic Approaches

- **Kareus Therapeutics** is developing compounds for the treatment of Alzheimer's disease. The mechanism of action is undisclosed. The company aims to create therapeutics that intervene in the disease causing mechanism, to slow down or block its progression.

- **CoPlex Therapeutics** is undertaking a research programme in Germany and Israel. The programme is intended to delay or halt AD progression. Mithridion is undertaking a research programme in Germany and Israel.

- **Daewoong Pharmaceutical** is developing hawAD14, an orally-administered small molecule originated by CoPlex Therapeutics, which may have potential in the treatment of Alzheimer's disease. The programme is being conducted in South Korea.

- **Hawthorn Therapeutics** is developing hawAD14, an orally-administered small molecule originated by CoPlex Therapeutics, which may have potential in the treatment of Alzheimer's disease. The programme is being conducted in South Korea.
<table>
<thead>
<tr>
<th><strong>Company</strong></th>
<th><strong>Owner</strong></th>
<th><strong>Collaborator</strong></th>
<th><strong>Private</strong></th>
<th><strong>Public</strong></th>
<th><strong>Large Pharma</strong></th>
<th><strong>Pharmaceutical</strong></th>
<th><strong>Biotechnology</strong></th>
<th><strong>Biopharmaceutical</strong></th>
<th><strong>Originator</strong></th>
<th><strong>RemainingTony</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Satori Pharmaceuticals</td>
<td>USA</td>
<td>USA</td>
<td>USA</td>
<td>USA</td>
<td>USA</td>
<td>USA</td>
<td>USA</td>
<td>Biotechnology</td>
<td>USA</td>
<td>RemainingTony</td>
</tr>
<tr>
<td>Cellzome/Ortho-McNeil Pharmaceutical</td>
<td>Switzerland</td>
<td>USA</td>
<td>USA</td>
<td>USA</td>
<td>USA</td>
<td>USA</td>
<td>USA</td>
<td>Biotechnology</td>
<td>USA</td>
<td>RemainingTony</td>
</tr>
<tr>
<td>Biogen Idec</td>
<td>USA</td>
<td>USA</td>
<td>USA</td>
<td>USA</td>
<td>USA</td>
<td>USA</td>
<td>USA</td>
<td>Biotechnology</td>
<td>USA</td>
<td>RemainingTony</td>
</tr>
<tr>
<td>Galapagos NV</td>
<td>Switzerland</td>
<td>Switzerland</td>
<td>Switzerland</td>
<td>Switzerland</td>
<td>Switzerland</td>
<td>Switzerland</td>
<td>Switzerland</td>
<td>Biotechnology</td>
<td>Switzerland</td>
<td>RemainingTony</td>
</tr>
<tr>
<td>Sonexa Therapeutics</td>
<td>USA</td>
<td>USA</td>
<td>USA</td>
<td>USA</td>
<td>USA</td>
<td>USA</td>
<td>USA</td>
<td>Biotechnology</td>
<td>USA</td>
<td>RemainingTony</td>
</tr>
<tr>
<td>Socratech LLC</td>
<td>USA</td>
<td>USA</td>
<td>USA</td>
<td>USA</td>
<td>USA</td>
<td>USA</td>
<td>USA</td>
<td>Biotechnology</td>
<td>USA</td>
<td>RemainingTony</td>
</tr>
</tbody>
</table>

**Research Focus**

- **Alzheimer's disease**
- **Amyloid beta-protein inhibitors**
- **Macrophage inhibitors**
- **Alpha7 nicotinic acetylcholine receptor agonists**
- **Signal transduction pathway inhibitors**
- **BACE1 protein inhibitors**
- **Amyloid beta-protein precursor inhibitors**
- **Amyloid beta-protein inhibitors**

**Preclinical Stage**

- The research focus involves investigations of senile dementia of the Alzheimer's disease type.
- The research involves the development of compounds for the treatment of Alzheimer's disease and other age-related neurodegenerative disorders, including the vascular system and neuroinflammation.
- The compounds are developed to target the vascular system for the treatment of Alzheimer's disease.

**Compound Development**

- The compound from an undisclosed Japanese company has licensed exclusive rights worldwide for the treatment of Alzheimer's disease.
- The company has reported that a product candidate had entered preclinical trials in 2011.
- The company's research programme involves the development of compounds for the treatment of Alzheimer's disease.
- The research programme involves the investigation of senile dementia of the Alzheimer's disease type.
- The research programme involves the development of compounds for the treatment of neurodegenerative disorders, including the vascular system.

**Peptide-Based Therapeutics**

- Peptides, such as ANA-5, are used to prevent beta-amyloid aggregation and toxicity.
- The peptides are able to prevent beta-amyloid aggregation and neurotoxicity in preclinical trials.
- The peptides are being developed to target the vascular system and neuroinflammation for the treatment of Alzheimer's disease.

**Signalling Pathways**

- The research involves the development of peptide- and non-peptide-based inhibitors targeting signalling pathways.
- The research involves the development of compounds for the treatment of neurodegenerative disorders.
- The research involves the development of compounds for the treatment of Alzheimer's disease.
- The research involves the development of compounds for the treatment of neuroinflammation.

**Amyloid-Related Peptides**

- Amyloid-related peptides, such as ANA-1, are being developed to target Alzheimer's disease.
- The peptides are being developed to target the vascular system and neuroinflammation for the treatment of Alzheimer's disease.
- The peptides are being developed to target the vascular system and neuroinflammation for the treatment of neurodegenerative disorders.
- The peptides are being developed to target the vascular system and neuroinflammation for the treatment of Alzheimer's disease.

**Other Research Focuses**

- The research involves the development of compounds for the treatment of neuroinflammation.
- The research involves the development of compounds for the treatment of neurodegenerative disorders.
- The research involves the development of compounds for the treatment of Alzheimer's disease.
- The research involves the development of compounds for the treatment of neuroinflammation.
- The research involves the development of compounds for the treatment of neurodegenerative disorders.
- The research involves the development of compounds for the treatment of Alzheimer's disease.
- The research involves the development of compounds for the treatment of neuroinflammation.
- The research involves the development of compounds for the treatment of neurodegenerative disorders.
- The research involves the development of compounds for the treatment of Alzheimer's disease.
- The research involves the development of compounds for the treatment of neuroinflammation.
- The research involves the development of compounds for the treatment of neurodegenerative disorders.
- The research involves the development of compounds for the treatment of Alzheimer's disease.
- The research involves the development of compounds for the treatment of neuroinflammation.
- The research involves the development of compounds for the treatment of neurodegenerative disorders.
- The research involves the development of compounds for the treatment of Alzheimer's disease.
- The research involves the development of compounds for the treatment of neuroinflammation.
- The research involves the development of compounds for the treatment of neurodegenerative disorders.
- The research involves the development of compounds for the treatment of Alzheimer's disease.
- The research involves the development of compounds for the treatment of neuroinflammation.
- The research involves the development of compounds for the treatment of neurodegenerative disorders.
- The research involves the development of compounds for the treatment of Alzheimer's disease.
- The research involves the development of compounds for the treatment of neuroinflammation.
- The research involves the development of compounds for the treatment of neurodegenerative disorders.
- The research involves the development of compounds for the treatment of Alzheimer's disease.
- The research involves the development of compounds for the treatment of neuroinflammation.
- The research involves the development of compounds for the treatment of neurodegenerative disorders.
- The research involves the development of compounds for the treatment of Alzheimer's disease.
- The research involves the development of compounds for the treatment of neuroinflammation.
- The research involves the development of compounds for the treatment of neurodegenerative disorders.
- The research involves the development of compounds for the treatment of Alzheimer's disease.
- The research involves the development of compounds for the treatment of neuroinflammation.
- The research involves the development of compounds for the treatment of neurodegenerative disorders.
- The research involves the development of compounds for the treatment of Alzheimer's disease.
- The research involves the development of compounds for the treatment of neuroinflammation.
- The research involves the development of compounds for the treatment of neurodegenerative disorders.
- The research involves the development of compounds for the treatment of Alzheimer's disease.
- The research involves the development of compounds for the treatment of neuroinflammation.
- The research involves the development of compounds for the treatment of neurodegenerative disorders.
- The research involves the development of compounds for the treatment of Alzheimer's disease.
- The research involves the development of compounds for the treatment of neuroinflammation.
- The research involves the development of compounds for the treatment of neurodegenerative disorders.
- The research involves the development of compounds for the treatment of Alzheimer's disease.
- The research involves the development of compounds for the treatment of neuroinflammation.
- The research involves the development of compounds for the treatment of neurodegenerative disorders.
- The research involves the development of compounds for the treatment of Alzheimer's disease.
- The research involves the development of compounds for the treatment of neuroinflammation.
- The research involves the development of compounds for the treatment of neurodegenerative disorders.
- The research involves the development of compounds for the treatment of Alzheimer's disease.
- The research involves the development of compounds for the treatment of neuroinflammation.
- The research involves the development of compounds for the treatment of neurodegenerative disorders.
- The research involves the development of compounds for the treatment of Alzheimer's disease.
- The research involves the development of compounds for the treatment of neuroinflammation.
- The research involves the development of compounds for the treatment of neurodegenerative disorders.
- The research involves the development of compounds for the treatment of Alzheimer's disease.
- The research involves the development of compounds for the treatment of neuroinflammation.
- The research involves the development of compounds for the treatment of neurodegenerative disorders.
- The research involves the development of compounds for the treatment of Alzheimer's disease.
- The research involves the development of compounds for the treatment of neuroinflammation.
- The research involves the development of compounds for the treatment of neurodegenerative disorders.
- The research involves the development of compounds for the treatment of Alzheimer's disease.
- The research involves the development of compounds for the treatment of neuroinflammation.
- The research involves the development of compounds for the treatment of neurodegenerative disorders.
- The research involves the development of compounds for the treatment of Alzheimer's disease.
- The research involves the development of compounds for the treatment of neuroinflammation.
- The research involves the development of compounds for the treatment of neurodegenerative disorders.
- The research involves the development of compounds for the treatment of Alzheimer's disease.
- The research involves the development of compounds for the treatment of neuroinflammation.
- The research involves the development of compounds for the treatment of neurodegenerative disorders.
- The research involves the development of compounds for the treatment of Alzheimer's disease.
- The research involves the development of compounds for the treatment of neuroinflammation.
- The research involves the development of compounds for the treatment of neurodegenerative disorders.
- The research involves the development of compounds for the treatment of Alzheimer's disease.
- The research involves the development of compounds for the treatment of neuroinflammation.
- The research involves the development of compounds for the treatment of neurodegenerative disorders.
- The research involves the development of compounds for the treatment of Alzheimer's disease.
- The research involves the development of compounds for the treatment of neuroinflammation.
- The research involves the development of compounds for the treatment of neurodegenerative disorders.
- The research involves the development of compounds for the treatment of Alzheimer's disease.
- The research involves the development of compounds for the treatment of neuroinflammation.
- The research involves the development of compounds for the treatment of neurodegenerative disorders.
<table>
<thead>
<tr>
<th>Company</th>
<th>Country</th>
<th>Stage</th>
<th>Route</th>
<th>Research Programme</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognition Therapeutics</td>
<td>USA</td>
<td>Preclinical</td>
<td>Unknown route</td>
<td>Alzheimer's disease</td>
</tr>
<tr>
<td>Acumen Pharmaceuticals</td>
<td>USA</td>
<td>Preclinical</td>
<td>Parenteral</td>
<td>Alzheimer's disease (Prevention)</td>
</tr>
<tr>
<td>DNAVEC Corporation</td>
<td>USA</td>
<td>Preclinical</td>
<td>Intraperitoneal</td>
<td>Unknown route</td>
</tr>
<tr>
<td>University</td>
<td>USA</td>
<td>Preclinical</td>
<td>Unknown route</td>
<td>Unknown route</td>
</tr>
<tr>
<td>Abbott GmbH &amp; Co. KG</td>
<td>Austria</td>
<td>Preclinical</td>
<td>Intranasal</td>
<td>Alzheimer's disease vaccines - Abbott</td>
</tr>
<tr>
<td>A-887755</td>
<td>Austria</td>
<td>Owner</td>
<td>Parenteral</td>
<td>Alzheimer's disease</td>
</tr>
<tr>
<td>CT 0093</td>
<td>Austria</td>
<td>Collaborator</td>
<td>Parenteral</td>
<td>Alzheimer's disease</td>
</tr>
<tr>
<td>RV 01</td>
<td>USA</td>
<td>Owner</td>
<td>Intraperitoneal</td>
<td>Alzheimer's disease</td>
</tr>
<tr>
<td>RV 02</td>
<td>USA</td>
<td>Owner</td>
<td>Intraperitoneal</td>
<td>Alzheimer's disease</td>
</tr>
<tr>
<td>RV 03</td>
<td>USA</td>
<td>Owner</td>
<td>Intraperitoneal</td>
<td>Alzheimer's disease</td>
</tr>
<tr>
<td>EB 101</td>
<td>USA</td>
<td>Owner</td>
<td>Intraperitoneal</td>
<td>Alzheimer's disease</td>
</tr>
<tr>
<td>SPI-014</td>
<td>USA</td>
<td>Owner</td>
<td>Intraperitoneal</td>
<td>Alzheimer's disease</td>
</tr>
<tr>
<td>SPI 1865</td>
<td>USA</td>
<td>Owner</td>
<td>Intraperitoneal</td>
<td>Alzheimer's disease</td>
</tr>
<tr>
<td>SPI 014</td>
<td>USA</td>
<td>Owner</td>
<td>Intraperitoneal</td>
<td>Alzheimer's disease</td>
</tr>
<tr>
<td>A-887755</td>
<td>USA</td>
<td>Owner</td>
<td>Parenteral</td>
<td>Alzheimer's disease</td>
</tr>
<tr>
<td>Cognition Therapeutics</td>
<td>USA</td>
<td>Owner</td>
<td>Parenteral</td>
<td>Alzheimer's disease</td>
</tr>
<tr>
<td>Acumen Pharmaceuticals</td>
<td>USA</td>
<td>Owner</td>
<td>Parenteral</td>
<td>Alzheimer's disease</td>
</tr>
<tr>
<td>DNAVEC and Eisai</td>
<td>USA</td>
<td>Owner</td>
<td>Parenteral</td>
<td>Alzheimer's disease</td>
</tr>
<tr>
<td>University</td>
<td>USA</td>
<td>Owner</td>
<td>Parenteral</td>
<td>Alzheimer's disease</td>
</tr>
<tr>
<td>Abbott GmbH &amp; Co. KG</td>
<td>Austria</td>
<td>Owner</td>
<td>Parenteral</td>
<td>Alzheimer's disease</td>
</tr>
<tr>
<td>A-887755</td>
<td>Austria</td>
<td>Owner</td>
<td>Parenteral</td>
<td>Alzheimer's disease</td>
</tr>
<tr>
<td>CT 0093</td>
<td>Austria</td>
<td>Owner</td>
<td>Parenteral</td>
<td>Alzheimer's disease</td>
</tr>
<tr>
<td>RV 01</td>
<td>USA</td>
<td>Owner</td>
<td>Parenteral</td>
<td>Alzheimer's disease</td>
</tr>
<tr>
<td>RV 02</td>
<td>USA</td>
<td>Owner</td>
<td>Parenteral</td>
<td>Alzheimer's disease</td>
</tr>
<tr>
<td>RV 03</td>
<td>USA</td>
<td>Owner</td>
<td>Parenteral</td>
<td>Alzheimer's disease</td>
</tr>
<tr>
<td>EB 101</td>
<td>USA</td>
<td>Owner</td>
<td>Parenteral</td>
<td>Alzheimer's disease</td>
</tr>
<tr>
<td>SPI-014</td>
<td>USA</td>
<td>Owner</td>
<td>Parenteral</td>
<td>Alzheimer's disease</td>
</tr>
<tr>
<td>SPI 1865</td>
<td>USA</td>
<td>Owner</td>
<td>Parenteral</td>
<td>Alzheimer's disease</td>
</tr>
<tr>
<td>SPI 014</td>
<td>USA</td>
<td>Owner</td>
<td>Parenteral</td>
<td>Alzheimer's disease</td>
</tr>
<tr>
<td>A-887755</td>
<td>USA</td>
<td>Owner</td>
<td>Parenteral</td>
<td>Alzheimer's disease</td>
</tr>
<tr>
<td>Cognition Therapeutics</td>
<td>USA</td>
<td>Owner</td>
<td>Parenteral</td>
<td>Alzheimer's disease</td>
</tr>
<tr>
<td>Acumen Pharmaceuticals</td>
<td>USA</td>
<td>Owner</td>
<td>Parenteral</td>
<td>Alzheimer's disease</td>
</tr>
<tr>
<td>DNAVEC and Eisai</td>
<td>USA</td>
<td>Owner</td>
<td>Parenteral</td>
<td>Alzheimer's disease</td>
</tr>
<tr>
<td>University</td>
<td>USA</td>
<td>Owner</td>
<td>Parenteral</td>
<td>Alzheimer's disease</td>
</tr>
<tr>
<td>Abbott GmbH &amp; Co. KG</td>
<td>Austria</td>
<td>Owner</td>
<td>Parenteral</td>
<td>Alzheimer's disease</td>
</tr>
<tr>
<td>A-887755</td>
<td>Austria</td>
<td>Owner</td>
<td>Parenteral</td>
<td>Alzheimer's disease</td>
</tr>
<tr>
<td>CT 0093</td>
<td>Austria</td>
<td>Owner</td>
<td>Parenteral</td>
<td>Alzheimer's disease</td>
</tr>
<tr>
<td>RV 01</td>
<td>USA</td>
<td>Owner</td>
<td>Parenteral</td>
<td>Alzheimer's disease</td>
</tr>
<tr>
<td>RV 02</td>
<td>USA</td>
<td>Owner</td>
<td>Parenteral</td>
<td>Alzheimer's disease</td>
</tr>
<tr>
<td>RV 03</td>
<td>USA</td>
<td>Owner</td>
<td>Parenteral</td>
<td>Alzheimer's disease</td>
</tr>
<tr>
<td>EB 101</td>
<td>USA</td>
<td>Owner</td>
<td>Parenteral</td>
<td>Alzheimer's disease</td>
</tr>
<tr>
<td>SPI-014</td>
<td>USA</td>
<td>Owner</td>
<td>Parenteral</td>
<td>Alzheimer's disease</td>
</tr>
<tr>
<td>SPI 1865</td>
<td>USA</td>
<td>Owner</td>
<td>Parenteral</td>
<td>Alzheimer's disease</td>
</tr>
<tr>
<td>SPI 014</td>
<td>USA</td>
<td>Owner</td>
<td>Parenteral</td>
<td>Alzheimer's disease</td>
</tr>
<tr>
<td>Originator</td>
<td>Route</td>
<td>Status</td>
<td>Treatment</td>
<td>Country</td>
</tr>
<tr>
<td>------------</td>
<td>-------</td>
<td>--------</td>
<td>-----------</td>
<td>---------</td>
</tr>
<tr>
<td>Cognition Therapeutics</td>
<td>Unknown route</td>
<td>Preclinical</td>
<td>Alzheimer's disease</td>
<td>USA</td>
</tr>
<tr>
<td>Unknown route</td>
<td>Unknown route</td>
<td>Preclinical</td>
<td>Anxiety disorders</td>
<td>USA, Japan</td>
</tr>
<tr>
<td>Originator</td>
<td>PO</td>
<td>Preclinical</td>
<td>Merck &amp; Co</td>
<td>USA</td>
</tr>
<tr>
<td>Public</td>
<td>Alzheimer's disease</td>
<td>Preclinical</td>
<td>Eli Lilly</td>
<td>USA, Sweden</td>
</tr>
<tr>
<td>Astex Pharmaceuticals</td>
<td>Unknown route</td>
<td>Preclinical</td>
<td>University</td>
<td>USA</td>
</tr>
<tr>
<td>Public</td>
<td>Alzheimer's disease</td>
<td>Preclinical</td>
<td>NeuroGenetic Pharmaceuticals</td>
<td>USA</td>
</tr>
<tr>
<td>Private</td>
<td>Neurodegenerative disorders</td>
<td>Preclinical</td>
<td>USA</td>
<td>USA</td>
</tr>
<tr>
<td>Owner</td>
<td>Apolipoprotein E agonists</td>
<td>Preclinical</td>
<td>University of California at Irvine</td>
<td>USA</td>
</tr>
</tbody>
</table>

Research programme:
- anti-beta-amyloid antibodies - Takeda
- small molecule modulators of human amyloid precursor protein secretase - NeuroGenetic
- antibodies - Centocor/AstraZeneca
- gamma-secretase inhibitors - Merck & Co
- beta-secretase-1 inhibitors - Merck & Co
- EVP-15962
- EVP-14936
- BMS-433796
- BMS-299897
- BMS-289948
- SCH 1375975
- SCH 741216
- SCH 745966
- SCH-741216
- JRF/hAb11/1
- BA27
- AZ 12066871
- Anti-amyloid oligomer monoclonal antibody
- Anti-amyloid oligomer MAb
- Amyloid oligomer vaccine
- CT 0109
<table>
<thead>
<tr>
<th>BACE1 protein inhibitors</th>
<th>Originator</th>
<th>USA</th>
<th>USA</th>
<th>USA</th>
<th>Development status</th>
<th>Benefits</th>
<th>Route of administration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pfizer</td>
<td>Private</td>
<td>Large Pharma, Pharmaceutical</td>
<td>USA</td>
<td>Public</td>
<td>USA</td>
<td>Pfizer is developing orally active, small molecule inhibitors with BACE-1 inhibitors for the treatment of Alzheimer's disease. BACE-1 is a human brain aspartyl protease which cleaves amyloid beta-protein precursor inhibitors - Actelion Pharmaceuticals</td>
<td>USA</td>
</tr>
<tr>
<td>Merck &amp; Co</td>
<td>Private</td>
<td>Large Pharma, Pharmaceutical</td>
<td>USA</td>
<td>Public</td>
<td>USA</td>
<td>Novartis is developing cyclic sulfoxide inhibitors for the treatment of Alzheimer's disease.</td>
<td>USA</td>
</tr>
<tr>
<td>Madera Biosciences</td>
<td>Market Licensee</td>
<td>Large Pharma, Pharmaceutical</td>
<td>World</td>
<td>Public</td>
<td>USA</td>
<td>It is believed that the amyloid cascade plays a role in the pathogenesis of Alzheimer's disease. BACE is an enzyme that mediates the deposition of amyloid plaque in the brain.</td>
<td>USA</td>
</tr>
<tr>
<td>Vitae Pharmaceuticals</td>
<td>Owner</td>
<td>Pharmaceutical</td>
<td>USA</td>
<td>Private</td>
<td>USA</td>
<td>Pfizer and Astellas Pharma are developing a series of BACE1 protein inhibitors for the treatment of Alzheimer's disease. BACE is an enzyme that mediates the deposition of amyloid plaque in the brain.</td>
<td>USA</td>
</tr>
<tr>
<td>CoMentis (formerly Zapaq) and Astellas Pharma</td>
<td>Originator</td>
<td>USA</td>
<td>USA</td>
<td>USA</td>
<td>Johnson &amp; Johnson Pharmaceutical R&amp;D is developing a series of BACE1 protein inhibitors for the treatment of Alzheimer's disease. BACE is an enzyme that mediates the deposition of amyloid plaque in the brain.</td>
<td>USA</td>
<td>N/A</td>
</tr>
<tr>
<td>Duke University</td>
<td>Public</td>
<td>USA</td>
<td>USA</td>
<td>USA</td>
<td>Duke University is developing small molecule compounds that increase the expression of apolipoprotein E (apoE)-mimetic peptides of ten amino acids.</td>
<td>USA</td>
<td>N/A</td>
</tr>
<tr>
<td>Cognosci</td>
<td>Originator</td>
<td>USA</td>
<td>USA</td>
<td>USA</td>
<td>Cognosci is developing small molecule therapeutics - Madera Biosciences</td>
<td>USA</td>
<td>N/A</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Company</th>
<th>Therapy</th>
<th>Route</th>
<th>Stage</th>
<th>Route (specific)</th>
<th>Other Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abbott Laboratories</td>
<td>Alzheimer’s disease</td>
<td>PO</td>
<td>Preclinical</td>
<td>Unknown route</td>
<td>Commercialises small molecule oral beta-secretase inhibitors (beta-secretase inhibitor) for the treatment of Alzheimer’s disease. Development is at the preclinical stage in Japan and the US.</td>
</tr>
<tr>
<td>ArmaGen Technologies</td>
<td>Neuroplasticity for the treatment of spinal cord injuries</td>
<td>PO</td>
<td>Preclinical</td>
<td>Unknown route</td>
<td>ArmaGen is developing therapies for the conformationally mimic antigenic specificity of PSA-NCAM mimotope. It is derived from the marijuana plant Cannabis and products, including lead candidate APH 0802, derived from the marijuana plant Cannabis.</td>
</tr>
<tr>
<td>Pharmaxon Biotechnology</td>
<td>Erythropoietin receptor modulators</td>
<td>PO</td>
<td>Preclinical</td>
<td>Unknown route</td>
<td>Pharmaxon is developing compounds that mediate the deposition of amyloid plaque in the brain.</td>
</tr>
<tr>
<td>Company</td>
<td>Disease</td>
<td>Route</td>
<td>Phase</td>
<td>Region</td>
<td>Collaborator</td>
</tr>
<tr>
<td>--------------------------------------------</td>
<td>-------------------------------</td>
<td>---------</td>
<td>---------</td>
<td>-------------------------</td>
<td>--------------</td>
</tr>
<tr>
<td>Siena Biotech</td>
<td>Mild cognitive impairment</td>
<td>Parenteral</td>
<td>Preclinical</td>
<td>Belgium, Canada, USA</td>
<td></td>
</tr>
<tr>
<td>Diaxonhit</td>
<td>Discontinued</td>
<td>Unknown route</td>
<td>Preclinical</td>
<td>Belgium</td>
<td></td>
</tr>
<tr>
<td>ChemDiv</td>
<td>Alzheimer's disease</td>
<td>Unknown route</td>
<td>Preclinical</td>
<td>France</td>
<td></td>
</tr>
<tr>
<td>InnovatePharma</td>
<td>Alzheimer's disease</td>
<td>Unknown route</td>
<td>Preclinical</td>
<td>China</td>
<td></td>
</tr>
<tr>
<td>MedGenesis Therapeutix</td>
<td>Brain injuries</td>
<td>Unknown route</td>
<td>Preclinical</td>
<td>Austria, United Kingdom</td>
<td></td>
</tr>
<tr>
<td>Diaxonhit</td>
<td>Amyloid precursor protein</td>
<td>Unknown route</td>
<td>Preclinical</td>
<td>USA</td>
<td></td>
</tr>
<tr>
<td>Mapreg SAS</td>
<td>Dementia</td>
<td>Unknown route</td>
<td>Preclinical</td>
<td>France</td>
<td></td>
</tr>
<tr>
<td>ReGen Therapeutics Plc</td>
<td>Unknown route</td>
<td>Unknown route</td>
<td>Preclinical</td>
<td>France</td>
<td></td>
</tr>
</tbody>
</table>

**Chemical Probes and Their Uses**

- **Acetylcholinesterase inhibitors**
- **Cholinergic receptor modulators**
- **Cholinesterase inhibitors**
- **Cell differentiation stimulants**
- **Apoptosis inhibitors**
- **Antioxidants**
- **Undefined mechanism**
- **Endothelin inhibitors**
- **Endothelin analogues**
- **DYRK1a kinase inhibitors**
- **DKK1 analogues**
- **Endopeptidase inhibitors**
- **Cytokine inhibitors**
- **Wnt protein modulators**
- **Serotonin 6 receptor antagonists**
- **NMDA receptor antagonists**
- **Colostrinin**
- **Pregnenolone analogues**
- **3-Methoxy-pregnenolone**
- **Pregnenolone**
- **Pregnenolone derivatives**
- **TT302**
- **CM 2433**
- **CB-2433**
- **CB 2433**
- **Perso**
- **CM-2**
- **SE-401**
- **EBS-282**
- **ESN-401**
- **ESN-502**
- **SPH 1285**
- **SPH 1371**
- **Acetylcholinesterase inhibitors**
- **Cholinergic receptor modulators**
- **Cholinesterase inhibitors**
- **Cell differentiation stimulants**
- **Apoptosis inhibitors**
- **Antioxidants**
- ** Undefined mechanism**
- **Endothelin inhibitors**
- **Endothelin analogues**
- **DYRK1a kinase inhibitors**
- **DKK1 analogues**
- **Endopeptidase inhibitors**
- **Cytokine inhibitors**
- **Wnt protein modulators**
- **Serotonin 6 receptor antagonists**
- **NMDA receptor antagonists**
- **Colostrinin**
- **Pregnenolone analogues**
- **3-Methoxy-pregnenolone**
- **Pregnenolone**
- **Pregnenolone derivatives**
- **TT302**
- **CM 2433**
- **CB-2433**
- **CB 2433**
- **Perso**
- **CM-2**
- **SE-401**
- **EBS-282**
- **ESN-401**
- **ESN-502**
- **SPH 1285**
- **SPH 1371**

**Molecular Targets**

- Alzheimer's disease
- Down syndrome
- Multiple sclerosis
- Glioblastoma
- Parkinson's disease
- Amyotropic lateral sclerosis (ALS)
- Cancer
- Dementia
- Brain injuries
<table>
<thead>
<tr>
<th>Company</th>
<th>Originator</th>
<th>Route</th>
<th>Phase</th>
<th>Area</th>
<th>Owner</th>
<th>Market</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sanochemia Pharmazeutika</td>
<td>USA</td>
<td>Unknown route</td>
<td>Preclinical</td>
<td>Neurodegenerative disorders</td>
<td>Biopharmaceutical</td>
<td>USA</td>
</tr>
<tr>
<td>Summit Corporation plc (VASTox)</td>
<td>Sweden</td>
<td>Unknown route</td>
<td>Preclinical</td>
<td>Alzheimer's and Parkinson's diseases</td>
<td>Pharmaceutical</td>
<td>USA</td>
</tr>
<tr>
<td>Ligand Pharmaceuticals</td>
<td>Sweden</td>
<td>Unknown route</td>
<td>Preclinical</td>
<td>Histamine H3 receptor modulators</td>
<td>Biotechnology</td>
<td>World</td>
</tr>
<tr>
<td>Merck &amp; Co</td>
<td>Netherlands</td>
<td>USA</td>
<td>Preclinical</td>
<td>Secretase (gamma-secretase) inhibitors for Alzheimer's disease</td>
<td>Biotechnology</td>
<td>World</td>
</tr>
<tr>
<td>EnVivo Pharmaceuticals</td>
<td>USA</td>
<td>USA</td>
<td>Preclinical</td>
<td>Histone deacetylase inhibitors - EnVivo</td>
<td>Research</td>
<td>USA</td>
</tr>
<tr>
<td>Galantos Pharma</td>
<td>USA</td>
<td>USA</td>
<td>Preclinical</td>
<td>Immunomodulators</td>
<td>Biotechnology</td>
<td>USA</td>
</tr>
<tr>
<td>ALS Biopharma</td>
<td>USA</td>
<td>Germany</td>
<td>Preclinical</td>
<td>Amyotrophic lateral sclerosis</td>
<td>Biopharmaceutical</td>
<td>Netherlands</td>
</tr>
<tr>
<td>MethylGene</td>
<td>Netherlands</td>
<td>USA</td>
<td>Preclinical</td>
<td>Triglyceride modulators</td>
<td>Biopharmaceutical</td>
<td>Netherlands</td>
</tr>
<tr>
<td>Memogain®</td>
<td>Canada, USA</td>
<td>USA</td>
<td>Preclinical</td>
<td>Tau protein modulators</td>
<td>Biotechnology</td>
<td>USA</td>
</tr>
<tr>
<td>Merck &amp; Co</td>
<td>USA</td>
<td>USA</td>
<td>Preclinical</td>
<td>Alzheimer's disease</td>
<td>Biotechnology</td>
<td>USA</td>
</tr>
<tr>
<td>Plexxikon</td>
<td>World</td>
<td>USA</td>
<td>Preclinical</td>
<td>Raf kinase inhibitors</td>
<td>Biotechnology</td>
<td>USA</td>
</tr>
<tr>
<td>EnVivo Pharmaceuticals</td>
<td>USA</td>
<td>USA</td>
<td>Preclinical</td>
<td>Nicotinic receptor modulators</td>
<td>Biotechnology</td>
<td>USA</td>
</tr>
</tbody>
</table>

**Notes:**
- **Neuropathic pain**
- **Biotechnology**
- **USA**
- **Unknown route**
- **Preclinical**
- **Immunomodulators**
- **Biotechnology**
- **United Kingdom**
- **Preclinical**
- **Hepatitis C virus NS3 protein modulators**
- **USA**
- **Galantos Pharma**
- **Inflammation**
- **USA**
- **Private**
- **Originator**
- **Owner**
- **Mirati Therapeutics**
- **Public**
- **Canada, USA**
- **USA**
- **PO**
- **Viral infections**
- **Company**
- **Originator**
- **Biopharmaceutical**
- **Preclinical**
- **Unknown route**
- **Preclinical**
- **Raf kinase inhibitors**
- **Pharmaceutical**
- **Unknown route**
- **Alzheimer's disease**
- **Biotechnology**
- **Ligand Pharmaceuticals**
- **Sweden**
- **Unknown route**
- **to-BBB technologies**
- **Merck & Co**
- **Public**
- **Originator**
- **Unknown route**
- **EnVivo Pharmaceuticals**
- **Research**
- **USA**
- **World**
- **Nicotinic receptor modulators**
- **Unknown route**
- **Preclinical**
- **Unknown route**
- **USA**
- **Germany**
- **Preclinical**
- **Glucose modulators**
- **Proto-oncogene protein b-raf modulators**
- **Private**
- **ALS Biopharma**
- **Alpha-synuclein inhibitors**
- **MethylGene**
- **Unknown route**
- **Biopharmaceutical**
- **Public**
- **Netherlands**
- **Amyotrophic lateral sclerosis**
- **Preclinical**
- **Unknown route**

**Additional Information:**
- **Neuroscience**
- **Immunotherapeutics - BioArctic**
- **Pharmaceuticals**
- **deacetylase inhibitors - EnVivo**
- **Research programme: histone**
- **secretase inhibitors - Merck**
- **prodrug - Galantos Pharma**
- **Research programme: galantamine**
- **kinase (proto-oncogene protein b-raf-inhibitors)**
- **The company's proprietary technology**
- **Alzheimer's disease (AD) and Parkinson's disease**
- **antibodies and vaccines, for the treatment of**
- **BioArctic Neuroscience in Sweden is developing**
- **compounds for the treatment of Alzheimer's**
- **Summit Corporation plc (VASTox) is developing**
- **Alzheimer's and Parkinson's diseases**
- **The motif is characteristic of distinctive, recurring**
- **on a general amyloid interaction motif (GAIM).**
- **therapies targeted at protein misfolding. The**
- **network components**
- **RNA transcriptional regulators of homeostasis**
- **interactions with molecular chaperones, heat**
- **therapies modulate homeostasis may include**
- **several therapeutic areas, including**
- **that modulate homeostasis for the treatment of**
- **MethylGene which were generated using the**
- **These isotype-selective, brain-permeable HDAC**
- **neurodegenerative disorders, including**
- **plasma HDACi - EnVivo**
- **excitatory neurotransmitters such as glutamate**
- **release in the brain, controlling the release of**
- **D3 receptor modulates histamine**
- **disorders (schizophrenia and Alzheimer's**
- **H3 antagonists for the treatment of**
- **Ligand Pharmaceuticals is developing histamine**
- **proteins, the toxic form of tau protein and beta-**
- **lateral sclerosis (ALS). Hsp70 clears two**
- **such as Alzheimer's disease and amytrophic**
- **the treatment of neurodegenerative disorders**
- **therapeutic agents to the brain.**
- **Traditionally, targeting these indications has**
- **derivatives, aryl sulfones and [4.2.1]-bicyclo**
- **of Alzheimer's disease (AD) and cancer. Various**
- **secretase (gamma-secretase) for the treatment**
- **conventionally used for the treatment of mild-to**
- **treatment of Alzheimer's disease (AD). The**
- **Memogain®**
- **GLN-1062**
- **MRK-560**
- **MRK-003**
- **Memogain**
- **SPH1285**
- **SPH-1371**
- **CNS 101**
- **CNS101**
- **H3 receptor modulators**
- **HSP70 heat shock protein inhibitors**
- **Schizophrenia**
- **Narcolepsy**
- **Attention-deficit hyperactivity disorder**
- **Amyotrophic lateral sclerosis**
- **Brain cancer**
<table>
<thead>
<tr>
<th>Region</th>
<th>Sponsor</th>
<th>Purpose</th>
<th>Disease Area</th>
<th>Route</th>
<th>Country</th>
<th>Stage</th>
<th>Collaborator</th>
<th>Research Programme</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Intellectual Neurosciences</td>
<td>Biotech</td>
<td>Amyotrophic lateral sclerosis</td>
<td>PO</td>
<td>USA</td>
<td>Preclinical</td>
<td>biOasis Technologies</td>
<td>Research programme: Nanobodies - glutamate receptor 5 modulators - Addex Therapeutics</td>
</tr>
<tr>
<td>USA</td>
<td>Neuronascent</td>
<td>Biotech</td>
<td>Alzheimer's disease</td>
<td>PO</td>
<td>Belgium/Czech</td>
<td>Preclinical</td>
<td>Mithridion</td>
<td>Research programme: metabotropic glutamate receptor 5 modulators - Prana Biotechnology</td>
</tr>
<tr>
<td>Switzerland</td>
<td>Ablynx</td>
<td>Biotech</td>
<td>Alzheimer's disease</td>
<td>IV</td>
<td>Switzerland</td>
<td>Preclinical</td>
<td>Neurotez</td>
<td>Research programme: kinase inhibitors - Plexxikon</td>
</tr>
<tr>
<td>USA</td>
<td>Vitae Pharmaceuticals</td>
<td>Biotech</td>
<td>Alzheimer's disease</td>
<td>IV</td>
<td>Israel</td>
<td>Preclinical</td>
<td>BT2211</td>
<td>Research programme: Neurotez - research programme: Neuronascent</td>
</tr>
<tr>
<td>USA</td>
<td>Mithridion</td>
<td>Biotech</td>
<td>Alzheimer's disease</td>
<td>IV</td>
<td>Belgium/Germany</td>
<td>Preclinical</td>
<td>Neuronascent</td>
<td>Research programme: Muscarinic receptor agonists - Schering-Plough Pharma</td>
</tr>
<tr>
<td>USA</td>
<td>D-Pharm in Israel</td>
<td>Biotech</td>
<td>Alzheimer's disease</td>
<td>IV</td>
<td>Israel</td>
<td>Preclinical</td>
<td>Neuronascent</td>
<td>Research programme: Neuronascent - research programme: Neuronascent</td>
</tr>
<tr>
<td>USA</td>
<td>Pluxxikon</td>
<td>Biotech</td>
<td>Alzheimer's disease</td>
<td>IV</td>
<td>Switzerland</td>
<td>Preclinical</td>
<td>Neuronascent</td>
<td>Research programme: Muscarinic receptor agonists - Schering-Plough Pharma</td>
</tr>
<tr>
<td>USA</td>
<td>Neurotez</td>
<td>Biotech</td>
<td>Alzheimer's disease</td>
<td>IV</td>
<td>USA</td>
<td>Preclinical</td>
<td>Neuronascent</td>
<td>Research programme: Muscarinic receptor agonists - Schering-Plough Pharma</td>
</tr>
</tbody>
</table>

**Neuroprotection**

Intellectual Neurosciences is using its proprietary technologies to create small molecule oral drug candidates. The company has selected a lead compound, CDD-0322, as a negative allosteric metabotropic glutamate receptor-5 modulator for the treatment of Alzheimer's disease. Other compounds in the pipeline include CDD-0317, CDD-0313, CDD 0322, CDD 0317, CDD 0313, and CDD 0312.

Addex Therapeutics (formerly Addex Pharmaceuticals) is evaluating positive and negative allosteric modulation of metabotropic glutamate receptor 5 (mGluR5) for the treatment of neurological diseases including Alzheimer's disease (AD), autoimmune disorders, cancer, and inflammatory diseases. The company is developing a preclinical stage of its research programme: metabotropic glutamate receptor-5 modulators - Addex.

Merck & Co. is developing selective M1 muscarinic positive allosteric receptor modulators for the treatment of Alzheimer's disease. Development of the programme is at the early preclinical stage in the USA.

Plexxikon is developing AMP activated protein kinase modulators for the treatment of atherosclerosis and Alzheimer's disease. Development of the programme is at the preclinical stage in the USA.

Concert Pharmaceuticals is evaluating AMP activated protein kinase modulators for the treatment of Alzheimer's disease. Development of the programme is at the preclinical stage in the USA.

**CDD-0322**

CDD-0322 is a lead compound developed by Intellectual Neurosciences for the treatment of Alzheimer's disease. It is a negative allosteric metabotropic glutamate receptor-5 modulator.

**CDD-0317**

CDD-0317 is a lead compound developed by Intellectual Neurosciences for the treatment of Alzheimer's disease. It is a negative allosteric metabotropic glutamate receptor-5 modulator.

**CDD-0313**

CDD-0313 is a lead compound developed by Intellectual Neurosciences for the treatment of Alzheimer's disease. It is a negative allosteric metabotropic glutamate receptor-5 modulator.

**CDD 0322**

CDD 0322 is a lead compound developed by Intellectual Neurosciences for the treatment of Alzheimer's disease. It is a negative allosteric metabotropic glutamate receptor-5 modulator.

**CDD 0317**

CDD 0317 is a lead compound developed by Intellectual Neurosciences for the treatment of Alzheimer's disease. It is a negative allosteric metabotropic glutamate receptor-5 modulator.

**CDD 0313**

CDD 0313 is a lead compound developed by Intellectual Neurosciences for the treatment of Alzheimer's disease. It is a negative allosteric metabotropic glutamate receptor-5 modulator.

**CDD 0312**

CDD 0312 is a lead compound developed by Intellectual Neurosciences for the treatment of Alzheimer's disease. It is a negative allosteric metabotropic glutamate receptor-5 modulator.

**CDD 0199J**

CDD 0199J is a lead compound developed by Intellectual Neurosciences for the treatment of Alzheimer's disease. It is a negative allosteric metabotropic glutamate receptor-5 modulator.

**tauC3**

tauC3 is a lead compound developed by Intellectual Neurosciences for the treatment of Alzheimer's disease. It is a negative allosteric metabotropic glutamate receptor-5 modulator.

**N01-OX2**

N01-OX2 is a lead compound developed by Intellectual Neurosciences for the treatment of Alzheimer's disease. It is a negative allosteric metabotropic glutamate receptor-5 modulator.

**Anti-Abeta monoclonal antibodies**

Addex Therapeutics (formerly Addex Pharmaceuticals) is developing anti-Abeta monoclonal antibodies for the treatment of Alzheimer's disease. Development of the programme is at the preclinical stage in the USA.

**PBT434**

PBT434 is a lead compound developed by Prana Biotechnology for the treatment of Alzheimer's disease. It is a negative allosteric metabotropic glutamate receptor-5 modulator.

**PBT3 series - Prana Biotechnology**

Prana Biotechnology is developing a series of PBT3 compounds for the treatment of Alzheimer's disease. Development of the programme is at the preclinical stage in the USA.

**ADX47273**

ADX47273 is a lead compound developed by Prana Biotechnology for the treatment of Alzheimer's disease. It is a negative allosteric metabotropic glutamate receptor-5 modulator.

**ADX 50938**

ADX 50938 is a lead compound developed by Prana Biotechnology for the treatment of Alzheimer's disease. It is a negative allosteric metabotropic glutamate receptor-5 modulator.

**BT2211**

BT2211 is a lead compound developed by Prana Biotechnology for the treatment of Alzheimer's disease. It is a negative allosteric metabotropic glutamate receptor-5 modulator.

**BT-2211**

BT-2211 is a lead compound developed by Prana Biotechnology for the treatment of Alzheimer's disease. It is a negative allosteric metabotropic glutamate receptor-5 modulator.

**PLX7486**

PLX7486 is a lead compound developed by Prana Biotechnology for the treatment of Alzheimer's disease. It is a negative allosteric metabotropic glutamate receptor-5 modulator.
Alzheimer's disease

Oryzon

Research

USA

N/A

Collaborator

Alpha-synuclein inhibitors

Preclinical

ProteoTech

USA

Pharmaceutical

PO

Preclinical

United Kingdom

Originator

Originator

Cognition disorders

Unknown route

Affichem

Research

PO

PO

DYRK kinase inhibitors

Brain injuries

PharmaNeuroBoost

Sweden

Spain

Unknown route

Huntington's disease

Originator

Unknown route

BioChromix Pharma

Public

Pharmaceutical

Parkinson's disease

Manufacturer

Parkinson's disease

Originator

Preclinical

USA

Australia

Preclinical

Owner

Australia

Australia

Originator

Owner

Manufacturer

Preclinical

Preclinical

Unknown route

PO

PO

Sweden

Sweden

Acetylcholinesterase inhibitors

USA

Unknown route

PharmaNeuroBoost

USA

Parkinson's disease

Sweden

Pharmaceutical

Preclinical

Pharmaceutical

USA

Samaritan Pharmaceuticals

Down syndrome

Neuron stimulants

Australia

Neuropilin-1 inhibitors

Unknown route

Public

Spain

Research

England

Unknown route

Australia

Sigma-1 receptor antagonists

Private

Pharmaceutical

USA

NeuroNova AB

Advinus Therapeutics

Monoamine oxidase B inhibitors

Sweden

Unknown route

Research

Pharmaceutical

Preclinical

Preclinical

PO

Oryzon

Technology Provider

Huntington's disease

Preclinical

Preclinical

France

Unknown route

Public

Unknown route

Unknown route

Preclinical

Sweden

NeuroNova AB

Sweden

USA

Biopharmaceutical

Private

Private

Preclinical

Preclinical

Arrien Pharmaceuticals

Preclinical

Amyloid beta-protein inhibitors

USA

France

Unknown route

Private

Preclinical

Intracerebro ventricular

Parkinson's disease

Sweden

Private

Preclinical

Private

Preclinical

Design (FFDD)™ technology platform. [CONT.]

Oros Pharmaceuticals, and are being developed

disorders kinase inhibitors - Arrien

Research programme: neurological

neurodegenerative disorders

Research programme:

therapeutics - PharmaNeuroBoost

neurodegenerative disorders

Research programme:

therapeutics - KineMed/Bristol-

therapeutics - BioChromix Pharma

neurodegenerative disorders

Research programme:

Discovery and development of therapeutics

for the treatment of neurodegenerative disorders.

Two lead candidates to emerge is PNB 03 and

AF 243, is undergoing development is ongoing in the US.

Two lead candidates to emerge is PNB 03 and

AF 243, is undergoing development is ongoing in the US.

Two lead candidates to emerge is PNB 03 and

AF 243, is undergoing development is ongoing in the US.

Two lead candidates to emerge is PNB 03 and

AF 243, is undergoing development is ongoing in the US.

Two lead candidates to emerge is PNB 03 and

AF 243, is undergoing development is ongoing in the US.

Two lead candidates to emerge is PNB 03 and

AF 243, is undergoing development is ongoing in the US.

Two lead candidates to emerge is PNB 03 and

AF 243, is undergoing development is ongoing in the US.

Two lead candidates to emerge is PNB 03 and

AF 243, is undergoing development is ongoing in the US.

Two lead candidates to emerge is PNB 03 and

AF 243, is undergoing development is ongoing in the US.

Two lead candidates to emerge is PNB 03 and

AF 243, is undergoing development is ongoing in the US.

Two lead candidates to emerge is PNB 03 and

AF 243, is undergoing development is ongoing in the US.

Two lead candidates to emerge is PNB 03 and

AF 243, is undergoing development is ongoing in the US.

Two lead candidates to emerge is PNB 03 and

AF 243, is undergoing development is ongoing in the US.

Two lead candidates to emerge is PNB 03 and

AF 243, is undergoing development is ongoing in the US.

Two lead candidates to emerge is PNB 03 and

AF 243, is undergoing development is ongoing in the US.

Two lead candidates to emerge is PNB 03 and

AF 243, is undergoing development is ongoing in the US.

Two lead candidates to emerge is PNB 03 and

AF 243, is undergoing development is ongoing in the US.

Two lead candidates to emerge is PNB 03 and

AF 243, is undergoing development is ongoing in the US.

Two lead candidates to emerge is PNB 03 and

AF 243, is undergoing development is ongoing in the US.

Two lead candidates to emerge is PNB 03 and

AF 243, is undergoing development is ongoing in the US.

Two lead candidates to emerge is PNB 03 and

AF 243, is undergoing development is ongoing in the US.

Two lead candidates to emerge is PNB 03 and

AF 243, is undergoing development is ongoing in the US.

Two lead candidates to emerge is PNB 03 and

AF 243, is undergoing development is ongoing in the US.

Two lead candidates to emerge is PNB 03 and

AF 243, is undergoing development is ongoing in the US.

Two lead candidates to emerge is PNB 03 and

AF 243, is undergoing development is ongoing in the US.

Two lead candidates to emerge is PNB 03 and

AF 243, is undergoing development is ongoing in the US.

Two lead candidates to emerge is PNB 03 and

AF 243, is undergoing development is ongoing in the US.

Two lead candidates to emerge is PNB 03 and

AF 243, is undergoing development is ongoing in the US.

Two lead candidates to emerge is PNB 03 and

AF 243, is undergoing development is ongoing in the US.

Two lead candidates to emerge is PNB 03 and

AF 243, is undergoing development is ongoing in the US.

Two lead candidates to emerge is PNB 03 and

AF 243, is undergoing development is ongoing in the US.

Two lead candidates to emerge is PNB 03 and

AF 243, is undergoing development is ongoing in the US.

Two lead candidates to emerge is PNB 03 and

AF 243, is undergoing development is ongoing in the US.

Two lead candidates to emerge is PNB 03 and

AF 243, is undergoing development is ongoing in the US.

Two lead candidates to emerge is PNB 03 and

AF 243, is undergoing development is ongoing in the US.

Two lead candidates to emerge is PNB 03 and

AF 243, is undergoing development is ongoing in the US.

Two lead candidates to emerge is PNB 03 and

AF 243, is undergoing development is ongoing in the US.

Two lead candidates to emerge is PNB 03 and

AF 243, is undergoing development is ongoing in the US.

Two lead candidates to emerge is PNB 03 and

AF 243, is undergoing development is ongoing in the US.

Two lead candidates to emerge is PNB 03 and

AF 243, is undergoing development is ongoing in the US.

Two lead candidates to emerge is PNB 03 and

AF 243, is undergoing development is ongoing in the US.

Two lead candidates to emerge is PNB 03 and

AF 243, is undergoing development is ongoing in the US.

Two lead candidates to emerge is PNB 03 and

AF 243, is undergoing development is ongoing in the US.

Two lead candidates to emerge is PNB 03 and

AF 243, is undergoing development is ongoing in the US.

Two lead candidates to emerge is PNB 03 and

AF 243, is undergoing development is ongoing in the US.
<table>
<thead>
<tr>
<th>Disease/Condition</th>
<th>Originator</th>
<th>Owner</th>
<th>Research Programme</th>
<th>Route</th>
<th>Route Specifics</th>
<th>Preclinical/Phase</th>
<th>Biopharmaceutical Owner</th>
<th>Collaborator</th>
<th>endpoint</th>
<th>Disease</th>
<th>Therapeutic Approach</th>
<th>Formulation</th>
<th>Indications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alzheimer's disease</td>
<td>N/A</td>
<td>Private</td>
<td>N/A</td>
<td>PO</td>
<td></td>
<td>Preclinical</td>
<td>USA</td>
<td>Bionure</td>
<td></td>
<td></td>
<td>N/A</td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>Parkinson's disease</td>
<td>Biothera</td>
<td>Private</td>
<td>N/A</td>
<td>SC</td>
<td></td>
<td>Preclinical</td>
<td>USA</td>
<td>Bionure</td>
<td></td>
<td></td>
<td>N/A</td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>Huntington's disease</td>
<td>NeuroPhage</td>
<td>Switzerland</td>
<td>N/A</td>
<td>IV</td>
<td></td>
<td>Preclinical</td>
<td>USA</td>
<td>Bionure</td>
<td></td>
<td></td>
<td>N/A</td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>Schizophrenia</td>
<td>Pharos</td>
<td>Preclinical</td>
<td>N/A</td>
<td>PO</td>
<td></td>
<td>Preclinical</td>
<td>USA</td>
<td>Bionure</td>
<td></td>
<td></td>
<td>N/A</td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>Hepatitis B</td>
<td>Bionure</td>
<td>Unknown</td>
<td>N/A</td>
<td>IV</td>
<td></td>
<td>Preclinical</td>
<td>USA</td>
<td>Bionure</td>
<td></td>
<td></td>
<td>N/A</td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>Neurodegenerative disorders</td>
<td>RAPID</td>
<td>Parenteral</td>
<td>N/A</td>
<td>SC</td>
<td></td>
<td>Preclinical</td>
<td>Switzerland</td>
<td>RAPID</td>
<td></td>
<td></td>
<td>N/A</td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>Amyotrophic lateral sclerosis</td>
<td>Lay Line</td>
<td>Biotechnology</td>
<td>Preclinical</td>
<td>IV</td>
<td></td>
<td>Preclinical</td>
<td>England</td>
<td>RAPID</td>
<td></td>
<td></td>
<td>N/A</td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>Neuropathic pain</td>
<td>RAPID</td>
<td>Public</td>
<td>N/A</td>
<td>PO</td>
<td></td>
<td>Preclinical</td>
<td>USA</td>
<td>Bionure</td>
<td></td>
<td></td>
<td>N/A</td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>Fetal alcohol syndrome</td>
<td>RAPID</td>
<td>Biotechnology</td>
<td>N/A</td>
<td>PO</td>
<td></td>
<td>Preclinical</td>
<td>USA</td>
<td>Bionure</td>
<td></td>
<td></td>
<td>N/A</td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>Amyloid beta-protein inhibitors</td>
<td>Lay Line</td>
<td>Biotechnology</td>
<td>Preclinical</td>
<td>PO</td>
<td></td>
<td>Preclinical</td>
<td>USA</td>
<td>Bionure</td>
<td></td>
<td></td>
<td>N/A</td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>Multiple sclerosis</td>
<td>Neumar</td>
<td>Unknown</td>
<td>N/A</td>
<td>IV</td>
<td></td>
<td>Preclinical</td>
<td>USA</td>
<td>Bionure</td>
<td></td>
<td></td>
<td>N/A</td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>Optic neuritis</td>
<td>Bionure</td>
<td>Unknown</td>
<td>N/A</td>
<td>PO</td>
<td></td>
<td>Preclinical</td>
<td>USA</td>
<td>Bionure</td>
<td></td>
<td></td>
<td>N/A</td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>CCR2 receptor antagonists</td>
<td>Bionure</td>
<td>Unknown</td>
<td>N/A</td>
<td>PO</td>
<td></td>
<td>Preclinical</td>
<td>USA</td>
<td>Bionure</td>
<td></td>
<td></td>
<td>N/A</td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>CCR3 receptor antagonists</td>
<td>Bionure</td>
<td>Unknown</td>
<td>N/A</td>
<td>PO</td>
<td></td>
<td>Preclinical</td>
<td>USA</td>
<td>Bionure</td>
<td></td>
<td></td>
<td>N/A</td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>Autoimmune disorders</td>
<td>Bionure</td>
<td>Unknown</td>
<td>N/A</td>
<td>PO</td>
<td></td>
<td>Preclinical</td>
<td>USA</td>
<td>Bionure</td>
<td></td>
<td></td>
<td>N/A</td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>Neurotrophic Factor (ADNF)</td>
<td>Lay Line</td>
<td>Biotechnology</td>
<td>Preclinical</td>
<td>IV</td>
<td></td>
<td>Preclinical</td>
<td>England</td>
<td>RAPID</td>
<td></td>
<td></td>
<td>N/A</td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>NMDA receptor modulators</td>
<td>RAPID</td>
<td>Parenteral</td>
<td>N/A</td>
<td>SC</td>
<td></td>
<td>Preclinical</td>
<td>Switzerland</td>
<td>RAPID</td>
<td></td>
<td></td>
<td>N/A</td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>Immunostimulants</td>
<td>RAPID</td>
<td>Parenteral</td>
<td>N/A</td>
<td>SC</td>
<td></td>
<td>Preclinical</td>
<td>Switzerland</td>
<td>RAPID</td>
<td></td>
<td></td>
<td>N/A</td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>Cytoplasmic and nuclear receptor</td>
<td>RAPID</td>
<td>Parenteral</td>
<td>N/A</td>
<td>SC</td>
<td></td>
<td>Preclinical</td>
<td>Switzerland</td>
<td>RAPID</td>
<td></td>
<td></td>
<td>N/A</td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>Metabolic syndrome</td>
<td>RAPID</td>
<td>Parenteral</td>
<td>N/A</td>
<td>SC</td>
<td></td>
<td>Preclinical</td>
<td>Switzerland</td>
<td>RAPID</td>
<td></td>
<td></td>
<td>N/A</td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>Neuron stimulants</td>
<td>RAPID</td>
<td>Parenteral</td>
<td>N/A</td>
<td>SC</td>
<td></td>
<td>Preclinical</td>
<td>Switzerland</td>
<td>RAPID</td>
<td></td>
<td></td>
<td>N/A</td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>Positron-emission tomography</td>
<td>RAPID</td>
<td>Parenteral</td>
<td>N/A</td>
<td>SC</td>
<td></td>
<td>Preclinical</td>
<td>Switzerland</td>
<td>RAPID</td>
<td></td>
<td></td>
<td>N/A</td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>Neuroprotective therapies</td>
<td>NeuroPhage</td>
<td>Switzerland</td>
<td>Preclinical</td>
<td>PO</td>
<td></td>
<td>Preclinical</td>
<td>Switzerland</td>
<td>RAPID</td>
<td></td>
<td></td>
<td>N/A</td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>Neurotrophic Factor (ADNF)</td>
<td>Lay Line</td>
<td>Biotechnology</td>
<td>Preclinical</td>
<td>SC</td>
<td></td>
<td>Preclinical</td>
<td>England</td>
<td>RAPID</td>
<td></td>
<td></td>
<td>N/A</td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>Neuron stimulants</td>
<td>Lay Line</td>
<td>Biotechnology</td>
<td>Preclinical</td>
<td>IV</td>
<td></td>
<td>Preclinical</td>
<td>England</td>
<td>RAPID</td>
<td></td>
<td></td>
<td>N/A</td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>NMDA receptor modulators</td>
<td>Lay Line</td>
<td>Biotechnology</td>
<td>Preclinical</td>
<td>IV</td>
<td></td>
<td>Preclinical</td>
<td>England</td>
<td>RAPID</td>
<td></td>
<td></td>
<td>N/A</td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>Immunostimulants</td>
<td>Lay Line</td>
<td>Biotechnology</td>
<td>Preclinical</td>
<td>IV</td>
<td></td>
<td>Preclinical</td>
<td>England</td>
<td>RAPID</td>
<td></td>
<td></td>
<td>N/A</td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>Cytoplasmic and nuclear receptor</td>
<td>Lay Line</td>
<td>Biotechnology</td>
<td>Preclinical</td>
<td>IV</td>
<td></td>
<td>Preclinical</td>
<td>England</td>
<td>RAPID</td>
<td></td>
<td></td>
<td>N/A</td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>Metabolic syndrome</td>
<td>Lay Line</td>
<td>Biotechnology</td>
<td>Preclinical</td>
<td>IV</td>
<td></td>
<td>Preclinical</td>
<td>England</td>
<td>RAPID</td>
<td></td>
<td></td>
<td>N/A</td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>Neuron stimulants</td>
<td>Lay Line</td>
<td>Biotechnology</td>
<td>Preclinical</td>
<td>IV</td>
<td></td>
<td>Preclinical</td>
<td>England</td>
<td>RAPID</td>
<td></td>
<td></td>
<td>N/A</td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>Positron-emission tomography</td>
<td>Lay Line</td>
<td>Biotechnology</td>
<td>Preclinical</td>
<td>IV</td>
<td></td>
<td>Preclinical</td>
<td>England</td>
<td>RAPID</td>
<td></td>
<td></td>
<td>N/A</td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>Neuroprotective therapies</td>
<td>Lay Line</td>
<td>Biotechnology</td>
<td>Preclinical</td>
<td>IV</td>
<td></td>
<td>Preclinical</td>
<td>England</td>
<td>RAPID</td>
<td></td>
<td></td>
<td>N/A</td>
<td></td>
<td>N/A</td>
</tr>
</tbody>
</table>

**Notes:**
- Preclinical indicates the stage of drug development.
- Route-specific details may include specific formulations or dosing methods.
- Endpoints may refer to specific illness stages or conditions.
- Therapeutic approaches and formulations are tailored to specific diseases.
- Indications can range from neurodegenerative disorders to metabolic syndromes.
Newer generation drugs targeting the role of serotonin 6 (5-HT6) receptors in learning and memory may improve deficits in cognitive impairment in neurodegenerative disorders such as Alzheimer's disease. Wyeth (Pfizer) is developing serotonin 6 (5-HT6) receptor antagonists for the oral treatment of Alzheimer's disease. SUVN 504, SUVN 507 (and its active metabolite, SUVN 623) are in preclinical development in collaboration with Signum on the research and development in amyloid related targets, alpha synuclein and tau (Abeta) and other ligands such as S100B, advanced glycation-end-products (RAGE) for the treatment of Alzheimer's disease. Development is at the preclinical stage with Signum on the research and development in amyloid related targets, alpha synuclein and tau. Roche and Wyeth are both developing small molecule inhibitors of adenosylhomocysteinase (AH) as potential therapies for Down syndrome. Rhesus primates treated with the selective AH inhibitor L-002259713 (EHT 1864) showed normal levels as a preclinical model of Down syndrome and Alzheimer's disease. The role of this sub-type of 5-HT receptors in regulation of actin organisation, gene expression and the regulation of the cell cycle is currently under investigation.

Research programme: serotonin 6 receptor antagonists - Wyeth

Research programme: Rho GTP-hydrolase inhibitors - Abide Therapeutics and the University of California, San Diego

Research programme: RAGE - ExonHit Therapeutics

Research programme: protein aggregation inhibitors - Prothena Biosciences

Research programme: GTP phosphohydrolase inhibitors - Neotope Biosciences

Research programme: Acetylcholinesterase inhibitors - Large Pharma, Pharmaceutical

Research programme: Butyrylcholinesterase inhibitors

Research programme: Acetylcholinesterase inhibitors - India

Research programme: Adenosylhomocysteinase inhibitors

Research programme: Protein phosphatase 2A modulators

Research programme: Amyloid inhibitors

Research programme: Alpha-synuclein inhibitors

Research programme: Schizophrenia - Abbott Laboratories

Research programme: Type 2 diabetes mellitus - GlaxoSmithKline/Signum Biosciences

Research programme: Cancer - University of California, San Diego

Research programme: Amyloidosis - University

Research programme: Pain - Biotechnology

Research programme: Neurological disorders - Suven Life Sciences

Research programme: Neurotransmitters acetylcholine and glutamate. A role of this sub-type of 5-HT receptors in regulation of actin organisation, gene expression and the regulation of the cell cycle is currently under investigation.

Research programme: Rho GTP-binding proteins are involved in the regulation of actin organisation, gene expression and the regulation of the cell cycle.

Research programme: Serotonin 6 receptor antagonists - Wyeth

Research programme: Selective serotonin 4 receptor agonists for the treatment of Alzheimer's disease. The role of this sub-type of 5-HT receptors in regulation of actin organisation, gene expression and the regulation of the cell cycle is currently under investigation.

Research programme: Selective nicotinic acetylcholine alpha4beta2 receptor agonists for the treatment of neuropathic pain. Preclinical development is underway in the USA.

Research programme: Elan Corporation) initiated the development of new drug candidates by means of transdermal delivery technology applied by the University of California, San Diego. These new drug candidates, SUVN F91201 and SUVN F91202, are currently in the preclinical stage of development.

Research programme: Elan Corporation) initiated the development of new drug candidates by means of transdermal delivery technology applied by the University of California, San Diego. These new drug candidates, SUVN F91201 and SUVN F91202, are currently in the preclinical stage of development.

Research programme: GlaxoSmithKline (China) Investment Co.

Research programme: Wyeth 321348 is a highly selective serotonin-6 receptor antagonist developed with optimised pharmacodynamic and pharmacokinetic properties. This compound is currently in the preclinical stage of development.
Scientists at the University of London are collaborating with Roche in the development of vaccine against influenza A virus strains, as well as collaborating with Warren in the development of cell replacements.

HanAll Biopharma is developing therapeutic agents (oral monoclonal antibodies) for the treatment of cancer, lipid disorders (atherosclerosis and hyperlipidaemia), and obesity.

Antoxis, an Aberdeen-based biotechnology company, is focusing on developing a universal vaccine against malaria, hepatitis C virus, and vaccines against influenza A virus strains. It is based on virus-like particles (VLP).

Probiodrug is engaged in a programme focussed on the identification of molecule therapeutics that are found in a variety of foods and beverages. Flavonoids are polyphenolic phytochemicals that function as antioxidants and anti-inflammatory agents and are protective agents against neurodegenerative disorders, such as Parkinson's disease, Alzheimer's disease, cardiovascular disease (AD), obesity, and atopic dermatitis. Second-generation metformin products are being developed by HanAll Biopharma.

The University College of London is collaborating with Asterand plc on the development of atherosclerosis vaccine - VLP Biotech. VLP Biotech is focusing on developing a universal vaccine against influenza A virus strains.

The University of Minnesota is developing emt protein-tyrosine kinase inhibitors for the treatment of tumor necrosis factor inhibitors.

Asterand plc is collaborating with Roche in the development of antibody- and cell-based vaccines targeting glioma, glioblastoma, multiple sclerosis, and Alzheimer's disease. It is developing therapeutic agents (oral monoclonal antibodies) for the treatment of cancer, lipid disorders (atherosclerosis and hyperlipidaemia), and obesity.

Cancer vaccine - Asterand plc

Obesity vaccine - VLP Biotech

Atherosclerosis vaccine - VLP Biotech

Allergy vaccine - VLP Biotech

Tumour necrosis factor inhibitors

Toll-like receptor 9 agonists

Toll-like receptor 8 agonists

Toll-like receptor 7 agonists

Nerve growth factor stimulants

Cell replacements

Amyloid beta-protein inhibitors

Parkinson's disease

Alzheimer's disease

Probiodrug

Warren Pharmaceuticals

HL160

HL157 (oral monoclonal antibody) - HanAll Biopharma

HL152B

HL051

HL039

HL030

HL025

Asterand plc
Pharnext/Biosystems is leading a research programme for Alzheimer's disease therapeutics. Pharnext and Inserm will collaborate on a 6-year project to develop monoclonal antibodies that target soluble aggregates of tau proteins, which are implicated in the development of Alzheimer's disease.

Axxam is to collaborate with the University of Bordeaux Segalen and Inserm on a project focused on disrupting tau oligomers or inhibiting tau-related neurodegeneration in Alzheimer's disease. Early research is led by Weill Cornell Medical College, exploring the role of the receptor P2Z (also known as P2X7) as a potential target for developing molecule compounds that block the purinergic receptor nAChR for the treatment of Alzheimer's disease.

Axxam is also collaborating with AstraZeneca and academic research laboratories, including the technology from Cornell University that acts on proteins implicated in neurodegeneration in Alzheimer's disease. The companies will first conduct the drug discovery and development and then conduct preclinical validation of the resulting technologies. The involvement of such collaborative efforts will help identify candidate molecular targets for drug development and Alzheimer's disease therapeutics.

AstraZeneca and ADispell are collaborating to develop small and large molecule therapeutics for Alzheimer's disease. ADispell is developing small molecule, amyloid beta (Abeta) oligomers that are not present in regular Abeta molecules. AstraZeneca is developing a vaccine technology that acts on proteins present in regular Abeta molecules.

Columbia (UBC) is developing immune-based therapies for the treatment of Alzheimer's disease. The collaboration will combine the technology platform and MULTI-ARRAY® diagnostic assays for Alzheimer's disease (AD) developed by Meso Scale Discovery with the proprietary TriGrid™ electroporation technology platform developed by Ichor Medical Systems.

Astellas Pharma and RIKEN are collaborating on research and drug development for Alzheimer's disease. The collaboration will combine Astellas's proprietary biologics arm technology and RIKEN's small molecule technologies.

The collaboration between Bristol-Myers Squibb and ADispell is aimed at developing small molecule, amyloid beta-protein modulators, and immunomodulators to treat Alzheimer's disease. Bristol-Myers Squibb will collaborate with ADispell to develop small molecule, amyloid beta-protein modulators, and immunomodulators for Alzheimer's disease.

Axxam in Italy and a US-based public charity, Axxam/Alzheimer's Drug Discovery Foundation, are collaborating to develop small and large molecules for the treatment of Alzheimer's disease. Axxam is to collaborate with a US-based public charity, Axxam/Alzheimer's Drug Discovery Foundation, on a project to develop small and large molecules for the treatment of Alzheimer's disease.
Research programme: catalytic antibody platform and early activation/inactivation of proteins. Ozgene has patented a catalytic antibody platform and early activation/inactivation of proteins. Ozgene is undertaking research in Australia. This research involves catalytic antibodies and their application in various diseases.

Lead compounds are undergoing optimisation in preparation for Alzheimer's disease (AD). Lead compounds are also targeted towards pain and Alzheimer's disease (AD). Lead compounds are also targeted towards Pain.

Reviva Pharmaceuticals, in the US, is developing small molecule therapeutics for the treatment of Alzheimer's disease. The company is using its ICOCEPT™ platform to investigate these compounds. The company is also developing therapeutics for the treatment of Alzheimer's disease (AD). The company are using their platform to investigate these compounds.

The company is developing small molecule therapeutics for the treatment of Alzheimer's disease (AD). The company are using their platform to investigate these compounds. The company is also developing therapeutics for the treatment of Alzheimer's disease (AD) and Pain.

The company is also developing therapeutics for the treatment of Alzheimer's disease (AD) and Pain. The company is also developing therapeutics for the treatment of Alzheimer's disease (AD) and Pain. The company is also developing therapeutics for the treatment of Alzheimer's disease (AD) and Pain.

Research programme: Alzheimer's disease therapeutics - Umecrine Cognition is developing compounds for the treatment of Alzheimer's disease. The company investigated these compounds in 2011, but the results were not promising. The company has since moved on to other research programmes.

Research programme: Alzheimer's disease therapeutics - Reviva Pharmaceuticals in the US is developing small molecule therapeutics for the treatment of Alzheimer's disease. The company's internally lead by Pharnext and will involve development of drugs which have been approved for other purposes.

Research programme: Alzheimer's disease therapeutics - Reviva Pharmaceuticals in the US is developing small molecule therapeutics for the treatment of Alzheimer's disease. The company's internally lead by Pharnext and will involve development of drugs which have been approved for other purposes. The company is also developing therapeutics for the treatment of Alzheimer's disease (AD). The company are using their platform to investigate these compounds.

The company is also developing therapeutics for the treatment of Alzheimer's disease (AD) and Pain.

Research programme: Alzheimer's disease therapeutics - Reviva Pharmaceuticals in the US is developing small molecule therapeutics for the treatment of Alzheimer's disease. The company's internally lead by Pharnext and will involve development of drugs which have been approved for other purposes. The company is also developing therapeutics for the treatment of Alzheimer's disease (AD) and Pain.

The company is also developing therapeutics for the treatment of Alzheimer's disease (AD) and Pain.

Research programme: Alzheimer's disease therapeutics - Reviva Pharmaceuticals in the US is developing small molecule therapeutics for the treatment of Alzheimer's disease. The company's internally lead by Pharnext and will involve development of drugs which have been approved for other purposes. The company is also developing therapeutics for the treatment of Alzheimer's disease (AD) and Pain.

The company is also developing therapeutics for the treatment of Alzheimer's disease (AD) and Pain. The company is also developing therapeutics for the treatment of Alzheimer's disease (AD) and Pain. The company is also developing therapeutics for the treatment of Alzheimer's disease (AD) and Pain.

Research programme: Alzheimer's disease therapeutics - Reviva Pharmaceuticals in the US is developing small molecule therapeutics for the treatment of Alzheimer's disease. The company's internally lead by Pharnext and will involve development of drugs which have been approved for other purposes. The company is also developing therapeutics for the treatment of Alzheimer's disease (AD) and Pain.

The company is also developing therapeutics for the treatment of Alzheimer's disease (AD) and Pain. The company is also developing therapeutics for the treatment of Alzheimer's disease (AD) and Pain. The company is also developing therapeutics for the treatment of Alzheimer's disease (AD) and Pain.
<table>
<thead>
<tr>
<th><strong>Company</strong></th>
<th><strong>Originator</strong></th>
<th><strong>Developer</strong></th>
<th><strong>Route</strong></th>
<th><strong>Pharmaceutical</strong></th>
<th><strong>Type</strong></th>
<th><strong>Target</strong></th>
<th><strong>Disease</strong></th>
<th><strong>Stage</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mnemosyne Pharmaceuticals</td>
<td>Public</td>
<td>Private</td>
<td>Unknown route</td>
<td>USA</td>
<td>Biotechnology</td>
<td>Protein misfolding reagents</td>
<td>Protein aggregation modulators</td>
<td>Alzheimer’s disease</td>
</tr>
<tr>
<td>Genentech</td>
<td>World</td>
<td>Biotechnology</td>
<td>Parenteral</td>
<td>USA</td>
<td>Biotechnology</td>
<td>Hexosaminidase-C inhibitors</td>
<td>Protein conformation modulators</td>
<td>Alzheimer’s disease</td>
</tr>
<tr>
<td>Prothena Corporation</td>
<td>Biotechnology</td>
<td>Biopharmaceutical</td>
<td>Parenteral</td>
<td>USA</td>
<td>Large Pharma, Biotechnology</td>
<td>G protein-coupled receptor antagonists</td>
<td>Alzheimer’s disease</td>
<td>Reata Pharmaceuticals</td>
</tr>
<tr>
<td>Neurimmune Therapeutics</td>
<td>Biotechnology</td>
<td>Biopharmaceutical</td>
<td>Parenteral</td>
<td>USA</td>
<td>Biotechnology</td>
<td>Nitric oxide modulators</td>
<td>Protein aggregation modulators</td>
<td>HD, PD</td>
</tr>
<tr>
<td>University of Dundee</td>
<td>Biotechnology</td>
<td>Biopharmaceutical</td>
<td>Parenteral</td>
<td>Switzerland, USA</td>
<td>Biotechnology</td>
<td>Hexosaminidase C inhibitors</td>
<td>Protein aggregation modulators</td>
<td>Alzheimer’s disease</td>
</tr>
<tr>
<td>Aurogen</td>
<td>Biotechnology</td>
<td>Biopharmaceutical</td>
<td>Parenteral</td>
<td>USA</td>
<td>Biotechnology</td>
<td>GPR3 inhibitors programme</td>
<td>Protein aggregation modulators</td>
<td>Neurodegenerative diseases</td>
</tr>
<tr>
<td>University</td>
<td>Biotechnology</td>
<td>Biopharmaceutical</td>
<td>Parenteral</td>
<td>USA</td>
<td>Biotechnology</td>
<td>Hexosaminidase C inhibitors</td>
<td>Protein aggregation modulators</td>
<td>Alzheimer’s disease</td>
</tr>
</tbody>
</table>

*HD: Huntington’s disease, PD: Parkinson’s disease, AD: Alzheimer’s disease, ALS: Amyotrophic lateral sclerosis, MS: Multiple sclerosis*
<table>
<thead>
<tr>
<th>Indication</th>
<th>Research Programme</th>
<th>Originator/Owner/Licensee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schizophrenia</td>
<td>Mnemosyne Pharmaceuticals</td>
<td>USA Biotechnology Private</td>
</tr>
<tr>
<td>Brain injuries</td>
<td>Mnemosyne Pharmaceuticals</td>
<td>USA Biotechnology Private</td>
</tr>
<tr>
<td>Stroke</td>
<td></td>
<td>USA Biotechnology Private</td>
</tr>
<tr>
<td>Alzheimer's disease</td>
<td>Daewoong Pharmaceutical</td>
<td>South Korea Pharmaceutical Public</td>
</tr>
<tr>
<td>Gastric ulcer</td>
<td>Daewoong Pharmaceutical</td>
<td>South Korea Pharmaceutical Public</td>
</tr>
<tr>
<td>Thrombosis</td>
<td>Daewoong Pharmaceutical</td>
<td>South Korea Pharmaceutical Public</td>
</tr>
<tr>
<td>Alzheimer's disease</td>
<td>Bristol-Myers Squib and the Gladstone Institutes</td>
<td>USA Large Pharma, Biopharmaceutical Public</td>
</tr>
<tr>
<td>Neurodegenerative disorders</td>
<td>BIOALVO</td>
<td>Portugal Biopharmaceutical Private</td>
</tr>
<tr>
<td>Parkinson's disease</td>
<td>TAU Programme</td>
<td>France University</td>
</tr>
<tr>
<td>Psoriasis</td>
<td></td>
<td>USA Pharmaceutical Private</td>
</tr>
<tr>
<td>Alzheimer's disease</td>
<td>Virobay</td>
<td>Portugal Pharmaceutical Private</td>
</tr>
<tr>
<td>Amyloid beta-protein inhibitors</td>
<td>sanofi-aventis</td>
<td>World Large Pharma, Pharmaceutical Public</td>
</tr>
<tr>
<td>Tau protein modulators</td>
<td>BIOALVO</td>
<td>Portugal Biopharmaceutical Private</td>
</tr>
<tr>
<td>Tau dysfunction regulators</td>
<td>Bristol-Myers Squib and the Gladstone Institutes</td>
<td>USA Large Pharma, Biopharmaceutical Public</td>
</tr>
<tr>
<td>Alzheimer's disease</td>
<td>Mnemosyne Pharmaceuticals</td>
<td>USA Biotechnology Private</td>
</tr>
</tbody>
</table>

**Virobay**: VBY 129 is a selective, orally active, small-molecule cathepsin S inhibitor developed for the treatment of Alzheimer's disease. It was in-licensed from an undisclosed company and appears suitable for once-daily dosing. Development is at the early research stage in the US.

**Sanofi-aventis**: A monoclonal antibody targeting amyloid beta (Abeta) parenchymal plaque is being developed for Alzheimer's disease. This antibody was licensed from the Rockefeller University and is being studied preclinically in France.

**BIOALVO**: BIOALVO focuses on tauopathies for neurodegenerative diseases like Alzheimer's disease and Frontotemporal Dementia (FTD) with Parkinsonism. Tau protein interacts with tubulin to stabilize microtubules and promotes tubulin assembly into microtubules. Tau aggregation into neurofibrillary tangles is a major feature in neurodegenerative diseases.

**Bristol-Myers Squib and the Gladstone Institutes**: Collaborating in a discovery-based research program to identify and validate targets affecting Tau dysfunction for Alzheimer's disease. Tau is a protein that binds the internal skeleton of the cell and helps regulate brain cell activity. Abnormal deposits of tau (neurofibrillary tangles) are a hallmark of Alzheimer's disease.

**Daewoong Pharmaceutical**: Developing sustained-release incrementally modified drugs (IMDs) for thrombosis (IMD2), Alzheimer's disease (IMD3), and gastric ulcers (IMD4). These drugs are in research stage in South Korea.

**Research programme: anti-beta-amyloid antibodies - sanofi-aventis/Rockefeller University**: Sanofi-aventis is developing a monoclonal antibody targeting specific forms of the amyloid beta (Abeta) parenchymal plaque for Alzheimer's disease. This antibody was licensed from the Rockefeller University for study. Preclinical research is ongoing in France.

**Research programme: Tau dysfunction regulators - Bristol-Myers Squib/Gladstone Institutes**: Collaborating to identify and validate targets that affect Tau dysfunction for Alzheimer's disease. Tau protein is involved in the internal skeleton of the cell and helps regulate brain cell activity. Abnormal tau deposits (neurofibrillary tangles) are a feature of Alzheimer's disease.