

Dopamine Receptor Agonists

Track Code: 65304

Categories:

- Pharmaceuticals

Keywords:

- Compounds
- Dopamine
- Drug Development
- Medical/Health
- Parkinson's Disease
- Pharmaceuticals

Dopamine is a neurotransmitter that is important in locomotor control, reward circuitry, cognitive function, prolactin release, and a variety of other key physiological functions. Dopaminergic dysfunctions have been implicated in many disorders including Parkinson's disease, schizophrenia, addiction, and ADHD. Dopamine receptor agonists are of interest in terms of finding successful therapies for these disorders. However, current D1 and D2 receptor agonists can have adverse side effects depending on the level and timing of use.

Researchers at Purdue University have developed a class of novel D1 dopamine agonists, or stimulants, which may be useful in treating the symptoms of Parkinson's disease and other working memory and cognitive deficits. This series of compounds has potent and selective activity at dopamine D1 receptors, making them useful therapeutic agents in hypodopaminergic conditions. Recent studies have also shown that dopamine D1 agonists are able to reverse drug-induced and age-related deficits in working memory.

Advantages:

- Novel class of dopamine agonists
- Potent and selective activity
- Clinical precedent

Potential Applications:

- Pharmaceutical industry

People:

- Nichols, David E (Project leader)
- Watts, Val Joseph

Intellectual Property:

Application Date: October 20, 2011
Type: Utility Patent
Country of Filing: United States
Patent Number: 9,359,303
Issue Date: June 7, 2016

Application Date: April 21, 2010
Type: NATL-Patent
Country of Filing: Japan
Patent Number: 5734957
Issue Date: April 24, 2015

Application Date: April 21, 2010
Type: NATL-Patent
Country of Filing: European Patent
Patent Number: 2421862
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Country of Filing: United Kingdom
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Type: NATL-Patent
Country of Filing: Switzerland
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Type: NATL-Patent
Country of Filing: Ireland
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Country of Filing: Germany
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