US009352025B2

(12) **United States Patent**
Cincotta

(10) **Patent No.: US 9,352,025 B2**
(45) **Date of Patent: *May 31, 2016**

(54) **COMBINATION OF DOPAMINE AGONISTS PLUS FIRST PHASE INSULIN SECRETAGOGUES FOR THE TREATMENT OF METABOLIC DISORDERS**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

(21) Appl. No.: **14/506,353**

(22) Filed: **Oct. 3, 2014**

(65) **Prior Publication Data**

US 2015/0024995 A1 Jan. 22, 2015

Related U.S. Application Data

(63) Continuation of application No. 13/375,810, filed as application No. PCT/US2010/037605 on Jun. 7, 2010, now Pat. No. 8,877,708.

(60) Provisional application No. 61/217,906, filed on Jun. 5, 2009.

(51) **Int. Cl.**

A61K 38/26	(2006.01)
A61K 38/28	(2006.01)
A61K 31/4985	(2006.01)
A61K 31/166	(2006.01)
A61K 31/198	(2006.01)
A61K 31/4453	(2006.01)
A61K 31/48	(2006.01)

(52) **U.S. Cl.**

CPC ***A61K 38/28*** (2013.01); ***A61K 31/166*** (2013.01); ***A61K 31/198*** (2013.01); ***A61K 31/4453*** (2013.01); ***A61K 31/48*** (2013.01); ***A61K 31/4985*** (2013.01); ***A61K 38/26*** (2013.01)

(58) **Field of Classification Search**

CPC A61K 38/26; A61K 31/166

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,009,265	A	2/1977	Howard
4,338,304	A	7/1982	Kamimae et al.
4,446,138	A	5/1984	Pack
4,659,715	A	4/1987	Meier et al.
4,749,709	A	6/1988	Meier et al.
4,783,369	A	11/1988	Sugata et al.
4,783,469	A	11/1988	Meier et al.
4,791,125	A	12/1988	Clark
4,971,969	A	11/1990	Carlier et al.
5,006,526	A	4/1991	Meier et al.
5,066,495	A	11/1991	Moro et al.
5,344,832	A	9/1994	Cincotta et al.
5,468,755	A	11/1995	Cincotta et al.
5,496,803	A	3/1996	Meier et al.
5,554,623	A	9/1996	Cincotta et al.
5,565,454	A	10/1996	Cincotta
5,585,347	A	12/1996	Meier et al.
5,614,492	A	3/1997	Habener
5,626,860	A	5/1997	Cincotta et al.
5,635,512	A	6/1997	Cincotta et al.
5,654,313	A	8/1997	Cincotta et al.
5,668,155	A	9/1997	Cincotta et al.
5,679,685	A	10/1997	Cincotta et al.
5,688,794	A	11/1997	Meier et al.
5,696,128	A	12/1997	Cincotta et al.
5,700,795	A	12/1997	Cincotta et al.
5,700,800	A	12/1997	Cincotta et al.
5,712,265	A	1/1998	Cincotta et al.
5,714,519	A	2/1998	Cincotta et al.
5,716,957	A	2/1998	Cincotta et al.
5,716,962	A	2/1998	Cincotta et al.
5,719,160	A	2/1998	Cincotta et al.
5,731,312	A	3/1998	Cincotta et al.
5,741,503	A	4/1998	Cincotta et al.
5,744,477	A	4/1998	Cincotta et al.
5,750,519	A	5/1998	Cincotta et al.
5,756,513	A	5/1998	Cincotta et al.
5,760,047	A	6/1998	Cincotta et al.
5,792,748	A	8/1998	Cincotta et al.
5,830,895	A	11/1998	Cincotta et al.
5,854,255	A	12/1998	Cincotta et al.
5,866,584	A	2/1999	Cincotta et al.
5,872,127	A	2/1999	Cincotta et al.
5,872,133	A	2/1999	Cincotta et al.
5,877,183	A	3/1999	Cincotta
5,902,811	A	5/1999	Cincotta
5,905,083	A	5/1999	Cincotta et al.
6,004,972	A	12/1999	Cincotta et al.
6,011,049	A	1/2000	Whitcomb
6,040,292	A	3/2000	Sommer
6,071,914	A	6/2000	Cincotta et al.
6,075,020	A	6/2000	Cincotta et al.
6,166,017	A	12/2000	Marin

(Continued)

FOREIGN PATENT DOCUMENTS

CN	1678313	10/2005
CN	1950078	4/2007

(Continued)

OTHER PUBLICATIONS

Kok et al., Am J. Phys. 291: E1038-E1043, 2006.*

(Continued)

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(57) **ABSTRACT**

The present invention is directed to a method of treating a metabolic disorder or key elements of a metabolic disorder such method comprising the use of an agent(s) that increases central dopaminergic activity plus a first-phase insulin secretagouge.

19 Claims, No Drawings