

The
United
States
of
America



**The Director of the United States
Patent and Trademark Office**

Has received an application for a patent for a new and useful invention. The title and description of the invention are enclosed. The requirements of law have been complied with, and it has been determined that a patent on the invention shall be granted under the law.

Therefore, this

United States Patent

Grants to the person(s) having title to this patent the right to exclude others from making, using, offering for sale, or selling the invention throughout the United States of America or importing the invention into the United States of America for the term set forth below, subject to the payment of maintenance fees as provided by law.

If this application was filed prior to June 8, 1995, the term of this patent is the longer of seventeen years from the date of grant of this patent or twenty years from the earliest effective U.S. filing date of the application, subject to any statutory extension.

If this application was filed on or after June 8, 1995, the term of this patent is twenty years from the U.S. filing date, subject to any statutory extension. If the application contains a specific reference to an earlier filed application or applications under 35 U.S.C. 120, 121 or 365(c), the term of the patent is twenty years from the date on which the earliest application was filed, subject to any statutory extensions.

Nicholas P. Lodici

Acting Director of the United States Patent and Trademark Office

Quinn M. Pason



US006028068A

United States Patent [19]

Chupakhin et al.

[11] Patent Number: 6,028,068

[45] Date of Patent: Feb. 22, 2000

[54] SUBSTITUTED 6H-1,3,4-THIADIAZINE-2-AMINES, THE USE THEREOF AS ANAESTHETISING, CARDIOVASCULAR AND HYPOMETABOLIC AGENTS, AND A PHARMACEUTICAL COMPOSITION CONTAINING THEM

6253976	9/1994	Japan
94007001	12/1995	Russian Federation
1726478	4/1992	U.S.S.R.
1827257	7/1993	U.S.S.R.
2215206	9/1989	United Kingdom
9322311	11/1993	WIPO

[75] Inventors: Oleg Nikolaevich Chupakhin; Larisa Petrovna Sidorova; Emma Afanasievna Tarakhry; Antonina Petrovna Novikova; Natalya Mikhailovna Perova, all of Ekaterinburg; Valentin Antonovich Vinogradov, Moscow, all of Russian Federation

[75] Assignees: The Procter & Gamble Company, Cincinnati, Ohio; Nauchno-Tekhnologicheskoe Predpriyatie "Ligand" (Tovarischestvo S Ogranichennoi Otvetstvennostju), Ekaterinburg, Russian Federation

[21] Appl. No.: 09/101,079

[22] PCT Filed: Dec. 28, 1995

[86] PCT No.: PCT/RU95/00286

§ 371 Date: Jan. 21, 1999

§ 102(e) Date: Jan. 21, 1999

[87] PCT Pub. No.: WO97/24353

PCT Pub. Date: Jul. 10, 1997

[51] Int. Cl.⁷ C07D 285/16; A61K 31/54

[52] U.S. Cl. 514/222.5; 514/212; 544/8; 540/598

[58] Field of Search 544/8; 514/222.5; 514/212; 540/598

[56] References Cited

U.S. PATENT DOCUMENTS

4,272,532	6/1981	Jones et al.	424/246
4,309,426	1/1982	Jones, Jr. et al.	424/246
4,553,045	12/1985	Hargreaves et al.	514/222
4,940,790	7/1990	Thorwart et al.	544/8
5,021,415	6/1991	Terada et al.	514/227.5
5,411,955	5/1995	Strasser et al.	514/214

FOREIGN PATENT DOCUMENTS

384990	12/1980	Belgium
384991	12/1980	Belgium
2493844	5/1982	France
220311	3/1985	German Dem. Rep.
228248	10/1985	German Dem. Rep.
3031703	3/1981	Germany
3642295	6/1982	Germany
49-33889	8/1974	Japan

OTHER PUBLICATIONS

Committee of the Russian Federation on Patents and Trade Marks Translation of RU 94007001 dated Dec. 20, 1995. Osipova, N. A. "Evaluation of the Effect of Narcotic, Analgetic and Psychotropic Agents in Clinical Anesthesiology." The Meditsina Publishers, Leningrad (1988) Chapter 2, pp. 14-16 (English Translation of "Otsenka Effekta Narkoticheskikh, Analgeticheskikh i psikhotropnykh sredstv v klinicheskoi Anesteziologii." 1988. Meditsina, Leningrad, pp. 18-19).

Textbook of Anesthesiology. The Meditsina Publishers (1994) pp. 10-13 (English Translation of "Rukovodstvo po anesteziologii" pod redaktsiei Bunyatina A.A. (1994) Meditsina (Moscow) pp. 80-81).

"Side Effects of Drugs" Meditsina Publishers, Moscow (1983) pp. 1-6 (English Translation of "Pobochnye Deistviya Lekarstvennykh Sredstv" pod redaktsiei Djuska M.N.G. (1983) Meditsina, Moscow pp. 89-93).

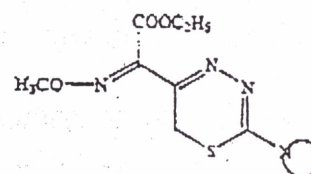
The State Patent Office of the USSR (Gospatent of the USSR) English Translation of the Specification of SU 1827257 dated Jul. 15, 1993.

(List continued on next page.)

Primary Examiner—John M. Ford
Attorney, Agent, or Firm—Ladas & Parry

[57] ABSTRACT

Substituted 6H-1,3,4-thiadiazin-2-amines of the following general formula:



wherein



represents a morpholino, thiomorpholino, piperidino, pyrrolidino, or hexamethylenimino moiety, and pharmaceutically acceptable salts thereof which are used as anesthetics, cardiovascular and hypometabolic agents, and the pharmaceutical compositions containing them.

8 Claims, No Drawings