



THE UNIVERSITY of TEXAS

HEALTH SCIENCE CENTER AT HOUSTON

Office of Technology Management

LACTAM AND THIOLACTAM DERIVATIVES AS ANESTHETIC AND CONSCIOUS SEDATION AGENTS

Market: The American Society of Anesthesiologists estimates that 40 million anesthetics are administered each year in the United States. With an increasing population, it is anticipated that anesthesia drug sales will rise to well over \$4 billion worldwide by 2011.

Competitors and Current Problems: Currently, there are numerous compounds used to provide anesthesia and conscious sedation. These traditional compounds, such as benzodiazepines and opioids, present a variety of problems, including low to onset anesthesia, difficult administration, adverse side effects, patient tolerance, and even addiction.

The Technology: Researchers at The University of Texas Health Science Center at Houston (UTHSC-H) have developed and have available to license new water-soluble compounds for general anesthesia and conscious sedation. Initial studies reveal that these compounds exhibit anesthetic and conscious sedation properties that are safe, easily administered, contain no adverse side-effects, and result in a rapid patient recovery. Furthermore, this technology has an almost instantaneous anesthetic onset with a duration that is dependent on the dose provided to the patient. This patented technology has also been used for treatment or prevention of convulsant seizures and anxiety by using water soluble lactam and thiolactam derivatives, showing relatively low toxicity and low sedative activity. The major pharmacological mechanism of action of these agents is the ability to enhance the action of γ -aminobutyric acid (GABA), the major inhibitory neurotransmitter in the mammalian central nervous system. This technology can also be used to improve both situational anxiety and certain disease-associated anxiety conditions. Furthermore, because this compound can act as an anxiolytic agent, it may also be used for the treatment of insomnia.

NON-CONFIDENTIAL TECHNOLOGY DESCRIPTION

The preceding is intended to be a non-confidential summary of a novel technology available to license from the University of Texas Health Science Center at Houston (UTHSCH), for which the University has obtained patent protection.

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Inventors: Ferrendelli et.al.

Patent Status: Issued U.S. Patents 6,680,331; 6,066,666; 5,776,959

License Available: world-wide; exclusive or non-exclusive

To obtain further information about this technology, please contact:
Office of Technology Management, 7000 Fannin, Suite 720, Houston, TX, 77030
Phone: (713) 500-3369 Fax: (713) 500-0331
Email: uthsch-otm@uth.tmc.edu