

Title (en)

FOREHEAD COOLING METHOD AND DEVICE TO STIMULATE THE PARASYMPATHETIC NERVOUS SYSTEM FOR THE TREATMENT OF INSOMNIA

Title (de)

STIRNKÜHLUNGSVERFAHREN UND VORRICHTUNG ZUR STIMULIERUNG DES PARASYMPATHISCHEN NERVENSYSTEMS ZUR BEHANDLUNG VON SCHLAFFLOSIGKEIT

Title (fr)

PROCÉDÉ DE REFROIDISSEMENT DU FRONT ET DISPOSITIF DESTINÉ À STIMULER LE SYSTÈME NERVEUX PARASYMPATHIQUE POUR LE TRAITEMENT DE L'INSOMNIE

Publication

EP 3457923 A1 20190327 (EN)

Application

EP 17800040 A 20170516

Priority

- US 201662337279 P 20160516
- US 2017032964 W 20170516

Abstract (en)

[origin: WO2017201088A1] Preclinical and clinical studies have shown that the autonomic nervous system (parasympathetic and sympathetic nervous systems) show reliable changes across the sleep wake cycle. Most importantly, the parasympathetic nervous system shows increased activity during sleep consistent with its role in regulating rest. Further, patients with insomnia show reduced parasympathetic activity and/or increased sympathetic activity during sleep consistent with a neurobiological model of "hyperarousal". Described herein are methods and apparatuses that activate the parasympathetic nervous system in response to a diving reflex; a sustained diving reflex may, surprisingly, lead to enhancing sleep. The apparatuses and methods described herein may specifically and/or selectively activate this reflex may play a therapeutic role in the modulation of sleep in insomnia patients.

IPC 8 full level

A61B 5/01 (2006.01); **A61B 5/0205** (2006.01); **A61F 7/00** (2006.01); **A61F 7/02** (2006.01); **A61F 7/10** (2006.01); **A61M 21/00** (2006.01);
A61M 21/02 (2006.01)

CPC (source: EP)

A61B 5/0205 (2013.01); **A61B 5/4836** (2013.01); **A61F 7/00** (2013.01); **A61F 7/007** (2013.01); **A61F 7/0085** (2013.01); **A61F 7/02** (2013.01);
A61M 21/02 (2013.01); **A61F 2007/0007** (2013.01); **A61F 2007/0054** (2013.01); **A61F 2007/0056** (2013.01); **A61F 2007/0075** (2013.01);
A61F 2007/0226 (2013.01); **A61F 2007/0228** (2013.01); **A61M 2021/0066** (2013.01); **A61M 2230/04** (2013.01); **A61M 2230/10** (2013.01);
A61M 2230/42 (2013.01); **A61M 2230/63** (2013.01)

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

WO 2017201088 A1 20171123; AU 2017268269 A1 20181108; CA 3024491 A1 20171123; EP 3457923 A1 20190327; EP 3457923 A4 20200101;
JP 2019523660 A 20190829

DOCDB simple family (application)

US 2017032964 W 20170516; AU 2017268269 A 20170516; CA 3024491 A 20170516; EP 17800040 A 20170516; JP 2018560127 A 20170516