Cannabinoid Receptor 1 (CB1) Inverse Agonists for the Treatment of Diabetes, Obesity and Their Complications

Description of Technology: Cannabinoid (CB1 and CB2) receptors recognize and mediate the effects of the active compound tetrahydrocannabinol found in marijuana. CB1 receptor activation plays a key role in appetitive behavior and metabolism.

Dr. Kunos and colleagues have designed a set of CB1 receptor inverse agonists that are effective at reducing obesity and its associated metabolic consequences while not causing the adverse neuropsychotropic side effects linked to earlier antagonists such as rimonabant. The CB1 receptor compounds were developed with the goals of (1) limiting their brain penetrance without losing their metabolic efficacy due to CB1 inverse agonism, and (2) generating compounds whose primary metabolite directly targets enzymes involved in inflammatory and fibrotic processes associated with metabolic disorders. The patent application of this technology are to the composition of matter and methods of use to the cannabinoid receptor (CB1) blocking compounds for the treatment of obesity, diabetes, fatty liver disease and a variety of obesity-related metabolic syndromes. The technology has the potential to be the next generation of safer CB1 receptor therapeutics for treating obesity.

Potential Commercial Applications:

- Treatment for obesity
- Treatment for metabolic syndrome
- Treatment of diabetes
- Treatment of fibrosis
- Treatment of Fatty Liver Disease such as Nonalcoholic steatohepatitis (NASH)

Competitive Advantages:

- Inhibits metabolic activity without causing psychiatric side effects
- Offers improved anti-inflammatory and anti-fibrotic efficacy

Development Stage:

- In vitro data available
- In vivo data available (animal)

Inventors: George Kunos (NIAAA), Malliga Iyer (NIAAA), Resat Cinar (NIAAA), Kenner Rice (NIDA)

Intellectual Property:

- HHS Reference No. E–282–2012/0–US–01—US Provisional Patent Application No. 61/725,949 filed November 13, 2012
- HHS Reference No. E–282–2012/0–PCT–02—PCT Application No. PCT/US2013/069686 filed November 12, 2013
- HHS Reference No. E–282–2012/0–US–03—US Patent Application No. 14/442,383 filed May 12, 2015
- HHS Reference No. E–282–2012/0–CA–04—Canadian Patent Application No. 2889697 filed April 27, 2015
- HHS Reference No. E–282–2012/0–EP–05—European Patent Application No. 13802153.0 filed June 01, 2015
- HHS Reference No. E–282–2012/0–IN–06—Indian Patent Application No. 3733/DELNP/2015 filed May 01, 2015
- HHS Reference No. E–282–2012/0–JP–07—Japanese Patent Application No. 2015–542015 filed May 11, 2015
- HHS Reference No. E–282–2012/0–CN–08—Chinese Patent Application No. 201380069389.9 filed July 3, 2015
- HHS Reference No. E–282–2012/1–US–01—US Provisional Application No. 62/171, 179 filed June 04, 2015

Licensing Contact: Jasmine Yang, Ph.D.; 301–451–7836; *jasmine.yang@nih.gov.*

Collaborative Research Opportunity: The National Institute on Alcohol Abuse and Alcoholism, Laboratory of Physiologic Studies, is seeking statements of capability or interest from parties interested in collaborative research to further develop, evaluate or commercialize peripherally restricted CB1 receptor blockers with improved efficacy. For collaboration opportunities, please contact George Kunos, M.D., Ph.D. at *George.Kunos@nih.gov* or 301–443–2069.

Dated: September 29, 2015.

Richard U. Rodriguez,

Acting Director, Office of Technology Transfer, National Institutes of Health.

[FR Doc. 2015–25197 Filed 10–2–15; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

National Heart, Lung, and Blood Institute; Notice of Meeting

Pursuant to section 10(a) of the Federal Advisory Committee Act, as amended (5 U.S.C. App.), notice is hereby given of a meeting of the Sleep Disorders Research Advisory Board.

The meeting will be open to the public and conducted electronically. The public is encouraged to observe the meeting, and should request instructions from the Contact Person listed below in advance.

Name of Committee: Sleep Disorders Research Advisory Board.

Date: October 9, 2015.

Time: 1:00 p.m. to 3:00 p.m.

Agenda: To discuss plans for the proposed revision of the NIH Sleep Disorders Research Plan, and potential directions for inter-agency coordination activities.

Place: National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892 (Virtual Meeting).

Contact Person: Michael J. Twery, Ph.D., Director, National Center on Sleep Disorders Research, Division of Lung Diseases, National Heart, Lung, and Blood Institute, National Institutes of Health, 6701 Rockledge Drive, Suite 10038, Bethesda, MD 20892–7952, 301–435–0199 *twerym@nhlbi.nih.gov.*

This notice is being published less than 15 days prior to the meeting due to internal discussions regarding agenda and scheduling details.

Information is also available on the Institute's/Center's home page: *http://www.nhlbi.nih.gov/about/committees*, where an agenda and any additional information for the meeting will be posted when available.

(Catalogue of Federal Domestic Assistance Program Nos. 93.233, National Center for Sleep Disorders Research; 93.837, Heart and Vascular Diseases Research; 93.838, Lung Diseases Research; 93.839, Blood Diseases and Resources Research, National Institutes of Health, HHS)

Dated: September 30, 2015.

Michelle Trout,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2015–25266 Filed 10–2–15; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center for Scientific Review; Notice of Closed Meetings

Pursuant to section 10(d) of the Federal Advisory Committee Act, as amended (5 U.S.C. App.), notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Center for Scientific Review Special Emphasis Panel; Member Conflict: Cognition and Memory.

Date: October 30, 2015.

Time: 2:00 p.m. to 4:00 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892 (Virtual Meeting).

Contact Person: Wind Cowles, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of