

**DEPARTMENT OF HEALTH AND HUMAN SERVICES****National Institutes of Health****Government Owned Inventions Available for Licensing or Collaboration: Single Source-Detector Separation Approach To Calculate Tissue Oxygen Saturation**

**AGENCY:** National Institutes of Health, HHS.

**ACTION:** Notice.

**SUMMARY:** The National Institute of Child Health and Human Development (NICHD), an institute of the National Institutes of Health (NIH), Department of Health and Human Services (HHS), is giving notice of the licensing or collaboration opportunities for the inventions listed below, which are owned by an agency of the U.S. Government and are available for licensing and collaboration to achieve expeditious commercialization of results of federally-funded research and development.

**FOR FURTHER INFORMATION CONTACT:** Inquiries related to these licensing or collaboration opportunities should be directed to: Zarpheen Jinnah, Ph.D., Technology Transfer Manager, NCI, Technology Transfer Center, email: [zarpheen.jinnah@nih.gov](mailto:zarpheen.jinnah@nih.gov) or phone: 240-620-0586.

**SUPPLEMENTARY INFORMATION:** Tissue oxygen saturation (StO<sub>2</sub>) is an important parameter to assess oxygen delivery and uptake. Hypoxia, a term used to indicate inadequate StO<sub>2</sub>, is often seen in patients with cardiac problems, respiratory infections or pulmonary diseases. Prolonged hypoxia can damage vital organs such as the brain, lungs, and heart and can be fatal. Currently available tissue oximeters to monitor StO<sub>2</sub> are expensive and cumbersome. NICHD has developed a novel method, which uses a single source-detector separation to calculate StO<sub>2</sub>. With this technique, a simple tissue oximeter can be made with just a LED and a photodetector, which enables the development of a miniaturized device. As a result, it can be used independently or implemented on existing technologies to measure StO<sub>2</sub> without any hardware modifications. It can be applied in wearable devices, implantable medicines or endoscopies to measure tissue oxygenation in different tissues such as muscle, brain, spinal cord, internal organs, fetus and placenta.

This Notice is in accordance with 35 U.S.C. 209 and 37 CFR part 404.

*NIH Reference Number:* E-037-2023-0.

*Product Type:* Device.

*Therapeutic Area(s):* Respiratory, Neurology or Cardiac.

*Potential Commercial Applications:*

- Miniaturized tissue oximeter for implantation or endoscopy.

- Measure tissue oxygen saturation.

- Multilayer tissue oximeter.

*Competitive Advantages:*

- Simpler and more compact as it only requires a single light source such as LED and a single photodetector such as a photodetector to build a tissue oximeter.

- Multilayer measurement.
- Implementation with existing technologies without any hardware modifications.

*Publication:* Nguyen, T., et al. Application of the Single Source—Detector Separation Algorithm in Wearable Neuroimaging Devices: A Step toward Miniaturized Biosensor for Hypoxia Detection. (PMID 38671806).

*Patent Status:* PCT Application PCT/US2023/085725 filed on December 22, 2023.

*Development Stage:* Clinical Phase I.

Dated: May 5, 2025.

**Richard U. Rodriguez,**

*Associate Director, Technology Transfer Center, National Cancer Institute.*

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**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 1009 of the Federal Advisory Committee Act, as amended, 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; Program Project: National Center for Biomedical Imaging and Bioengineering.

*Date:* June 2-4, 2025.

*Time:* 10:00 a.m. to 5:00 p.m.

*Agenda:* To review and evaluate grant applications.

*Address:* National Institutes of Health, Rockledge II, 6701 Rockledge Drive, Bethesda, MD 20892.

*Meeting Format:* Virtual Meeting.

*Contact Person:* Mark Caprara, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 5156, MSC 7844, Bethesda, MD 20892, 301-613-5228, [capraramg@mail.nih.gov](mailto:capraramg@mail.nih.gov).

*Name of Committee:* Social and Community Influences on Health Integrated Review Group; Psychosocial Development, Risk and Prevention Study Section.

*Date:* June 5-6, 2025.

*Time:* 9:00 a.m. to 6:00 p.m.

*Agenda:* To review and evaluate grant applications.

*Address:* National Institutes of Health, Rockledge II, 6701 Rockledge Drive, Bethesda, MD 20892.

*Meeting Format:* Virtual Meeting.

*Contact Person:* Anna L. Riley, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 3114, MSC 7759, Bethesda, MD 20892, 301-435-2889, [rileyann@csr.nih.gov](mailto:rileyann@csr.nih.gov).

*Name of Committee:* Center for Scientific Review Special Emphasis Panel; Centers on the Demography and Economics of Aging, including Alzheimer's Disease and Alzheimer's Disease-Related Dementias.

*Date:* June 5-6, 2025.

*Time:* 9:00 a.m. to 6:00 p.m.

*Agenda:* To review and evaluate grant applications.

*Address:* National Institutes of Health, Rockledge II, 6701 Rockledge Drive, Bethesda, MD 20892.

*Meeting Format:* Virtual Meeting.

*Contact Person:* Janetta Lun, Ph.D., Scientific Review Officer, SRB, National Institute on Aging, National Institutes of Health, 5601 Fishers Lane, Suite 8B, Bethesda, MD 20892, (301) 827-4588, [janetta.lun@nih.gov](mailto:janetta.lun@nih.gov).

*Name of Committee:* Biobehavioral and Behavioral Processes Integrated Review Group; Child Psychopathology and Developmental Disabilities Study Section.

*Date:* June 9-10, 2025.

*Time:* 9:00 a.m. to 6:00 p.m.

*Agenda:* To review and evaluate grant applications.

*Address:* National Institutes of Health, Rockledge II, 6701 Rockledge Drive, Bethesda, MD 20892.

*Meeting Format:* Virtual Meeting.

*Contact Person:* Robin Lori Thompson, Ph.D., Scientific Review Officer, The Center for Scientific Review, The National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892, (301) 480-4933, [robin.thompson@nih.gov](mailto:robin.thompson@nih.gov).

*Name of Committee:* Center for Scientific Review Special Emphasis Panel; Topics in Health Services Research: Big Data, Health Information Technology and Clinical Informatics.

*Date:* June 10-11, 2025.

*Time:* 9:00 a.m. to 6:00 p.m.

*Agenda:* To review and evaluate grant applications.