

**DEPARTMENT OF HEALTH AND HUMAN SERVICES****National Institutes of Health****Government-Owned Inventions; Availability for Licensing**

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

**ACTION:** Notice.

**SUMMARY:** The inventions listed below are owned by an agency of the U.S. Government and are available for licensing in the U.S. to achieve expeditious commercialization of results of federally-funded research and development.

**FOR FURTHER INFORMATION CONTACT:**

Licensing information may be obtained by emailing Michael Shmilovich, [shmilovm@mail.nih.gov](mailto:shmilovm@mail.nih.gov), the licensing contact at the National Heart, Lung, and Blood, Office of Technology Transfer and Development Office of Technology Transfer, 31 Center Drive, Room 4A29, MSC2479, Bethesda, MD 20892-2479; telephone: 301-402-5579. A signed Confidential Disclosure Agreement may be required to receive any unpublished information.

**SUPPLEMENTARY INFORMATION:**

Technology description follows.

**Resolution Enhancement for Light Sheet Microscopy Systems and Methods**

Available for licensing and commercial development is a system and technique for enhancing the resolution of images acquired through light sheet microscopy by adding additional enhanced depth-of-focus optical arrangements and high numerical aperture objective lenses. The technique employs an arrangement of three objective lenses and a processor for combining captured images. The first objective lens illuminates the sample and the second and third objective lenses collect the fluorescence emissions emitted by the sample. The second objective lens focuses a first portion of the fluorescence emissions for detection by a second detection component. The third objective lens focuses a second portion of the fluorescence emissions through a diffractive or refractive optic component. A processor combines the images resulting from first and second portions of the fluorescence emissions and generates a composite image with improved axial and lateral resolution.

*Potential Commercial Applications:*

- High speed imaging
- Fast single cell and cellular dynamics imaging

- Super-resolution and single molecule imaging
- 3D single particle tracking
- 3D super-resolution imaging in thick samples

*Competitive Advantages:*

- Resolution enhancement in light microscopy

*Development Stage:*

- In vitro data available

*Inventors:* Hari Shroff (NIBIB), Yicong Wu (NIBIB), and Sara Abrahamsson.

*Intellectual Property:* HHS Reference No. E-232-2014/0.

U.S. Provisional Patent Applications 62/

054,484 filed 24 September 2014

PCT Application No. PCT/US2015/

052047 filed 24 September 2015

European Patent Applications No.

15843742.6 filed 24 September 2017

U.S. Patent No. US 10,401,604 issued 3 September 2019

*Related Technology:* HHS Reference No. E-078-2011/0.

*Licensing Contact:* Michael Shmilovich, Esq., CLP; 301-435-5019; [shmilovm@mail.nih.gov](mailto:shmilovm@mail.nih.gov).

*Collaborative Research Opportunity:*

The National Institute of Biomedical Imaging and Bioengineering is seeking statements of capability or interest from parties interested in collaborative research to further develop, evaluate or commercialize Resolution Enhancement Technique for Light Sheet Microscopy Systems and Methods. For collaboration opportunities, please contact Michael Shmilovich 301-435-5019 or [shmilovm@nih.gov](mailto:shmilovm@nih.gov).

Dated: October 17, 2019.

**Michael A. Shmilovich,**

*Senior Licensing and Patenting Manager, National Heart, Lung, and Blood Institute, Office of Technology Transfer and Development.*

[FR Doc. 2019-23031 Filed 10-22-19; 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 Closed Meetings**

Pursuant to section 10(d) 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:* National Heart, Lung, and Blood Institute Special Emphasis Panel; Short-Term Research Education to Increase Diversity.

*Date:* November 20, 2019.

*Time:* 1:00 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.

*Contact Person:* Giuseppe Pintucci, Ph.D., Scientific Review Officer, Office of Scientific Review/DERA, National Heart, Lung, and Blood Institute, 6701 Rockledge Drive, Room 7192, Bethesda, MD 20892, 301-827-7696, [Pintuccig@nhlbi.nih.gov](mailto:Pintuccig@nhlbi.nih.gov) (Telephone Conference Call).

*Name of Committee:* National Heart, Lung, and Blood Institute Special Emphasis Panel; Rare Disease Cohorts in Heart, Lung, Blood and Sleep Disorders.

*Date:* November 22, 2019.

*Time:* 8:30 a.m. to 4:30 p.m.

*Agenda:* To review and evaluate grant applications.

*Place:* The William F. Bolger Center, 9600 Newbridge Drive, Potomac, MD 20854.

*Contact Person:* Michael P. Reilly, Ph.D., Scientific Review Officer, Office of Scientific Review, National Heart, Lung, and Blood Institute, National Institutes of Health, 6701 Rockledge Drive, Room 7200, Bethesda, MD 20892, 301-827-7975, [reillymp@nhlbi.nih.gov](mailto:reillymp@nhlbi.nih.gov).

(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: October 17, 2019.

**Ronald J. Livingston, Jr.,**

*Program Analyst, Office of Federal Advisory Committee Policy.*

[FR Doc. 2019-23037 Filed 10-22-19; 8:45 am]

**BILLING CODE 4140-01-P**

**DEPARTMENT OF HEALTH AND HUMAN SERVICES****National Institutes of Health****National Center for Complementary & Integrative Health; Notice of Meeting**

Pursuant to section 10(d) of the Federal Advisory Committee Act, as amended, notice is hereby given of a meeting of the National Advisory Council for Complementary and Integrative Health.

The meeting will be open to the public as indicated below, with attendance limited to space available.