

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. in accordance with 35 U.S.C. 209 and 37 CFR Part 404 to achieve expeditious commercialization of results of federally-funded research and development. Foreign patent applications are filed on selected inventions to extend market coverage for companies and may also be available for licensing.

FOR FURTHER INFORMATION CONTACT: Licensing information and copies of the U.S. patent applications listed below may be obtained by writing to the indicated licensing contact at the Office of Technology Transfer, National Institutes of Health, 6011 Executive Boulevard, Suite 325, Rockville, Maryland 20852-3804; telephone: 301-496-7057; fax: 301-402-0220. A signed Confidential Disclosure Agreement will be required to receive copies of the patent applications.

SUPPLEMENTARY INFORMATION: Technology descriptions follow.

Resolution Enhancement Technique for Light Sheet Microscopy Systems

Description of Technology: The invention pertains to a technique for enhancing the resolution of a light sheet microscopy technique by adding an additional enhanced depth-of-focus optical arrangement and high numerical aperture objective lens. The technique employs an arrangement of three objective lenses and a processor for combining captured images from the objectives. The resulting image composite retains the greater resolving power of the third high numerical aperture objective lens by imaging the light sheet with the third objective lens and enhanced depth-of-focus arrangement so that the overall resolution of the light sheet system is improved. The depth of field arrangement could be a simple oscillation of the third objective, or a "layer cake" or cubic phase mask component. Any loss in lateral resolution that results from the depth of field arrangement may be compensated for by deconvolution. In some embodiments, other optics, such as an

axicon or annular aperture, can provide extended depth of field.

Potential Commercial Applications: Resolution enhancement in light microscopy

Competitive Advantages: Image composition using processing system

Development Stage:

- Early-stage
- Prototype

Inventors: Hari Shroff (NIBIB), Yicong Wu (NIBIB), Sara Abrahamsson (The Rockefeller University)

Intellectual Property: HHS Reference No. E-232-2014/0—U.S. Provisional Patent Application 62/054,484 filed September 24, 2014

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

- PCT Application No. PCT/US2012/27524 filed March 02, 2012
- U.S. Patent Application No. 14/003,380 filed September 5, 2013, which published as US 2014-0126046-A1 on May 08, 2014

Licensing Contact: Michael Shmilovich, Esq.; 301-435-5019; 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 light sheet microscopy image resolution enhancement. For collaboration opportunities, please contact Cecilia Pazman at 301-594-4273 or pazmance@nhlbi.nih.gov.

Resolution Enhancement for Line-Scanning Excitation Microscopy

Description of Technology: The invention describes a method for improving the spatial resolution of optical microscopes that use line-scanning excitation, such as line-scanning confocal microscopes, line-scanning STED microscopes, or line-scanning light-sheet microscopes. Common elements of the invention include: (a) An apparatus for exciting and scanning a line-like excitation focus through the sample; (b) an optical arrangement on the detection side of the microscope for manipulating the spacing and/or width of the resulting fluorescence emissions; (c) integration and optional post-processing of the manipulated fluorescence emissions after capture by an area detector such as a camera. The resolution increase may be performed with no or marginal decrease in temporal resolution relative to the conventional line-scanning microscopes upon which the technique is based.

Potential Commercial Applications: Fluorescence microscopy

Competitive Advantages:

- Improved resolution
- Enhanced acquisition speed relative to other forms of super-resolution microscopy

Development Stage: Prototype

Inventors: Hari Shroff, Andrew York, John Giannini, Abhishek Kumar (all of NIBIB)

Intellectual Property: HHS Reference No. E-225-2014—U.S. Provisional Patent Application 62/054,481 filed September 24, 2014

Licensing Contact: Michael Shmilovich, Esq.; 301-435-5019; 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 fluorescent microscopy. For collaboration opportunities, please contact Cecilia Pazman at 301-594-4273 or pazmance@nhlbi.nih.gov.

Chemotherapeutic Anti-Cancer Agents

Description of Technology: Available for licensing are new compounds derived from 4-benzyl-amino-benzyl alcohol. These compounds possess potent activity in multiple *in vitro* models of cancer cell growth inhibition and *in vivo* xenograft models of renal tumor regression. These compounds could potentially be developed into promising therapeutic agents for the treatment of various cancers.

Potential Commercial Applications: Chemotherapy of cancer

Competitive Advantages:

- Extreme potency for tumor regression *in vivo*.
- Compounds with similar profiles have been approved by the FDA as chemotherapeutic agents.

—Preliminary toxicology data available.

Development Stage:

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

Inventors: Joel Morris and Donn Wishka (NCI)

Intellectual Property: HHS Reference No. E-027-2014/0—U.S. Application No. 61/933,606 filed 20 Jan 2014

Licensing Contact: Patrick McCue, Ph.D.; 301-435-5560; mccuepat@od.nih.gov

Novel Codon-Optimized Gene Therapeutic for Methylmalonic Acidemia

Description of Technology: Methylmalonic Acidemia (MMA) is a metabolic disorder characterized by increased acidity in the blood and tissues due to toxic accumulation of

protein and fat by-products resulting in seizures, strokes, and chronic kidney failure. A significant portion of MMA cases stem from a deficiency in a key mitochondrial enzyme, methylmalonyl-CoA mutase (*MUT*), required to break down amino acids and lipids. Currently, there are no treatments for MMA and the disease is managed primarily with dietary restriction of amino acid precursors and liver-kidney transplantation in severe cases.

The present invention describes a synthetic codon-optimized *MUT* gene (co-*MUT*) that improves expression of human methylmalonyl-CoA mutase. A series of novel gene therapy vectors containing co-*MUT* rescued MMA mice from lethality and lowered levels of methylmalonic acid in the blood. Results of pre-clinical efficacy studies demonstrate a promising therapy for MMA and other renal-associated disorders.

Potential Commercial Applications:

- The co-*MUT* transgene could be used to treat MMA patients.
- In addition, it could be used to produce *MUT* in vitro for MMA enzyme replacement therapy.

Competitive Advantages: co-*MUT* transgene could be used through non-viral and viral gene delivery.

Development Stage:

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

Inventors: Charles P. Venditti and Randy J. Chandler (NHGRI)

Intellectual Property: HHS Reference No. E-243-2012/0—

- U.S. Provisional Application No. 61/792,081 filed 15 March 2013
- PCT Application No. PCT/US2014/028045 filed 14 March 2014

Licensing Contact: Vince Contreras, Ph.D.; 301-435-4711; vince.contreras@nih.gov

Collaborative Research Opportunity: The Organic Acid Research Section at the National Human Genome Research Institute is seeking statements of capability or interest from parties interested in collaborative research to further develop, evaluate or commercialize codon-optimized *MUT* constructs. For collaboration opportunities, please contact Claire T. Driscoll at cdriscoll@mail.nih.gov.

Dated: October 28, 2014.

Richard U. Rodriguez,

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

[FR Doc. 2014-25874 Filed 10-30-14; 8:45 am]

BILLING CODE 4140-01-P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

National Institute of Environmental Health Sciences; Notice of Closed Meeting

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 meeting.

The meeting 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 Institute of Environmental Health Sciences Special Emphasis Panel; Review of NIEHS R13 Conference Grant Applications.

Date: November 24, 2014.

Time: 12:00 p.m. to 4:30 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institute of Environmental Health Sciences, Keystone Building, Conference Room 3118, 530 Davis Drive, Research Triangle Park, NC 27709, (Telephone Conference Call).

Contact Person: Janice B. Allen, Ph.D., Scientific Review Officer, Scientific Review Branch, Division of Extramural Research and Training, Nat. Institute of Environmental Health Science, P.O. Box 12233, MD EC-30/Room 3170 B, Research Triangle Park, NC 27709, 919/541-7556.

(Catalogue of Federal Domestic Assistance Program Nos. 93.115, Biometry and Risk Estimation—Health Risks from Environmental Exposures; 93.142, NIEHS Hazardous Waste Worker Health and Safety Training; 93.143, NIEHS Superfund Hazardous Substances—Basic Research and Education; 93.894, Resources and Manpower Development in the Environmental Health Sciences; 93.113, Biological Response to Environmental Health Hazards; 93.114, Applied Toxicological Research and Testing, National Institutes of Health, HHS)

Dated: October 24, 2014.

Carolyn Baum,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2014-25873 Filed 10-30-14; 8:45 am]

BILLING CODE 4140-01-P

DEPARTMENT OF HOMELAND SECURITY

Office of the Secretary

[Docket No. DHS-2014-0053]

Privacy Act of 1974; Department of Homeland Security/United States Coast Guard—010 Physical Disability Evaluation System Files System of Records

AGENCY: Privacy Office, Department of Homeland Security.

ACTION: Notice of Privacy Act System of Records.

SUMMARY: In accordance with the Privacy Act of 1974, the Department of Homeland Security proposes to update and reissue a current Department of Homeland Security system of records titled, "Department of Homeland Security/United States Coast Guard Physical Disability Evaluation System Files System of Records." This system of records allows the Department of Homeland Security/United States Coast Guard to collect and preserve the records regarding physical disability evaluation proceedings. As a result of the biennial review of this system, the system manager and address category has been updated. This updated system will be included in the Department of Homeland Security's inventory of record systems.

DATES: Submit comments on or before December 1, 2014. This updated system will be effective December 1, 2014.

ADDRESSES: You may submit comments, identified by docket number DHS-2014-0053 by one of the following methods:

- Federal e-Rulemaking Portal: <http://www.regulations.gov>. Follow the instructions for submitting comments.

- Fax: 202-343-4010.

- Mail: Karen L. Neuman, Chief Privacy Officer, Privacy Office, Department of Homeland Security, Washington, DC 20528.

Instructions: All submissions received must include the agency name and docket number for this rulemaking. All comments received will be posted without change to <http://www.regulations.gov>, including any personal information provided.

Docket: For access to the docket to read background documents or comments received, please visit <http://www.regulations.gov>.

FOR FURTHER INFORMATION CONTACT: For general questions, please contact: Marilyn Scott-Perez (202-475-3515), Privacy Officer, Commandant (CG-61), United States Coast Guard, Mail Stop