Patent Status: U.S. Patent No. 6,274,134 issued 14 Aug 2001 (HHS Reference No. E–084–1991/1–US–01); Australian Patent No. 684,806 issued 23 Apr 1998 (HHS Reference No. E–084–1991/1–AU–05); Australian Patent No. 668,134 issued 26 Apr 1996 (HHS Reference No. E–084–1991/0–AU–03) and Japanese Patent No. 3,715,313 issued 9 November 2005 (HHS Reference No. E–084–1991/1–JP–04).

Licensing Status: Available for exclusive or non-exclusive licensing.

Licensing Contact: Surekha Vathyam, PhD; 301–435–4076; *vathyams@mail.nih.gov.*

Dated: January 16, 2008.

Steven M. Ferguson,

Director, Division of Technology Development and Transfer, Office of Technology Transfer, National Institutes of Health.

[FR Doc. E8–1244 Filed 1–24–08; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Government-Owned Inventions; Availability for Licensing

AGENCY: National Institutes of Health, Public Health Service, 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. 207 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.

ADDRESSES: 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.

Human Papillomavirus microRNA Diagnostics and Therapeutics

Description of Technology: Available for licensing and commercial development are patent rights that cover the uses of a p53 specific microRNA (miRNA). It has been reported that the tumor suppressive mRNA miR–34a is downregulated in HPV-infected primary keratinocytes. miR–34a arrests the cell cycle at G2 phase and promotes apoptosis. Therapeutic restoration of normal miR–34a expression levels and/or simultaneous stabilization of p53 (inhibited by HPV E6) may induce miR–34a accumulation in G0/G1 phase and potentially arrest tumor growth.

Applications: Cervical cancer; Human papillomavirus; Therapeutics.

Inventors: Zhi-Ming Zheng, Xiaohong Wang (NCI).

Relevant Publications:

1. WO Lui *et al.* Patterns of known and novel small RNAs in human cervical cancer. Cancer Res. 2007 Jul 1;67(13):6031–6043.

2. I Martinez *et al.* Human papillomavirus type 16 reduces the expression of microRNA–218 in cervical carcinoma cells. Oncogene 2007 Nov 12; Advance online publication, doi:10.1038/sj.onc.1210919.

Patent Status: U.S. Provisional Application No. 60/983,368 filed 29 Oct 2007 (HHS Reference No. E–029–2008/0–US–01).

Licensing Status: Available for licensing.

Licensing Contact: Michael A. Shmilovich, Esq.; 301/435–5019; *shmilovm@mail.nih.gov.*

Collaborative Research Opportunity: The National Cancer Institute HIV and AIDS Malignancy Branch is seeking statements of capability or interest from parties interested in collaborative research to further develop, evaluate, or commercialize HPV-induced aberrant expression of microRNAs for cervical cancer diagnostics and therapeutics. Please contact John D. Hewes, PhD at 301–435–3121 or *hewesj@mail.nih.gov* for more information.

Nitroxide Radical as a Treatment for Neurodegeneration

Description of Technology: This invention describes the use of a nitroxide radical to treat or prevent the progression of neurodegeneration characterized by a deficiency in iron regulatory protein 2 (IRP 2) function. The inventors discovered that IRP 2 null mice with adult-onset neurodegeneration and microcytic anemia regain activity of iron regulatory protein 1 (IRP 1) after eating food formulations containing specific nitroxide radicals. The inventors also discovered the nitroxide agent prevents the progression of neurodegeneration by attacking inhibitory iron-sulfur clusters found on IRP 1 thereby allowing IRP 1 to bind to iron responsive elements found on transcripts that encode iron metabolism proteins that regulate cellular iron homeostasis in the brain.

Applications: Treatment for neurological disorders resulting from a deficiency in the amount of bioavailable iron in the central nervous system, including Alzheimer's and Parkinson's disease, erythropoietic protoporphyria or adult-onset neurodegeneration.

Market: Over 22 million people suffer from neurodegenerative diseases worldwide, and in 2050, this number could triple due to increased life expectancy and an increased aging population.

Development Status: Early-stage.

Inventors: Tracey Rouault *et al.* (NICHD).

Patent Status: U.S. Provisional Application No. 60/894,134 filed 09 Mar 2007 (HHS Reference No. E–153–2007/0–US–01).

Licensing Status: Available for licensing.

Licensing Contact: Charlene A. Sydnor, PhD; 301/435–4689; *sydnorc@mail.nih.gov.*

A Sensitive, High Throughput Pseudovirus-Based Papillomavirus Neutralization Assay for HPV 16 and HPV 18

Description of Technology: This invention is a research tool for measuring protective antibody responses against Human Papilloma Viruses (HPV). Sensitive high-throughput neutralization assays, based upon pseudoviruses carrying a secreted alkaline phosphatase (SEAP) reporter gene, were developed and validated by the inventors for HPV 16, HPV 18, and bovine papillomavirus 1 (BPV1). In a 96-well plate format, the assay was reproducible and appears to be as sensitive as, but more type-specific than, a standard papillomavirus-like particle (VLP)-based enzyme-linked immunosorbent assay (ELISA). The SEAP pseudovirus-based neutralization assay should be a practical method for quantifying potentially protective antibody responses in HPV natural history and prophylactic vaccine studies.

Inventors: John T. Schiller (NCI), Douglas R. Lowy (NCI), Christopher Buck (NCI), Diana V. Pastrana (NCI), *et al.*

Publication: The assay is further described in Pastrana *et al.*, ''Reactivity of human sera in a sensitive, high-throughput pseudovirus-based papillomavirus neutralization assay for HPV16 and HPV18,'' Virology. 2004 Apr 10;321(2):205–216.

Patent Status: HHS Reference No. E–137–2004/0—Research Material.

Licensing Status: This assay is available nonexclusively through a biological materials license.

Licensing Contact: Peter A. Soukas, J.D.; 301/435–4646; *soukasp@mail.nih.gov.*

Molecular Motors Powered by Proteins

Description of Technology: The technology available for licensing and commercial development relates to molecular motors powered by proteins. Some implementations describe a molecular motor in which multiple concentric cylinders or nested cones rotate around a common longitudinal axis. Opposing complementary surfaces of the cylinders or cones are coated with complementary motor protein pairs, such as actin and myosin. The actin and myosin interact with one another in the presence of ATP to rotate the cylinders or cones relative to one another, and this rotational energy is harnessed to produce work. Speed of movement is controlled by the concentration of ATP and the number of nested cylinders or cones. The length of the cylinders or cones can also be used to control the power generated by the motor.

Another configuration forms the motor out of a set of stacked disks, much like CDs on a spindle. The advantage of this form is extreme simplicity of construction compared to the nested cylinders or cones. In yet another configuration, which has aspects of both of the previous forms, the surfaces are broken into annular rings in order to overcome that the inner surfaces rotate at a different rate than the outer surfaces. This belt form may ultimately be used in molecular manufacturing.

Applications: Supplying power to prosthetic implants and other medical devices without external power sources.

Many other applications that could use a motor in other biotechnological areas, in addition to the medical applications.

The inventions can be implemented on either a microscopic or macroscopic scale.

Development Status: Very early stage of development.

Inventors: Thomas D. Schneider and Ilya G. Lyakhov (NCI).

Relevant Publications: ''Molecular motor'', Patent Publication Nos. WO 2001/009181 A1, published 02/08/2001; CA 2380611A1, published 02/08/2001; AU 6616600A, published 02/19/2001; EP 1204680A1, published 05/15/2002; and U.S. 20020083710, published 07/04/2002.

Patent Status: HHS Reference No. E–018–1999/0—International Application Number PCT/US 2000/20925 filed 07/31/2000; granted Application AU 2002/18688 B2, and the corresponding European and Canadian applications being prosecuted, all entitled ''Molecular Motor.''

HHS Reference No. E–018–1999/1—allowed U.S. Application No. 10/061,377 filed 02/01/2002, entitled ''Molecular Motor.''

Licensing Status: Available for non-exclusive or exclusive licensing.

Licensing Contact: Cristina Thalhammer-Reyero, PhD, MBA; 301–435–4507; *thalhamc@mail.nih.gov.*

Collaborative Research Opportunity: The National Cancer Institute, Center for Cancer Research Nanobiology Program is seeking statements of capability or interest from parties interested in collaborative research to further develop, evaluate, or commercialize the Molecular Rotation Engine. Please contact John D. Hewes, PhD at 301–435–3121 or *hewesj@mail.nih.gov* for more information.

Dated: January 16, 2008.

Steven M. Ferguson,

Director, Division of Technology Development and Transfer, Office of Technology Transfer, National Institutes of Health.

[FR Doc. E8–1247 Filed 1–24–08; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Government-Owned Inventions; Availability for Licensing

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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. 207 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.

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3D Imaging of Mammalian Cells Using Focused Ion Beam-Secondary Ion Mass Spectrometry (FIB–SIMS)

Description of Technology: Available for licensing and commercial development is a new automated approach to cellular imaging that allows 3D visualization of cellular organelles and protein expression at nanometer (nm) resolution using ion abrasion scanning electron microscopy (IA–SEM). The approach uses established technologies for 3D imaging [1, 2] by iterative use of a focused ion beam and scanning electron beam combined with established technologies for mass spectrometry. Strategies to explore the 3D distribution of cellular components are being developed with the goal of establishing rapid methods for determining protein, metabolite and drug localization in the subcellular space.

Applications: Cytology; Oncology; Cell biology; Drug development; Drug targeting.

Development Status: Pilot experiments are ongoing for the development and optimization of the technology using commercially available components. Clinical applications for the diagnosis of tissue specimens are also being explored.

Inventor: Sriram Subramaniam (NCI).

Publications:

1. J Heymann, M Hayles, I Gestmann, L Giannuzzi, L Lich, S Subramaniam. Site-specific 3D imaging of cells and tissues with a dual beam microscope. J. Struct. Biol. 2006 Jul;155(1):63–73.

2. J Heymann, D Shi, S Kim, D Bliss, J Milne, S Subramaniam. 3D imaging of melanoma cells using automated ''ion abrasion scanning electron microscopy''. Microsc Microanal. 2007 Aug;13(Suppl 2):360–361, doi 10.1017/S1431927607079287.

Patent Status: U.S. Provisional Application No. 60/970,070 filed 05 Sep 2007 (HHS Reference No. E–313–2007/0–US–01); U.S. Provisional Application No. 60/974,686 filed 24 Sep 2007 (HHS Reference No. E–313–2007/1–US–01).

Licensing Status: Available for exclusive or non-exclusive licensing.

Licensing Contact: Michael A. Shmilovich, Esq.; 301/435–5019; *shmilovm@mail.nih.gov.*

Collaborative Research Opportunity: The National Cancer Institute is seeking statements of capability or interest from parties interested in collaborative research and/or partnership agreements to further develop and commercialize tools for 3D mapping cells and tissues at nanometer resolution. Please contact