all of the images to perform a localized analysis (corresponding X–Y pixels or X–Y–Z voxels are analyzed across all images) that identifies temporal components within each sub-region. Subsequently, within the sub-regions, only those temporal components are selected whose amplitude is above a predetermined amplitude threshold. The images are then reconstructed using the sub-regions with reduced components. A maximal-intensity-projection (MIP) is applied in the temporal domain (tMIP) in order to obtain a single image with reduced noise (this can be done either at the sub-region level or at the reconstructed image level). The technology can be applied to a broad spectrum of medical imaging technologies such as MRI, X-Ray, CT and others.

Applications: Medical imaging and diagnostics applied to MRI, X-Ray, CT scans or other imaging modalities including PET, SPECT, ultrasound or optical.

Advantages: Enhancing signal-to-noise of medical imaging techniques.

Development Status:

• Proof of concept has been demonstrated. Data is available.

• Need to acquire further data to establish clinical utility of the method and to further optimize the protocol.

Market:

• According to market research reports the market for medical imaging equipment industry in the United States is approximately $9.0 billion dollars now and has been growing by approximately 7.6% annually.

• The United States market for computed tomography (CT) scanning systems is estimated to touch $3.6 billion by the end of 2009. The U.S. accounts for over 50.0% of the worldwide market.

• Worldwide MRI equipment market is estimated to reach $5.5 billion by 2010, according to new report by Global Industry Analysts, Inc. (*http://www.strategyr.com/Magnetic_Resonance_Imaging_MRI_Equipment_Market_Report.asp*). In the United States the market for such equipment is estimated at $1.9 billion for 2008, as stated the same report. The very high-field MRI systems market in the United States is projected to reach $968 million by the year 2010. Very High-Field Systems also represent the fastest growing segment, as hospitals and clinics upgrade old equipment with state-of-the-art systems.

• Enhancements in imaging technologies to achieve better image clarity, reliability and speed are being constantly pursued by medical imaging companies. Technologies that offer such improvements therefore present excellent commercial potential. Thus the subject invention which can be applied in a broad spectrum of imaging technologies offers such good commercial potential.

Inventors: Han Wen and Vinay Pai (NHLBI).

Relevant Articles:

1. Fish DA, Grochmalicki J, Pike ER. Scanning singular-value-decomposition method for restoration of images with space-variant blur. J Opt Soc Am A, 13(3), pp. 464–469, March 1996.

2. Du X, Dunxu Y, Cuihua L, Jing L. "A novel approach to SVD-based image filtering improvement," International Conference on Computer Science and Software Engineering, vol 6, pp. 133–136, 2008.

Patent Status: U.S. Provisional Application No. 61/266,442 filed December 3, 2009, entitled "Signal-to-Noise Enhancement in Imaging Applications Using a Time-Series of Images" (HHS Reference No. E–292–2009/0–US–01).

Related Technologies: Image denoising techniques such as singular value decomposition (SVD).

Licensing Status: Available for licensing.

Licensing Contacts: Uri Reichman, Ph.D., MBA; 301–435–4616; *UR7a@nih.gov;* or John Stansberry, Ph.D.; 301–435–5236; *stansbej@mail.nih.gov.*

Collaborative Research Opportunity: The National Heart, Lung, and Blood Institute is seeking statements of capability or interest from parties interested in collaborative research to implement the technology described above on specific commercial platforms. Please contact Denise Crooks, Ph.D. at 301–435–0103 or via e-mail at *crooksd@nhlbi.nih.gov* for more information.

Method for the Treatment of HIV/AIDS Infection Using Acyclovir in Identified Subjects

Description of Invention: The invention provides the novel method to treat HIV infections with acyclovir which can be converted to acyclovir triphosphate inside infected cells. Acyclovir or acyclovir-related drugs were previously approved for control of herpesvirus replication with 20 years of records of safe application. The subject invention demonstrates that acyclovir triphosphate can inhibit HIV–1 reverse transcriptase as a potent suppressor of HIV–1 replication in human lymphoid tissues. In addition, the subject invention may be attractive to potential licensees, as there is little to no FDA hurdle to overcome in the development of the new formulations to use in this manner. Thus, the low cost and proven safety of acyclovir may lead to a new medicine for treating HIV–1 infections and a prophylactic agent for preventing HIV infections.

Applications: The treatment and prevention of HIV infections.

Development Status: In vitro data available.

Inventors: Leonid B. Margolis, Andrea Lisco, Christophe Vanpouille, Jean-Charles Grivel (NICHD).

Related Publications:

1. A Lisco *et al.* Acyclovir is activated into a HIV–1 reverse transcriptase inhibitor in herpesvirus-infected human tissues. Cell Host Microbe. 2008 Sep 11;4(3):260–270. [PubMed: 18779052]

2. N Nagot *et al.* Reduction of HIV–1 RNA levels with therapy to suppress herpes simplex virus. New Engl J Med. 2007 Feb 22;356(8):790–799. [PubMed: 17314338]

Patent Status: PCT Application No. PCT/US2008/010316 filed 30 Aug 2008, which published as WO 2009/032244 on 12 Mar 2009 (HHS Reference No. E–306–2007/0–PCT–02).

Licensing Status: Available for licensing.

Licensing Contact: Sally Hu, Ph.D.; 301/435–5606; *HuS@mail.nih.gov.*

Collaborative Research Opportunity: The *Eunice Kennedy Shriver* National Institute of Child Health and Human Development, Program in Physical Biology, Section on Intracellular Interactions, is seeking statements of capability or interest from parties interested in collaborative research to further develop, evaluate, or commercialize this technology. Please contact Joseph Conrad, Ph.D., J.D. at 301–435–3107 or *jmconrad@mail.nih.gov* for more information.

Dated: January 21, 2010.

Richard U. Rodriguez,

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

[FR Doc. 2010–1669 Filed 1–27–10; 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.

Mouse Macula Densa Cell Line

Description of Invention: This technology provides a clonally derived macula densa cell line (MMDD1 cells) that closely mimics the known molecular expression pattern of native macula densa (MD) cells. MMDD1 cells are developed from SV–40 transgenic mice using fluorescence-activated cell sorting of renal tubular cells labeled with segment-specific fluorescent lectins. The MMDD1 cells of this technology express COX–2, bNOS, NKCC2, and ROMK, but not Tamm-Horsfall protein, and show rapid 86Rb+ uptake that is inhibited by a reduction in NaCl concentration and by bumetanide or furosemide. These MMDD1 cells provide a useful in vitro model for the study of Macula Densa function.

Inventor: Jürgen B. Schnermann (NIDDK).

Publication: T Yang, JM Park, L Arend, Y Huang, R Topaloglu, A Pasumarthy, H Praetorius, K Spring, JP Briggs, J Schnermann. Low chloride stimulation of prostaglandin E2 release and cyclooxygenase-2 expression in a mouse macula densa cell line. J Biol Chem. 2000 Dec 1;275(48):37922–37929. [PubMed: 10982805].

Patent Status: HHS Reference No. E–234–2009/0—Research Tool. Patent protection is not being pursued for this technology.

Licensing Status: Available for licensing under a Biological Materials License Agreement.

Licensing Contact: Suryanarayana (Sury) Vepa, Ph.D., J.D.; 301–435–5020; *vepas@mail.nih.gov.*

Collaborative Research Opportunity: The National Institute of Diabetes and Digestive and Kidney Diseases Kidney Disease Branch is seeking statements of capability or interest from parties interested in collaborative research to further develop, evaluate, or commercialize the clonally derived macula densa cell line (MMDD1 cells). Please contact Cindy Fuchs at 301–451–3636 for more information.

Novel Analogues of the Natural Product Schweinfurthin With Specificity for Tumors and Other Disease Manifestations Associated With Neurofibromatosis Type 1

Description of Invention: The global anti-cancer market is forecast to reach $40 billion by 2012. There remains a significant unmet need for therapies to treat neurofibromatosis type 1 ("NF1"), a common genetic disease that afflicts 1 in 3500 people, and malignant tumors carrying NF1 mutations, including tumors of the central and peripheral nervous systems.

Researchers at the National Cancer Institute ("NCI")-Frederick investigating genetic influences on cancer susceptibility of the nervous system have synthesized novel analogues of Schweinfurthin, a natural compound first isolated from the tropical African plant *Macaranga schweinfurthii,* to which glioma and leukemia cell lines show significant sensitivity. The Schweinfurthin analogues also have inhibitory activity against mouse and human NF1 cancer cell lines. The analogues have a novel mode of action that appears to involve regulation of cytoskeletal reorganization.

These inhibitors are likely to be accepted in the marketplace because their potent, selective activity and unique specificity in mode of action gives them a distinct advantage over the mechanisms of other existing therapies.

Applications:

- Therapies for tumors associated with NF1 (including brain and peripheral nervous system tumors).
- Therapies for leukemia.
- Therapies for NF1 and associated conditions.

Advantages:

- Utilizes proven small-molecule technology.
- Specificity of mode of action may reduce potential side-effects.
- Novel mode of action may limit market competition.

Development Status: Pre-clinical.

Inventors: Karlyne Reilly *et al.* (NCI).

Relevant Publication: Turbyville *et al.,* "Schweinfurthin A Selectively Inhibits Proliferation and Rho Signaling in Glioma and Neurofibromatosis type 1 Tumor Cells in an NF1–GRD Dependent Manner", submitted.

Patent Status: U.S. Patent Application No. 61/174,338, filed 30 Apr 2009 (HHS Reference No. E–183–2009/0–US–01).

Licensing Status: Available for licensing.

Licensing Contact: Patrick P. McCue, Ph.D.; 301–435–5560; *mccuepat@mail.nih.gov.*

Collaborative Research Opportunity: The Genetic Modifiers of Tumorigenesis Section at the National Cancer Institute-Frederick is seeking statements of capability or interest from parties interested in collaborative research to further develop, evaluate, or commercialize Schweinfurthins for the treatment of Neurofibromatosis type 1. Please contact John D. Hewes, Ph.D. at 301–435–3121 or *hewesj@mail.nih.gov* for more information.

Detection of Autoantibodies for the Diagnosis of Sjogren's Syndrome

Description of Invention: This invention provides a method for diagnosing Sjogren's syndrome in a subject. In tests utilizing blood from human volunteers, this method demonstrated dramatically higher accuracy (76%) in positively diagnosing Sjogren's syndrome than a standard, currently available immunoassay (46%).

Briefly, this invention employs a panel of mammalian-derived proteins and protein fragments that are often antigentic in individuals with Sjogren's syndrome in concert with a luciferase immunoprecipitation system. In contrast, most currently available immunoassays for diagnosis of rheumatological diseases include either antigens from recombinant bacterial expression systems or single antigens from bovine sources. These immunoassays are likely to fail to present the sufficient variety of specific human epitopes that are necessary for high accuracy diagnoses of Sjogren's syndrome.

Applications:

- Diagnosis of Sjogren's syndrome.
- A component of a panel of diagnostic tests for patients with autoimmune disease symptoms.

Advantages: Higher accuracy than currently available diagnostics of Sjogren's syndrome.

Development Status: Early stage. Initial clinical screens have been completed.

Market: According to the Sjogren's Syndrome Foundation, Inc., it takes on average seven years for a positive Sjogren's syndrome diagnosis as symptoms of this syndrome mimic other conditions and diseases. Up to four million individuals in the United States have Sjogren's syndrome, and half of currently diagnosed cases occur in concert with other autoimmune disease (*http://www.sjogrens.org/home/about-sjogrens-syndrome*).

Inventors: Peter D. Burbelo and Michael J. Iadarola (NIDCR).

Related Publications:

1. Burbelo PD, Leahy HP, Issa AT, Groot S, Baraniuk JN, Nikolov NP, Illei GG, Iadarola MJ. Sensitive and robust luminescent profiling of anti-La and other autoantibodies in Sjogren's syndrome. Autoimmunity. 2009 Sep;42(6):515–524. [PubMed: 19657778]

2. Burbelo PD, Ching KH, Issa AT, Loftus CM, Li Y, Satoh M, Reeves WH, Iadarola MJ. Rapid serological detection of autoantibodies associated with Sjögren's syndrome. J Transl Med. 2009 Sep 24;7:83. [PubMed: 19778440]

3. Burbelo PD, Ching KH, Klimavicz CM, Iadarola MJ. Antibody profiling by Luciferase Immunoprecipitation Systems (LIPS). J Vis Exp. 2009 Oct 7;(32); pii: 1549; doi: 10.3791/1549. [PubMed: 19812534]

Patent Status: U.S. Provisional Application No. 61/224,649 filed 10 Jul 2009 (HHS Reference No. E–070–2009/0–US–01).

Licensing Status: Available for licensing.

Licensing Contact: Norbert Pontzer, J.D., Ph.D.; 301–435–5502; *pontzern@mail.nih.gov.*

Collaborative Research Opportunity: The National Institute of Dental and Craniofacial Research, Laboratory of Sensory Biology, Neurobiology and Pain Therapeutics Section, is seeking statements of capability or interest from parties interested in collaborative research to further develop, evaluate, or commercialize this technology. Please contact David W. Bradley, Ph.D. at 301–402–0540 or *bradleyda@nidcr.nih.gov* for more information.

Dated: January 21, 2010.

Richard U. Rodriguez,

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

[FR Doc. 2010–1680 Filed 1–27–10; 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.

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Nitric Oxide-Based Therapeutics for Lung Cancer

Description of Invention: JS–36–25, a diazeniumdiolate prodrug, is available for licensing and development of treatments for lung cancer. The inventors have demonstrated a potent tumoristatic activity of JS–36–25 in both lung cancer cells in vitro and as xenografts in mice. JS–36–25 treatment led to 85% reduction of tumor growth in vivo. The tumoristatic potency of the compound correlated well with the level of endogenous reactive oxygen species (ROS) in the cancer cells. Thus, in addition to potent tumoristatic activity when administered alone, this compound is predicted to have a strong synergy with therapeutics that act through generation of ROS, such as bortezomib, doxorubicin, as well as high-energy radiation.

Applications: Development of lung cancer treatments.

Development Status: Pre-clinical.

Market: There are over 160,000 new cases of lung cancer every year in the United States alone.

Inventors: Anna E. Maciag *et al.* (NCI).

Patent Status: U.S. Provisional Application No. 61/261,175 filed 13 November 2009 (HHS Reference No. E–025–2010/0–US–01).

Licensing Status: Available for licensing.

Licensing Contact: Steve Standley, Ph.D.; 301–435–4074; *sstand@od.nih.gov.*

T-Cell-Specific Gfi-1 Knockout Mouse

Description of Invention: This is a mouse model available to study T-cell differentiation. Growth factor independent 1 (GFi-1) is a transcriptional repressor that is transiently induced during T-cell activation. This knockout mouse line is a GFi-1[flox/flox] introduced into a mouse Cre controlled by a CD4 promoter, which allows selective removal of GFi-1 exclusively in T-cells. It has thus-far been used to demonstrate that GFi-1 plays a critical role in enhancing Th2 cell expansion and repressing induction of Th17 and CD103+ iTreg cells.

Applications: Tool for studying T-cell proliferation and differentiation.

Inventors: Jinfang Zhu and William E. Paul (NIAID).

Related Publication: J Zhu, TS Davidson, G Wei, D Jankovic, K Cui, DE Schones, L Guo, K Zhao, EM Shevach, WE Paul. Down-regulation of Gfi-1 expression by TGF-beta is important for differentiation of Th17 and CD103+ inducible regulatory T cells. J Exp Med. 2009 Feb 16;206(2):329–341. [PubMed: 19188499].

Patent Status: HHS Reference No. E–242–2009/0—Research Tool. Patent protection is not being pursued for this technology.

Licensing Status: This technology is available as a research tool under a Biological Materials License.

Licensing Contact: Steve Standley, Ph.D.; 301–435–4074; *sstand@od.noh.gov.*

Dated: January 21, 2010.

Richard U. Rodriguez,

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

[FR Doc. 2010–1668 Filed 1–27–10; 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.

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