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Dated: February 27, 2014.

Leslie Kux,

Assistant Commissioner for Policy.

[FR Doc. 2014-04811 Filed 3-4-14; 8:45 am]

BILLING CODE 4160-01-P

## 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.

#### Software for 3D Spectral Fingerprint Based Consensus Modeling Using Orthogonal PLS and Tanimoto Similarity KNN Techniques

*Description of Technology:* This technology is a software tool for improving molecular modeling. The software addresses data matrices processed in rows instead of columns and the result of these approaches are combined. To process data in rows, the technique uses a measure of similarity known as "Tanimoto Similarity" operating on pairs of objects. The property values of the top most similar objects are normalized and used as coefficients to predict the property of

interest. These predictions can then be used in combination with the predictions obtained by multivariate techniques to improve the quality of the consensus model in comparison to the individual predictions. Since, in the case of multivariate techniques, the information is accessed in columns, while for the similarity based technique it is accessed in rows, the two types of techniques provide complementary information. Thus, more useful information can be extracted from the same data matrix. Also contemplated is the use of consensus modeling by letting two algorithms (PLS and KNN) operate on descriptor matrices of different size. If each of these matrices is processed by a different model building algorithm and a consensus model between two or more such individual models is built, the resulting model would benefit from both: i) the partial orthogonality of the modeling techniques and ii) the complementarity of the information contained in 3D-SDAR matrices of different granularity.

#### Potential Commercial Applications:

- Drug Design
- Drug Development

#### Competitive Advantages:

- Matrix processing of molecules of biological interest
- High Fit-Activity Prediction capacity

#### Development Stage:

- Early-stage
- In vitro data available

*Inventors:* Svetoslav H. Slavov, Jon G. Wilkes, Rick Beger, Dan A. Buzatu, Bruce A. Pearce (all of FDA)

#### Publications:

1. Slavov SH, et al. <sup>13</sup>C NMR-distance matrix descriptors: optimal abstract 3D space granularity for predicting estrogen binding. *J Chem Inform Model.* 2012 Jul 23;52(7):1845-64. [PMID 22681591]

2. Slavov SH, et al. Complementary PLS and KNN algorithms for improved 3D-QSDAR consensus modeling of AhR binding. *J Cheminform.* 2013 Nov 21;5(1):47-62. [PMID 24257141]

3. Stoyanova-Slavova IB, et al. PLS and KNN algorithms for improved 3D-QSDAR consensus modeling of acute toxicity. *Environ Toxicol Chem.* 2014 Jan 27 (Epub ahead of print). [PMID 24464801]

*Intellectual Property:* HHS Reference No. E-015-2014/0—Software Materials. Patent protection is not being pursued for this technology.

#### Related Technologies:

- HHS Reference No. E-209-1999/1—US Patent 6,898,533 issued 24 May 2005
- HHS Reference No. E-297-2001/0—US Patent 7,996,156 issued 09 Aug 2011

*Licensing Contact:* Michael Shmilovich, Esq., CLP; 301-435-6019; [shmilovm@mail.nih.gov](mailto:shmilovm@mail.nih.gov).

*Collaborative Research Opportunity:* The Food and Drug Administration is seeking

statements of capability or interest from parties interested in collaborative research to further develop, evaluate or commercialize Molecular Modeling/Drug Design. For collaboration opportunities, please contact Ashley Groves at 870-543-7956.

#### Multivalent, Multiple-Antigenic-Peptides for Serological Detection of HIV-1 Groups -M, -N, -O, and HIV-2

*Description of Technology:* This CDC-developed invention pertains to multivalent antigenic peptides (MAPs) that can be used in a variety of HIV/AIDS diagnostics. There are two types of HIV: HIV-1 and HIV-2. HIV-1 is subdivided into groups M, N, and O, while HIV-2 is subdivided into subtypes A and B. Within HIV -1 group M, several different subtypes and numerous forms of recombinant viruses exist. To detect all types, groups, and subtypes of HIV by serological methods, a mixture of antigens derived from different viral strains representing different HIV types and subtypes is needed. However, due to the competition and dilution effect, mixing multiple antigens may reduce the amount of individual antigen bound to the solid phase and lead to a reduction in assay sensitivity.

It is known that MAPs, which contain multiple branches of an oligopeptide sequence, are more antigenic than the corresponding single chain linear peptides. The MAPs encompassed by this technology contain multiple branches of oligopeptides of different sequences, derived from HIV-1 group M, N, O, and HIV-2. Thus, depending on the peptide sequences incorporated, a single MAP can be used to detect HIV-1 group M alone, HIV-2 alone, or to simultaneously detect HIV-1 groups M, N, O, and HIV-2 with high sensitivity and specificity.

#### Potential Commercial Applications:

- Diagnostic test for HIV-1 and/or HIV-2 infection
- Blood and plasma donation screening
- HIV/AIDS surveillance and monitoring programs

#### Competitive Advantages:

- Lateral flow assays for HIV detection and discrimination
- On-site, point-of-care testing and diagnosis
- Easily formulated as an ELISA kit for commercial or research applications
- Technology can be used to develop a rapid, low-cost method of determining HIV status for home-use or low-resource settings

#### Development Stage:

*Inventor:* Chou-Pong Pau (CDC)

#### Publications:

1. Granade TC, et al. Rapid detection and differentiation of antibodies to HIV-1 and HIV-2 using multivalent antigens and magnetic immunochromatography testing. *Clin Vaccine Immunol.* 2010 Jun;17(6):1034-9. [PMID 20410326]
2. Pau C, et al. Chimeric multiple antigenic peptides for the simultaneous detection of specific antibodies to HTV-1 groups M, N, O, and HIV-2. *J Immunol Methods.* 2007 Jan 10;318(1-2):59-64. [PMID 17169369]

3. Kim P and Pau CP. Comparing tandem repeats and multiple antigenic peptides as the antigens to detect antibodies by enzyme immunoassay. *J Immunol Methods*. 2001 Nov 1;257(1-2):51-4. [PMID 11687238]

**Intellectual Property:** HHS Reference No. E-604-2013/0—Research Tool. Patent protection is not being pursued for this technology.

**Related Technologies:**

- HHS Reference No. E-052-2013/0
- HHS Reference No. E-053-2013/0
- HHS Reference No. E-173-2013/0
- HHS Reference No. E-232-2013/0
- HHS Reference No. E-259-2013/0
- HHS Reference No. E-294-2013/0
- HHS Reference No. E-357-2013/0
- HHS Reference No. E-358-2013/0
- HHS Reference No. E-522-2013/0
- HHS Reference No. E-555-2013/0
- HHS Reference No. E-638-2013/0

**Licensing Contact:** Whitney Blair, J.D., M.P.H.; 301-435-4937; [whitney.blair@nih.gov](mailto:whitney.blair@nih.gov).

**Recombinant, Multivalent Malarial Antigens for Development of Therapeutics, Diagnostics and/or a Multistage Vaccine for *Plasmodium falciparum***

**Description of Technology:** This CDC-generated technology relates to a recombinant, multivalent and multi-stage malaria vaccine and, more specifically, to antigenic proteins useful for preventing or treating *Plasmodium falciparum* malarial infections. Malaria continues to be a public health problem throughout the world and *P. falciparum* is often identified as the cause of the most severe forms of the disease. Ideally, an effective malaria vaccine would contain a combination of key antigens/epitopes from different stages of the pathogen's complex life-cycle. This approach to vaccination would likely result in the induction of both humoral and cellular immunity for optimal efficacy and a broad scope of protection.

This technology entails a multi-stage vaccine against malaria that is effective in inhibiting reproductive growth of the parasite within a human or animal after initial infection. Further, the technology includes antibodies against a recombinant protein containing antigenic epitopes to varied life-cycle stages of a malarial *Plasmodium* species. These antigens and antibodies may be useful as research tools or diagnostic reagents for the detection and diagnosis of *P. falciparum* at a number of different life-cycle stages within a biological sample.

**Potential Commercial Applications:**

- Malaria vaccine development
- Useful for malaria vaccination and surveillance programs
- Military, foreign service applications
- Mitigation of zoonotic disease transmission and livestock morbidity, especially within South Asia

**Competitive Advantages:**

- Single vaccine confers immunity against the malarial parasite at multiple life cycle stages, increasing the chances of neutralizing sustained infection
- In vivo animal studies demonstrate vaccine efficacy

**Development Stage:**

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

**Inventors:** Altaf A. Lal (CDC), Ya-Ping Shi (CDC), Seyed P. Hasnain (National Institute of Immunology—India)

**Publication:** Shi YP. Immunogenicity and in vitro protective efficacy of a recombinant multistage *Plasmodium falciparum* candidate vaccine. *Proc Natl Acad Sci U S A*. 1999 Feb 16;96(4):1615-20. [PMID: 9990073]

**Intellectual Property:** HHS Reference No. E-451-2013/0—

- US Patent No. 6,828,416 issued 07 Dec 2004
- Various international patent applications pending or issued

**Licensing Contact:** Whitney Blair, J.D., M.P.H.; 301-435-4937; [whitney.blair@nih.gov](mailto:whitney.blair@nih.gov).

**Air Quality Assurance: A Monitor for Continuous, Simultaneous Analysis of Atmospheric or Aerosolized Particulate Mixtures**

**Description of Technology:** This technology pertains to monitors for measuring the mass concentration of ambient particulate matter in an atmosphere containing both larger/coarser (e.g., respirable dust) and smaller/finer (sub-micrometer particles such as diesel particulate matter—DPM) particulate mixtures. The monitoring device can be configured for operation with a controller unit adapted to ionization sensor and/or light-scattering modules. The controller translates the sensor output signal into a quantifiable value, determining mass concentration of particulate matter within the ionization chamber. For example, practical applications of this monitor/analysis technology would easily extend to use in mining operations (where both DPM and respirable dust exist in abundance), industrial manufacturing facilities, and anywhere that frequent or extended exposure to fuel-combustion exhaust or airborne pollution is a concern. Further, by virtue of its ability to distinguish “fire smoke” from other aerosols that may be present, the device also has significant potential for use in early-warning fire detection.

**Potential Commercial Applications:**

- Airborne particle monitor for mining and industrial manufacturing operations
- Addressing emissions control standards and regulations
- Early-warning fire detection in locations where traditional smoke-detector use is impractical

**Competitive Advantages:**

- Inexpensive and simple to implement
- Device provides continuous, simultaneous, and independent measurement of both respirable dust and diesel particulate matter (DPM) mass concentrations
- Previous particulate counting technologies are both expensive and cannot provide accurate quantification of coarse/fine aerosol mixtures, concentrations

**Development Stage:**

- In situ data available (on-site)
- Prototype

**Inventors:** Charles D. Litton, Jon C. Volkwein, William H. Schiffbauer (all of CDC)

**Intellectual Property:** HHS Reference No. E-240-2013/0—US Patent No. 6,965,240 issued 27 Mar 2003

**Licensing Contact:** Whitney Blair, J.D., M.P.H.; 301-435-4937; [whitney.blair@nih.gov](mailto:whitney.blair@nih.gov).

**A Targeted Therapy for the Activated B Cell-Like Subtype of Diffuse Large B Cell Lymphoma**

**Description of Technology:** NIH scientists have developed novel peptides that specifically target the activated B cell like (ABC) subtype of diffuse large B cell lymphoma (DLBCL), which is the least curable form of this aggressive lymphoma.

ABC DLBCL is characterized by constitutive NF- $\kappa$ B pathway activation, which depends on the binding of two protein molecules, RNF31 and RBCK1. These cell-permeable peptides compete against endogenous RNF31, therefore inhibit the NF- $\kappa$ B induction pathway and kill the malignant cells.

This technology would be a potential targeted therapy for ABC DLBCL, and could be combined with radiation or chemotherapy for ABC DLBCL or other cancers.

Additionally, these peptides could also be applied to treat rheumatoid arthritis, chronic autoinflammation, systemic lupus erythematosus, Crohn's inflammatory bowel disease, or psoriasis.

**Potential Commercial Applications:**

- Targeted therapies for ABC DLBCL.
- Combination cytotoxic chemotherapies for ABC DLBCL.
- Treatment for other cancers or autoimmune/inflammatory diseases that depend upon the function of RNF31 and RBCK1 combination.

**Competitive Advantages:**

- Novel composition of inhibitors for ABC DLBCL.
- Novel targeted drug to ABC DLBCL.
- Effective therapies targeting at NF- $\kappa$ B pathway.

**Development Stage:**

- Early-stage
- In vitro data available

**Inventors:** Louis M. Staudt, Yibin Yang, Federico Bernal (all of NCI)

**Publication:** Yang Y, et al. Essential Role of the Linear Ubiquitin Chain Assembly Complex in Lymphoma Revealed by Rare Germline Polymorphisms. *Cancer Discov*. 2014 Feb 3 (Epub ahead of print). [PMID 24491438]

**Intellectual Property:** HHS Reference No. E-035-2013/0—US Provisional Application No. 61/789,064 filed 15 March 2013

**Licensing Contact:** Sabarni Chatterjee, Ph.D., MBA; 301-435-5587; [chatterjeesa@mail.nih.gov](mailto:chatterjeesa@mail.nih.gov).

**Collaborative Research Opportunity:** The National Cancer Institute is seeking statements of capability or interest from parties interested in collaborative research to further develop, evaluate or commercialize the inhibitors of the LUBAC ubiquitin ligase for the therapy of lymphoma and autoimmune diseases. For collaboration

opportunities, please contact John D. Hewes, Ph.D. at [hewesj@mail.nih.gov](mailto:hewesj@mail.nih.gov).

#### **Mutation Based Control Plasmids for Standardizing Cancer Genomic Diagnostic Assays**

*Description of Technology:* To date, there are no widely accepted standards and controls for multi-analyte based diagnostic assays. The ability to compare the accuracy of different types of assay results and to utilize in process controls is hampered by the lack of availability of such standards/controls. Variations resulting from different platforms, methodologies, and bioinformatics analyses therefore create error in the interpretation of assay reports and different results may occur when testing for the presence or absence of specific gene mutations or biomarkers.

This technology includes a library of plasmids that can be used to test for and control for accuracy, sensitivity, and specificity and reproducibility within an assay and across different assays or laboratories and platforms. These standards consist of normal human reference genomic DNA that have engineered to contain known sequence variations representing somatic mutations of interest to cancer management. The plasmids contain approximately 1000 bases of human sequence. Each inserted sequence carries a specific mutation of interest within the appropriate genomic locus and a mutation adjacent alien barcode. The plasmids can be mixed with non-mutant genomes to create exact variant to normal allele frequencies for limit of detection studies. The alien barcode unequivocally indicates the detected mutation is from the plasmid spiked into a test human specimen. If needed for certain applications the barcode can be left out of design.

#### *Potential Commercial Applications:*

- Quantified standards for scientists to compare, optimize and/or validate assays
- Assess specificity, sensitivity, accuracy and limit detection of artifacts during assay development
- Internal in process run controls to monitor assay performance

#### *Competitive Advantages:*

- Reference materials for comparing results of assays performed by different platforms, operators, times, and sites
- Ability to uniquely distinguish plasmid control mutations spiked directly into unknown samples by alien barcode
- No limit in the number and types of mutation plasmids introduced into the test human specimen, unlike engineered cell line genome based mutation controls
- Easy design and manufacture process

#### *Development Stage:* In vitro data available

*Inventors:* Chih-Jian Lih, Paul Williams, David Sims, Michele Mehaffey (all of NCI)

*Publications:* Manuscripts in preparation.

*Intellectual Property:* HHS Reference No. E-265-2012/0—Research Tool. Patent protection is not being pursued for this technology.

*Licensing Contact:* Jennifer Wong, M.S.; 301-435-4633; [wongje@mail.nih.gov](mailto:wongje@mail.nih.gov)

*Collaborative Research Opportunity:* The National Cancer Institute, Cancer Diagnosis

Program, is seeking statements of capability or interest from parties interested in collaborative research to further develop, evaluate or commercialize Mutation Based Control Plasmids for Standardizing Cancer Genomic Diagnostic Assays. For collaboration opportunities, please contact John Hewes, Ph.D. at [john.hewes@nih.gov](mailto:john.hewes@nih.gov).

#### **Use of Soluble CD27 as Potential Immunotherapy and a Diagnostic and Prognostic Serum Biomarker for Solid Tumors**

*Description of Technology:* The present invention discloses methods for diagnosing a patient with a solid tumor or a predisposition to developing a solid tumor, a patient's suitability for immunotherapy and monitor disease progression in a patient undergoing treatment for a solid tumor, such as a prostate or colorectal tumor, by measuring the amount of soluble CD27 (sCD27) present in a serum sample obtained from a patient and detecting the amount of sCD27 present in the serum sample. Additionally, sCD27 can also be developed an immunotherapeutic product. Such product will constitute the administration of a therapeutically effective amount of sCD27 or a functional 15 fragment thereof that is capable of stimulating a patient's immune system.

CD27 is a tumor necrosis factor receptor. A soluble form of CD27 (sCD27), is a 32-kD protein identical to the extracellular domain of membrane-bound CD27. CD27's role in T cell activation has been previously demonstrated.

#### *Potential Commercial Applications:*

- Serum biomarker for diagnosis, prognosis and therapeutic response.
- Can potentially be developed into an immunotherapeutic product.

#### *Competitive Advantages:*

- Potentially can be used with clinically proven platforms.
- Can be developed into a minimally invasive diagnostic test using patient's blood sample.

#### *Development Stage:*

- Early-stage
- In vitro data available

*Inventors:* Jeffrey Schlom and Jianping Huang (NCI)

*Publication:* Huang J, et al. Soluble CD27-pool in humans may contribute to T cell activation and tumor immunity. *J Immunol.* 2013 Jun 15;190(12):6250–8. [PMID 23677477]

*Intellectual Property:* HHS Reference No. E-005-2011/0—US Patent Application No. 61/824,898 filed 17 May 2013

*Licensing Contact:* Sabarni Chatterjee, Ph.D., MBA; 301-435-5587; [chatterjeesa@mail.nih.gov](mailto:chatterjeesa@mail.nih.gov)

*Collaborative Research Opportunity:* The National Cancer Institute, Laboratory of Metabolism, is seeking statements of capability or interest from parties interested in collaborative research to further develop, evaluate or commercialize a non-invasive assay for the detection of colorectal cancer. For collaboration opportunities, please contact John D. Hewes, Ph.D. at [hewesj@mail.nih.gov](mailto:hewesj@mail.nih.gov).

#### **The Use of alpha-4 beta-7 integrin Inhibitors To Inhibit HIV Transmission and Infection**

*Description of Technology:* This invention involves the use of inhibitors of alpha-4 beta-7 ( $\alpha 4 \beta 7$ ) integrin to inhibit HIV transmission/infection, as a prophylactic to inhibit onset of the acute stage of HIV infection or to treat HIV infection. The  $\alpha 4 \beta 7$  integrin inhibitors were previously developed for use in other diseases, such as multiple sclerosis or inflammatory bowel disease.

$\alpha 4 \beta 7$  integrin is a multifaceted target for HIV infection and recent studies indicate that it is important for establishing HIV infection through multiple paths. Studies indicate that: (1) CD4 T-cells present in vaginal and anal mucosa have high levels of  $\alpha 4 \beta 7$  integrin, making CD4 T-cells permissive to HIV infection; (2)  $\alpha 4 \beta 7$  integrin is important for cell to cell transmission of HIV; (3)  $\alpha 4 \beta 7$  integrin is used to dysregulate the host humoral response to HIV; and (4) HIV acts on  $\alpha 4 \beta 7$  integrin through an epitope in V2 loop of GP120, identified as important for HIV vaccine protection. Additionally, primate studies indicate that  $\alpha 4 \beta 7$  integrin inhibition of HIV infection preserves gut-associated lymphoid tissue (GALT) generally destroyed during the acute phase of HIV infection.

#### *Potential Commercial Applications:*

Prevention and treatment of HIV infection

#### *Competitive Advantages:*

- $\alpha 4 \beta 7$  integrin is a multifaceted target for HIV infection
- Previously developed  $\alpha 4 \beta 7$  integrin inhibitors can be used for a new purpose

#### *Development Stage:*

- Pre-clinical
  - In vitro data available
  - In vivo data available (animal)
- Inventors:* James Arthos, Claudia Cicala, Anthony S. Fauci, Diana Goode (all of NIAID)

#### *Publications:*

1. Martinelli E, et al. The frequency of  $[\alpha]_4[\beta]_7^{\text{high}}$  memory CD4<sup>+</sup> T cells correlates with susceptibility to rectal simian immunodeficiency virus infection. *J Acquir Immune Defic Syndr.* 2013 Dec 1;64(4):325–31. [PMID 23797688]
2. Nawaz F, et al. The genotype of early-transmitting HIV gp120s promotes  $\alpha 4 \beta 7$ -reactivity, revealing  $\alpha 4 \beta 7^+$ /CD4<sup>+</sup> T cells as key targets in mucosal transmission. *PLoS Pathog.* 2011 Feb;7(2):e1001301. [PMID 21383973]
3. Cicala C, et al. The integrin  $\alpha 4 \beta 7$  forms a complex with cell-surface CD4 and defines a T-cell subset that is highly susceptible to infection by HIV-1. *Proc Natl Acad Sci U S A.* 2009 Dec 8;106(49):20877–82. [PMID 19933330]
4. Arthos J, et al. HIV-1 envelope protein binds to and signals through integrin  $\alpha 4 \beta 7$ , the gut mucosal homing receptor for peripheral T cells. *Nat Immunol.* 2008 Mar;9(3):301–9. [PMID 18264102]

#### *Intellectual Property:*

- HHS Reference No. E-055-2007/0—US Provisional Patent Application No. 60/873,884 filed 07 Dec 2006
- HHS Reference No. E-055-2007/1—US Provisional Patent Application No. 60/920,880 filed 30 Mar 2007

- HHS Reference No. E-055-2007/2—US Provisional Patent Application No. 60/957,140 filed 21 Aug 2007
- HHS Reference No. E-055-2007/3—PCT Patent Application No. PCT/US2007/086663 filed 06 Dec 2007, which published as WO 2008/140602 on 20 Nov 2008, and corresponding European Application No. 07874349.9; US Patent Application No. 12/518,035 filed 05 Jun 2009

*Licensing Contact:* Cristina Thalhammer-Reyero, Ph.D., M.B.A.; 301-435-4507; [thalhamc@mail.nih.gov](mailto:thalhamc@mail.nih.gov).

*Collaborative Research Opportunity:* The National Institute of Allergy and Infectious Diseases is seeking statements of capability or interest from parties interested in collaborative research to further develop, evaluate or commercialize alpha-4 beta-7 integrin inhibitors. For collaboration opportunities, please contact Bill Ronnenberg, JD/MIP, MS at 301-451-3522 or [wr78k@nih.gov](mailto:wr78k@nih.gov).

### Beta-Amyloid and Tau Fibril Positron Emissions Tomography (PET) Imaging Agents

*Description of Technology:* The invention relates to two novel classes of compounds useful as radioligands for in vivo imaging of beta-amyloid fibrils, peptides and plaques in humans. Beta-amyloid peptide deposition in the brain is a pathological feature of Alzheimer's disease (AD). Early detection of beta-amyloid load in patients with suspected AD is vital to initiating early treatment, which can improve cognitive function and quality of life for many patients. The invention describes novel derivatives of imidazopyridinylbenzeneamine (IMPY) and benzothiazolylbenzeneamine (BTA), which demonstrate high in vitro binding affinity to human beta-amyloid. The difference between existing IMPY compounds and the novel derivatives is the substitution of an aryl halide with an aryl thioether group and replacement of a sulfur group of the pyridine ring with a nitrogen group. The new classes of compounds have the potential of providing improved amyloid imaging agents for Positron Emission Tomography (PET) with higher specificity for amyloid, low background noise, better entry into the brain and improved labeling efficiency.

#### *Potential Commercial Applications:*

- Alzheimer's disease
- Alzheimer's disease diagnostics
- Alzheimer's disease early detection

#### *Competitive Advantages:* Specificity

*Development Stage:* In vitro data available

*Inventors:* Lisheng Cai, Victor W. Pike, Robert B. Innis (all of NIMH)

#### *Publications:*

1. Nichols L, et al. Imaging and in vivo quantitation of beta-amyloid: an exemplary biomarker for Alzheimer's disease? *Biol Psychiatry*. 2006 May 15;59(10):940-7. [PMID 16487944]
2. Toyama H, et al. PET imaging of brain with the beta-amyloid probe, [11C]6-OH-BTA-1, in a transgenic mouse model of Alzheimer's disease. *Eur J Nucl Med Mol Imaging*. 2005 May;32(5):593-600. [PMID 15791432]
3. Cai L, et al. Synthesis and evaluation of two 18F-labeled 6-iodo-2-(4'-N,N-

dimethylamino)phenylimidazo[1,2-a]pyridine derivatives as prospective radioligands for beta-amyloid in Alzheimer's disease. *J Med Chem*. 2004 Apr 22;47(9):2208-18. [PMID 15084119]

*Intellectual Property:* HHS Reference No. E-156-2006/0—

- US Patent Application 12/293,940 filed September 17, 2008 (allowed)
- European Patent Application 07797254.5 filed April 19, 2007 (pending)

#### *Related Technologies:*

- HHS Reference No. E-136-2008/0—"Beta Amyloid PET Imaging Agents Based On 2-(4-phenyl)benzo[d]thiazole Derivatives"
- HHS Reference Nos. E-225-2011/0 and/1—"Beta-amyloid PET Imaging Agents Based On Benzothiazoles (BTA) Derivatives"

*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 Mental Health is seeking statements of capability or interest from parties interested in collaborative research to further develop, evaluate or commercialize Alzheimer's disease diagnostics. For collaboration opportunities, please contact Suzanne Winfield, Ph.D. at 301-402-4324.

Dated: February 27, 2014.

**Richard U. Rodriguez,**

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

[FR Doc. 2014-04771 Filed 3-4-14; 8:45 am]

**BILLING CODE 4140-01-P**

## DEPARTMENT OF HEALTH AND HUMAN SERVICES

### National Institutes of Health

#### National Institute on Deafness and Other Communication Disorders; Notice of Closed Meetings

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 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 Institute on Deafness and Other Communication Disorders Special Emphasis Panel; Neural/Vestibular Prosthesis Review.

*Date:* March 21, 2014.

*Time:* 2:00 p.m. to 3:30 p.m.

*Agenda:* To review and evaluate grant applications.

*Place:* National Institutes of Health Neuroscience Center, 6001 Executive Boulevard, Rockville, MD 20852 (Telephone Conference Call).

*Contact Person:* Kausik Ray, Ph.D., Scientific Review Officer, National Institute on Deafness and Other Communication Disorders, National Institutes of Health Rockville, MD 20850, 301-402-3587, [rayk@nidcd.nih.gov](mailto:rayk@nidcd.nih.gov).

*Name of Committee:* National Institute on Deafness and Other Communication Disorders Special Emphasis Panel; VSL Translational Applications Review.

*Date:* March 27, 2014.

*Time:* 3:30 p.m. to 5:30 p.m.

*Agenda:* To review and evaluate grant applications.

*Place:* National Institutes of Health, Neuroscience Center, 6001 Executive Boulevard, Rockville, MD 20852 (Telephone Conference Call).

*Contact Person:* Christine A. Livingston, Ph.D., Scientific Review Officer, Division of Extramural Activities, National Institutes of Health/NIDCD, 6001 Executive Blvd.—Room 8343, Bethesda, MD 20892, (301) 496-8683, [livingsc@mail.nih.gov](mailto:livingsc@mail.nih.gov).

(Catalogue of Federal Domestic Assistance Program Nos. 93.173, Biological Research Related to Deafness and Communicative Disorders, National Institutes of Health, HHS)

Dated: February 27, 2014.

**Melanie J. Gray,**

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

[FR Doc. 2014-04767 Filed 3-4-14; 8:45 am]

**BILLING CODE 4140-01-P**

## DEPARTMENT OF HEALTH AND HUMAN SERVICES

### National Institutes of Health

#### National Institute of General Medical Sciences; Notice of Closed Meetings

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 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 Institute of General Medical Sciences Special Emphasis Panel; Review of K99 Grant Applications.

*Date:* March 25, 2014.

*Time:* 8:00 a.m. to 5:00 p.m.