

This invention relates to a novel magnetic resonance angiography (MRA) method that accomplishes uniform contrast enhancement between coronary arteries and the surrounding tissue across the entire imaging volume. The disclosed technique utilizes an adiabatic refocusing transverse relaxation time ( $T_2$ )-preparation pulse sequence, in which the magnetization is tipped into the transverse plane with a hard radio-frequency (RF) pulse and refocused using a pair of adiabatic fast-passage RF pulses. The isochromats are subsequently returned to the longitudinal axis using a hard RF pulse. Simulations and in vivo images acquired with the  $T_2$ -Prep sequence illustrate excellent suppression of artifacts originating from  $B_1$  inhomogeneity while achieving contrast-to-noise (CNR) enhancement between coronary arteries and surrounding tissues. Furthermore, images acquired with the  $T_2$ -Prep sequence show suppression of the banding artifacts and improvement of the visual sharpness of distal segments of the coronaries as compared to images acquired without the  $T_2$ -Prep sequence.

#### **Novel Methods and Compositions for Diagnosing AIDS and Other Diseases Involving Immune System Activation**

Gene M. Shearer and Jean-Philippe Herbeuval (NCI).

U.S. Provisional Application No. 60/564,588 filed April 23, 2004 (HHS Reference No. E-045-2004/0-US-01) and U.S. Provisional Application No. 60/634,255 filed December 12, 2004 (HHS Reference No. E-045-2004/1-US-01), combined into PCT/US2005/13554 filed April 21, 2005 (HHS Reference No. E-045-2004/2-PCT-01).

Licensing Contact: Cristina Thalhammer-Reyero; 301/435-4507; [thalhamc@mail.nih.gov](mailto:thalhamc@mail.nih.gov).

Available for licensing and commercial development are methods and compositions suitable for monitoring the progression of AIDS and other diseases whose progression involves immune system activation in mammals, such as cancer, atherosclerosis, Alzheimer's disease, inflammation, autoimmune disorder, allergic asthma, Crohn's disease, Grave's disease, lupus, multiple sclerosis, Parkinson's disease, allograft transplant rejection, and graft vs. host disease.

In particular, the invention relates to the use of the TRAIL (TNF-related apoptosis-inducing ligand) and TRAIL compounds to monitor the progression of AIDS, and such other diseases. This is accomplished by assessing the presence or concentration of TRAIL,

especially mTRAIL, sTRAIL, the TRAIL DR5 receptor molecule, and biological molecules that activate TRAIL or its receptor. These biological molecules include p53, alpha- and beta-interferon, as well as additional compounds such as CD69 and HLA-DR. Also claimed are kits for immunoassays to determine the presence or concentration of a TRAIL compound in a biological fluid, suitable for determining whether the mammal suffers from any of the above diseases.

TRAIL can be used as a new surrogate biomarker to monitor the progression of HIV infection and other conditions and diseases associated with immune system activation. In the case of HIV infection, measuring levels of this biomarker can distinguish among infected individuals with high viral load, infected individuals with low viral load, and uninfected individuals. Only two surrogate markers are currently recognized by the Food and Drug Administration as clinically relevant to HIV progression, HIV viral load and the absolute number of peripheral CD4+ T cells. Tests for assessing HIV viral load employ PCR, the use of which has drawbacks, including cross-contamination. TRAIL has mechanistic implications for HIV-1 pathogenesis and directly correlates to viral load but not necessarily inversely with CD4+ T cell count. Other surrogate markers have been proposed but do not consistently reflect AIDS progression in all individuals or may result in overlooking possible treatments that may affect disease progression but do not affect the chosen marker. Therefore, use of this new biomarker to assess disease progression in infected individuals and to evaluate the effectiveness of various treatment regimens has several advantages over currently used methods, since TRAIL is a death molecule involved in CD4+ T cell depletion in HIV/AIDS. TRAIL, its receptor, and activating molecules can all be used as sensitive markers for CD4 T cell activation and apoptosis.

The technology is further described at:

1. Herbeuval JP, Hardy AW, Boasso A, Anderson SA, Dolan MJ, Dy M, Shearer GM. Regulation of TNF-related apoptosis-inducing ligand on primary CD4+ T cells by HIV-1: role of type I IFN-producing plasmacytoid dendritic cells. *Proc Natl Acad Sci U S A*. September 27, 2005;102(39):13974-9.

2. Herbeuval JP, Grivel JC, Boasso A, Hardy AW, Chougnnet C, Dolan MJ, Yagita H, Lifson JD, Shearer GM "CD4+ T-cell death induced by infectious and noninfectious HIV-1: role of type 1 interferon-dependent, TRAIL/DR5-

mediated apoptosis" *Blood*. November 15, 2005;106(10):3524-31.

3. Herbeuval JP, Boasso A, Grivel JC, Hardy AW, Anderson SA, Dolan MJ, Chougnnet C, Lifson JD, Shearer GM "TNF-related apoptosis-inducing ligand (TRAIL) in HIV-1-infected patients and its in vitro production by antigen-presenting cells" *Blood*. March 15, 2005;105(6):2458-64.

#### **Vessel Delineation in Magnetic Resonance Angiographic Images**

Peter Yim (CC).

U.S. Patent No. 7,003,144 issued February 21, 2006 (HHS Reference No. E-229-1999/0-US-04).

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

This invention relates to advances in magnetic resonance angiography (MRA) or the imaging of blood vessels in the body for the evaluation of vascular pathology. Presented are new methods for processing magnetic resonance angiographic images, or angiograms, to delineate certain vessels in an angiogram. These methods find particular utility in highly vascular regions of the body such as the cerebrum, heart, abdomen and extremities where there is extensive overlapping and variation in the size of the vessels. Current MRA methods are unable to generate high-resolution images of complex vessel geometries in these dynamic environments. The patent application for this invention covers algorithms and computer-implemented methods for tracking the paths of vessels in magnetic resonance angiography. Also covered are similar methods for digital image processing in alternative imaging technologies such as tomography and X-ray angiography.

Dated: March 28, 2006.

**Steven M. Ferguson,**

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

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**BILLING CODE 4140-01-P**

## **DEPARTMENT OF HEALTH AND HUMAN SERVICES**

### **National Institutes of Health**

#### **National Cancer Institute; Notice of Closed Meeting**

Pursuant to section 10(d) of the Federal Advisory Committee Act, as amended (5 U.S.C. Appendix 2), 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 Cancer Institute Special Emphasis Panel, Molecular Biology.

*Date:* May 22–24, 2006.

*Time:* 6 p.m. to 5 p.m.

*Agenda:* To review and evaluate grant applications.

*Place:* Hilton Silver Spring, 8727 Colesville Road, Silver Spring, MD 20910.

*Contact Person:* Michael B. Small, PhD, Scientific Review Administrator, Research Programs Review Branch, Division of Extramural Activities, National Cancer Institute, National Institutes of Health, 6116 Executive Blvd., Room 8127, Bethesda, MD 20892–8328. 301–402–0996. [smallm@mail.nih.gov](mailto:smallm@mail.nih.gov).

(Catalogue of Federal Domestic Assistance Program Nos. 93.392, Cancer Construction; 93.393, Cancer Cause and Prevention Research; 93.394, Cancer Detection and Diagnosis Research; 93.395, Cancer Treatment Research; 93.396, Cancer Biology Research; 93.397, Cancer Centers Support; 93.398, Cancer Research Manpower; 93.399, Cancer Control, National Institutes of Health, HHS)

*Dated:* March 29, 2006.

**Anna Snouffer,**

*Acting Director, Office of Federal Advisory Committee Policy.*

[FR Doc. 06–3222 Filed 4–4–06; 8:45 am]

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## DEPARTMENT OF HEALTH AND HUMAN SERVICES

### National Institutes of Health

#### National Cancer Institute; Notice of Closed Meeting

Pursuant to section 10(d) of the Federal Advisory Committee Act, as amended (5 U.S.C. Appendix 2), 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), as amended. The concept review and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the concept review, the

disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

*Name of Committee:* National Cancer Institute Special Emphasis Panel, P4 Concept Review.

*Date:* April 25, 2006.

*Time:* 8 a.m. to 2 p.m.

*Agenda:* To review and evaluate concept review.

*Place:* Residence Inn Bethesda, 7335 Wisconsin Ave., Bethesda, MD 20814.

*Contact Person:* Timothy C. Meeker, PhD, Scientific Review Administrator, Special Review and Logistics Branch, National Cancer Institute, 6116 Executive Boulevard, Room 8103, Bethesda, MD 20892. 301–594–1279. [meekest@mail.nih.gov](mailto:meekest@mail.nih.gov).

(Catalogue of Federal Domestic Assistance Program Nos. 93.392, Cancer Construction; 93.393, Cancer Cause and Prevention Research; 93.394, Cancer Detection and Diagnosis Research; 93.395, Cancer Treatment Research; 93.396, Cancer Biology Research; 93.397, Cancer Centers Support; 93.398, Cancer Research Manpower; 93.399, Cancer Control, National Institutes of Health, HHS)

*Dated:* March 29, 2006.

**Anna Snouffer,**

*Acting Director, Office of Federal Advisory Committee Policy.*

[FR Doc. 06–3223 Filed 4–4–06; 8:45 am]

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## DEPARTMENT OF HEALTH AND HUMAN SERVICES

### National Institutes of Health

#### National Center on Minority Health and Health Disparities; Notice of Closed Meetings

Pursuant to section 10(d) of the Federal Advisory Committee Act, as amended (5 U.S.C. Appendix 2), 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 Center on Minority Health and Health Disparities Special Emphasis Panel, LRP for Health Disparities & Extramural Clinical Research—Panel B.

*Date:* April 24, 2006.

*Time:* 8:30 a.m. to 5:30 p.m.

*Agenda:* To review and evaluate grant applications.

*Place:* National Institutes of Health, Two Democracy Plaza, 6707 Democracy Boulevard, Bethesda, MD 20892 (Virtual Meeting).

*Contact Person:* Lorrита Watson, PhD., National Center on Minority Health, and Health Disparities, National Institutes of Health, 6707 Democracy Blvd., Suite 800, Bethesda, MD 20892–5465. (301) 402–1366. [watsonl@ncmhd.nih.gov](mailto:watsonl@ncmhd.nih.gov).

*Name of Committee:* National Center on Minority Health and Health Disparities Special Emphasis Panel, Loan Repayment Program for Health Disparities Research—Panel C.

*Date:* May 12, 2006.

*Time:* 8:30 a.m. to 5:30 p.m.

*Agenda:* To review and evaluate grant applications.

*Place:* National Institutes of Health, Two Democracy Plaza, 6707 Democracy Boulevard, Bethesda, MD 20892 (Virtual Meeting).

*Contact Person:* Lorrита Watson, PhD., National Center on Minority Health, and Health Disparities, National Institutes of Health, 6707 Democracy Blvd., Suite 800, Bethesda, MD 20892–5465. (301) 402–1366. [watsonl@ncmhd.nih.gov](mailto:watsonl@ncmhd.nih.gov).

*Dated:* March 29, 2006.

**Anna Snouffer,**

*Acting Director, Office of Federal Advisory Committee Policy.*

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## 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 (5 U.S.C. Appendix 2), 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 contract proposals and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the contract proposals, 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, Long-Term Oxygen Treatment Trial.

*Date:* April 12, 2006.

*Time:* 7 p.m. to 11 p.m.

*Agenda:* To review and evaluate contract proposals.

*Place:* Hyatt Regency Bethesda, One Bethesda Metro Center, 7400 Wisconsin Avenue, Bethesda, MD 20814.