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**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.

#### **New Gene Expressed in Prostate Cancer and Methods of Use**

TK Bera, C Wolfgang, I Pastan (NCI), B Lee, J Vincent;

DHHS Reference No. E-005-2002 filed Nov. 14, 2001;

Licensing Contact: Jonathan Dixon; 301/435-5559; [dixonj@od.nih.gov](mailto:dixonj@od.nih.gov).

A new polypeptide is described in this invention that is specifically detected in the cells of the prostate. This polypeptide has been termed Novel Gene Expressed In Prostate (NGEP). There are potential claims to the NGEF gene, polynucleotides encoding NGEF, antibodies to NGEF, methods for using an NGEF polypeptide, polynucleotide, or antibody, and pharmaceutical compositions containing any of the above NGEF-related molecules. This invention might be useful in prostate cancer diagnostics, such as an assay to detect prostate cancer, or as a therapeutic directed towards prostate cancer.

#### **Use of Interferon-Inducible 2',5'-Oligoadenylate-Dependent RNase in the Diagnosis, Prognosis, and Treatment of Prostate Cancer**

J. Carpten (NHGRI), J. Trent (NHGRI), J. Smith, P. Walsh, W. Isaacs, D. Stephan, and N. Nupponen (NHGRI);

PCT Application PCT/US02/19516 (DHHS Ref. E-196-01/1), claiming priority to a U.S. Provisional Patent Application filed on June 20, 2001;

Licensing Contact: Brenda Hefti; 301/435-4632; [heftib@od.nih.gov](mailto:heftib@od.nih.gov).

This invention pertains to the use of interferon-inducible 2',5'-oligoadenylate-dependent RNase L in the diagnosis, prognosis and treatment of cancer, particularly prostate cancer. The inventors have identified a potential prostate cancer susceptibility

locus, which has been designated HPC1 due to its putative link to hereditary prostate cancer. HPC1 may lead to an early, sensitive and accurate method for detecting cancer or a predisposition to cancer, especially prostate cancer, in a mammal. In addition, such claimed methods can be used to monitor onset and progression of cancer, as well as a patient's response to a particular treatment.

#### **Signal Transduction Inhibitor Compounds in Clinical Trials as Cancer Therapeutics**

Elise C. Kohn, Lance A. Liotta, Christian C. Felder (NCI);

U.S. Patent 5,359,078 issued October 25, 1994;

U.S. Patent 5,482,954 issued January 9, 1996;

U.S. Patent 5,498,620 issued March 12, 1996;

U.S. Patent 5,705,514 issued January 6, 1998;

U.S. Patent 5,880,129 issued March 9, 1999;

Licensing Contact: Brenda Hefti; 301/435-4632; [heftib@od.nih.gov](mailto:heftib@od.nih.gov).

The above issued patents relate to azole, diazole, and triazole compounds that appear to inhibit signal transduction and inhibit invasion and metastasis of malignant solid tumors. A number of these compounds are in phase I, II and III clinical trials for specific indications, and might be useful in other indications as well.

These issued patents claim a number of compositions of matter, pharmaceutical compositions of said compounds, and methods of using said compounds.

Dated: November 4, 2002.

**Jack Spiegel,**

*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**

#### **Government-Owned Inventions; Availability for Licensing**

**AGENCY:** National Institutes of Health, Public Health Service, HHS.

**ACTION:** Notice.

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#### **Tissue Microosmometer**

Ferenc Horkay, Peter J. Bassar, Adam Berman (NICHD)

DHHS Reference No. E-280-2002/0 filed Aug. 07, 2002

Licensing Contact: Dale Berkley; 301/435-5019; [berkleyd@od.nih.gov](mailto:berkleyd@od.nih.gov)

This new tissue microosmometer allows for the quantification of minor changes in the swelling properties of different tissues (e.g. cartilage) using very small amounts of tissue, and can be used as a potential diagnostic technique to detect early stages of cell or tissue injury such as cartilage degeneration or disorder. Varying the vapor pressure in the environment of the device induces controlled changes in the osmotic pressure of a tissue layer attached to the surface of a flat quartz crystal. Variation in the swelling degree is measured with high sensitivity and reliability by monitoring the change in resonance frequency of the quartz crystal. The device requires less than one microgram of sample, and the small tissue sample allows for an extremely fast response time. The device is well suited to the study of expensive or limited availability biological or macromolecular samples.

#### **Method for Convection Enhanced Delivery of Therapeutic Agents**

Edward H. Oldfield (NINDS)

DHHS Reference No. E-202-2002/0 filed Sep. 24, 2002

Licensing Contact: Dale Berkley; 301/435-5019; [berkleyd@od.nih.gov](mailto:berkleyd@od.nih.gov)

The invention is a method for monitoring the spatial distribution of therapeutic substances by MRI or CT that have been administered to tissue using convection-enhanced delivery, a technique that is the subject of NIH-owned U.S. Patent No. 5,720,720. In one embodiment, the tracer is a molecule,

detectable by MRI or CT, which functions as a surrogate for the motion of the therapeutic agent through the solid tissue. In other particular embodiments, the tracer is the therapeutic agent conjugated to an imaging moiety. The method of this invention uses non-toxic macromolecular MRI contrast agents comprised of chelated Gd(III). In particular, the surrogate tracer used in this invention is a serum albumin conjugated with either a gadolinium chelate of 2-(p-isothiocyanatobenzyl)-6-methyldiethylenetriamine pentaacetic acid or with iopanoic acid. These macromolecular imaging agents have clearance properties that mimic the pharmacokinetic properties of co-administrated drugs, so as to be useful in quantifying the range and dosage level of therapeutic drugs using MR imaging.

#### **Refinement of Isointensity Surfaces**

Peter Yim (CC)

DHHS Reference No. E-078-2002/0  
filed Feb 22, 2002

Licensing Contact: Dale Berkley; 301/  
435-5019; [berkleyd@od.nih.gov](mailto:berkleyd@od.nih.gov)

The invention is a method for reconstructing arterial geometry from magnetic resonance angiography (MRA) using isosurfaces deformed to conform to the boundaries of objects in the image with minimal a priori assumptions of object shape. The method determines the degree of stenosis in digital phantoms with an accuracy of at least 10%. This method, unlike previous techniques, does not require the imposition of a pre-defined surface mesh onto the image or user interaction for definition of the vessel axes. Here, the deformable model surface mesh is generated by the isosurface algorithm. Accordingly, the new method requires minimal user interaction and provides highly accurate results when applied to the evaluation of vascular stenoses. The methodology may also be applicable for reconstruction of the geometry of vascular aneurysms from MRA. Other potential applications include precision surface reconstruction of vascular surfaces from computed tomographic angiography (CTA) and precision reconstruction of the surface of the colon from computed tomography (CT).

#### **Automated Centerline Detection Algorithm for Colon-Like 3D Surfaces**

Gheorghe Iordanescu (CC), Ronald Summers (CC), Juan Cebra

DHHS Reference No. E-311-2001 filed  
Dec. 27, 2001

Licensing Contact: Dale Berkley; 301/  
435-5019; [berkleyd@od.nih.gov](mailto:berkleyd@od.nih.gov)

The invention is a method for obtaining the centerline of a colon-like surface, which is an important tool for virtual colonoscopy. The invention uses only three steps: (1) Computing a shrunken version of the colon surface (2) modeling the shrunken colon by an ordered group of 3D points and (3) selecting equally distanced planes to define equal length segments along the centerline. The centerline is a vital parameter for any virtual colonoscopy technique as it defines a navigation path along which the imaging proceeds and it provides a natural coordinate system for describing polyp detections. A virtual colonoscopy method is described and claimed in NIH-owned U.S. Patent No. 6,246,784. However, detecting the centerline of the colon is a challenging problem for which a number of approaches have been developed. Most of these approaches are not fully automatic, are slow and require the original CT images. The method of this invention is fully automatic, relatively quick and uses only the 3D surface rather than the original CT images.

#### **Discovery of Novel Inhibitors of HIV-1 Integrase That Can Be Used for the Treatment of Retroviral Infection Including AIDS**

Terrence R. Burke, Jr., Xuechen Zhang, Godwin C. G. Pais, Christophe Marchand, Evguenia Svarovskaia, Vinay K. Pathak, and Yves Pommier (NCI)

DHHS Reference No. E-317-2001/0  
filed Dec. 07, 2001

Licensing Contact: Sally Hu; 301/435-  
5606; [hus@od.nih.gov](mailto:hus@od.nih.gov)

This invention provides azido group-containing diketo acids that can inhibit HIV-1 integrase in vitro efficiently while being highly selective for the strand transfer step of the integration reaction. Human Immunodeficiency Virus (HIV) and other retroviruses require three viral enzymes for replication: Reverse transcriptase, protease and integrase. The prognosis of AIDS has been improved recently by the discovery and application of reverse transcriptase and protease inhibitors. However, a significant fraction of patients fail to respond to such treatments and viral resistance remains a major problem. Furthermore, anti-AIDS combinations are often not well tolerated. Thus, HIV integrase is a rational target for AIDS therapy because genetic studies demonstrated that the enzyme is essential for viral replication while being without a cellular equivalent. Therefore, specific integrase inhibitors should be effective and devoid of toxicity. Since this invention involves the discovery of novel HIV-1

integrase inhibitors that are derived from diketo acids with a different anti-HIV mechanism from that of reverse transcriptase and protease inhibitors, these azide group-containing compounds may represent potential new therapeutics for treatment of retroviral infections, including AIDS.

Dated: November 4, 2002.

#### **Jack Spiegel,**

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

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#### **Regulation of INS (3456) P4 Signalling by a Reversible Kinase/Phosphatase and Methods and Compositions Related Thereto**

Dr. Stephen Shears (NIEHS)  
DHHS Reference No. E-105-2002/0  
filed Mar 18, 2002

Licensing Contact: Marlene Shinn; 301/  
435-4426; [shinnm@od.nih.gov](mailto:shinnm@od.nih.gov).

Signaling entities are frequently controlled by quite delicate shifts in the dynamic balance of regulatory signals with competing impacts. Ion channels provide particularly impressive