

interested in collaborative research to further develop, evaluate, or commercialize treatments or vaccines against infections caused by enveloped viruses. Please contact Anna Z. Amar at 301/451-3525 and/or aamar@naiid.nih.gov for more information.

Increased Cytokine Expression

Barbara Felber and George Pavlakis (NCI)

U.S. Provisional Application No. 60/758,819 filed 13 Jan 2006 (HHS Reference No. E-254-2005/0-US-01)

U.S. Provisional Application No. 60/758,680 filed 13 Jan 2006 (HHS Reference No. E-267-2005/0-US-01)

Licensing Contact: Susan Ano; 301/435-5515; anos@mail.nih.gov

The current technologies describe optimization of the genes encoding interleukins 12 (IL-12) and 15 (IL-15), resulting in higher levels of protein expression. Cytokines play an important role in both innate and adaptive immune responses. Their utility as immunotherapeutics against infectious disease and cancer as well as vaccine adjuvants has been previously demonstrated. However, cytokine expression from native sequences can be sub-optimal for several reasons, including potential splice sites within RNA and low stability coding sequences. The current technologies offer a means to increase expression of these important molecules. In vitro studies show a 5- to 10-fold mean increase in cytokine protein production. In some instances, further increased expression was achieved by use of a heterologous signal peptide. The subject technologies have application to DNA vaccination and treatment of diseases such as HIV, hepatitis B or C, cancer, and influenza. Some fields of use may not be available for licensing.

Dated: April 24, 2006.

Steven M. Ferguson,

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

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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.

Tetracyclines and Derivatives as Inhibitors of Human Tyrosyl-DNA-phosphodiesterase (Tdp1)

Description of Technology: The invention describes tetracycline compounds and their derivatives as having anticancer activity, as well as methods of treating cancer. Tetracyclines are commonly used as antibiotics, however testing of these compounds in a high throughput screening system for Tdp1 inhibitors revealed them to be potent Tdp1 inhibitors. Tdp1 is known to be important for mutation avoidance under normal growth conditions. Tetracyclines derivatives are expected to increase the selectivity of chemotherapeutic agents (e.g. camptothecin), for tumors, thereby increasing the antitumor activity while reducing their side effects.

Inventors: Yves Pommier, Christophe Marchand, Laurent Thibaut (NCI).

Patent Status: U.S. Provisional Application filed March 27, 2006 (HHS Reference No. E-097-2006/0-US-01).

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

Licensing Contact: Richard Rodriguez; 301/435-4013; rodrigr@mail.nih.gov.

Collaborative Research Opportunity: The Laboratory of Molecular Pharmacology at the National Cancer Institute is seeking statements of capability or interest from parties interested in collaborative research to further develop, evaluate, or commercialize tetracycline derivatives, particularly optimizing them for therapeutic use. Please contact Lisa Finkelstein at 301-451-7458 for more information.

Insect Cell Production of Recombinant Adeno-Associated Virus That Produce Cytotoxic Gene Products and Applications for Solid Tumor Therapy

Description of Technology: Cancer is the second leading cause of death in United States and it is estimated that there will be approximately 600,000 deaths caused by cancer in 2006. Due to the high incidence of death from cancer despite the use of current therapies, there is a strong need for targeted therapeutic approaches such as gene therapy.

This technology describes a new method for targeting solid tumors using gene therapy. More specifically, mammalian HEC-1 has a critical role in chromosome segregation and thus cell division. This technology involves targeted depletion of HEC-1 using shRNA against the HEC-1 mRNA inhibiting cancer cell growth in cell culture models (*in vitro*) as well as regressed tumor size in mouse model (*in vivo*). Additionally, this is the sole technology using an insect cell based recombinant adeno-associated virus (rAAV) gene transfer vehicle with high titer containing the shRNA of interest thus enabling high dosing during therapeutic intervention if necessary. This technology platform has the potential to treat a broad spectrum of cancers and related diseases.

Applications: A new anti-cancer adjuvant therapy for non-resectable tumors targeting HEC-1 protein; a new method involving insect cell based production of recombinant adeno-associated virus (rAAV) gene transfer vehicle.

Market: 600,000 deaths from cancer related diseases estimated in 2006. The technology platform involving new cancer therapy and gene therapy technology has a potential market of more than 50 billion dollars.

Development Status: The technology is currently in pre-clinical stage of development.

Inventors: Robert M. Kotin and Lina Li (NHLBI).

Publications:

1. EN Gurzov *et al.*, "RNA Interference against Hec 1 inhibits tumor growth *in vivo*," *Gene Ther.* 2006 Jan; 13 (1):1-7.

2. JG DeLuca *et al.*, "Hec1 and nuf2 are core components of the kinetochore outer plate essential for organizing microtubule attachment sites," *Mol Biol Cell.* 2005 Feb; 16 (2):519-531.

3. S Martin-Lluesma *et al.*, "Role of Hec1 in spindle checkpoint signaling and kinetochore recruitment of Mad1/Mad2," *Science* 2002 Sep 27; 297 (5590):2267-2270.

4. T Hori *et al.*, "Dynamic behavior of Nuf2-Hec1 complex that localizes to the centrosome and centromere and is essential for mitotic progression in vertebrate cells," *J Cell Sci.* 2003 Aug 15; 116 (Pt 16):3347–3362.

5. Y Chen *et al.*, "Phosphorylation of the mitotic regulator protein Hec1 by Nek2 kinase is essential for faithful chromosome segregation," *J Biol Chem.* 2002 Dec 20; 277 (51):49408–49416.

Patent Status: U.S. Provisional Application No. 60/782,277 filed 15 Mar 2006 (HHS Reference No. E-200-2005/0-US-01).

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

Licensing Contact: Jesse S. Kindra, J.D.; 301/435-5559; kindraj@mail.nih.gov.

Collaborative Research Opportunity: The National Heart, Lung, and Blood Institute, Laboratory of Biochemical Genetics, is seeking statements of capability or interest from parties interested in collaborative research to further develop therapeutics using rAAV-shRNA to induce selective cytotoxicity in primary and metastatic solid tumors. Partners are sought for conducting translational research from preclinical trials to clinical trials. Please contact Dr. Vincent Kolesnichenko, Office of Technology Transfer and Development, NHLBI at 301-594-4115 or by e-mail (vk5q@nih.gov) for more information.

Identification of a Novel Folliculin Interacting Protein, FNIP-1

Description of Technology: Renal cell carcinoma is an important health problem in the United States, affecting 32,000 individuals each year and resulting in 12,000 deaths annually. Several familial cancer disorders with a renal epithelial tumor phenotype have been well characterized and the causative genes have been identified including the Birt-Hogg-Dube (BHD) gene. The BHD gene encodes a protein called folliculin. Mutations in BHD lead to the development of Birt-Hogg-Dube syndrome, a dermatologic disorder associated with an increased risk for developing renal cancer, spontaneous pneumothorax and lung cysts.

This invention describes the cloning and characterization of the first folliculin interacting protein FNIP-1 and purified antibodies that selectively bind to an epitope of FNIP-1. FNIP-1 interacts with subunits of AMP-dependent protein kinase (AMPK). The FNIP-1/AMPK interaction places FNIP-1 and folliculin as potential interactors in cellular pathways essential for regulating cell growth and cell size. FNIP-1 may play an important role in

folliculin's function. Identification of the FNIP-1 cDNA sequence will enable evaluation of sporadic renal tumors, enable the development of cancer diagnostics and aid in the treatment of BHD skin lesions.

Inventors: Laura S. Schmidt *et al.* (NCI).

Patent Status: U.S. Provisional Application No. 60/689,749 filed June 9, 2005 (HHS Reference No. E-139-2005/0-US-01).

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

Licensing Contact: John Stansberry, Ph.D.; 301/435-5236; stansbej@mail.nih.gov.

Collaborative Research Opportunity: The National Cancer Institute, Center for Cancer Research, is seeking statements of capability or interest from parties interested in collaborative research to further develop, evaluate, or commercialize folliculin interacting protein FNIP-1 and purified antibodies. Please contact Kathy Higinbotham at 301-846-5465 or higinbok@mail.nih.gov for more information.

Bone Morphogenetic Variants, Compositions and Methods of Treatment

Description of Technology: The invention identifies proteins belonging to TGF-Beta superfamily that promote repair of menisci, cruciate and collateral ligaments of the knee, and rotator cuff tendons. The application claims nucleic acids encoding human Cartilage-Derived Morphogenetic Protein-1 (hCDMP-1) variant polypeptides. Morphogenetic proteins are able to induce the proliferation and differentiation of progenitor cells into functional bone, cartilage, tendon, or ligament tissue.

Inventors: Malcolm C. Moos *et al.* (FDA).

Patent Status: U.S. Provisional Application No. 60/689,346 filed June 9, 2005 (HHS Reference No. E-196-2004/0-US-01).

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

Licensing Contact: Thomas P. Clouse, J.D.; 301/435-4076; clouset@mail.nih.gov.

Dated: April 25, 2006.

David R. Sadowski,

Acting 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 HOUSING AND URBAN DEVELOPMENT

[Docket No. FR-5052-N-02]

Notice of Proposed Information Collection: Comment Request; Applicant/Recipient Disclosure/Update Report—HUD 2880

AGENCY: Office of the General Counsel, HUD.

ACTION: Notice.

SUMMARY: The proposed information collection requirement described below will be submitted to the Office of Management and Budget (OMB) for review, as required by the Paperwork Reduction Act. The Department is soliciting public comments on the subject proposal.

DATES: *Comments Due Date:* July 3, 2006.

ADDRESSES: Interested persons are invited to submit comments regarding this proposal. Comments should refer to the proposal by name and/or OMB Control Number and should be sent to: Brenda M. Johnson, Reports Liaison Officer, Department of Housing and Urban Development, 451 Seventh Street, SW., Room 10276, Washington, DC 20410-0500.

FOR FURTHER INFORMATION CONTACT:

Timothy Wray, Senior Attorney-Advisor, Ethics Law Division, Office of General Counsel, Department of Housing and Urban Development, 451 Seventh Street, SW., Room 2130, Washington, DC 20410-0500, telephone (202) 708-3815 (this is not a toll-free number). This form can be viewed or accessed at http://www.hudclips.org/sub_nonhud/cgi/pdfforms/2880.pdf.

SUPPLEMENTARY INFORMATION: The Department is submitting the proposed information collection to OMB for review, as required by the Paperwork Reduction Act of 1995 (44 U.S.C. Chapter 35, as amended).

This notice is soliciting comments from members of the public and affecting agencies concerning the proposed collection of information to: (1) Evaluate whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility; (2) Evaluate the accuracy of the agency's estimate of the burden of the proposed collection of information; (3) Enhance the quality, utility, and clarity of the information to be collected; and (4) Minimize the burden of the collection of information on those who are to respond; including through the use of appropriate