

Related Publication: Y Zhang, ZH Zhou, TH Bugge, LM Wahl. Urokinase-type plasminogen activator stimulation of monocyte matrix metalloproteinase-1 production is mediated by plasmin-dependent signaling through annexin A2 and inhibited by inactive plasmin. *J Immunol.* 2007 Sep 1;179(5):3297–3304.

Patent Status: U.S. Provisional Application No. 60/980,009 filed 15 Oct 2007 (HHS Reference No. E-168–2007/0–US–01).

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

Licensing Contact: Tara Kirby, PhD; 301/435–4426; tarak@mail.nih.gov.

Establishment of Two Cell Lines That Stably Express Luciferase for In Vivo Tracking

Description of Technology: Available for licensing are two renal carcinoma cell lines, 786-O(luc) and 786-O/VHL/(luc) which both stably express luciferase. 786-O(luc) lacks von Hippel-Landau (VHL) protein expression and it has constitutively high expression of hypoxia-inducible transcription factor-2alpha (HIF-2alpha). The second stably expresses VHL, a tumor suppressor, and has minimal HIF-2alpha expression. These cell lines can be tracked in vivo and can be used to study VHL-dependent and HIF-2alpha-dependent events such as tumorigenesis. VHL mutations lead to the clinical manifestations of von Hippel-Lindau disease, a rare autosomal dominant syndrome characterized by abnormal growth of blood vessels in multiple organs, including the brain and kidneys.

Applications: Model to study VHL pathology.

Advantages: Cell lines that stably express luciferase for in vivo tracking.

Benefits: Easy, ready to use positive and negative VHL and HIF-2alpha cells that stably express luciferase for in vivo tests.

Market: Incidence of VHL syndrome is 1 in 38,951; HCC is the third leading cause of cancer death worldwide; HCC is the fifth most common cancer in the world; Post-operative five year survival rate of HCC patients is 30–40%.

Inventor: Leonard M. Neckers, Marston Linehan (NCI).

Patent Status: HHS Reference No. E-005–2007/0—Research Tool. Patent protection is not being pursued for this technology.

Licensing Status: Available for non-exclusive licensing.

Licensing Contact: Jennifer Wong; 301/435–4633; wongje@mail.nih.gov.

Collaborative Research Opportunity: The National Cancer Institute (Urologic Oncology Branch) is seeking statements of capability or interest from parties

interested in collaborative research to develop further uses for these two cell lines that stably express luciferase for in vivo tracking. Please contact John D. Hewes, PhD at 301–435–3121 or hewesj@mail.nih.gov for more information.

HIV gp41-Membrane Proximal Region Arrayed on Hepatitis B Surface Antigen Particles for HIV Diagnostic and Vaccine Applications

Description of Invention: This technology describes vectors encoding the membrane proximal region (MPR) and select variants from HIV-1 gp41 linked to the hepatitis B surface antigen (HBsAg) and the resulting expressed particles for use in HIV diagnostic and vaccine applications. HIV-1 gp41 membrane proximal region contains two epitopes recognized by broadly neutralizing human monoclonal antibodies 2F5 and 4E10. However, immunization with gp41 MPR or the 2F5 or 4E10 epitopes have failed to raise neutralizing antibodies. In the subject technology, the particles were shown to bind antibodies from broadly neutralizing human sera and to the two known broadly neutralizing antibodies 2F5 and 4E10 with high relative affinities, demonstrating that the relevant epitopes are accessible for antibody binding and the potential utility of the particles in diagnostic applications. Additionally, these particles could be used to screen phage-display libraries for novel broadly cross-reactive neutralizing antibodies, of which only five are currently known.

These particles could also be used for selection of MPR specific B cells. Lastly, these particles have been shown to be immunogenic and raise antibodies that recognize HIV-1 Env gp160 expressed on the cell surface. These immunogens can elicit neutralizing antibodies specific for HIV gp41 MPR, the MPR of gp41 is highly conserved across various HIV clades and therefore is likely to generate broadly neutralizing antibodies when administered in a proper presentation in a lipid context as is the case in HBsAg particles. Multiple copies of the MPR of HIV-1 gp41 arrayed on the particles could significantly increase the immunogenic potential compared to monomeric molecules. An increase of this nature has been observed with HBsAg and HPV virus-like particles in hepatitis B and cervical cancer vaccines, respectively, suggesting that particulate array may improve the presentation of selected epitopes to the immune system.

Applications: HIV vaccines; HIV diagnostics.

Advantages: These immunogens can elicit neutralizing antibodies specific for

HIV gp41 MPR, which is highly conserved across various HIV clades and therefore is likely to generate broadly neutralizing antibodies when administered in a proper presentation in a lipid context as is the case in HBsAg particles. Multiple copies of the MPR of HIV-1 gp41 arrayed on the particles could significantly increase the immunogenic potential compared to monomeric molecules.

Inventors: Richard T. Wyatt (NIAID), Sanjay K. Phogat (NIAID), Ira Berkower (FDA).

Patent Status: U.S. Provisional Application No. 60/653,930 filed 18 Feb 2005 (HHS Reference No. E-123–2005/0–US–01); PCT Application No. PCT/US2006/005613 filed 17 Feb 2006, which published as WO 2006/112929 on 30 Nov 2006 (HHS Reference No. E-123–2005/1–PCT–01); U.S. Patent Application No. 11/816,069 filed 10 Aug 2007 (HHS Reference No. E-123–2005/1–US–02).

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

Licensing Contact: Susan Ano, Ph.D.; 301/435–5515; anos@mail.nih.gov.

Collaborative Research Opportunity: The NIAID Vaccine Research Center Structural Virology Section is seeking statements of capability or interest from parties interested in collaborative research to further develop, evaluate, or commercialize HIV-1 MPR regions coupled with the hepatitis B surface antigen particles. Please contact Richard Wyatt, Ph.D. at richardwyatt@nih.gov for more information.

Dated: December 11, 2007.

Steven M. Ferguson,

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

[FR Doc. E7–24529 Filed 12–18–07; 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.

Micropatterning of Extracellular Matrix Proteins Using Microphotoablation of Poly Vinyl Alcohol (PVA) Monolayers

Description of Technology: Available for licensure and commercial development is a microphotoablation (μ PA) method used as a micropatterning technique to attach ECM proteins or other biological molecules to specified locations. Advantages of this photolytic technique are that it: (a) Is stampless, (b) allows for flexible pattern generation to the submicron level, (c) allows for live cell fluorescence imaging, retains cell viability, and (d) allows the use of multiple proteins. The technique has demonstrated experimentally that micropatterning with live cell fluorescence imaging can be used to precisely visualize studying distinct cell-ECM interactions.

Applications of microlithography techniques into the study of cell biology aid in resolving cellular function as regulated by the interaction of cells with the extracellular matrix. Currently many techniques have used micro-contact patterning (μ CP) to apply ECM proteins in distinct localized patterns. These techniques require the fabrication of silicone-based stamps to either "ink" proteins directly or indirectly onto a gold coated surface, limiting the user to a specified stamp shape and size. To bypass the necessity of a physical stamp the current technique provides submicron-sized spots using a tunable multiphoton laser coupled to a confocal microscope to photoablate hydrophilic poly vinyl alcohol (PVA) macro-molecular thin films. Through controlled photoablation, PVA layers are locally removed allowing deposition of ECM proteins into distinct patterns. The use of ROI's produces a "virtual mask" that can be created in any shape or pattern and is easily modified. Unlike μ CP techniques, microphotoablation (μ PA) allows live cell imaging of multiple fluorophores and is possible even with total internal reflection

fluorescence (TIRF) microscopy. Therefore, microphotoablation (μ PA) allows kinetic quantification of ECM-cell interactions. This technique that uses a macro-molecular thin film together with localized photoablation allows the versatility to create protein spots of any size or shape easily on the same cover slip. Furthermore, this process can be repeated multiple times to directly conjugate different proteins to the same local region allowing the investigation of how single cells probe their surroundings to discern different ECM proteins.

Applications: Cellular interactions; Protein visualization; Diagnostics.

Inventors: Andrew Doyle (NIDCR), Kenneth Yamada (NIDCR), *et al.*

Relevant Publications

1. CM Cheng, PR LeDuc. Micropatterning polyvinyl alcohol as a biomimetic material through soft lithography with cell culture. *Mol Biosyst.* 2006 Jun;2(6-7):299-303.
2. T Matsuda, T Sugawara. Development of surface photochemical modification method for micropatterning of cultured cells. *J Biomed Mater Res.* 1995 Jun;29(6):749-756.

Patent Status: U.S. Provisional Application No. 60/979,045 filed 10 Oct 2007 (HHS Reference No. E-001-2008/0-US-01).

Licensing Status: Available for licensing.

Licensing Contact: Michael A. Shmilovich, Esq.; 301/435-5019; *shmilovm@mail.nih.gov.*

Collaborative Research Opportunity: The National Institute of Dental and Craniofacial Research is seeking statements of capability or interest from parties interested in collaborative research to further develop, evaluate, or commercialize Microphotoablation of Poly Vinyl Alcohol (PVA) Monolayers. Please contact David W. Bradley, Ph.D. at *bradleyda@nidcr.nih.gov* for more information.

Chimeric SHIV Gag Proteins Optimize T-Cell Response Against HIV Gag

Description of Technology: HIV Gag has been included in nearly all HIV vaccines entering clinical trials because of its importance in SIV models and its correlation with protection in HIV-infected long-term non-progressors. However, HIV Gag has proven less immunogenic than Env in phase I clinical trial studies. Through sequence comparison, two regions in HIV Gag have been identified as contributing to the decreased immunogenicity observed for HIV Gag. Replacement of these regions with corresponding SIV

sequences significantly increased the resulting T-cell response to HIV Gag in mice. Utilization of these chimera in an HIV vaccine could significantly enhance the overall immunogenicity of the vaccine.

Applications: HIV vaccine.

Inventors: Gary J. Nabel *et al.* (NIAID).

Patent Status

U.S. Provisional Application No. 60/965,268 filed 17 Aug 2007 (HHS Reference No. E-304-2007/0-US-01).

U.S. Patent No. 7,094,598 issued 22 Aug 2006 (CMV/R expression vector) and pending foreign applications (HHS Reference No. E-241-2001/1-US-01).

Development Status: Animal (mouse) data available.

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

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

Dated: December 11, 2007.

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

Substance Abuse and Mental Health Services Administration

Agency Information Collection Activities: Proposed Collection; Comment Request

In compliance with Section 3506(c)(2)(A) of the Paperwork Reduction Act of 1995 concerning opportunity for public comment on proposed collections of information, the Substance Abuse and Mental Health Services Administration (SAMHSA) will publish periodic summaries of proposed projects. To request more information on the proposed projects or to obtain a copy of the information collection plans, call the SAMHSA Reports Clearance Officer on (240) 276-1243.

Comments are invited on: (a) Whether the proposed collections of information are necessary for the proper performance of the functions of the agency, including whether the information shall have practical utility; (b) the accuracy of the agency's estimate of the burden of the proposed collection of information; (c) ways to enhance the quality, utility, and clarity of the information to be collected; and (d) ways to minimize the burden of the collection of information on