

and organizations (e.g. cancer patients, their families, the general public, health providers, the media, voluntary groups, scientific and medical organizations), it is beneficial for NCI to pretest their communications strategies, concepts, and messages while they are under development. The primary purpose of this pretesting, or formative evaluation, is to ensure that the messages, communication materials, and information services created by NCI have the greatest capacity of being received, understood, and accepted by their target audiences. By utilizing appropriate qualitative and quantitative

methodologies, NCI is able to (1) understand characteristics of the intended target audience—their attitudes, beliefs, and behaviors—and use this information in the development of effective communication tools and strategies; (2) produce or refine messages that have the greatest potential to influence target audience attitudes and behavior in a positive manner; and (3) expend limited program resource dollars wisely and effectively. *Frequency of Response:* On occasion. *Affected Public:* Individuals or households; Businesses or other for profit; Not-for-profit institutions;

Federal Government; State, Local, or Tribal Government. *Type of Respondents:* Adult cancer patients; members of the public; health care professionals; organizational representatives. The annual reporting burden is as follows: *Estimated Number of Respondents:* 13,780; *Estimated Number of Responses per Respondent:* 1; *Average Burden Hours Per Response:* .1458; and *Estimated Total Annual Burden Hours Requested:* 2,010. The annualized cost to respondents is estimated at: \$34,155. There are no Capital Costs, Operating Costs, and/or Maintenance Costs to report.

ESTIMATE HOURS OF BURDEN

Type of respondents	No. of respondents	Frequency of response	Average time per response	Annual hour burden
Adults 18+ .....	13,780	1	.1458	2009.12
Total .....	13,780	.....	.....	2009.12

*Request For Comments:* Written comments and/or suggestions from the public and affected agencies are invited on one or more of the following points: (1) Whether the proposed collection of information is necessary for the proper performance of the function of the agency, including whether the information will have practical utility; (2) The accuracy of the agency's estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used; (3) Ways to enhance the quality, utility, and clarity of the information to be collected; and (4) Ways to minimize the burden of the collection of information on those who are to respond, including the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology.

**FOR FURTHER INFORMATION CONTACT:** To request more information on the proposed project or to obtain a copy of the data collection plans and instruments, contact Nina Goodman, Senior Analyst, Operations Research Office, OESI, NCI, NIH, 6116 Executive Blvd., Suite 400, Rockville, MD 20892, call non-toll-free number 301-435-7789 or e-mail your request, including your address to: [goodmann@mail.nih.gov](mailto:goodmann@mail.nih.gov).

*Comments Due Date:* Comments regarding this information collection are best assured of having their full effect if received within 60 days of the date of this publication.

Dated: August 2, 2006.  
**Rachelle Ragland-Greene,**  
*NCI Project Clearance Liaison, National Institutes of Health.*  
 [FR Doc. E6-13190 Filed 8-11-06; 8:45 am]  
**BILLING CODE 4101-01-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.

**Real-Time Correction of Magnetic Field Fluctuations in MIR**

*Description of Technology:* Available for licensing is a new MRI technique that will markedly improve the diagnostic potential of the rendered images. This is a method for applying real-time corrections to prevent image distortions caused by field variations that are due to the patient's respiratory cycle or instrument instability. These field variations reduce the B<sub>0</sub> homogeneity in a non-uniform and spatially-dependent manner. They may lead to a variety of image artifacts such as ghosting and blurring. This method provides a way of calculating the correct electrical currents that must be applied to a set of gradients and shims, smaller magnets that are used to make fine-tune adjustments to the magnetic field in a spatially-dependent manner. As the MRI subject breathes, changes in the B<sub>0</sub> field occur. During a brief training session, the amplitude of these changes as a function of chest motion is recorded in a phase map. Similarly, changes in B<sub>0</sub> as a function of chest motion is recorded in a phase map. Similarly, changes in B<sub>0</sub> as a function of current intensity is available from calibration data containing B<sub>0</sub> as a function of coil current. As the subject undergoes a scan, compensatory currents are applied to the x, y, or z axis of the gradients and the shims coils in order to correct for the effect of respiration on the B<sub>0</sub> homogeneity. The shim values can be updated every 10 to 80 milliseconds

during an experiment. This method results in a substantial decrease in artifacts that can obscure the overall image quality. It can be used for virtually all types of scans and MRI instruments.

*Applications:* (1) Real-time correction of magnetic fluctuations in MRI experiments; (2) Improved MRI image precision.

*Market:* MRI manufacturers, hospitals, medical research centers, and universities.

*Development Status:* The technology is ready to be used and requires no further testing or development.

*Inventors:* Jozef H. Duyn (NINDS), Peter van Gelderen (NINDS), et al.

*Related Publication:* P van Gelderen, JA de Zwart, P Starewicz, RS Hinks, JH Duyn. Real time shimming for compensation of respiration induced field changes. Proceedings ISMRM 2006, page 752.

*Patent Status:* U.S. Provisional Application No. 60/781,246 filed 10 Mar 2006 (HHS Reference No. E-085-2006/0-US-01).

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

*Licensing Contact:* Cheksha Clingman, Ph.D.; 301/435-5018; [clingmac@mail.nih.gov](mailto:clingmac@mail.nih.gov)

*Collaborative Research Opportunity:* The National Institute of Neurological Disorders and Stroke is seeking statements of capability or interest from parties interested in collaborative research to further develop, evaluate, or commercialize this technology. Please contact Martha Lubet at 301/435-3120 or [lubetm@mail.nih.gov](mailto:lubetm@mail.nih.gov) for more information.

#### **Microdialysis Probe for Musculoskeletal Tissue Stimulation and Biochemical Analysis**

*Description of Technology:* Available for licensing and commercial development is a microdialysis probe made from a small-bore (32 gauge) needle containing both a fluid delivery and recovery tube within the bore. A molecular exchange membrane is positioned about 200 microns from the tip. Fluid flows across the membrane removing diffused molecules to a collection device. The rounded tip of the needle is designed to cause minimal tissue damage while allowing investigations to be performed on local tissue fluids. Additionally, this device allows simultaneous delivery of small concentrations of drug to the area immediately surrounding the device tip. The device is actively used to study the pathophysiology of myofascial trigger points (MTrPs), a very common physical finding and cause of musculoskeletal

pain and disability. The device allows for safe in situ exploration of myofascial pain biochemistry with minimal system perturbation.

*Applications:* (1) Muscular stimulation; (2) Musculoskeletal pain; (3) Myofascial Trigger Points.

*Market:* (1) Drug Discovery; (2) Pain management.

*Inventors:* Jay Shah (NIHCC), Terence Martyn Phillips (ORS), Jerome V. Danoff (NIHCC), Lynn Gerber (NIHCC).

*Patent Status:* U.S. Provisional Application No. 60/795,176 filed 27 Apr 2006 (HHS Reference No. E-024-2006/0-US-01).

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

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

#### **Novel Infrared (IR)-Transparent Hydrophilic Membrane That Can be Used for Filtration, Printing or Microarrays, and Cultivation of Bacteria and Other Microorganisms for Reagent-Free IR Spectroscopic Identification**

*Description of Technology:* Available for licensing and commercial development is a novel, disposable infrared (IR)-transparent, microporous, plasma treated polyethylene hydrophilic membrane, as well as methods for making and using this membrane to identify bacterial and other microorganism impurities in food using IR spectroscopy. Further applications include: filtering dilute aqueous bacterial suspensions, and growing bacterial colonies when the PE membrane is placed over an agar medium and incubated. The patent also describes a novel high-throughput technique, as an alternative to manual filtration, where the PE membrane is used for microarray printing of intact microorganisms in pre-enriched medium on the treated PE substrate. Furthermore, the invention relates to a method of detecting mixtures of food-borne pathogens *E. sakazakii* and *K. pneumoniae*, by using the treated PE membranes. Because this unique membrane is transparent to infrared light, isolated microcolonies of bacterial cells grown on this PE substrate can be fingerprinted directly by IR microspectroscopy, followed by multivariate analysis for the identification of the pathogens. The method can be applied to other cell types as well.

This novel membrane and its applications offer an advantage over existing tests in that it can be used to rapidly identify presumptive pathogen colonies, and can be used in screening

tests for a large number of pathogens, as well as various microorganisms and cell types. It can also be used to isolate microorganisms from aqueous suspensions as well as spores, including airborne ones.

*Inventors:* Magdi M. Mossoba and Sufian Al-Khaldi (FDA).

*Patent Status:* U.S. Patent Application No. 11/343,561 filed 30 Jan 2006, entitled "Hydrophilic IR transparent membrane, spectroscopic sample holder comprising same and methods of using same" (HHS Reference No. E-174-2005/0-US-01).

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

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

#### **Porcine Rotavirus Reassortant Compositions**

*Description of Technology:* Rotaviruses are the predominant cause of severe diarrhea and dehydration in infants and young children and are associated with approximately 600,000 deaths each year worldwide. Although death from rotavirus infection occurs more frequently in developing countries an estimated 55,000-70,000 hospitalizations and 20 to 60 deaths occur yearly in the United States. Thus, accelerating the availability of a safe and effective rotavirus vaccine represents a global public health priority.

Available for licensing and commercial development are newly developed human rotavirus-porcine rotavirus reassortant vaccine compositions and methodology for their use in humans. This technology provides immunogenic compositions of reassortant human-porcine rotaviruses with VP7 specificity of the most clinically prevalent serotypes of human rotavirus found in various regions of the world. These compositions, which need clinical evaluation, should be able to induce an immunogenic response specific to human rotavirus serotypes that is protective against symptoms of serious rotaviral disease, such as severe diarrhea and dehydration. Porcine rotaviruses are genetically more closely related to human rotavirus strains compared to rhesus and bovine rotaviruses.

*Applications:* (1) Resistance to developing severe human rotaviral disease; (2) Safe and effective global infant vaccinations.

*Market:* (1) Rotaviral infections result in approximately 600,000 deaths yearly; (2) Anti-rotavirus technology has a projected market of more than 1.0 billion dollars by 2010.

*Development Status:* Preclinical data is available at this time.

*Inventors:* Yasutaka Hoshino and Albert Z. Kapikian (NIAID).

*Related Publications:*

1. Y Hoshino, RW Jones, J Ross, AZ Kapikian. Porcine rotavirus strain Gottfried-based human rotavirus candidate vaccines: construction and characterization. *Vaccine* 2005 May 31;23(29):3791–3799.

2. M Gorziglia, K Nishikawa, Y Hoshino, K Taniguchi. Similarity of the outer capsid protein VP4 of the Gottfried strain of porcine rotavirus to that asymptomatic human rotavirus strains. *J Virology*, 1990 Jan;64(1):414–418.

*Patent Status:* U.S. Provisional Application No. 60/698,572 filed 11 Jul 2005 (HHS Reference No. E-056-2005/0-US-01)

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

*Licensing Contact:* Chekesha Clingman, Ph.D.; 301/435-5018; [clingmac@mail.nih.gov](mailto:clingmac@mail.nih.gov).

#### **Adoptive T-Cell Transfer After Lymphodepletion Promotes Tumor Regression**

*Description of Technology:* Available for licensing is a method of adoptive cell transfer (ACT) immunotherapy. Since its first description, ACT is now being developed for the supportive treatment of a variety of infectious diseases and cancer.

Current ACT methods to treat cancer are based on the ex vivo selection of lymphocytes with high avidity for recognition of tumor antigens, and their activation and numerical expansion before re-infusion to the autologous tumor-bearing host. The current invention improves ACT by including a pre-treatment regimen to ensure permissive conditions in the host for in vivo proliferation of the transferred cells. Specifically, the immune system is suppressed by pre-treatment with lymphodepleting chemotherapy. Two separate clinical trials have demonstrated that using this approach, ACT can induce lasting tumor shrinkage.

Lymphodepleting chemotherapy followed by ACT resulted in tumor shrinkage of at least 50 percent in 6 out of 13 treated patients suffering from refractory melanoma. Several patients remained cancer free for more than a year after treatment. The usefulness of combined ACT and lymphodepleting therapy for cancer treatment was confirmed when this study was extended to include 35 melanoma patients. Eighteen of the 35 patients (51%) responded to the treatment,

including 3 patients who experienced ongoing complete disappearance of cancer and 15 patients had tumor shrinkage of at least 50 percent with a mean duration of almost a year after treatment. In a recent clinical trial that is not yet published, using a modified protocol to treat 23 patients, a similar response rate (56%) was seen.

This approach to ACT offers a potentially significant improvement in the treatment of many types of cancer. In addition, this method might be applicable in treating other diseases such as AIDS, immunodeficiency, or other autoimmunity for which immune effector cells can impact the clinical outcome.

*Inventors:* Mark E. Dudley, Steven A. Rosenberg, John R. Wunderlich (NCI).

*Publications:*

1. Dudley ME, et al. "Adoptive cell transfer therapy following non-myeloablative but lymphodepleting chemotherapy for the treatment of patients with refractory metastatic melanoma." *J Clin Oncol*. 2005 Apr 1;23(10):2346–2357.

2. Dudley ME, et al. "Cancer regression and autoimmunity in patients after clonal repopulation with antitumor lymphocytes." *Science*. 2002 Oct 25;298(5594):850–854.

*Patent Status:* U.S. Provisional Application No. 60/408,681 filed 06 Sep 2002 (HHS Reference No. E-275-2002/0-US-01); PCT Application No. PC/US03/27873 filed 05 Sep 2003, which published as WO 2004/021995 on 18 Mar 2004 (HHS Reference No. E-275-2002/1-PCT-01); U.S. Patent Application No. 10/526,697 filed 05 May 2005 (HHS Reference No. E-275-2002/1-US-02).

*Licensing Status:* Available for exclusive and non-exclusive licensing.

*Licensing Contact:* Michelle A. Booden, Ph.D.; 301/451-7337; [boodenm@mail.nih.gov](mailto:boodenm@mail.nih.gov).

*Collaborative Research Opportunity:* The NCI Surgery Branch is seeking statements of capability or interest from parties interested in collaborative research to further develop, evaluate, or commercialize ACT therapy. Please contact Steven A. Rosenberg, M.D., Ph.D. at 301/496-4164 for more information.

Dated: July 28, 2006.

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

[FR Doc. 06-6872 Filed 8-11-06 8:45 am]

**BILLING CODE 4140-01-M**

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

### **National Institutes of Health**

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#### **Hollow Waveguide Laser Delivery System for Digital Particle Image Velocity**

##### *Description of Technology*

Available for licensing and commercial development is an all-hollow-waveguide laser delivery system used for effective digital particle image velocimetry (DPIV) illumination. The System incorporates two key optical hollow waveguide components: An uncoated funnel-shaped hollow glass taper for a direct laser-to-taper coupling and a flexible hollow core waveguide for precise high-peak-power laser delivery. The principle of operation of the uncoated hollow taper is based on grazing-incidence effect. The optical taper is used for direct lens-free launching of laser radiation including from powerful lasers into fibers and waveguides. Because of the mutual action of the direct parallel laser excitation, the mode coupling process and mode filtering effect, the hollow taper serves as a mode converter that transforms the highly multimode profile of the input laser emission into a high-quality Gaussian-shaped profile at the taper output. Moreover, because of the lower power density of the output laser beam and its high causality profile, the