

you envision the Subcommittee providing, and what type of outreach would you intend to do in order to formulate your recommendations to the Board of Scientific Counselors?

[FR Doc. 00-27372 Filed 10-24-00; 8:45 am]  
BILLING CODE 4163-70-P

## DEPARTMENT OF HEALTH AND HUMAN SERVICES

### Agency for Toxic Substances and Disease Registry

#### Community/Tribal Subcommittee and the Board of Scientific Counselors, Agency for Toxic Substances and Disease Registry: Meetings.

In accordance with section 10(a)(2) of the Federal Advisory Committee Act (Pub. L. 92-463), the Agency for Toxic Substances and Disease Registry (ATSDR) announces the following subcommittee and committee meetings.

*Name:* Community/Tribal Subcommittee (CTS).

*Times and Dates:*

8:30 a.m.–4 p.m., November 28, 2000

8:30 a.m.–4 p.m., November 29, 2000

*Place:* The Westin Peachtree Plaza Hotel, 210 Peachtree Street, NW., Atlanta, Georgia 30303.

*Status:* Open to the public, limited by the available space. The meeting room accommodates approximately 60 people.

*Purpose:* This subcommittee brings to the Board advice, citizen input, and recommendations on community and tribal programs, practices, and policies of the Agency.

*Matters To Be Discussed:* Agenda items include an update on Action Items and Recommendations from previous meeting; CTS update on Cultural Sensitivity Training; discussion on implementation of task forces; discussion of Freedom of Information Act (FOIA) process at Department of Defense and Department of Energy sites; update on the Office of Urban Affairs health intervention and health care activities at sites; and, an update on Research Agenda Building activities.

*Name:* Board of Scientific Counselors, ATSDR.

*Times and Dates:*

8:30 a.m.–5:05 p.m., November 30, 2000.

8:30 a.m.–12:10 p.m., December 1, 2000.

*Place:* The Westin Peachtree Plaza Hotel, 210 Peachtree Street, NW., Atlanta, Georgia 30303.

*Status:* Open to the public, limited by the available space. The meeting room accommodates approximately 60 people.

*Purpose:* The Board of Scientific Counselors, ATSDR, advises the Secretary; the Assistant Secretary for Health; and the

Administrator, ATSDR, on ATSDR programs to ensure scientific quality, timeliness, utility, and dissemination of results. Specifically, the Board advises on the adequacy of science in ATSDR-supported research, emerging problems that require scientific investigations, accuracy and currency of the science in ATSDR reports, and program areas to emphasize or de-emphasize. In addition, the Board recommends research programs and conference support for which the Agency awards grants to universities, colleges, research institutions, hospitals, and other public and private organizations.

*Matters To Be Discussed:* Agenda items will include ATSDR updates; review of the ATSDR Research Agenda, and a review of the public comments and implementation plans; discussion on exposure investigations and biomarkers; discussion on current events impacting ATSDR; an overview of Community and Tribal Subcommittee meeting issues and recommendations; discussion of activities related to Libby, Montana, growth of environmental pediatric units, and Minority Health Program; and, an overview on ATSDR new directions. Written comments are welcomed and should be received by the contact person listed below prior to the opening of the meeting.

Agenda items are subject to change as priorities dictate.

*Contact Person for More Information:*

Robert Spengler, Sc.D., Executive Secretary, BSC, ATSDR, M/S E-28, 1600 Clifton Road, NE, Atlanta, Georgia 30333, telephone 404/639-0708.

The Director, Management Analysis and Services Office, has been delegated the authority to sign **Federal Register** notices pertaining to announcements of meetings and other committee management activities for both CDC and the Agency for Toxic Substances and Disease Registry.

Dated: October 17, 2000.

**Carolyn J. Russell,**

*Director, Management Analysis and Services Office, Centers for Disease Control and Prevention.*

[FR Doc. 00-27374 Filed 10-24-00; 8:45 am]

BILLING CODE 4163-70-P

## DEPARTMENT OF HEALTH AND HUMAN SERVICES

### Centers for Disease Control and Prevention

#### ICD-9-CM Coordination and Maintenance Committee; Meeting

National Center for Health Statistics (NCHS), Data Policy and Standards Staff, announces the following meeting.

*Name:* ICD-9-CM Coordination and Maintenance Committee meeting.

*Time and Date:* 9 a.m.–5 p.m., November 17, 2000.

*Place:* The Health Care Financing Administration (HCFA), Multi-purpose Room, 7500 Security Boulevard, Baltimore, Maryland.

*Status:* Open to the public, limited only by the space available.

*Purpose:* The ICD-9-CM Coordination and Maintenance (C&M) Committee will hold its final meeting of the calendar year 2000 cycle on Friday November 17, 2000. The C&M meeting is a public forum for the presentation of proposed modifications to the International Classification of Diseases, Ninth-Revision, Clinical Modification.

*Matters to be Discussed:* Agenda items include:

- Hemophilia carrier status
- Developmental hip dislocation
- Heart failure
- Constipation
- Urologic conditions
- Clinical trial participant
- Dental caries
- Implementation of the ICD-10-PCS coding system
- Removal of Intra-aortic balloon pump
- Transcervical fetal oxygen saturation
- Abdominal cerclage (FspOs) monitoring
- Addenda

*Contact Person for Additional Information:*

Amy Blum, Medical Classification Specialist, Data Policy and Standards Staff, NCHS, 6526 Belcrest Road, Room 1100, Hyattsville, Maryland 20782, telephone 301/458-4106 (diagnosis), Amy Gruber, Health Insurance Specialist, Division of Acute Care, HCFA, 7500 Security Blvd., Room C4-07-07, Baltimore, Maryland, 21244 telephone 410-786-1542 (procedures).

*Notice:* In the interest of security, HCFA has instituted stringent procedures for entrance into the building by non-government employees. Persons without a government I.D. must show a photo I.D. and sign-in at the security desk upon entering the building.

The Director, Management Analysis and Services Office, has been delegated the authority to sign **Federal Register** notices pertaining to announcements of meetings and other committee management activities, for both CDC and the Agency for Toxic Substances and Disease Registry.

Dated: October 17, 2000.

**Carolyn J. Russell,**

*Director, Management Analysis and Services Office, Centers for Disease Control and Prevention.*

[FR Doc. 00-27373 Filed 10-24-00; 8:45 am]

BILLING CODE 4160-18-P

## DEPARTMENT OF HEALTH AND HUMAN SERVICES

### National Institutes of Health

#### Government-Owned Invention; Availability for Licensing: Tissue Microarrays for Rapid Molecular Profiling

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

**ACTION:** Notice.

**SUMMARY:** The inventions listed below are owned by agencies 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 may be obtained by contacting Uri Reichman, Ph.D., M.B.A., at the Office of Technology Transfer, National Institutes of Health, 6011 Executive Boulevard, Suite 325, Rockville, Maryland 20852-3804; Telephone: 301/496-7736 ext. 240; Fax: 301/402-0220; E-mail: reichmau@od.nih.gov. A signed Confidential Disclosure Agreement will be required to receive copies of the patent applications.

**SUPPLEMENTARY INFORMATION:** Advances in medical research and the successful development of new, improved diagnostic tools and therapeutic agents are often dependent on the ability to screen thousands of clinical samples for molecular markers in a high-throughput fashion. This is particularly critical in the "post-genomics" era, where the number of genes to be analyzed is often much higher than the number of samples evaluated. DNA microarray ("DNA chip") and related genome-screening tools have made it possible to screen the genome to discover genes with medical utility. However, before they can be utilized in developing improved diagnostics and therapeutic applications these early discoveries in genomics and proteomics need to be tested and validated.

The technology presented here, called Tissue Microarrays or "Tissue Chips" is specifically designed to fill the need of the medical community for high throughput screening of hundreds of molecular markers in thousands of cell or tissue samples on a single microscope slide.

Tissue Microarrays include hundreds or even thousands of tiny discs (approx. 1 mm in diameter) of tissue specimens, fixed and arranged on a single microscope slide. The technology provides an automated means to generate thousands of copies of this kind of slide, slides that then can be used for specific molecular analyses, such as DNA and mRNA in situ hybridization and protein immunostaining.

A typical application of tissue microarrays in cancer research and product development is the analysis of several hundred breast tumors from patients at different stages of disease

development (normal breast, atypia, in situ cancer, invasive cancer, metastases) to identify the specific step at which gene alterations take place, as well as the frequency of these alterations. In another example, tissue microarrays can be constructed from tissue materials in a retrospective study design, where one can immediately correlate the expression of a molecular marker with poor prognosis. Furthermore, tissue microarrays can be used to screen many different diseases at once, such as multiple different tumor types, non-malignant tissues, and normal tissues and cells.

The data accumulated from these type of studies can serve as the basis for the development of diagnostic and prognostic tools for disease, classification of diseases into molecularly defined subgroups, as well as for identifying targets for therapeutic regimens for treating the disease.

Tissue microarrays are useful in the early-stage discovery of gene targets in genomic research, in validation of such targets, in the testing and optimization of diagnostic tests, as well as in the quality control of molecular detection schemes. In the quality control field, it would be possible to provide a copy of a tissue microarray with commercial histological (IHC or ISH) test kits for QC procedure. Tissue microarrays could also be used to standardize pathology interpretations by sending copies of the same slides to different pathologists. Electronic database archives of previously analyzed tissue arrays could also be utilized as a teaching tool of anatomy and pathology for students, clinical lab technicians and physicians.

The manufacturing of tissue microarrays is a critical step in the success of the technology. The NIH group has developed a manual tissue microarray device, which facilitates development of tissue microarrays. In addition, a prototype of an automated tissue microarrayer has been developed. This instrument consists of a donor specimen station and a recipient block station. An XY robotic arm retrieves cylindrical tissue specimens from the donor block and inserts them into assigned locations at cylindrical receptacles in the donor paraffin block. When the recipient tissue microarray block has been constructed, it is sectioned into 200 to 300 thin sections with a microtome. The resulting sections are then laid down and fixed on a microscope slide. The apparatus is controlled by a computer, which also stores the addressable sample locations.

The commercial potential of the present technology is enormous. It is estimated that the total market for

microarray high-throughput screening in 1999 was \$176 million. With an estimated annual rate growth of 33%, the market size is expected to approach \$1 billion by 2005 (Source: Biosearch Online). Tissue microarray market is tied in with the other biochip markets, but it also presents an opportunity to expand microarray research and development into an entirely new direction. For example, most of the current microscopic tissue based analyses could in the future take place in a tissue microarray format, which provides several hundred-fold higher throughput than conventional analyses.

The technology is available for licensing in its entirety or in parts. A list of the inventions available for licensing, along with a brief summary of each invention, is shown below.

*Licensing of Tissue Microarrays Instrumentation and Related Fluorescence Systems*

(1) NIH Reference No. E-002-98/0 (USSN 60/075,979, PCT/US99/04001), entitled "Tumor Tissue Microarrays for Rapid Molecular Profiling", originally filed 02/25/98, PCT filed 02/24/99.

Inventors: S. Leighton, O. Kallionemi and J. Kononen.

(2) NIH Reference No. E-273-99/0 (USSN 60/170,461), entitled "Methods and Apparatus for Constructing Tissue Microarrays", filed 12/13/99. Inventors: O. Kallionemi, G. Sauter, S. Leighton and J. Kononen.

These two patent applications disclose the specifics of the microarray-maker instrument. With the advances in the field of genomics it is predicted that the demand for tissue microarrays and thus the demand for tissue microarray instruments will increase rapidly in the next several years. Also offered for licensing (E-273-90/0) is an integrated tissue microarray system. The system includes three stations, *i.e.* array-making station, array processing station and a detection system (fluorescent imager). Licensing of either and/or both of the instrument inventions is particularly recommended for manufacturers of scientific and medical instrumentation.

(3) NIH Reference No. E-272-99/0 (USSN 60/154,601), entitled "Signal Counting for In Situ Hybridization", filed 9/17/99. Inventors: O. Kallionemi, J. Kononen, L. Buendorf, E. Dougherty and A. Grigoryan.

The accurate detection and quantitation of fluorescence signal associated with FISH is critical for the molecular analysis of arrayed tissue specimens. In spite of recent improvements in fluorescence optics and related techniques, quantitation of FISH has not been perfected yet. This

invention discloses a device and method for improving the accuracy of fluorescence spot counting. This has been accomplished mainly through the following improvements: (1) A method to analyze ratios of test and reference spot signals in a field of view, (2) an imaging system to acquire confocal images to cells to provide a set of different layers of the same cells, at different positions along the Z-axis, and (3) a software program to make use of the three-dimensional nature of the images, which makes the identification of FISH signals more accurate. Licensing of an algorithm for automated FISH spot counting is recommended for manufacturers of scientific and medical instrumentation and in particular for manufacturers of commercial imaging devices as well as companies that specialize in providing fluorescent probes for molecular biology research.

#### *Licensing of Applications of Tissue Microarrays*

(4) NIH Reference No. E-007-99/0 (USSN 60/106,038, PCT/US99/04000), entitled "Tissue Microarrays for Rapid Molecular Profiling", originally filed 10/28/98, PCT filed 02/24/99. Inventors: O. Kallioniemi, G. Sauter and J. Kononen.

(5) NIH Reference No. E-274-99/0 (USSN 60/171,262), entitled "Methods of Making and Using Microarrays", filed 12/15/99. Inventors: O. Kallioniemi and G. Sauter.

These two inventions disclose methods of using tissue microarrays for a wide variety of clinical applications. E-007-99/0 describes in great detail high-throughput screening studies of thousands of tissue samples. These studies, ordinarily requiring many days to perform, can be completed in only a few hours when tissue microarrays are used. Licensees of this invention will be able to manufacture tissue microarrays using clinical samples and distribute the panels and companion reagents to the medical and research community. Commercially produced microarrays could be developed for use as reference standards for certain diseases or custom made for specific needs.

E-274-99/0 describes the use of tissue microarrays for educational, standardization and OC (histological test kits) purposes. With respect to the first proposed use, licensees will be able, for example, to distribute microarray panels and companion reagents in medical teaching institutions. With respect to the latter two uses, standard microarray panels could be included in clinical test kits that are histological (IHC or ISH) procedures.

Tissue Microarray technology and its applications have been described in several publications, such as *Nature Medicine* 4:844 (1998), *Cancer Research* 59:803 (1999), *J Natl Cancer Inst.* 91:1758 (1999), *Clin Cancer Res* 5:1966 (1999), *J Natl Cancer Inst.* 92:1252 (2000).

Dated: October 6, 2000.

#### **Jack Spiegel,**

*Director, Division of Technology Development and Transfer, Office of Technology Transfer.*  
[FR Doc. 00-27355 Filed 10-24-00; 8:45 am]

**BILLING CODE 4140-01-M**

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

### **National Institutes of Health**

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

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

**ACTION:** Notice.

**SUMMARY:** The inventions listed below are owned by agencies 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.

#### **A Cultured Cell Line which Expresses the GLUT4 Glucose Transporter Isoform Labeled with a Short Hemagglutinin Peptide and a Modified Green Fluorescence Protein**

Samuel W. Cushman (NIDDK), DHHS Reference No. E-264-00/0 filed 26 Jul 2000; Licensing Contact: Marlene Shinn; 301/496-7056 ext. 285; email: shinnm@od.nih.gov.

The aforementioned invention is currently available through a Biological Materials License as a research tool. Insulin regulates glucose uptake by inducing the translocation of GLUT4, a glucose transporter isoform expressed in

fat and muscle, from intracellular components to the plasma membrane. The NIH announces the discovery of a cell line that expresses the GLUT4 glucose transporter isoform with a short hemagglutinin peptide (HA) and a modified green fluorescent protein (GFP). The HA peptide is recognized by a specific antibody when GLUT4 is in the plasma membrane but not when GLUT4 is sequestered inside the cell. The modified GFP can be detected by its fluorescence whether it is inside the cell or on the cell surface. This allows the HA label to quantitate the GLUT4 subcellular distribution and the GFP label, the total GLUT4 expression. Therefore, this invention can be used in high through-put screening, as an assay reagent, and it may aid specifically in ascertaining compounds that have the insulin-like effect of stimulating GLUT4 translocation from an intracellular compartment to the cell surface.

#### **Dmt-tic Di- and Tri-Peptidic Derivatives and Related Compositions and Methods of Use**

Lawrence H. Lazarus (NIEHS), DHHS Reference No. E-103-00/0 filed 24 Mar 2000; Licensing Contact: Marlene Shinn; 301/496-7056 ext. 285; e-mail: shinnm@od.nih.gov.

A major obstacle in the treatment of many cancers involves the clinical manifestation of drug resistance. Currently, toxic substances are used in clinical and therapeutic settings to inhibit glycoproteins in the cell membrane of some cancer cells that have the ability to pump out of the cell drugs that would be potentially lethal. The most common of these glycoproteins is the 170-kd ATP-dependent transmembrane efflux pump. The multidrug resistance (MDR1) phenotype, however, is not the sole source of drug resistance since MDR1 is a member of a superfamily of proteins structurally related to the transmembrane P-glycoproteins.

NIH scientists have prepared a series of  $\delta$ -opioid analogs of Dmt-tic (2',6'-dimethyl-L-tyrosine-1,2,3,4-tetrahydroisoquinoline-3-carboxylic acid). At least one of the analogs, which is biologically stable and exerts no known side effects, has been observed to inhibit the ability of MDR1 to pump out a fluorescent probe from the cell membrane. Thus, these analogs might represent novel chemosensitizing agents to treat both hematologic malignancies (lymphomas) and solid tumors (e.g. breast and colon) without toxic effects in patients.

In addition, this invention provides more potent  $\delta$ -opioid antagonists and  $\delta$ -opioid antagonists with dual binding