

*Location:* Holiday Inn, Versailles Ballrooms, 8120 Wisconsin Ave., Bethesda, MD.

*Contact Person:* Johanna M. Clifford, Center for Drug Evaluation and Research (HFD-21), Food and Drug Administration, 5600 Fishers Lane (for express delivery, 5630 Fishers Lane, rm. 1093) Rockville, MD 20857, 301-827-7001, FAX: 301-827-6776 or e-mail: [cliffordj@cder.fda.gov](mailto:cliffordj@cder.fda.gov), or FDA Advisory Committee Information Line, 1-800-741-8138 (301-443-0572 in the Washington, DC area), code 12542. Please call the Information Line for up-to-date information on this meeting.

*Agenda:* The committee will discuss: (1) General issues on clinical trial design and endpoints; and (2) non-small cell lung cancer endpoints as a follow-up to issues discussed at an April 15, 2003, FDA workshop.

*Procedure:* Interested persons may present data, information, or views, orally or in writing, on issues pending before the committee.

Written submissions may be made to the contact person by December 9, 2003. Oral presentations from the public will be scheduled between approximately 10:30 a.m. and 11 a.m., and between approximately 2:30 p.m. and 3 p.m. Time allotted for each presentation may be limited. Those desiring to make formal oral presentations should notify the contact person before December 9, 2003, and submit a brief statement of the general nature of the evidence or arguments they wish to present, the names and addresses of proposed participants, and an indication of the approximate time requested to make their presentation.

Persons attending FDA's advisory committee meetings are advised that the agency is not responsible for providing access to electrical outlets.

FDA welcomes the attendance of the public at its advisory committee meetings and will make every effort to accommodate persons with physical disabilities or special needs. If you require special accommodations due to a disability, please contact Trevelin Prysock at 301-827-7001 at least 7 days in advance of the meeting.

Notice of this meeting is given under the Federal Advisory Committee Act (5 U.S.C. app. 2).

Dated: November 10, 2003.

**Peter J. Pitts,**

*Associate Commissioner for External Relations.*

[FR Doc. 03-28687 Filed 11-17-03; 8:45 am]

BILLING CODE 4160-01-S

## 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 invention listed below is owned by an agency of the U.S. Government and is 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 application 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 application.

#### Methods of Diagnosis of Colorectal Cancer, Compositions and Methods of Screening for Modulators of Colorectal Cancer

Thomas Ried and Madhvi Upender (NCI).

U.S. Provisional Application No. 60/340,124 filed 13 Dec 2001 (DHHS Reference No. E-206-2003/0-US-01); U.S. Patent Application No. 10/318,578 filed 12 Dec 2002 (DHHS Reference No. E-206-2003/0-US-02).

*Licensing Contact:* Catherine Joyce; (301) 435-5031; [joycec@mail.nih.gov](mailto:joycec@mail.nih.gov).

Oncogene activation by gene amplification is a major pathogenetic mechanism in human cancer. Comparative genomic hybridization and DNA microarray expression profiling was used to examine the expression of over 2000 genes that were identified as residing on chromosome arms that were amplified in metastatic colon cancer cancers *i.e.* 7p, 8q, 13q, and 20q. The results indicated that amplified genes that also demonstrate increased expression levels are quite rare. However, the results also identified 93 genes, which reside on the chromosome arms in question, which showed an increased expression level concomitant with amplification. Some of these genes could provide targets for therapy.

As a result of the above findings, the inventors contemplate methods of diagnosing colon cancer through detection of the increased expression of one or more of the identified 93 genes. Aspects of this work have been published as follows: Platzer *et al.*, 2002, Silence of Chromosomal Amplifications in Colon Cancer, *Cancer Research* 62:1134-1138.

This technology is available for licensing on an exclusive or a non-exclusive basis.

#### Compositions and Methods for Detecting Abnormal Cell Proliferation

Lance Liotta *et al.* (NCI).

U.S. Provisional Application No. 60/466,154 filed 28 Apr 2003 (DHHS Reference No. E-253-2002/0-US-01).

*Licensing Contact:* Catherine Joyce; (301) 435-5031; [joycec@mail.nih.gov](mailto:joycec@mail.nih.gov).

The invention relates to the discovery that class 5 semaphorins are linked to cancer. A *Drosophila* model system was used to identify genes that functionally alter tumorigenicity or metastasis. Deletion of *Drosophila* lethal giant larvae (l(2)gl) leads to highly invasive and widely metastatic tumors on transplantation into adult flies. Random homozygous P element insertions were screened for the ability to modulate the l(2)gl phenotype. Analysis of metastasis patterns of the lines containing P element insertions and lacking wild-type l(2)gl expression identified Semaphorin 5c (Sema 5c) as being required for tumorigenicity.

Semaphorin 5c, is a transmembrane protein with a large extracellular domain that contains seven thrombospondin type I (Tsp I) repeats. The semaphorin 5c gene belongs to the class 5 group of semaphorins, which are transmembrane proteins with short cytoplasmic (C-terminal) tails and extracellular domains containing seven thrombospondin type I repeats, a plexin domain, and a semaphorin domain sequences. Class 3 semaphorins, previously linked to cancer, are structurally different from class 5, lacking the thrombospondin repeats present in the transmembrane class 5 semaphorins.

The invention is a screening method using *Drosophila* to (a) screen for functional important genes associated with cancer growth, invasion and metastasis, and (b) screen for the effects of an anti-cancer targeted therapy by administering the therapy to the *drosophila* host bearing the tumor. In addition the invention covers a specific gene Semaphorin 5c which is a potential therapeutic target acting in the TGFbeta pathway.

As part of the invention, the inventors contemplate the following:

(i) a method of detecting an increased risk for abnormal cellular proliferation in a subject via detection of overexpression of the *Sema 5* gene product;

(ii) methods and compositions for treating abnormal cellular proliferation in a subject by administering a molecule that decreases or prevents expression of a *Sema 5* gene product or a molecule that binds to *Sema 5* antigen on the surface of the cell and targets the cell for destruction.

This technology is available for licensing on an exclusive or a non-exclusive basis.

#### **Novel Antisense Oligonucleotides Targeting Folate Receptor Alpha**

Mona S. Jhaveri, Patrick C. Elwood, Koong-Nah Chung (NCI).

U.S. Provisional Application No. 60/274,249 filed 09 Mar 2001 (DHHS Reference No. E-321-2000/0-US-01).

*Licensing Contact:* Catherine Joyce; 301/435-5034; [joycec@mail.nih.gov](mailto:joycec@mail.nih.gov).

Ovarian cancer is the fifth leading cause of cancer death for women in the United States. Drug resistance of ovarian tumors to chemotherapy is a common problem resulting in only 20 to 30 percent overall 5-year survival rates. Folate is a vitamin that is absolutely necessary for cell survival. Some cancer cells, including ovarian carcinomas, have an abundance of a folate-binding protein termed the human alpha folate receptor (ahFR). It is believed that the elevated levels of ahFR contribute to the cells' cancerous state by mediating increased folate uptake or by generating positive regulatory growth signals. This invention comprises a genetic therapy that diminishes the levels of ahFR using antisense oligonucleotides that block the transcription of the gene. Studies have shown that this invention significantly decreases proliferation of cultured cancer cells and sensitizes these cells to treatment with chemotherapeutic drugs. Further development of receptor-targeted antisense oligonucleotides and related compounds have potential therapeutic value for a range of difficult-to-treat cancers including cancers of the ovary, cervix, uterus, and brain.

Dated: November 10, 2003.

#### **Steven M. Ferguson,**

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

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#### **Compositions and Methods for Enhancing Differential Gene Expression**

I Horikawa, JC Barrett (NCI).  
DHHS Reference No. E-008-2001/0-US-01 filed 05 Jun 2003.

*Licensing Contact:* Susan S. Rucker; 301/435-4478; [ruckersu@mail.nih.gov](mailto:ruckersu@mail.nih.gov).

This application describes compositions and methods useful in enhancing the differential expression of heterologous nucleic acids. In particular, the application claims inventions that encompass artificial promoters derived from the human telomerase reverse transcriptase promoter (hTERT) and their use. More particularly, this application describes artificial hTERT promoters that minimize the expression of a heterologous nucleic acid sequences operably linked thereto in normal cells while providing for high levels of expression of the heterologous nucleic acid in cancer cells. The heterologous nucleic acid sequence preferentially encodes a product that will have cytotoxic activity upon expression in the cell.

The hTERT promoter has been characterized and research has demonstrated that small portions thereof are responsible for the cancer-

specific expression of the hTERT gene. The cancer-specific nature of hTERT promoter activity suggests that it is a target for the development of specific anti-cancer therapeutics and other strategies for cancer treatment.

In order to improve therapeutic strategies for delivering cytotoxic nucleic acid sequences that are expressed in cancer cells artificial hTERT promoters have been constructed that, when operably linked to the cytotoxic nucleic acid sequence, minimize expression of the cytotoxic nucleic acid sequence in normal cells while maintaining high levels of expression of the cytotoxic nucleic acid sequence in cancer cells. This differential regulatory control is accomplished by operably linking particular E-box nucleic acid sequences in cis with the regulatory elements of the hTERT promoter associated with gene expression in cancer cells and a nucleic acid sequence encoding a product that is cytotoxic upon expression. Cytotoxic substances include, for example, *Pseudomonas* exotoxin (polypeptide toxin), HSV thymidine kinase (pro-drug converting) or bax (apoptosis inducing).

Experimental work related to this invention has been published at Horikawa, I *et al.*, *Mol Biol Cell* 13(8): 2585-97 (Aug 2002).

#### **Leukoregulin, An Antitumor Lymphokine, and Its Therapeutic Uses**

JH Ransom (NCI), RP McCabe, M Haspel, N Pomato.

U.S. Patent Application No. 06/906,353 filed 11 Sep 1986, which issued as U.S. Patent 4,849,506 on 18 Jul 1989 (DHHS Reference No. E-537-1983/2-US-01); U.S. Patent Application No. 07/350,879 filed 11 May 1989, which issued as U.S. Patent 5,082,657 on 21 Jan 1992 (DHHS Reference No. E-970-1997/0-US-01).

*Licensing Contact:* Susan S. Rucker; (301) 435-4478; [ruckersu@mail.nih.gov](mailto:ruckersu@mail.nih.gov).

These patents claim compositions and methods for using the lymphokine/cytokine known as leukoregulin. In particular, leukoregulin is useful in methods of treating cancer. The NIH is the exclusive licensee of these patents.

Leukoregulin, a cytokine derived from T lymphocytes, is a glycoprotein hormone. Leukoregulin interacts with target cells to regulate cellular activity with its effects being pleiotrophic and dependent on the type of target cell. Among other roles, leukoregulin has been demonstrated to influence the synthesis of collagenase, stromelysin-1, collagen, and hyaluronan in human fibroblasts. These properties make it important in maintaining the