

**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 will have practical utility; (2) The accuracy of the agency's estimate of 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 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 data collection plans and instruments, contact Dr. Diane Bild, Division of Clinical Applications, NHLBI, NIH, II Rockledge Centre, 6701 Rockledge Drive, MSC #7938, Bethesda, MD, 20892-7938, or call non-toll-free number (301) 435-0457, or e-mail your request, including your address to: [bildd@nhlbi.nih.gov](mailto:bildd@nhlbi.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: June 9, 2004.

**Peter Savage,**

Director, DECA, NHLBI, National Institutes of Health.

[FR Doc. 04-13888 Filed 6-18-04; 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 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.

#### Monoclonal Antibodies (MAbs) Define Human Cytochrome P450 Drug Metabolism

Harry V. Gelboin *et al.* (NCI)

**Licensing Contact:** Fatima Sayyid; 301/435-4521; [sayyidf@mail.nih.gov](mailto:sayyidf@mail.nih.gov).

The application of the invention reported herein will be useful for reducing the incidence of adverse drug reactions (ADR) causing serious toxicity and mortality from certain drugs and toxicity from drug-drug interactions (DDI). The MAb system will be useful in the search for new drugs in Drug Discovery. The system engages the use

of specific inhibitory monoclonal antibodies (MAbs) to identify, measure and quantitate the role of each human Cytochrome P450 in the metabolism of drugs, NCEs (new chemical entities) or xenobiotics that can be toxic to the human population. Hybridoma clones have been isolated that produce MAbs uniquely specific to human P450s 1A1, 1A2, 2A6, 2C8, 2C9, 2C9\*2, 2C19, 2C family (8,9,18,19), 2D6, 2E1, and 3A4/5. The MAbs are highly inhibitory (80–90%) to the enzyme activity of the target P450 and thus the amount of inhibition of the metabolism of the substrate drug incubated with human liver microsomes defines the maximum contribution of the target P450 to the metabolism of the drug or other substrate. The MAbs also immunoblot the target P450 permitting the identification of the target P450 in cells and tissues. In stark contrast to other complex commonly used analytic systems that are selective, the MAb system is specific to the target P450 and is the basis for an extraordinary simple in vitro methodology. The microsome-MAb system (in vitro) defines the contribution of the target P450 to the metabolism of the substrate and identifies substrates metabolized by a single or multiple P450s and P450s catalyzing alternate metabolic pathways. Substrates metabolized by a single P450 or through a specific metabolic route can be used as a marker probe (in vivo) for examining the role of different P450 isoforms in the metabolism of drugs. They are also used for individual phenotyping for studying the genetic potential for individual drug metabolism. Additional applications include the study of polymorphic P450s to identify the metabolic consequences of the absence of a polymorphic P450 in an individual. The MAbs, listed below, are present in ascites fluid and are generally useful for all of the procedures described above. Some are also available in purified form.

### INHIBITORY MONOCLONAL ANTIBODIES (MABS) TO HUMAN LIVER CYTOCHROME P450S

| Human P450           | Monoclonal anti-body (MAb clone #) | DHHS reference No. |
|----------------------|------------------------------------|--------------------|
| 1A1 .....            | 1-7-1                              | B-043-1994/0       |
| 1A2 .....            | *26-7-5                            | E-122-1998/0       |
| 2A6 .....            | *151-45-4                          | E-150-1998/0       |
| 2B6 .....            | *49-10-20                          | B-043-1994/1       |
| 2C8, 9, 18, 19 ..... | 1-68-11                            | B-043-1994/0       |
| 2C8 .....            | *281-1-1                           | E-077-1999/0       |
| 2C9*1,*2,*3 .....    | 1763-15-5                          | E-077-1999/0       |
| 2C9*2 .....          | 1292-2-3                           | E-077-1999/0       |
| 2C19 .....           | 1-7-4-8                            | E-200-2001/0       |
| 2D6 .....            | *512-1-8 50-1-3                    | E-046-1997/0       |
| 2E1 .....            | 1-73-18                            | E-185-1995/0       |
| 3A4/5 .....          | 3-29-9                             | E-185-1995/0       |

\*Also Immunoblots.

Additionally, the following MAbs are non-inhibitory, but yield an Immunoblot:

| Human P450 | Monoclonal anti-body (MAb clone #) | DHHS reference No. |
|------------|------------------------------------|--------------------|
| 2E1 .....  | 2-106-12                           | E-185-1995/0       |
| 3A4 .....  | 275-1-2                            | E-185-1995/0       |

These MAbs are further described in the following research articles:

Gelboin HV, Krausz KW, Gonzalez FJ, and Yang TJ (1999). Inhibitory Monoclonal Antibodies to Human Cytochrome P450 Enzymes: A New Avenue for Drug Discovery. *Trends Pharmacol Sci* 20(11):432-438.

Gelboin HV, Shou M, Goldfarb I, Yang TJ and Krausz KW (1998). Monoclonal Antibodies to Cytochrome P450 in Methods in Molecular Biology: Cytochrome P450 Protocols. (IR Phillips and EA Shephard, eds) pp 227-237, Humana Press Inc., Totowa, New Jersey.

Yang TJ, Krausz KW, Sai Y, Gonzalez FJ and Gelboin HV (1999). Eight Inhibitory Monoclonal Antibodies Define the Role of Individual P450s in Human Liver Microsomal Diazepam, 7-Ethoxycoumarin and Imipramine Metabolism. *Drug Metab Dispos* 27: 102-109.

Yang TJ, Sai Y, Krausz KW, Gonzalez FJ and Gelboin HV (1998a). Inhibitory Monoclonal Antibodies to Human Cytochrome P450 1A2: Analysis of Phenacetin o-Deethylation in Human Liver. *Pharmacogenetics* 8:375-382.

Sai Y, Yang TJ, Krausz KW, Gonzalez FJ and Gelboin HV (1999). An Inhibitory Monoclonal Antibody to Human Cytochrome P450 2A6 Defines its Role in the Metabolism of coumarin, 7-ethoxycoumarin and 4-nitroanisole in Human Liver. *Pharmacogenetics* 9:229-237.

Yang TJ, Krausz KW, Shou M, Yang SK, Buters JTM, Gonzalez FJ and Gelboin HV (1998b). Inhibitory Monoclonal Antibody to Human Cytochrome P450 2B6. *Biochem Pharmacol* 55:1633-1640.

Krausz KW, Goldfarb I, Yang TJ, Gonzalez FJ, and Gelboin HV (2000). An Inhibitory Monoclonal Antibody to Human Cytochrome P450 That Specifically Binds and Inhibits P450 2C9II, an Allelic Variant of P450 2C9 Having a Single Amino Acid Change Arg144 Cys. *Xenobiotica* 30:619-625.

Krausz KW, Goldfarb I, Buters JTM, Yang TJ, Gonzalez FJ, and Gelboin HV (2001). Monoclonal Antibodies Specific and Inhibitory to Human Cytochromes P450 2C8, 2C9, and 2C19. *Drug Metab Dispos* 29: 1410-1423.

Krausz KW., Yang TJ., Shou M, Gonzalez FJ and Gelboin, HV (1997). Inhibitory Monoclonal Antibodies to Human Cytochrome P450 2D6. *Biochem Pharmacol*. 54:15-17.

Gelboin HV, Krausz KW, Shou M, Gonzalez FJ and Yang TJ (1997). A Monoclonal Antibody Inhibitory to Human P450 2D6: A Paradigm for Use in Combinatorial Determination of Individual P450 Role in Specific Drug Tissue Metabolism. *Pharmacogenetics* 7:469-477.

Gelboin HV, Goldfarb I, Krausz KW, Grogan J, Korzekwa KR, Gonzalez FJ and Shou M (1996). Inhibitory and Noninhibitory Monoclonal Antibodies to Human Cytochrome P450 2E1. *Chem Res Toxicol*. 9:1023-1030.

Gelboin HV, Krausz KW, Goldfarb I, Buters JTM, Yang SK, Gonzalez FJ, Korzekwa KR and Shou M (1995). Inhibitory and Non Inhibitory Monoclonal Antibodies to Human Cytochrome P450 3A3/4. *Biochem Pharmacol* 50:1841-1850.

Dated: June 5, 2004.

**Steven M. Ferguson,**

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

[FR Doc. 04-13890 Filed 6-18-04; 8:45 am]

**BILLING CODE 4140-01-P**

## DEPARTMENT OF HEALTH AND HUMAN SERVICES

### National Institutes of Health

#### National Human Genome Research Institute; Notice of Closed Meeting

Pursuant to section 10(d) of the Federal Advisory Committee Act, as amended (5 U.S.C. appendix 2), notice is hereby given of the following meeting.

The meeting will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

*Name of Committee:* National Human Genome Research Institute Special Emphasis Panel; ENCODE RFA Review.

*Date:* June 22-23, 2004.

*Time:* June 22, 2004, 6:30 p.m. to 9:30 p.m.

*Agenda:* To review and evaluate grant applications.

*Place:* Hyatt Regency Bethesda, Bethesda, MD.

*Time:* June 23, 2004, 8:30 a.m. to 5 p.m.

*Agenda:* To review and evaluate grant applications.

*Place:* Hyatt Regency Bethesda, Bethesda, MD.

*Contact Person:* Rudy O. Pozzatti, PhD, Scientific Review Administrator, Office of Scientific Review, National Human Genome Research Institute, National Institutes of Health, Bethesda, MD 20892, (301) 402-0838.

This notice is being published less than 15 days prior to the meeting due to the timing limitations imposed by the review and funding cycle.

(Catalogue of Federal Domestic Assistance Program Nos. 93.172, Human Genome Research, National Institutes of Health, HHS)

Dated: June 14, 2004.

**Anna P. Snouffer,**

*Acting Director, Office of Federal Advisory Committee Policy.*

[FR Doc. 04-13880 Filed 6-18-04; 8:45 am]

**BILLING CODE 4140-01-M**

## DEPARTMENT OF HEALTH AND HUMAN SERVICES

### National Institutes of Health

#### National Institute of Dental & Craniofacial Research; Notice of Closed Meetings

Pursuant to section 10(d) of the Federal Advisory Committee Act, as amended (5 U.S.C. appendix 2), notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

*Name of Committee:* National Institute of Dental and Craniofacial Research Special Emphasis Panel; 04-59, Review of F32s.

*Date:* June 15, 2004.

*Time:* 10 a.m. to 11:30 a.m.

*Agenda:* To review and evaluate grant applications.

*Place:* National Institutes of Health, Natcher Building, 45 Center Drive, Bethesda, MD 20892 (Telephone Conference Call).

*Contact Person:* Lynn M. King, PhD, Scientific Review Administrator, Scientific Review Branch, 45 Center Dr., Rm 4AN-38K,