

This technology involves the generation of novel chemoattractant toxins that deplete the T regulatory cells (Treg) or other immunosuppressive or hyperactivated cells locally. Treg controls activation of immune responses by suppressing the induction of adaptive immune responses, particularly T cell responses. Immunosuppressive cells such as tumor infiltrating macrophages, regulatory T cells, regulatory B cells, or NKT and other cells down regulate antitumor immune responses. The chemoattractant toxins consist of a toxin moiety fused with a chemokine receptor ligand, such as chemokines and various chemoattractants, that enables specific targeting and delivery to the regulatory cells. This technology is advantageous over the more harmful antibodies and chemicals that are currently used for the systemic depletion of regulatory cells. The current technology can be used therapeutically in a variety of ways. They can be used together with vaccines to increase efficacy of the vaccine for the treatment of cancer, and can be used to locally deplete Treg, Bregs, or other immunosuppressive cells to induce cytolytic cell responses at the tumor site or to eliminate chronic infectious diseases such as HIV and tuberculosis.

Applications:

- New chemoattractant based toxins targeted towards Treg cells.
- New chemoattractant based toxins targeted towards immunosuppressive B cells, NKT and macrophages.
- New chemoattractant based toxins targeted towards local depletion of hyperactivated CD4 T cells to treat autoimmune diseases.

- Chemoattractant based toxins depleting Treg cells or other immunosuppressive cells causing enhanced vaccine immune responses.

- Novel immunotherapy by increasing vaccine efficacy against cancer and infectious diseases.

Development Status: The technology is currently in the pre-clinical stage of development.

Market:

- The technology platform involving novel chemo-attractant based toxins can be used to improve vaccine immune responses.

- The technology platform has an additional market in treating several other clinical problems such as autoimmune diseases.

Inventors: Arya Biragyn (NIA), Dolgor Bataar (NIA), *et al.*

Related Publications:

1. D Baatar, P Olkhanud, D Newton, K Sumitomo, A Biragyn. CCR4-expressing T cell tumors can be specifically controlled via delivery of

toxins to chemokine receptors. *J Immunol.* 2007 Aug 1;179(3):1996–2004.

2. D Baatar, P Olkhanud, K Sumitomo, D Taub, R Gress, A Biragyn. Human peripheral blood T regulatory cells (Tregs), functionally primed CCR4+ Tregs and unprimed CCR4- Tregs, regulate effector T cells using FasL. *J Immunol.* 2007 Apr 15;178(8):4891–900.

3. M Coscia, A Biragyn. Cancer immunotherapy with chemoattractant peptides. *Semin Cancer Biol.* 2004 Jun; 14(3):209–218.

4. R Schiavo *et al.* Chemokine receptor targeting efficiently directs antigens to MHC class I pathways and elicits antigen-specific CD8+ T-cell responses. *Blood* 2006 Jun 15; 107(12):4597–4605.

Patent Status: U.S. Patent Application No. 11/992,880 filed 28 Mar 2008 (HHS Reference No. E-027–2005/0–US-06)

Licensing Status: Available for licensing.

Licensing Contact: Patrick P. McCue, PhD; 301–435–5560;

mccuepat@mail.nih.gov.

Collaborative Research Opportunity: The Immunotherapeutics Unit, National Institute on Aging, is seeking statements of capability or interest from parties interested in collaborative research to further develop, evaluate, or commercialize Chemotoxin technology for clinical use or as a laboratory tool for depletion of cells. Please contact Nicole Darack, PhD at 301–435–3101 or darackn@mail.nih.gov for more information.

Novel Agents Exhibiting Cytotoxicity Against Human Tumor Cell Lines

Description of Invention: Researchers at the National Cancer Institute have developed novel agents that inhibit the growth of several human tumor cell lines. The new compounds are phenyl maleimides, some of which show cytotoxicity against human liver cancer cells in vitro in the low micromolar range.

Applications:

- Therapeutics for treating a broad range of cancers.
- Use as pharmacologic probes for specific biochemical pathways.

Advantages:

- Demonstrated selective inhibition for cancer cells vs. untransformed cells *in vitro* and *in vivo*.
- Potent growth inhibition of several human tumor cell lines.

Development Status: Pre-clinical stage of development.

Market: Cancer therapeutics.

Inventors: Christoph J. Michejda and Wei Yao (NCI) *et al.*; Terrence R. Burke Jr. (NCI).

Relevant Publication: S Kar, M Wang, W Yao, CJ Michejda, BI Carr. PM-20, a novel inhibitor of Cdc25A, induces extracellular signal-regulated kinase 1/2 phosphorylation and inhibits hepatocellular carcinoma growth in vitro and in vivo. *Mol Cancer Ther.* 2006 Jun; 5(6):1511–1519.

Patent Status: U.S. Patent No. 7,504,430 issued 17 Mar 2009 (HHS Reference No. E-110–2004/0–US-06).

Licensing Status: Available for licensing.

Licensing Contact: Patrick P. McCue, PhD; 301–435–5560; mccuepat@mail.nih.gov.

Dated: September 21, 2009.

Richard U. Rodriguez,

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

[FR Doc. E9–23590 Filed 9–29–09; 8:45 am]

BILLING CODE 4140-01-P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

National Institute of Biomedical Imaging and Bioengineering; Notice of Closed Meeting

Pursuant to section 10(d) of the Federal Advisory Committee Act, as amended (5 U.S.C. App.), 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 Institute of Biomedical Imaging and Bioengineering Special Emphasis Panel.

Date: November 19, 2009.

Time: 8 a.m. to 5 p.m.

Agenda: To review and evaluate grant applications.

Place: Hyatt Regency Bethesda, One Bethesda Metro Center, 7400 Wisconsin Avenue, Bethesda, MD 20814.

Contact Person: John K. Hayes, PhD, Scientific Review Officer, 6707 Democracy Boulevard, Suite 959, Democracy Two, Bethesda, MD 20892, 301–451–3398, hayesj@mail.nih.gov.

Dated: September 24, 2009.

Jennifer Spaeth,

Director, Office of Federal Advisory Committee Policy.

[FR Doc. E9-23611 Filed 9-29-09; 8:45 am]

BILLING CODE 4140-01-P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

National Cancer Institute; Notice of Closed Meeting

Pursuant to section 10(d) of the Federal Advisory Committee Act, as amended (5 U.S.C. App.), notice is hereby given of a meeting of the Board of Scientific Counselors for Basic Sciences National Cancer Institute.

The meeting will be closed to the public as indicated below in accordance with the provisions set forth in section 552b(c)(6), Title 5 U.S.C., as amended for the review, discussion, and evaluation of individual intramural programs and projects conducted by the National Cancer Institute, including consideration of personnel qualifications and performance, and the competence of individual investigators, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Board of Scientific Counselors for Basic Sciences National Cancer Institute.

Date: November 10, 2009.

Time: 9 a.m. to 2:15 p.m.

Agenda: To review and evaluate personal qualifications and performance, and competence of individual investigators.

Place: National Institutes of Health, National Cancer Institute, 9000 Rockville Pike, Building 31, Conference Room 6, Bethesda, MD 20892.

Contact Person: Florence E. Farber, PhD, Executive Secretary, Office of the Director, National Cancer Institute, National Institutes of Health, 6116 Executive Boulevard, Room 2205, Bethesda, MD 20892, 301-496-7628, ff6p@nih.gov.

In the interest of security, NIH has instituted stringent procedures for entrance onto the NIH campus. All visitor vehicles, including taxicabs, hotel, and airport shuttles will be inspected before being allowed on campus. Visitors will be asked to show one form of identification (for example, a government-issued photo ID, driver's license, or passport) and to state the purpose of their visit.

Information is also available on the Institute's/Center's home page: <http://deainfo.nci.nih.gov/advisory/bsc/bs/bs.htm>, where an agenda and any additional information for the meeting will be posted when available.

(Catalogue of Federal Domestic Assistance Program Nos. 93.392, Cancer Construction;

93.393, Cancer Cause and Prevention Research; 93.394, Cancer Detection and Diagnosis Research; 93.395, Cancer Treatment Research; 93.396, Cancer Biology Research; 93.397, Cancer Centers Support; 93.398, Cancer Research Manpower; 93.399, Cancer Control, National Institutes of Health, HHS)

Dated: September 25, 2009.

Jennifer Spaeth,

Director, Office of Federal Advisory Committee Policy.

[FR Doc. E9-23588 Filed 9-29-09; 8:45 am]

BILLING CODE 4140-01-P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

National Institute of Allergy and Infectious Diseases; Notice of Closed Meeting

Pursuant to section 10(d) of the Federal Advisory Committee Act, as amended (5 U.S.C. App.), 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 contract proposals and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the contract proposals, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: National Institute of Allergy and Infectious Diseases Special Emphasis Panel; Microbiology and Infectious Diseases Biological Resource Repository.

Date: October 13, 2009.

Time: 12 p.m. to 5 p.m.

Agenda: To review and evaluate contract proposals.

Place: National Institutes of Health, Rockledge 6700, 6700B Rockledge Drive, Bethesda, MD 20817.

Contact Person: Lynn Rust, PhD, Scientific Review Officer, Scientific Review Program, Division of Extramural Activities, NIAID/NIH/DHHS, 6700B Rockledge Drive, MSC 7616, Bethesda, MD 20892, 301-402-3938, lr228v@nih.gov.

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. 93.855, Allergy, Immunology, and Transplantation Research; 93.856, Microbiology and Infectious Diseases Research, National Institutes of Health, HHS)

Dated: September 24, 2009.

Jennifer Spaeth,

Director, Office of Federal Advisory Committee Policy.

[FR Doc. E9-23617 Filed 9-29-09; 8:45 am]

BILLING CODE 4140-01-P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

National Institute of Allergy and Infectious Diseases; Notice of Closed Meeting

Pursuant to section 10(d) of the Federal Advisory Committee Act, as amended (5 U.S.C. App.), 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: Allergy, Immunology, and Transplantation Research Committee; Allergy, Immunology & Transplantation Research Review Committee.

Date: October 15, 2009.

Time: 8:30 a.m. to 5 p.m.

Agenda: To review and evaluate grant applications.

Place: Hyatt Regency Chicago, 151 Wacker Drive, Chicago, IL 60601.

Contact Person: Katrin Eichelberg, PhD, Scientific Review Officer, Scientific Review Program, Division of Extramural Activities, NIAID/NIH/DHHS, 6700B Rockledge Drive, MSC 7616, Bethesda, MD 20892, 301-496-0818, keichelberg@niaid.nih.gov.

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. 93.855, Allergy, Immunology, and Transplantation Research; 93.856, Microbiology and Infectious Diseases Research, National Institutes of Health, HHS)

Dated: September 24, 2009.

Jennifer Spaeth,

Director, Office of Federal Advisory Committee Policy.

[FR Doc. E9-23615 Filed 9-29-09; 8:45 am]

BILLING CODE 4140-01-P