

Methods of Modulating Chemotherapeutic Cytotoxicity

Description of Technology:

Investigators at the National Cancer Institute (NCI) have discovered that blockade of the signalling activity of a single cell-surface receptor, CD47, in cancer cells results in enhanced sensitivity of cancer cells to chemotherapy treatment and in healthy tissues reduces damage to normal cells. Many chemotherapeutic agents cause significant cytotoxicity to non-cancer ("normal") cells, resulting in undesirable side-effects and often limiting the dose and/or duration of chemotherapy that can be administered to a patient. The present invention relates to a method of using CD47-modulating compounds in combination with a chemotherapeutic agent to increase the efficacy of that agent against inhibiting tumor growth. The invention also relates to methods for preventing damage to heart tissue associated with the use of anthracycline chemotherapy. The current invention builds on the NIH's previous discoveries of antibodies, antisense morpholino oligonucleotides, and peptide compounds that modulate CD47.

Potential Commercial Applications: Combination Chemotherapy

Competitive Advantages:

- Enhance effectiveness of chemotherapeutic agents.
- Limit off target effects on normal tissue.
- Reduces cytotoxicity of normal cells.
- Provides cardioprotection for anthracyclines.

Development Stage:

- Early-stage.
- Pre-clinical.
- In vitro data available.
- In vivo data available (animal).

Inventors: David D. Roberts and David R. Soto Pantoja (NCI).

Publication: Soto-Pantoja DR, et al. CD47 deficiency confers cell and tissue radioprotection by activation of autophagy. *Autophagy*. 2012 Nov;8(11):1628–42. [PMID 22874555]

Intellectual Property: HHS Reference No. E–296–2011/0—US Application No. 61/779,587 filed 13 March 2013

Related Technology: HHS Reference No. E–227–2006/5–

- US Application No. 12/444,364 filed 03 April 2009.
- CA Application No. 2,665,287 filed 05 October 2007.
- EP Application No. 07868382.8 filed 27 March 2009.
- US Application No. 13/546,941 filed 11 July 2012.
- US Application No. 13/546,931 filed 11 July 2012.

Licensing Contact: Charlene Maddox, Ph.D.; 301–435–4689; sydnorc@mail.nih.gov.

Collaborative Research Opportunity: The National Cancer Institute, Laboratory of Pathology, is seeking statements of capability or interest from parties interested in collaborative research to further develop, evaluate or commercialize CD47 targeting therapeutics, cardioprotection, autophagy modulation. For collaboration opportunities, please contact John D. Hewes, Ph.D. at hewesj@mail.nih.gov.

Dated: November 21, 2013.

Richard U. Rodriguez,

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

[FR Doc. 2013–28558 Filed 11–27–13; 8:45 am]

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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; NIBIB 2014–05 Reducing Health Disparity SBIR Review.

Date: March 6, 2014.

Time: 10:00 a.m. to 5:30 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, Two Democracy Plaza, Suite 920, 6707 Democracy Boulevard, Bethesda, MD 20892 (Virtual Meeting).

Contact Person: Ruixia Zhou, Ph.D., Scientific Review Officer, 6707 Democracy Boulevard, Suite 957, Bethesda, MD 20892, 301–496–4773, zhou@mail.nih.gov.

Dated: November 22, 2013.

David Clary,

Program Analyst, Office of Federal Advisory Committee Policy.

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DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

National Cancer Institute; Notice of Closed Meeting

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Name of Committee: National Cancer Institute Special Emphasis Panel; K22 Grant Applications for PAR–12–121.

Date: December 3, 2013.

Time: 9:00 a.m. to 5:00 p.m.

Agenda: To review and evaluate grant applications.

Place: National Cancer Institute Shady Grove, 9609 Medical Center Drive, Room 7W030, Rockville, MD 20850 (Telephone Conference Call).

Contact Person: Sergei Radaev, Ph.D., Scientific Review Officer, Resources and Training Review Branch, Division of Extramural Activities, National Cancer Institute, NIH, 9609 Medical Center Drive, Room 7W634, Bethesda, MD 20892, 240–276–6466, sradaev@mail.nih.gov.

This notice is being published less than 15 days prior to the meeting date due to scheduling conflicts.

Information is also available on the Institute's/Center's home page: <http://deainfo.nci.nih.gov/advisory/sep/sep.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).