

**DEPARTMENT OF HEALTH AND HUMAN SERVICES**

**National Institutes of Health**

**Submission for OMB Review; 30-Day Comment Request; The NIH/NCATS GRDR<sup>SM</sup> Program: Global Rare Diseases Patient Registry Data Repository (GRDR)**

**SUMMARY:** Under the provisions of Section 3507(a)(1)(D) of the Paperwork Reduction Act of 1995, the National Institutes of Health (NIH) has submitted to the Office of Management and Budget (OMB) a request for review and approval of the information collection listed below. This proposed information collection was previously published in the **Federal Register** on July 17, 2014, page 44185 and allowed 60-days for public comment. No public comments were received. The purpose of this notice is to allow an additional 30 days for public comment. The National Center for Advancing Translational Sciences (NCATS), National Institutes of Health, may not conduct or sponsor, and the respondent is not required to respond to, an information collection that has been extended, revised, or implemented on or after October 1, 1995, unless it displays a currently valid OMB control number.

*Direct Comments to OMB:* Written comments and/or suggestions regarding the item(s) contained in this notice, especially regarding the estimated public burden and associated response time, should be directed to the: Office of Management and Budget, Office of Regulatory Affairs, *OIRA\_submission@omb.eop.gov* or by fax to 202-395-6974, Attention: NIH Desk Officer.

*Comment Due Date:* Comments regarding this information collection are best assured of having their full effect if received within 30-days of the date of this publication.

**FOR FURTHER INFORMATION CONTACT:** To obtain a copy of the data collection plans and instruments, submit comments in writing, or request more information on the proposed project contact: Dr. Yaffa Rubinstein, Director of Patient Resources for Clinical and Translational Research at the Office of Rare Diseases Research (ORDR), NCATS, NIH, Suite 1004, 6701 Democracy Boulevard, Bethesda, MD 20892-4874, or call non-toll-free number (301) 402-4338 or Email your request, including your address to: *yaffa.rubinstein@nih.gov*. Formal requests for additional plans and instruments must be requested in writing.

*Proposed Collection:* NIH/NCATS GRDR<sup>SM</sup> Program: Global Rare Diseases

Patient Registry Data (GRDR), The National Center for Advancing Translational Sciences (NCATS), National Institutes of Health (NIH).

*Need and Use of Information Collection:* The NIH created the GRDR program <https://grdr.ncats.nih.gov> an informatics system and central data repository, housed at the NCATS/NIH Center to support and accelerate research in the cause, diagnosis, and treatment of rare diseases. The GRDR program collects a wide range of data types, including phenotypic and clinical information, as well as medical images, derived from individuals who participate in rare disease patient registries, regardless of the source of funding. The GRDR program provides the infrastructure to store, search across, retrieve, and analyze these varied types of data. This valuable information will help NIH understand and evaluate the use of repositories/datasets in the research community. The GRDR program will support: (1) Mapping data to standards; (2) increased visibility for participating registries; (3) opportunity for cross-disease research; (4) better and faster rare disease clinical research.

OMB approval is requested for 3 years. There are no costs to respondents other than their time. The total estimated annualized burden hours are 334.

**ESTIMATED ANNUALIZED BURDEN HOURS**

Form name	Type of respondent	Number of respondents	Number of responses per respondent	Average burden per response (in hours)	Total annual burden hours
Request for Open access .....	Individuals .....	2000	1	2/60	67
Request for Controlled access .....	Individuals .....	1000	1	15/60	250
Request to Submit .....	Individuals .....	100	1	10/60	17

Dated: January 9, 2015.  
**Pamela McInnes,**  
*Deputy Director, NCATS, NIH.*  
 [FR Doc. 2015-00554 Filed 1-14-15; 8:45 am]  
**BILLING CODE 4140-01-P**

**DEPARTMENT OF HEALTH AND HUMAN SERVICES**

**National Institutes of Health**

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

**AGENCY:** National Institutes of Health, HHS.

**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. 209 and 37 CFR part 404 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.

**FOR FURTHER INFORMATION CONTACT:** 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.

**SUPPLEMENTARY INFORMATION:** Technology descriptions follow.

**Highly Sensitive Tethered-Bead Immune Sandwich Assay**

*Description of Technology:* This technology is a highly sensitive tethered-bead immune sandwich assay. Analyte molecules are captured between two antibodies, a capture antibody and a detection antibody. The capture antibody on a micron-size bead binds analyte from a sample fluid. The bead-captured analyte is then exposed to a “detection” antibody that binds to the bead-captured analyte, forming a “sandwich”. The sandwiched analyte-bead complex then connects to a flexible polymer (such as DNA)

anchored on a solid surface to form tethered particles. Binding the analyte-bead complex to a flexible polymer forms tethered particles and may be done, for example, by streptavidin biotin. Motion of the tethered beads easily identifies bound analyte. The tethered beads are quantified using low-magnification light microscopy. Prior enhanced sensitivity tethered bead technologies require expensive and cumbersome detection equipment. This assay is inherently single molecule, low background, and works with simple inexpensive imaging formats, but is automatable and potentially adaptable to portable technologies. A prototype design using prostate specific antigen (PSA) shows detection sensitivity of ~0.03ng/ml, compared with normal PSA sensitivity of ~4ng/ml. Design refinements further improve sensitivities.

**Potential Commercial Applications:** Diagnostics and research.

**Competitive Advantages:** Highly sensitive single molecule adaptable format, specific, low background, inexpensive, simple to use, automatable for image analysis.

**Development Stage:**

- Early-stage
- Prototype

**Inventors:** Jonathan Silver (NHLBI), Zhenyu Li (George Washington Univ.), Keir Neuman (NHLBI).

**Publication:** Silver J, et al. Tethered-bead, immune sandwich assay. *Biosens Bioelectron.* 2015 Jan 15;63:117–23. [PMID 25064819].

**Intellectual Property:** HHS Reference No. E–188–2014/0—U.S. Provisional Application No. 62/015,122 filed June 20, 2014.

**Licensing Contact:** Edward (Tedd) Fenn; 424–297–0336; [Tedd.fenn@nih.gov](mailto:Tedd.fenn@nih.gov).

### **Polyketal Nanoparticle Delivery of CpG Oligodeoxynucleotide for Treatment of Lung Cancer**

**Description of Technology:** This technology delivers oligodeoxynucleotide locally to lung tumors using polyketal nanoparticles. CpG ODNs (oligonucleotides with CpG motifs) stimulate anti-tumor immune cells via Toll-like receptor 9 and show promise as cancer therapeutics in preclinical and clinical trials. However, previous systemic CpG ODN treatments of lung tumors progressed only to Phase 3 trials. Local CpG ODN delivery appears to have superior antitumor effect compared to earlier systemic treatments. Adsorbing CpG ODNs onto biodegradable polyketal (CpG-NP) creates 1–3 micron nanoparticles that can reach distal alveoli by inhalation.

This localized treatment improves uptake and persistence in the tumor microenvironment, resulting in decreased immunosuppressive T-Cells and increased macrophages. *In vivo* data indicate this therapy reduces tumor growth and enhances survival rate in lung cancer. Mice treated with CpG-NP had fewer and smaller tumor nodules (reduced by >90%). In Lewis lung carcinoma model, CpG-NP therapy significantly improved the survival; 80% of CpG-NP-treated mice survived (some for >1 yr). CpG-NP represents a promising potential lung cancer therapy.

**Potential Commercial Applications:** Therapeutic or combination therapy for lung cancer treatment.

**Competitive Advantages:**

- Superior therapeutic effect versus systemic administration.
- CpG ODN treatments have well studied safety profile in phase 1–3 clinical trials.

**Development Stage:** In vivo data available (animal).

**Inventors:** Dennis Klinman and Takashi Sato (NCI).

**Publication:** Klinman D, et al. Synthetic oligonucleotides as modulators of inflammation. *J Leukoc Biol.* Oct 2008; 84(4): 958–64. [PMID 18430787].

**Intellectual Property:** HHS Reference No. E–159–2014/0—U.S. Provisional Application No. 62/024,657 filed July 15, 2014.

**Licensing Contact:** Edward (Tedd) Fenn; 424–297–0336; [Tedd.fenn@nih.gov](mailto:Tedd.fenn@nih.gov).

**Collaborative Research Opportunity:** The National Cancer Institute is seeking statements of capability or interest from parties interested in collaborative research to further develop, evaluate or commercialize optimizing delivery of immunostimulatory CpG oligonucleotides to patients with lung cancer. For collaboration opportunities, please contact John D. Hewes, Ph.D. at [john.hewes@nih.gov](mailto:john.hewes@nih.gov).

### **Aza-Englerin Analogues—Novel Natural Product-Based Nitrogen-Containing Anti-Cancer Agents**

**Description of Technology:** Available for licensing are synthetic compounds developed as novel cancer therapeutics. Scientists at the National Institutes of Health and University of Hawaii have designed and synthesized novel aza-englerin analogues that have shown great inhibitory effects on cancer cell growth. Englerin A is a natural compound from the African plant *Phyllanthus engleri* that displays potent and selective anti-cancer properties in several cancer types and has been found

to be active in several mouse xenograft experiments with human tumor cells when injected intraperitoneally. The invention provides compositions, methods of synthesis and methods of using the aza-derivatives of englerin for cancer treatment. These englerin analogues show significant bioavailability after oral administration in mice, making them attractive as cancer therapeutics.

**Potential Commercial Applications:** Potential therapeutics for cancer, particularly kidney cancer, Ewing's sarcoma, and other cancers with a glycolytic phenotype. Potential in diabetes and HIV infection.

**Competitive Advantages:**

- Novel compounds with great inhibitory effect on select cancer cells, designed/synthesized as analogues to natural products that show striking anti-cancer properties.
- Parent compounds are effective in in vivo cancer models.
- Novel syntheses of the compounds of the invention are provided.
- Bioavailability after oral administration in mouse model demonstrated, making it suitable for clinical usage.

**Development Stage:**

- Early-stage
- In vitro data available
- In vivo data available (animal)

**Inventors:** John A Beutler (NCI), Douglas Figg (NCI), William Chain (Univ. of Hawaii-Manoa).

**Publications:**

1. Ratnayake R, et al. Englerin A, a selective inhibitor of renal cancer cell growth, from *Phyllanthus engleri*. *Org Lett.* 2009 Jan 1;11(1):57–60. [PMID 19061394].
  2. Li Z, et al. A brief synthesis of (-)-englerin A. *J Am Chem Soc.* 2011 May 4;133(17):6553–6. [PMID 21476574].
  3. Akee R, et al. Chlorinated englerins with selective inhibition of renal cancer cell growth. *J Nat Prod.* 2012 Mar 23;75(3):459–63. [PMID 22280462].
  4. Sourbier C, et al. Englerin A stimulates PKC theta to inhibit insulin signaling while simultaneously activating HSF1: A case of pharmacologically induced synthetic lethality. *Cancer Cell* 23 (2):228–237, 2013. [PMID 23352416].
- Intellectual Property:**
- HHS Reference No. E–090–2014/0—U.S. Provisional Patent Application No. 61/936,285 filed February 5, 2014.
  - HHS Reference No. E–090–2014/1—U.S. Provisional Patent Application No. 62/018,381 filed June 27, 2014.
- Related Technologies:**
- HHS Reference No. E–064–2008/2–US–06—U.S. Patent No. 8,410,292 issued April 2, 2013.

• HHS Reference No. E-042-2012/0-US-06—U.S. Patent Application No. 14/370,140 filed July 1, 2014.

• HHS Reference No. E-201-2012/0-PCT-02—PCT Application No. PCT/US2013/069796 filed November 13, 2013, which published as WO 2014/078350 on May 22, 2014.

*Licensing Contact:* Surekha Vathyam, Ph.D.; 301-435-4076; [vathyams@mail.nih.gov](mailto:vathyams@mail.nih.gov).

*Collaborative Research Opportunity:* The National Cancer Institute, Molecular Targets Development Program, is seeking statements of capability or interest from parties interested in collaborative research to further develop, evaluate or commercialize aza-englerin analogues as cancer inhibitors. For collaboration opportunities, please contact John D. Hewes, Ph.D. at [john.hewes@nih.gov](mailto:john.hewes@nih.gov).

#### Nicotine Conjugate Treatment for Parkinson's Disease

*Description of Technology:* It has been known since 1959 that tobacco use has protective effects against Parkinson's disease. However, efforts to turn that knowledge into a safe and effective treatment, divorced from tobacco use, have had little success. An inventor at FDA now has *in vitro* evidence that nicotine promotes a protein clearance system, thereby halting Parkinson's disease progression. In addition to using nicotine as the treatment, the inventor has created a coated conjugate of nicotine and nanoceria. This conjugate not only harnesses the power of nicotine but also takes advantage of the anti-oxidant effect of the nanoceria to reduce the oxidant environment, which is also a major mechanism of neuronal damage in Parkinson's disease.

*Potential Commercial Applications:* Treatment for Parkinson's disease.

*Competitive Advantages:* Improved mechanism to use nicotine as a treatment.

*Development Stage:*

- Early-stage
- In vitro data available

*Inventor:* Syed Z. Imam (FDA).

*Intellectual Property:* HHS Reference No. E-016-2014/0—U.S. Provisional Application No. 62/010,033 filed June 10, 2014.

*Licensing Contact:* Jaime M. Greene, M.S.; 301-435-5559; [greenejaim@mail.nih.gov](mailto:greenejaim@mail.nih.gov).

*Collaborative Research Opportunity:* The FDA National Center for Toxicological Research, Division of Neurotoxicology, is seeking statements of capability or interest from parties interested in collaborative research to further develop, evaluate or commercialize A Nicotine-NanoCeria

Conjugate named NIC-NANO for treatment of Parkinson's disease. For collaboration opportunities, please contact Syed Z Imam at [syed.imam@fda.hhs.gov](mailto:syed.imam@fda.hhs.gov).

#### cGAP-PNA Multivalent Ligand Display at the Nanoscale

*Description of Technology:* Scientists at the NIH are developing new types of peptide nucleic acids (PNAs) that maintain aqueous solubility at longer lengths. This new type of PNA is called "cGAP-PNA" because it contains a sequence complementary to the L-PNA sequence, which is a PNA with one or more gamma-sidechains that displays a ligand. The investigators have synthesized cGAP-PNAs that are 60 nucleobases long that can support the assembly of 5 complementary L-PNAs (each with 12 nucleobases) that bear specific ligands. This platform can replace more traditional multivalent scaffolds, such as dendrimers and gold nanoparticles.

*Potential Commercial Applications:* Multivalent ligand display.

*Competitive Advantages:*

- Decreased hydrophobicity
- Increased water solubility
- Can be used at very long lengths
- More stable and resistant to degradation than existing PNAs

*Development Stage:*

- Early-stage
- In vitro data available

*Inventors:* Daniel H. Appella, Andrew V. Dix, Ethan A. Englund, Kara M. George Rosenker (all of NIDDK).

*Publication:* Dix A, et al.

Programmable nanoscaffolds that control ligand display to a G-protein-coupled receptor in membranes to allow dissection of multivalent effects. *J Am Chem Soc.* 2014 Sep 3;136(35):12296-303. [PMID 25116377].

*Intellectual Property:* HHS Reference No. E-761-2013/0—U.S. Provisional Application No. 61/929,893 filed January 21, 2014.

*Related Technologies:*

- HHS Reference No. E-308-2006/3—U.S. Application No. 13/592,490 filed August 23, 2012.
- HHS Reference No. E-129-2010/0—EP Application No. 11721899.0 filed May 11, 2011; U.S. Application No. 13/697,123 filed November 9, 2012.

*Licensing Contact:* Charlene S. Maddox, Ph.D.; 301-435-4689; [charlene.maddox@nih.gov](mailto:charlene.maddox@nih.gov).

*Collaborative Research Opportunity:* The National Institute of Diabetes and Digestive and Kidney Diseases is seeking statements of capability or interest from parties interested in collaborative research to further develop, evaluate or commercialize this

technology. For collaboration opportunities, please contact Marguerite Miller at [Marguerite.Miller@nih.gov](mailto:Marguerite.Miller@nih.gov) or 301-496-9003.

Dated: January 9, 2015.

**Richard U. Rodriguez,**

*Acting Director, Office of Technology Transfer, National Institutes of Health.*

[FR Doc. 2015-00535 Filed 1-14-15; 8:45 am]

**BILLING CODE 4140-01-P**

## DEPARTMENT OF HEALTH AND HUMAN SERVICES

### National Institutes of Health

#### National Heart, Lung, and Blood 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 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 Heart, Lung, and Blood Institute Special Emphasis Panel, Closure Devices for Transcaval Access to the Abdominal Aorta.

*Date:* February 6, 2015.

*Time:* 11:00 a.m. to 1:00 p.m.

*Agenda:* To review and evaluate contract proposals.

*Place:* National Institutes of Health, 6701 Rockledge Drive, Room 7185, Bethesda, MD 20892, (Telephone Conference Call).

*Contact Person:* Kristen Page, Ph.D., Scientific Review Officer, Office of Scientific Review/DERA, National Heart, Lung, and Blood Institute, 6701 Rockledge Drive, Room 7185, Bethesda, MD 20892, 301-435-0725, [kristen.page@nih.gov](mailto:kristen.page@nih.gov).

(Catalogue of Federal Domestic Assistance Program Nos. 93.233, National Center for Sleep Disorders Research; 93.837, Heart and Vascular Diseases Research; 93.838, Lung Diseases Research; 93.839, Blood Diseases and Resources Research, National Institutes of Health, HHS)

Dated: January 8, 2015.

**Michelle Trout,**

*Program Analyst, Office of Federal Advisory Committee Policy.*

[FR Doc. 2015-00497 Filed 1-14-15; 8:45 am]

**BILLING CODE 4140-01-P**