MTS968

MATERIALS TRANSFER AGREEMENT

Provider:
U.S. Environmental Protection Agency (EPA)
Office of Research and Development (ORD)
National Center for Computational Toxicology (NCCT)

Recipient:
Vanderbilt University, 1207, 17th Ave.
South, Suite 105, Nashville, TN 37027.

1a. Provider agrees to transfer to Recipient's Investigator named below the following Research Material:

Chemicals and Materials

- X A list identifying selected chemicals from the ToxCast chemical library to be tested by Dr. Ned Porter at Vanderbilt University.
- X A copy of the current ToxCast chemical library, or subset, consisting of chemical samples prepared as solution in dimethyl sulfoxide at a concentration of 20 millimolar. Additional chemicals may be provided in the future concurrent with expansion of the ToxCast chemical library.
- ☐ Samples of nanomaterials and characterization data on said materials

Data and Summary Information

- ☐ In vitro assay data derived from the ToxCast Program. This data is derived from chemicals analyzed using a variety of high throughput assay techniques. Below this is referred to as the "ToxCast Data".
- ☐ In vivo whole animal toxicology data summary data derived from the EPA Toxicology Reference Database (ToxRefDB). Below this is referred to as the "ToxRefDB Data".
- ☐ Summary descriptions of the individual data sets.
- ☐ Individual subsets of this data will be delivered to XXX after they have been prepared for use at EPA and cleared for release to XXXX.

1b. The Recipient agrees to transfer to the EPA Investigator named below the following Research Material:

- X All data or data summaries resulting from chemical screening performed on the ToxCast chemical library.
- X Results of any data analyses that include use of provided ToxCast or ToxRef data.
- ☐ Relevant data on these chemicals from non-public sources.
- ☐ Unique chemicals for the ToxCast chemical library and subsequent testing by EPA.

2. This Research Material may not be used in human subjects. The Research Material will be used only for research purposes by Recipient Investigator in his/her laboratory, for the research project described below, under suitable containment conditions. This Research Material will not be used for screening, production or sale, for which a commercialization license may be required. Recipient agrees to comply with all Federal rules and regulations applicable to the Research Project and the handling of the Research Material.

3. Does the Research Material include specimens or data derived or collected from human subjects?
_____ Yes – Go to item #3(a).
__x___ No – Skip to item #4.

3(a). Does the Research Material include specimens or data derived or collected from fetuses, children, pregnant women, or nursing women?
_____ Yes
_____ No

3(b). Was the Research Material obtained under a protocol that was reviewed and approved by an Institutional Review Board (IRB) that operated in accordance with the requirements of EPA Regulation 40 CFR 26, HHS Regulation 45 CFR 46, or any other Federal Regulation for the protection of human research subjects?
_____ Yes (Please indicate the applicable Regulation here _____ and provide copies of the protocol and IRB approval documents.)
_____ No (Please provide explanation with documentary support as appropriate.)

3(c). Can the Provider of the Research Material identify the subjects directly or through identifiers (codes) linked to the subjects?
_____ Yes – The Recipient's use of the Research Material may be human subject's research subject to 40 CFR 26. Go to item #3(d).
_____ No – The Recipient's use of the Research Material is not human subjects research subject to 40 CFR 26. Skip to item #4.

3(d). Is the Provider of the Research Material prohibited by this agreement from releasing information to the Recipient that might allow the identification of any of the subjects, including but not limited to the key to any existing code?
_____ Yes – The Recipient's use of the Research Material is not human subjects research subject to 40 CFR 26. Skip to item #4.
_____ No – The Recipient's use of the Research Material may be human subjects research subject to 40 CFR 26. Go to item #3(e).

3(e). Is the Research Material publicly available?
_____ Yes – The Recipient's use of the Research Material is human subjects research that is exempt from 40 CFR 26.
_____ No – The Recipient's use of the Research Material is human subjects research that may be subject to 40 CFR 26 and must be further evaluated accordingly by the EPA Human Subjects Review Official.

4. This Research Material will be used by Recipient Investigator solely in connection with the following research project ("Research Project") described with specificity as follows
Title: Screening of Environmental Agents in Neuro2a Cells to Determine Their Effect on Sterol Homeostasis. Compounds in the Toxcast library will be assayed in Neuro2a cells to determine their effect on the last step in the biosynthesis of cholesterol, the transformation of 7-dehydrocholesterol (7-DHC) to cholesterol promoted by 7-dehydrocholesterol reductase, *DHCR7*. The screening method to be utilized is based on a recent publication (Kim, H. Y.; Korade, Z.; Tallman, K. A.; Liu, W.; Weaver, C. D.; Mirnics, K.; Porter, N. A. Inhibitors of 7-Dehydrocholesterol Reductase: Screening of a Collection of Pharmacologically Active Compounds in Neuro2a Cells. *Chem Res Toxicol* **2016**, *29*, 892. PMCID: PMC4868769.) We are particularly interested in finding compounds that increase levels of 7-DHC in cells because this sterol generates cytotoxic oxysterols. Any perturbation of sterol homeostasis that results in an elevated cellular level of 7-DHC will likely be associated with increased lipid peroxidation and oxidative stress. Thus, environmental agents that affect sterol homeostasis could have significant health consequences and the screening method to be employed will provide information about chemical entities that pose a threat to an exposed population.

5. In all oral presentations or written publications concerning the Research Project, Recipient will acknowledge Provider's contribution of this Research Material unless requested otherwise. To the extent permitted by law, Recipient agrees to treat as confidential, any of Provider's written information about this Research Material that is stamped "CONFIDENTIAL" for a period of three (3) years from the date of its disclosure to recipient. The foregoing shall not apply to information that is or becomes publicly available or which is disclosed to Recipient without a confidentiality obligation. Any oral disclosures from Provider to Recipient which Provider wishes to be treated as confidential shall be identified as being Confidential at the time of the disclosure and by written notice delivered to Recipient within thirty (30) days after the date of the oral disclosure. Recipient may publish or otherwise publicly disclose the results of the Research Project, but if Provider has given Confidential information to Recipient, such public disclosure may be made only after Provider has had thirty (30) days to review the proposed disclosure to determine if it includes any Confidential information, to the extent such review period is permitted by law.

6. This Research Material represents a significant investment on the part of Provider and is considered proprietary to Provider. Recipient Investigator therefore agrees to retain control over this Research Material and further agrees not to transfer the Research Material to other people not under his/her direct supervision without advance written approval of Provider. Provider reserves the right to distribute the Research Material to others and to use it for its own purposes.

When the Research Project is completed, the Research Material will be returned to the Provider or disposed, if directed by Provider.

7. This Research Material is provided as a service to the research community. It is being supplied to Recipient with no warranties, express or implied, including any warranty of merchantability or fitness for a particular purpose. Provider makes no representations that the use of the Research Material will not infringe any patent or proprietary rights of third parties.

8. Recipient shall retain title to any patent or other intellectual property rights in inventions made by its employees in the course of the Research Project. However, if said inventions contain any portion of the Research Material, are derived from the Research Material, or could not have been produced but for the use of the Research Material, Recipient agrees to contact the Provider to determine what ownership interests, if any, the Provider may have, and, where applicable, to negotiate in good faith the terms of a commercial license. Inventorship for a patent application or a commercialized product based on said inventions shall be determined according to United States patent law.

9. When Provider is the EPA: Recipient agrees not to claim, infer, or imply endorsement by the Government of the United States of America (hereinafter referred to as "Government") of the Research Project, the institution or personnel conducting the Research Project or any resulting product(s). Recipient agrees to hold the Government harmless and to indemnify the Government for all liabilities, demands, damages, expenses and losses arising out of Recipient's use for any purpose of the Research Material.

10. When Recipient is the EPA: Provider will not be liable to EPA for any claims or damages arising from EPA's use of the Research Material.

11. Both the Provider and the Recipient shall have the right to terminate this Agreement at any time by providing ten (10) days advanced written notice. Upon termination, Recipient shall return to the Provider all unused portions of the Research Materials.

12. Will EPA develop any products or services from information or materials provided by the Recipient?

____ Yes – go to item A

__x__ No – skip to #13 (next clause)

Item A: The EPA has a long history of applying principles of quality assurance/quality control to all technical work conducted by or for the Agency (CIO 2106: USEPA Quality Policy). Given EPA is receiving metabolomics and screening data and will use the metabolomics and screening data for Agency purposes, the Recipient is required to

provide EPA with documentation such as a quality manual, describing their organization's quality system. In lieu of such documentation, Standard Operating Protocols for compound handling and the assays performed are acceptable or documentation showing third party accreditation to a relevant standard and scope is also acceptable for documenting an organization's quality system. EPA requirements for quality management plans can be found at this URL: http://www.epa.gov/quality/qa_docs.html

13. All notices pertaining to or required by this Agreement shall be in writing and shall be signed by an authorized representative and shall be delivered by hand (including private courier mail service) or sent by certified mail, return receipt requested, with postage prepaid, addressed as follows:

Provider's Contact Information:

Russell Thomas, Ph.D.
National Center for Computational Toxicology (NCCT)
US EPA
109 TW Alexander (MD-D143-02)
Research Triangle Park, NC 27711
Tel: 919-541-5776
Thomas.russell@epa.gov

With a copy to:

Sandra Roberts
National Center for Computational Toxicology (NCCT)
US EPA
109 TW Alexander (MD-D143-02)
Research Triangle Park, NC 27711
919-541-3850
Roberts.sandra@epa.gov

For commercial courier address use:

4930 Old Page Rd.
Durham, NC 27703

Recipient's Contact Information:
Center for Technology Transfer and Commercialization
Vanderbilt University
1207, 17th Avenue South, Suite 105,
Nashville, TN 37212
ATTN: Assistant Vice Chancellor

With a copy to:
Dr. Ned Porter
Chemistry Department
Vanderbilt University
7330 Stevenson Center
Nashville, TN 37235

14. Paragraphs 2, 7, 9 and 10 shall survive termination.

15. This Agreement shall be construed in accordance with law as applied by the Federal courts in the District of Columbia.

16. The undersigned Provider and Recipient expressly certify and affirm that the contents of any statements made herein are truthful and accurate.

17. This agreement shall enter into force as of the date of the last signature of the parties and shall remain in effect for one year from said date.

SIGNATURES

FOR THE RECIPIENT:

Authorized Representative of Institution

Alan Bentley
Assistant Vice Chancellor

7/13/16
Date

READ AND ACKNOWLEDGED BY:
Principal Investigator

Ned Porter, PhD
Title: Research Professor
Email address: n.porter@vanderbilt.edu

June 30, 2016
Date

CERTIFICATION OF NO CONFLICT OF INTEREST (EPA ONLY)

I hereby certify that neither I nor any member of my immediate family will benefit in any material way from the execution or failure to execute the attached FTTA Cooperative Agreement or Licensing Agreement except to the extent of participation in royalty sharing as authorized by section 13 of the Stevenson-Wydler Technology Innovation Act, as amended by the Federal Technology Transfer Act of 1986 (15 U.S.C. 3710a et seq.).

I further certify that I have no knowledge of any such conflict by any other person who has participated in any material way in the initiation, design or development of the attached Agreement or who will participate in carrying it out.

Signed: Russell Thomas

Name: Russell Thomas

Title: Director, NCCT

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FOR THE PROVIDER:

Principal Investigator

Keith Houck

Keith Houck, Ph.D.
houck.keith@epa.gov

29-June-2016
Date

Authorized Representative of Institution

Russell Thomas

Russell Thomas, Ph.D.
Director, EPA/ORD/NCCT

6/29/16
Date

Any false or misleading statements made, presented, or submitted to the Government, including any material omissions, under this Agreement and during the course of negotiation of this Agreement are subject to all applicable civil and criminal statutes including 31 U.S.C. " 3801-3812 (civil liability), 18 U.S.C. ' 1001 (criminal liability), and 31 U.S.C. " 3729-33 (False Claims Act).