UC Davis – EPA MTA 953-17 Short Title Date Last Saved: November 2, 2016

MATERIALS TRANSFER AGREEMENT

Provi	der:
U.S. E	Environmental Protection Agency (EPA)
Office	of Research and Development (ORD)
Nation	nal Center for Computational Toxicology (NCCT)
Recip	
	egents of the University of California on behalf of its Davis campus
	Davis InnovationAccess, Technology Transfer Services, 1850 Research Park Drive, Suite
100, L	Davis CA 95618-6134
Resea	rch Material should be sent to:
	tment of Civil and Environmental Engineering
-	Ghausi Hall
One S	hields Ave.
Davis,	CA 95616
Attn:]	Professor Thomas Young ("Recipient Investigator") (530-754-9399)
1a. P	rovider agrees to transfer to Recipient the following Research Material:
Chem	icals and Materials
	("Recipient Investigator") at Recipient.
X	A copy of the current ToxCast chemical library, or subset, consisting of chemical
	samples prepared as solution in dimethyl sulfoxide. 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
Doto	nd 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 recipient after they have been prepared
	for use at EPA and cleared for release.

1b. The Recipient agrees to transfer to the EPA Investigator named below the following Research Material:
 □ All data or data summaries resulting from chemical screening performed on the ToxCas chemical library in both binary data file formats and, where necessary, in open file formats. □ 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). 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:
 - The Material supplied in this MTA will be used in this project for the generation of chromatography and mass spectrometry data to perform mixture analysis, compound identification and analysis, and the construction of reference datasets.
- 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 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 but only in proportion to and to the extent such are caused by or result from the negligent or intentional acts or omissions of the Recipient, its officers, agents or employees.
- 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. The Provider shall have the right to terminate this Agreement at any time if Recipient breaches any of the terms of this Agreement. 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		Yes-	- go	to	item	A
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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

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Recipient's Contact Information:

The Regents of the University of California on behalf of its Davis campus, having an address at UC Davis Innovation Access, Technology Transfer Services, 1850 Research Park Drive, Suite 100, Davis CA 95618-6134, mta@ucdavis.edu

Recipient Investigator
Professor Thomas Young
Department of Civil and Environmental Engineering
University of California, Davis
2001 Ghausi Hall
One Shields Ave.
Davis, CA 95616
(530) 754-9399
tyoung@ucdavis.edu

- 14. Paragraphs 2, 7, 9 and 10 shall survive termination.
- 15. The undersigned Provider and Recipient expressly confirm and affirm that the contents of any statements made herein are truthful and accurate.
- 16. 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.

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SIGNATURES

FOR THE RECIPIENT:

Authorized Representative of Institution

Jan D. Carmikle

Senior Intellectual Property Officer

11/16/2016

Date

READ AND ACKNOWLEDGED BY:

Principal Investigator

Name Thomas Young

Title: Professor

Email address: tyoung@ucdavis.edu

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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.

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Signed:	lean		Troop
		_	

Name: Bussell Thomas

Title: Director NCCT

FOR THE PROVIDER:

Principal Investigator

Antony J. Williams, Ph.D.

williams.antony@epa.gov

vember 10th 2016 Date

Authorized Representative of Institution

Russell Thomas, Ph.D.

Director, EPA/ORD/NCCT

Date

Date Last Saved: November 2, 2016

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).