



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Office of Research and Development
RESEARCH TRIANGLE PARK, NC 27711

MEMORANDUM

DATE: March 11, 2020

SUBJECT: Engagement of the EPA Center for Computational Toxicology and Exposure in European Commission SC1-BHC-11-2020 Call

FROM: Russell S. Thomas, Ph.D. *RT*
Director, US EPA's Center for Computational Toxicology and Exposure

TO: Horizon 2020 SC1-BHC-11-2020 Call Applicants

As a likely consequence of the provision for international collaboration within the European Union's Horizon 2020 (H2020) Program for Health, Demographic Change and Wellbeing as the leadership and recognition of the US Environmental Protection Agency's Center for Computational Toxicology and Exposure (CCTE or the Center) in the area of chemical safety, the Center has received requests to be a partner in consortia intending to respond to the H2020 call entitled "Advancing the safety assessment of chemicals without the use of animal testing" (call identifier SC1-BHC-11-2020). The purpose of this memorandum is to announce that the Center does not intend to engage in proposals for this call led by external organizations as a formal bidding partner (i.e., beneficiary), but instead will consider collaborating or participating in an advisory capacity with successful consortia following selection and award of a grant by the European Commission. This decision was reached in order for the Center to maintain equity and transparency in engaging this important European initiative, and ultimately enhance the efficiency of external interactions with the Center. The Center hereby summarizes its considerations for collaborating with successful H2020 applicants, recognizing that there are multiple potential paths to success in predictive chemical safety testing.

The Center's considerations for future collaboration are the following:

- Use of chemicals that overlap with the ToxCast and Tox21 libraries in order to leverage diverse data streams in predicting toxicity, toxicokinetics, and exposure
- Development and deployment of *in vitro* assays that complement the existing toxicological space and technologies covered by the ToxCast and Tox21 program
- Development and application of *in silico* methods in predicting toxicity, toxicokinetics, and exposure
- Incorporation of assays, platforms, or approaches that allow efficient evaluation of hundreds or thousands of chemicals in concentration-response format or are of lower throughput but provide additional complementary information to the high-throughput assays in the ToxCast/Tox21 program (e.g., organotypic cell models)

- Address the primary uncertainties in biokinetics and toxicokinetics associated with translation of *in vitro* concentrations to *in vivo* administered dose
- Ability to frame laboratory experimental results in the context of relevant human exposures
- Public release of the data
- Relevance and complementarity to existing computational toxicology or computational exposure research efforts within the Center and Tox21 efforts

This memorandum and listed considerations for collaboration will be posted publicly on EPA's website, and will be communicated to the European Commission.

cc: Jeff Frithsen, Ph.D.
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