## Development of Innovative Approaches to Assess the Toxicity of Chemical Mixtures Request for Applications (RFA) Informational Webinar Questions and Answers October 21, 2021

- Can a senior investigator be either a co-PI or a co-investigator on an early career application? Answer: This is not prohibited in the RFA, but most of the work and associated budget should be for non-senior researchers.
- 2. Are the maximum fund limits for direct costs or direct + indirect costs? Answer: The funding total includes both direct and indirect costs.
- 3. What role, if any, are foreign collaborators able to play in this research? **Answer:** Foreign collaborators are permitted to be co-investigators. Foreign institutions may also be sub-awardees. Applicants can conduct research outside of the U.S., but the main benefits should be applicable to the U.S. Extra justification is required if there will be spending funds on international travel and/or work.
- 4. Is there a list of types of contaminants or mixtures of interest to EPA besides PFAS, PAHs, etc.? Or is it limited to these?

**Answer:** It is not limited to these contaminants, and we have not defined a list of 'possible' mixtures for this RFA. If your work is responsive to one of the two research areas, it is relevant. The RFA is about developing new approaches to assess the toxicity of mixtures to advance the science and less so about the specific mixture being evaluated. Keep in mind, reviewers will be evaluating your responsiveness to the RFA, so it is important to be clear what chemicals you are evaluating and how it addresses the research questions.

- 5. Can mixture carcinogenicity prediction/analysis be allowed in addition to toxicity **Answer:** Yes, if your work is responsive to one of the research areas in the RFA.
- In term of chemical classes, it looks like organic chemicals are the focus in this funding opportunity than inorganic chemicals, such as metals. Is this correct?
  Answer: If your work is responsive to one of the research areas in the RFA, there is no reason to rule out metals or inorganic chemical mixtures.
- Are the natural mixtures existing in the environment such as biomass burning aerosols or ambient PM2.5 considered relevant for this RFA?
   Answer: Yes, if the work is responsive to one of the research areas in the RFA.
- 8. Would microplastic contamination in air/water/soil/food be a considered a chemical mixture of interest?

**Answer:** Yes, if your work is looking at the toxicity of the components, but this RFA is not looking for ecological endpoints or the accumulation of microplastics in ecosystems.

- 9. Is the collection of air toxics profiled in NATA considered a chemical mixture? Answer: Yes, if the work is responsive to one of the research areas in the RFA.
- 10. Can antibiotic mixtures be also investigated as a mixture? Answer: Yes, if the work is responsive to one of the research areas in the RFA.
- 11. Can you please clarify whether *in chemico* approaches will also be considered? **Answer:** Yes, if the work is responsive to one of the research areas in the RFA.
- 12. Can bacteria be considered as an appropriate component of a mixture, in addition to chemicals??Answer: Bacterial contamination would be outside the scope of the RFA.
- 13. Are disease-oriented or disease-focused proposals acceptable? Answer: The focus of this RFA is on methods to inform risk assessment of chemical mixtures. If your work is investigating a specific human health outcome of exposure, that would be relevant, but this RFA is specifically looking for methods for evaluating toxicity.
- 14. Can the proposal focus on toxicity/risk to animals (such as zebrafish as you mentioned) instead of human?
  Answer: The focus of this RFA is toxicity to human health. *In vivo* approaches using non-mammalian animals such as zebrafish can be used to evaluate toxicity, but the endpoint is the

mammalian animals such as zebrafish can be used to evaluate toxicity, but the endpoint is the effect on humans.

- 15. What other animals can be used other than zebrafish? Answer: The RFA doesn't define any limitations, but the New Approach Methodologies (NAMs) sought in this solicitation usually doesn't include vertebrate animal testing.
- 16. Is this looking at the methodology to evaluate chemical mixture effects on human health rather than understanding how mixture effects of chemicals are or both?
  Answer: This RFA is seeking methods to assess the toxicity of chemical mixtures on human health.
- Is there priority given to proposals that address both research questions you described earlier in the presentation, or is a proposal that only addresses one of them held in equal standing?
   Answer: No. Applicants are only required to respond to one research area, both of which are in equal standing to reviewers.
- 18. Is there a need to present preliminary data? Answer: Applications will be reviewed for technical merit by the criteria listed in Section V of the RFA. If including preliminary data is relevant to the research areas and review criteria than it can be included, but it is not required.
- 19. What is the proposal page limit?

**Answer:** Each section has a page limit, defined in the RFA. If you exceed the page limit, reviewers may not review beyond that point.

- 20. Would Minority Serving Institutions (MSIs) be given preference over other traditional institutes? **Answer:** Minority Serving Institutions are encouraged to apply, however there is no preference given to MSIs or traditional institutes.
- 21. Can you let us know what type of peer reviewers you're looking for? (What fields they're expert in)

**Answer:** Having experience and depth of expertise in the field of study, specifically toxicology, risk assessment, mathematical and statistical models, bioinformatics, alternative animal models, and in vitro methodology. Early career researchers would also be considered. Please contact Chris Rea (<u>rea.chris.l@epa.gov</u>) or Meta Bonner (<u>bonner.meta@epa.gov</u>) if you are not planning to apply for a grant and you are interested in serving as a peer reviewer.

For further questions about the RFA and processes, please contact:

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