From: <u>Jason Bush</u>

To: <u>Barajas-Ochoa, Esther@OEHHA</u>

Subject: CIC Peer Review

Date: Monday, July 6, 2020 1:05:51 PM

EXTERNAL:

Dear Dr. Hirsch,

I have reviewed NSRL materials for Dibromoacetic acid, Dichloroacetic acid & Trichloroacetic acid. While I see no data that would add substantive rebuttal to the best-practices determinations that OEHHA has followed in assigning NSRL levels, I would caution that Trichloroacetic acid (TCA) is an agent widely applied in dermatology for skin regeneration and thus impacts metabolic mechanisms at the cellular level to promote proliferation. There appears to be a growth factor stimulation relationship in certain epithelial and fibroblastic tissues (e.g. Lee K, Ben Amara H, Lee SC, et al. Chemical Regeneration of Wound Defects: Relevance to the Canine Palatal Mucosa and Cell Cycle Up-Regulation in Human Gingival Fibroblasts. *Tissue Eng Regen Med*. 2019;16(6):675-684. Published 2019 Nov 21. doi:10.1007/s13770-019-00227-6) and thus circulating levels of TCA in the body could potentially have an as yet unknown effect in the most sensitive populations particularly women with conceptus. I suggest that this ought to be re-evaluated in the future.

In my review, I did consider the questions posed. My basic responses are denoted here in bold:

- 1. Is the NSRL based on the most sensitive study, or group of studies, deemed to be of sufficient quality? **Yes.**
- 2. Is the model selected for dose-response assessment appropriate, based upon the available data for this chemical? **Yes.**
- 3. Are there available data of such quality that "anatomic, physiologic, pharmacokinetic and metabolic considerations can be taken into account with confidence" that should be used in the assessment? **Not at this time.**
- 4. Are the calculations correct (e.g., interspecies scaling of animal to human cancer potency, derivation of NSRL)? Yes, these appear consistent with current standards.

Kind regards, Jason Bush

Jason A. Bush, PhD Professor & Chair, Biology Department California State University, Fresno

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On Tue, May 26, 2020 at 9:43 AM Barajas-Ochoa, Esther@OEHHA < Esther@OEHHA < Esther.Barajas-Ochoa@oehha.ca.gov> wrote:

Dear CIC Members:

Please find attached memo and attachments from OEHHA Chief Deputy Director Allan Hirsch.

Kind regards,

Esther Barajas-Ochoa

Associate Governmental Program Analyst

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