



Correspondence

Response to “Speculation vs. evidence in the association between e-cigarette use and COVID-19”

We thank the editors for the opportunity to respond to Drs. Farsalinos and Niaura's comments (Farsalinos and Niaura, *in press*). They raise three main concerns about our report (Soule et al., 2020) and the potential adverse effects of electronic cigarette (e-cigarette) use and the COVID-19 pandemic. They contend that our report was “based on irrelevant and erroneously cited evidence”, that “lipoid pneumonia is a treatable condition,” and that we “grossly mis-presented a blog post” by the first author (Dr. Farsalinos).

We confirm that our cited literature was chosen carefully and based on its high clinical and basic research impact that supports detrimental effects of e-cigarette use on lung immunity. As our authorship team includes a practicing pulmonary and critical care physician (Dr. Kheradmand), we can testify that respiratory failure associated with chronic e-cigarette use is characterized by the recruitment of macrophages into the lungs that uptake abnormal surfactant lipids, as demonstrated by Madison et al., (2019). Filling the alveoli with dysfunctional macrophages can cause a severe life-threatening condition that impairs gas exchange and requires medical attention. The notion that respiratory diseases related to e-cigarette use do not occur is false and is unethical to promote.

Criticisms of Gaiha et al., (2020) by Farsalinos and Niaura based on findings they find “implausible” and “probably represent serious response bias” (emphasis added) are speculative. We look forward to seeing data that address the speculation introduced regarding Gaiha et al. (2020)'s findings.

Finally, when Soule et al. (2020) write “However, one of the empirical reports to which the text refers is from a 1980 U.S. Environmental Protection Agency document...” the phrase “the text” does not refer to a blog post by Farsalinos (Farsalinos, 2020), but rather refers to a different online document that we cite (Vaping and Coronavirus, 2020). The text of that online document (Vaping and Coronavirus, 2020) does refer to the U.S. Environmental Protection Agency report which, as Farsalinos and Niaura suggest, is irrelevant to propylene glycol inhalation via e-cigarette use because it refers to disinfecting room air from air sanitizers and demonstrates how media continues to spread misinformation regarding how e-cigarette use could be protective for COVID-19 outcomes. We apologize if this wording confused Farsalinos and Niaura.

We maintain that health practitioners should be aware of the association of e-cigarette use and COVID-19 outcomes as well as the spread of misinformation regarding speculations that e-cigarette use may be protective for COVID-19 outcomes.

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Administration. The content is solely the responsibility of the authors and does not necessarily represent the official views of NIH or the FDA. E. Soule and T. Eissenberg are named on a patent application for a smartphone app that determines electronic cigarette device and liquid characteristics. T. Eissenberg is a paid consultant in litigation against the tobacco industry and also against the electronic cigarette industry and is named on a patent for a device that measures the puffing behavior of electronic cigarette users.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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