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12-14-2021

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Michael C. Kwa

*Henry Ford Health*, mkwa1@hfhs.org

Henry W. Lim

*Henry Ford Health*, hlim1@hfhs.org

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#### Recommended Citation

Kwa MC, and Lim HW. Commentary on: "Oxybenzone and pregnancy: Time for more research and patient education". *J Am Acad Dermatol* 2021.

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**Commentary on: “Oxybenzone and pregnancy: Time for more research and patient education”**

*To the Editor:* We read with interest Drs Viola and Grant-Kels’ letter<sup>1</sup> discussing the potential risk of oxybenzone in pregnancy, which advocates for further high-quality safety studies for sunscreens containing organic filters.

We agree that more research is warranted. As highlighted by a 2020 Food & Drug Administration (FDA) study, systemic absorption of oxybenzone and other organic UV filters surpasses the maximum threshold for waiving additional safety studies.<sup>2</sup>

It is important to note that, thus far, no known significant detrimental effects to overall human health have been identified from sunscreens despite decades of use. Indeed, while some organic sunscreens (eg, oxybenzone and octinoxate) have been identified as potential endocrine disruptors in vitro and in animal models, a review by Suh et al,<sup>3</sup> including search terms for pregnancy, highlights that current evidence is mixed and thus not sufficient to support a causal relationship between systemic absorption and adverse health outcomes.

In the case of Hirschsprung disease, it is important to emphasize that causation remains unknown especially given that the in vivo association was made using a single spot urine BP-3 collected at an unspecified time after pregnancy, and the proposed pathogenic mechanisms were based on in vitro studies.<sup>1</sup> Hirschsprung disease is exceedingly rare, with a recent 20-year epidemiologic study in California citing a stable incidence of 2.2 per 10,000 births with a higher incidence in individuals with skin of color (per 10,000 births, 4.05 in African Americans, 2.45 in Asians, and 1.89 in Caucasians),<sup>4</sup> a demographic with traditionally lower sunscreen usage. Notably, these rates were similar to earlier US cohorts examining the incidence dating back to the 1970s.

With the FDA’s recently released proposed administrative order calling for additional safety data for 12 of the organic filters, including oxybenzone, better characterization of risks to human health should be more forthcoming.<sup>5</sup> For those looking to minimize unclear risks while awaiting further study, sunscreens with inorganic filters, as proposed by Viola and Grant-Kels, would be reasonable options. Of note, inorganic UV filters (ie,

titanium dioxide and zinc oxide) have been proposed to be categorized by the FDA as generally recognized as safe and effective. However, for those who prefer the cosmetic elegance of organic sunscreens, discussion of potential, as yet unclear risks versus the known benefit of photoprotection from sunscreens will remain important in photoprotection counseling.

*Michael C. Kwa, MD, and Henry W. Lim, MD*

*From the Department of Dermatology, Henry Ford Health System, Detroit, Michigan.*

*Funding sources: None.*

*IRB approval status: Not applicable.*

*Key words: photoprotection; pregnancy; sunscreen.*

*Reprints not available from the authors.*

*Correspondence to: Henry W. Lim, MD, Dermatology, Henry Ford Medical Center—New Center One, 3031 West Grand Blvd, Suite 800, Detroit, MI 48202*

*E-mail: [hlim1@hfhs.org](mailto:hlim1@hfhs.org)*

**Conflicts of interest**

Dr Lim is an investigator for Incyte, L’Oreal, Pfizer, and PCORI. He has served as a consultant for Pierre Fabre, ISDIN, Ferndale, La Roche-Posay, Cantabria, and Beiersdorf. He has also participated as a speaker in general educational sessions for La Roche-Posay and Cantabria Labs. Dr Kwa has no conflicts of interest to declare.

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<https://doi.org/10.1016/j.jaad.2021.12.011>