

May 3, 2021

Tyler Saechao
Office of Environmental Health Hazard Assessment
1001 I Street
P.O. Box 4010, MS-12B
Sacramento, California 95812-4010

Re: Comments on the California Office of Environmental Health Hazard Assessment (OEHHA) Notice of Intent To List Chemical By The Authoritative Bodies Mechanism: Perfluorooctanoic Acid (PFOA)

Dear Mr. Saechao,

Breast Cancer Prevention Partners (BCPP) is a national non-profit organization committed to preventing breast cancer by reducing exposure to chemicals and radiation linked to the disease. We base our work on a foundation of sound, peer-reviewed science showing increased risk of breast cancer from exposure to chemicals. **We write in support of OEHHA's Intent to list PFOA as a carcinogen under the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65).**

Health and Safety Code Section 25249.8(b) and Title 27, California Code of Regulations, Section 25306 states that a chemical is known to the state to cause cancer if the lead agency determines an authoritative body has formally identified the chemical as causing cancer. BCPP believes these requirements have been met for PFOA for the following reasons:

- The National Toxicology Program (NTP) is considered an authoritative body for the identification of chemicals causing cancer as listed in Section 25306(m)(3).
- PFOA has been “formally identified” by NTP as causing cancer in the “NTP Technical Report on the Toxicology and Carcinogenesis Studies of Perfluorooctanoic Acid (CASRN 335-67-1) Administered in Feed to Sprague Dawley (Hsd:Sprague Dawley® SD®) Rats” (“Technical Report”) published in May 2020.¹ The Technical Report concludes, “Under the conditions of these 2-year feed studies, there was **clear evidence of carcinogenic activity of PFOA** in male Hsd:Sprague Dawley® SD® rats based on the increased incidence of hepatocellular neoplasms (predominately hepatocellular

¹ National Toxicology Program. “NTP Technical Report on the Toxicology and Carcinogenesis Studies of Perfluorooctanoic Acid (CASRN 335-67-1) Administered in Feed to Sprague Dawley (Hsd:Sprague Dawley® SD®) Rats.” Technical Report Series No. 598. US Department of Health and Human Services, NTP, Research Triangle Park, NC. Available from URL: https://ntp.niehs.nih.gov/ntp/htdocs/lt_rpts/tr598_508.pdf

adenomas) and increased incidence of acinar cell neoplasms (predominately acinar cell adenomas) of the pancreas.”

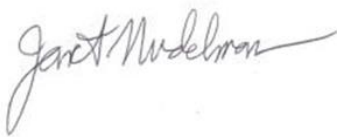
The Technical Report is considered “sufficient evidence” as defined in Section 25306(e)(2) since the findings indicate an increased incidence of combined malignant and benign tumors in multiple experiments. These findings meet the requirements for the lead agency, OEHHA, to list PFOA as a carcinogen under Proposition 65 by the Authoritative Bodies Mechanism.

NTP’s formal identification of PFOA as a carcinogen is consistent with multiple previous research studies which have linked PFOA to carcinogenicity in human breast cancer cells. For example, a study of Inuit women in Greenland showed higher levels of PFOA in women’s blood serum were associated with increased risk for developing breast cancer.^{2,3} A study conducted on human cells in vitro showed that PFOA enhanced the effects of estradiol in hormone-dependent breast cancer cells.⁴ After ingesting PFOA through breastfeeding, the diversity of infants’ gut microbiome decreased, a factor that has been associated with increased risk for developing breast cancer in adults.^{5,6}

In addition, a report BCPP released found that popular anti-aging creams sold in the United States containing PTFE were contaminated with PFOA, resulting in direct exposure to the demographic most affected by breast cancer.⁷ A Proposition 65 warning label should be required to protect public health from continued PFOA exposure.

We urge OEHHA to move forward with the listing PFOA as a Proposition 65 carcinogen and appreciate the opportunity to comment.

Sincerely,



Janet Nudelman
Director of Program and Policy

² Bonefeld-Jorgensen, Eva C et al. “Perfluorinated compounds are related to breast cancer risk in Greenlandic Inuit: a case control study.” *Environmental Health* 10 (2011): 88. [doi:10.1186/1476-069X-10-88](https://doi.org/10.1186/1476-069X-10-88).

³ Wielsøe, Maria et al. “Serum levels of environmental pollutants is a risk factor for breast cancer in Inuit: a case control study.” *Environmental Health* 16,1 (2017): 56. [doi:10.1186/s12940-017-0269-6](https://doi.org/10.1186/s12940-017-0269-6).

⁴ Sonthithai, Pacharapan et al. “Perfluorinated chemicals, PFOS and PFOA, enhance the estrogenic effects of 17 β -estradiol in T47D human breast cancer cells.” *Journal of Applied Toxicology* 36, 6 (2016): 790-801. [doi:10.1002/jat.3210](https://doi.org/10.1002/jat.3210).

⁵ Iszatt, Nina et al. “Environmental toxicants in breast milk of Norwegian mothers and gut bacteria composition and metabolites in their infants at 1 month.” *Microbiome* 7, 1 (2019): 34. [doi:10.1186/s40168-019-0645-2](https://doi.org/10.1186/s40168-019-0645-2).

⁶ Parida, Sheetal, and Dipali Sharma. “The Microbiome-Estrogen Connection and Breast Cancer Risk.” *Cells* 8, 12 (2019): 1642. [doi:10.3390/cells8121642](https://doi.org/10.3390/cells8121642).

⁷ Breast Cancer Prevention Partners. “Anti-Aging Secrets Exposed: Chemical Linked to Breast Cancer in Skin Care.” Available from URL: <https://www.bcpp.org/resource/anti-aging-secrets-report/>.