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CLIFFORD, VA, UNITED STATES, March 8, 2021 /EINPresswire.com/ -- A popular sunscreen and anti-aging cream ingredient, Octocrylene, degrades into a toxic chemical that is a known carcinogen and endocrine disruptor.

Octocrylene naturally degrades into the chemical, benzophenone, in over a dozen popular products, as demonstrated in a study published in the journal, Chemical Research in Toxicology, by French and American researchers at Sorbonne University and Haereticus Environmental Laboratory. Benzophenone concentration in the products quickly increase as the product ages.

Both octocrylene and benzophenone are readily absorbed into the skin. Dermal absorption of benzophenone into the body may exceed 70%, based on topical studies conducted by Prof. Howard Maibach and colleagues in the 1990s – a strong argument for regulatory prohibition of this chemical in perfumes and other topical products.

Based on the February 26, 2019 U.S. Federal Register, Octocrylene has not met U.S. Food & Drug Administration's criteria for safety or effectiveness, and accumulating science indicates that it may act as a reproductive toxicant, as well as a metabolic and endocrine disruptor. That octocrylene products are tainted by benzophenone questions the overall safety of these products for public use. In 2019, almost 3,000 commercial products sold in the United States contained octocrylene, including shampoos, hair conditioners, and hair sprays.

Dermatologist, Dr. Sharyn Laughlin, is gravely concerned regarding the far-reaching consequences of this study. "Benzophenone is still the worst offender in causing contact dermatitis, and may induce uticaria and anaphylaxis. Absorption of both chemicals through the skin poses a potential threat to toxicities and diseases of other organs."

Benzophenone is listed as a carcinogen and developmental disruptor under California Proposition 65. In mammalian-model studies, benzophenone exposure quickly gave rise to liver cancers and lymphomas. Benzophenone can act as a photo-mutagen; in the presence of light, it increases the rate of DNA lesions, thus increasing the risk of skin cancers.

Benzophenone is also an endocrine disruptor, affecting thyroid function as well as inducing anti-

androgenic activity, delaying testicular development and causing anatomic difficulties with female reproductive organs.

In both court cases and product data sheets, industry has admitted that its octocrylene-products may be contaminated with benzophenone.

Octocrylene can be removed from personal care product formulations. “It is a challenge to formulate aesthetically pleasing and effective sunscreens without using endocrine disrupting chemicals, but it can be done,” said Autumn Blum, CEO of Stream2Sea. “It is possible that major manufacturers and ingredient suppliers can pay attention to the science that clearly shows the danger, and that industry needs to invest in the innovation necessary to develop products that are safe for consumers and ecosystems.”

Octocrylene has been banned in sunscreen products in places like the U.S. Virgin Islands, the Republic of the Marshall Islands, and was first banned in the Republic of Palau. President Tommy Remengesau, Jr., who signed the ban into law states, “Palau identified an emerging environmental threat that is uniquely tied to tourism: sunscreen use in outdoor recreation. Precautionary governance of these chemicals and other contaminants of emerging concern is not only good policy, but also a manifestation of a traditional Pacific paradigm of conservation management. We should demand intensive, independent studies on the safety of all the chemicals used in personal care products, and emerging research like this further strengthens that imperative. Science has to come first, we cannot gamble with environmental health.”

Octocrylene, by itself, has demonstrated reproductive-developmental toxicities, as well as endocrine disrupting action. Octocrylene can act as a metabolic toxicant in corals, potentially decreasing the resiliency of coral reefs to climate change. Monsanto Chemical Company patented benzophenone as an herbicide in 1954, acknowledging the threat that octocrylene-based products polluting the environment could induce lower thresholds of coral bleaching because of benzophenone contamination.

In Hawai‘i, State Senator Mike Gabbard, Chair of Agriculture and Environment Committee, introduced new legislation for 2021 that seeks to amend Act 104 by including octocrylene products being banned from sale, along with oxybenzone and octinoxate sunscreen products. Sen. Gabbard said, “In 2018, our state became a world leader in safe sunscreens with the enactment of Act 104, which banned the dangerous chemicals oxybenzone and octinoxate starting January 1 of this year. I introduced SB 366 this session to take the next step to protect human health and our environment."

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