

STATE OF HAWAII
DEPARTMENT OF HEALTH
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WRITTEN
TESTIMONY ONLY

**Testimony COMMENTING on SB2621
RELATING TO WATER POLLUTION**

Department of Health; Water Pollution; Sunscreen; Distribution; Prohibition

REPRESENTATIVE ROSALYN H. BAKER, CHAIR
COMMITTEE ON COMMERCE, CONSUMER PROTECTION, AND HEALTH

SENATOR MIKE GABBARD, CHAIR
COMMITTEE ON AGRICULTURE AND ENVIRONMENT
Hearing Date: 2/11/2020 Room Number: 229

- 1 **Fiscal Implications:** This measure may impact the priorities identified in the Governor's
2 Executive Budget Request for the Department of Health's (Department) appropriations and
3 personnel priorities.
- 4 **Department Testimony:** SB 2621 seeks to add octocrylene, octisalate and homosalate to the
5 list of active ingredients restricted from sale or distribution in Hawaii in non-prescription
6 sunscreens, and allow the Department to add additional, future chemical restrictions through the
7 administrative rule making process. The Department has the following comments.
- 8 The Department recognizes the benefits of the 2018 legislation prohibiting the sale of
9 oxybenzone and octinoxate containing sunscreen products in Hawaii. It is heartening to see the
10 dramatic increase in availability, variety and consumer acceptance of oxybenzone and
11 octinoxate-free options and mineral sunscreen products that have entered the consumer market in
12 the past two years. Use of these products meets standards for public health protection and offers
13 the public a concrete choice to help protect Hawaii's coral reefs and marine environment when
14 enjoying our beaches. However, the risk of skin cancer from sun exposure remains a hazard for
15 the people of Hawaii and visitors and it is imperative that the public health consequences of
16 additional prohibition on sunscreen ingredients are considered.

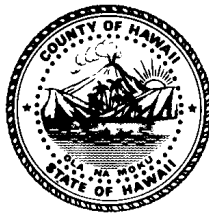
1 This measure seeks to amend Chapter 342D-21 to further prohibit the sale and distribution of
2 three additional sunscreen ingredients and use administrative rulemaking to add additional
3 chemicals. The Department is hesitant to take on responsibility for prohibition of additional
4 chemicals as we lack the technical expertise or resources needed to assess both human and
5 ecological impacts of such prohibitions. As a small agency, the Department relies on ongoing
6 research by the Environmental Protection Agency to identify the environmental risks of
7 sunscreen ingredients and the United States Food and Drug Administration to determine safe and
8 effective active ingredients for sun protection. Further, implementation of this measure would
9 take away limited resources from other critical public health priorities.

10 The Department strongly supports public education efforts and outreach strategies to inform
11 Hawaii beachgoers about steps they can take to reduce the unintended impacts of sunscreen use
12 while safely enjoying our tropical marine waters and sunny beaches. The Department also
13 supports academic and applied research efforts further investigating the fate and environmental
14 effects of homosalate, octocrylene, octisalate and other sunscreen compounds in the nearshore
15 marine environment.

16 **Offered Amendments:** None

17 Thank you for the opportunity to testify on this measure.

REBECCA VILLEGAS
Council Member
District 7, Central Kona



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HAWAI'I COUNTY COUNCIL

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Kailua-Kona, Hawai'i 96740

LATE

February 5, 2020

TESTIMONY OF REBECCA VILLEGAS
COUNCIL MEMBER, HAWAI'I COUNTY COUNCIL
ON SB 2621, RELATING TO WATER POLLUTION
Committee on Commerce, Consumer Protection, and Health
Committee on Agriculture and Environment
Tuesday, February 11, 2020
8:30 a.m.
Conference Room 229

Aloha Chair Baker, Chair Gabbard, and Members of the Committees:

I thank you for the opportunity to testify in support of SB 2621, relating to water pollution. My testimony is submitted in my individual capacity as a member of the Hawai'i County Council and Chair of the Hawai'i County Council Public Safety Committee.

The purpose of this measure is to further prohibit the sale and distribution of sunscreen containing certain chemicals within the State and allow the Department of Health to prevent the sale of additional chemicals through its administrative rulemaking process. A number of sunscreens have recently demonstrated to pose intolerable toxicological threats such as; environmental contamination in coastal waters, harmful impacts on Hawai'i's marine environment, coral reefs and other residing ecosystems, increases the risk of breast cancer, birth defects, development disorders in children and other issues. The State in the interest to preserve our marine ecosystem has banned sunscreen that contain oxybenzone or octinoxate through the enactment of Act 105, session laws of Hawai'i 2018. Additional action must be taken to prevent any potential harmful impacts of sunscreens containing ingredients other ingredients that is harmful to the environment and public health. Allowing the Department of Health to prevent the sale of additional chemicals through its rulemaking process can ensure future protections.

For the reasons stated above I urge the Committee on Commerce, Consumer Protection and Health, and the Committee on Agriculture and Environment to support this measure as well. Should you have any questions, please feel free to contact me at (808) 323-4267.

Mahalo for your consideration.

Rebecca Villegas
Council Member, Hawai'i County Council

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Derek Kurisu, KTA Superstores, *Advisor*
Beau Oshiro, C&S Wholesale Grocers, *Advisor*
Toby Taniguchi, KTA Superstores, *Advisor*

TO:

Committee on Commerce, Consumer Protection, and Health and Committee on Agriculture and Environment

Senator Rosalyn H. Baker and Senator Mike Gabbard, Chairs

Senator Stanley Chang and Senator Russell E. Ruderman, Vice Chairs

FROM: HAWAII FOOD INDUSTRY ASSOCIATION

Lauren Zirbel, Executive Director

DATE: February 11, 2020

TIME: 8:30am

PLACE: Conference Room 229

RE: SB2621 Relating to Water Pollution

Position: Oppose

The Hawaii Food Industry Association is comprised of two hundred member companies representing retailers, suppliers, producers, and distributors of food and beverage related products in the State of Hawaii.

HFIA is opposed to this measure, which disadvantages local retailers and benefits mainland and online retailers. This bill dramatically limits the number of desirable sunscreen products available for sale by local businesses. Internet sales of these same products will likely continue as it is very difficult to enforce this law for items sold online.

This ban would impact a number of products that are used to prevent skin cancer, we believe that a higher standard of review is necessary before banning products that many Hawaii residents rely on to prevent cancer.

Per the Food and Drug Administration:

“In a study recently published in the Journal of the American Medical Association (JAMA), 1 CDER scientists conducted a pilot study and learned that four active ingredients commonly found in sunscreen (avobenzone, oxybenzone, octocrylene, and ecamsule) were absorbed through the skin into the body.

These results do not mean that the ingredients are unsafe. Rather the results support the need for further absorption testing and other safety studies of these ingredients for repeated use. While industry and other interested parties develop further data, **the public should continue to use sunscreens** with other sun protective measures. Broad spectrum sunscreens with sun protection factor (SPF) values of at least 15 remain a critical element of a skin-cancer prevention strategy.”¹

We understand that there are some mineral sunscreens available that do not have these ingredients, however, there are serious concerns about the effectiveness of these alternative products. Consumer Reports (CR) has noted, **“Mineral sunscreens have consistently underperformed in CR’s testing, not always testing at the claimed SPF label** on the package and failing to provide adequate protection from either UVA or UVB rays. None of the 18 sunscreens in our current ratings that contain only titanium dioxide, zinc oxide, or both scored high enough to receive a recommended designation from CR.”²

There are also still questions about which ingredients are safest for the environment. In April 2019 Civil Beat reported, “The new research introduces the possibility that titanium dioxide sunscreen is not as safe for ocean life and human health as previously thought.”³ **Researcher Craig Downs, who was a leading proponent of the oxybenzone ban, is now stating that only expensive sunscreen is acceptable.**⁴

The head of science for the Great Barrier Reef Marine Park Authority is not supporting calls to ban people from using certain sunscreens on the Reef. Amid calls for a crackdown on the products in Queensland, the acting Chief Scientist for the Great Barrier Reef Marine Park Authority (GBRMPA) said currently, the health benefits are outweighing any reef risks. “There’s ample evidence oxybenzone plays a role in human health, so protecting us from DNA damage and the risks of skin cancer,” Dr James Kerry told the ABC. **“The science behind the impact of the products on corals is not well established at all.** The only studies that have established any link to damage to corals have been done in a lab and they haven’t replicated the conditions on the reef. They’ve been done these in confined spaces, in tanks, and if you treat coral that way it tends to get stressed. When we look for concentration of these chemicals out on the reef we’re finding very, very low concentrations.” Dr Kerry said people who are concerned about the health of the reef would be far better off reducing their carbon footprint. **“This issue of sunscreen is a distraction from what we really need to focus on the reef, which is climate change,” he said.**

Hawaii has high rates of skin cancer and we don’t believe there is enough evidence to warrant additional bans on functional products.

Thank you for the opportunity to testify.

¹ <https://www.fda.gov/drugs/news-events-human-drugs/spotlight-cder-science-new-fda-study-shines-light-sunscreen-absorption>

² <https://www.consumerreports.org/sunscreens/what-you-need-to-know-about-sunscreen-ingredients/>

³ <https://www.civilbeat.org/2019/08/some-reef-safe-sunscreens-may-not-be-safe-after-all/>

⁴ <https://www.civilbeat.org/2019/08/some-reef-safe-sunscreens-may-not-be-safe-after-all/>

SB-2621

Submitted on: 2/5/2020 7:17:49 AM

Testimony for CPH on 2/11/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Lisa Bishop	Testifying for Friends of Hanauma Bay	Support	No

Comments:

FRIENDS OF HANAUMA BAY

To: Committee on Commerce, Consumer Protection, and Health

Senator Rosalyn Baker, Chair

Senator Stanley Chang, Vice Chair

To: Committee on Agriculture and Environment

Senator Mike Gabbard, Chair

Senator Russell Ruderman, Vice Chair

Re: SB2621 RELATING TO WATER POLLUTION

Hearing: Tuesday, February 11, 2020 8:30 a.m. Conference Room 229

Position: STRONG SUPPORT

Aloha Chair Baker, Chair Gabbard, and Committe members,

Thank you for the opportunity to testify in strong support of SB2621.

Approximately one-fourth of the plants, fish, and invertebrates found in Hawaiian coral reefs are endemic to Hawaii. Coral reefs are intrinsic to Hawaiian culture, and provide critical natural protection against coastal erosion and sea level rise. Further, our coral reefs underpin the tourism industry, Hawaii's primary and vital economic engine.

Since the enactment of Act 104, Session Laws of Hawaii 2018, evolving science clearly demonstrates that the sunscreen chemicals homosalate, octocrylene, and octisalate are toxic to our coral reefs and the wildlife they support.

Additionally, in February 2019, the FDA delisted all chemical sunscreen actives from being safe and effective, stating only zinc oxide and titanium dioxide are Generally Recognized as Safe and Effective (GRASE).

It is therefore critical to add them to the sale and distribution sunscreen ban starting 1/1/2021.

Mahalo for supporting SB2621.

Respectfully,

Lisa Bishop

President

Friends of Hanauma Bay



COMMITTEE ON COMMERCE, CONSUMER PROTECTION AND HEALTH
Senator Rosalyn H. Baker, Chair
Senator Stanley Chang, Vice Chair

COMMITTEE ON AGRICULTURE AND ENVIRONMENT
Senator Mike Gabbard, Chair
Senator Russell E. Ruderman, Vice Chair

Testimony of the Ocean Tourism Coalition in Strong Support of SB2621

Dear Senator Baker, Chair; Senator Chang, Vice Chair; Senator Gabbard, Chair; Senator Ruderman, Vice Chair; and Members of the Joint Committees:

The OTC represents over 300 small ocean tourism businesses statewide which have been taking visitors and residents out enjoying snorkeling and SCUBA diving to many MLCD's and coral reefs for decades. Our industry relies on healthy coral reefs which are the habitats for our beloved tropical fish. At this point it has been reported a 40% loss of our Hawaiian coral reefs and if we act now with this sunscreen bill we will take a huge step to save what is left of our coral reefs.

As it has been brought to all of our attention, one of the damaging pollutants to these coral reefs is chemical sunscreens and we appreciate the decision your committees had in passing Act 104 to help with this serious problem. Now, we are asking for your help again to restrict all of the chemicals listed in this bill, OCTOCRYLENE, OCTISALATE, and HOMOSALATE from sale in Hawaii starting January 2021, adding to Act 104.

Given the FDA's recent and alarming announcement that all of the chemical sunscreens pose a toxicologic risk to public health and only mineral sunscreens are safe and effective, we urge Hawaii to further allow only sale of FDA Category 1 safe and effective sunscreens as soon as possible- and certainly no later than 2023.

Our members support the mineral sunscreens, zinc oxide and titanium dioxide as the best ingredients for sunscreen protection along with clothing, hats and staying out of the sun when possible for the very best sun protection.

Please support this measure SB2621 and help save our coral reefs for our future generations to see and experience the natural beauty, as well as storm protection these reefs offer our islands. While we are threatened by rising sea levels our reefs are an integral support to our coastlines. Please pass SB2621 for all of the right reasons!

Sincerely,

Mendy Dant
Secretary, OTC



February 5, 2020

To: The Honorable Roz Baker, Chair,
The Honorable Stanley Chang, Vice Chair, and Members
Senate Committee on Commerce, Consumer Protection and Health
And
The Honorable Mike Gabbard, Chair
The Honorable Russell E. Ruderman, Vice Chair, and Members
Senate Committee on Agriculture and the Environment

Re: SB 2621 – relating to water pollution
Hearing: Tuesday, February 11, 2020, 8:30 a.m. Room 229
Position: **Strong Support**

The HAWAI'I REEF AND OCEAN COALITION – HIROC – was formed in 2017 by coral reef scientists, educators, local Hawaii environmental organizations, elected officials, and others to address a crisis facing Hawaii's coral reefs and ocean – namely, the pollution of our near-shore environment by sunscreens that are literally killing our marine life. We are currently asking the Legislature to pass a handful of very important bills to save our coral reefs – they are bills relating to sunscreens, plus bills on cesspools, plastic marine debris, the climate crisis and sea level rise.

We thank the Legislature for passing, in 2018, Act 104, which provides for the ban of sunscreens containing oxybenzone and octinoxate, two of the most problematic chemicals that interfere with the life-cycles of marine life, effective as of January 2021.

The present bill builds directly on Act 104 by adding three more chemicals to the list -- octocrylene, octisalate, and homosalate. Scientific evidence is now available that clearly shows these chemicals interfere with the life-cycles of Hawaii marine life and therefore these chemicals should be banned from use in Hawaii waters. We will be supplying scientific papers supporting these conclusions on request.

The bill also authorizes the Department of Health to use administrative rules under HRS Chapter 91 to add more chemicals to the list, so that – we hope – it will not be necessary to come back to the Legislature every time there is sufficient scientific evidence to justify the ban of another chemical as critically dangerous to the marine environment.

The need for this bill is obvious and critical. Our reefs are already showing great damage. We must begin major efforts to stop the damage and help them recover. Thank you for the opportunity to testify!

Alan B. Burdick, on behalf of HIROC, 486-1018
Burdick808@gmail.com



Activities & Attractions Association of Hawaii
PO Box 598, Makawao, Hawaii 96768
(808)871-7947 Main (808)877-3104 Fax

Testimony to the

COMMITTEE ON COMMERCE, CONSUMER PROTECTION, AND HEALTH

Senator Rosalyn H. Baker, Chair

Senator Stanley Chang, Vice Chair

COMMITTEE ON AGRICULTURE AND ENVIRONMENT

Senator Mike Gabbard, Chair

Senator Russell E. Ruderman, Vice Chair

Support of SB2621

Aloha Chair Senator Baker & Gabbard and Vice-Chair Senator Chang & Ruderman along with members the committee,

Mahalo for this opportunity to testify, my name is Toni Marie Davis. For the last 23 years, it has been my honor to serve the Activity & Attraction industry of Hawaii through my position as the Executive Director of A3H (Activities & Attractions Association of Hawaii). A3H represents nearly 150 businesses statewide. Our members range in size from very large (over 300 employees) to very small (1-2 employees) aggregated well over 1500 employees/Hawaii residents. A3H's purpose is to support the sustainability of Hawaii businesses, the environment, and our communities.

While reviewing Bills for the 2020 session, our board of directors, which consists of CEOs and Owners from Atlantis Adventures, Blue Dolphin Charters, Fair Wind Cruise, Hawaiian Paddle Sports, Polynesian Cultural Center, Schuman Aviation, Smith's Luau and Fern Grotto Tours, and Warren & Annabelle's Magic Show unanimously approved support of SB2621.

According to ReefsatRisk.org, Hawaii has lost 40% of our corals reefs already, it is happening, and we need to be more aware and stop ignoring that what we do affects our environment. There is a great video on the impacts of sunscreen that I would encourage you all to watch: <https://www.youtube.com/watch?v=aGP9loQ0dqs> .

Please also reviewed documents from The National Oceanic and Atmospheric Administration who have recognized this existential threat to our coral reefs. (See the image on back), (<https://oceanservice.noaa.gov/news/sunscreen-coral.html>)

Sincerely,

Toni

Toni Marie Davis
Executive Director



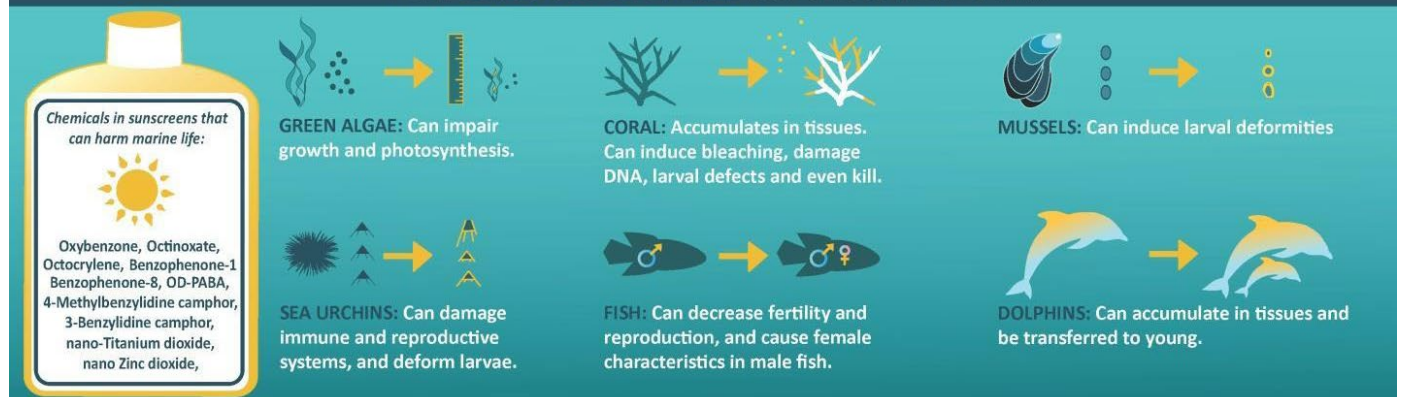
Activities & Attractions Association of Hawaii
 PO Box 598, Makawao, Hawaii 96768
 (808)871-7947 Main (808)877-3104 Fax

SUNSCREEN CHEMICALS AND MARINE LIFE

How sunscreen chemicals enter our environment:



How sunscreen chemicals can affect marine life:



What can we do?

Seek shade between 10 am & 2 pm, use Ultraviolet Protection Factor (UPF) sunwear, and choose sunscreens with chemicals that don't harm marine life.

Seek shade: 10am to 2pm Umbrella Sun hat UV Sun glasses Sun shirt Leggings NOAA

oceanservice.noaa.gov/news/sunscreen-corals

SB-2621

Submitted on: 2/10/2020 9:51:00 AM

Testimony for CPH on 2/11/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Holly Kersten	Testifying for Surfrider Foundation Kona Kai Ea Chapter	Support	No

Comments:

Aloha,

We at Surfrider Foundation Kona Kai Ea support adding the chemicals homosalate, octocrylene, and octisalate to the sale and distribution sunscreen ban beginning on 1/1/2021. We would like to support this bill to help the Department of Health to adopt rules to add additional harmful chemicals to the sale and distribution ban. It is important for us to protect our delicate reefs from the harmful chemicals currently in found in sunscreen. It is our responsibility to also educate visitors on the importance of the ban to protect our natural resources for future generations.

February 9, 2020

TO:

Senator Mike Gabbard, Chair
Senator Russell E. Ruderman, Vice Chair
Members of the Senate Committee on Agriculture and Environment

Senator Rosalyn H. Baker, Chair
Senator Stanley Chang, Vice Chair
Members of the Senate Committee on Commerce, Consumer Protection, and Health

Thirtieth Legislature
Regular Session of 2020

FROM:

The members of the Hawaii Skin Cancer Coalition

**RE: Comment on Senate Bill 2621, RELATING TO WATER POLLUTION
Comment on Senate Bill 2778, RELATING TO PRODUCTS CONTAINING SUN
PROTECTION FACTOR INGREDIENTS**

Mahalo for the opportunity to submit comments on Senate Bills 2621 and 2778 on behalf of the Hawaii Skin Cancer Coalition. These Bills SB 2621 and SB 2778 proposes to ban several sunscreen ingredients including homosalate, octocrylene, and octisalate; and that only sunscreen products containing active ingredients classified by the United States Food and Drug Administration (FDA) as a category I, generally recognized as safe and effective, shall be sold, offered for sale, or distributed for sale in the State without a prescription issued by a licensed healthcare provider. This would limit sunscreen products to only those containing zinc oxide or titanium dioxide as active ingredients. However, there is currently strong scientific evidence suggesting that sunscreen products with ingredients classified as a category I, specifically those containing zinc oxide, may be prime contributors to coral bleaching [1].

While zinc oxide has been deemed by the FDA to be safe and effective for use by humans to prevent sunburn, we do not know the biologic and in vivo effects of these UV filters on our marine environment. It is possible that the utilization of these products may *increase* stress and damage to our coral. We must conduct valid research to understand the potential environmental and societal impact of sunscreen use to protect all of Hawaii's natural resources. Therefore, studies must be done to examine the concurrent effects of these products, not only to reduce risks for skin cancers, but also to prevent the decline in our coral reefs.

Before modifying the current statutory exclusion for the sale of sunscreens that contain oxybenzone or octinoxate, the Hawaii Skin Cancer Coalition members suggest that Hawaii's legislators put forth efforts and resources to utilize the vast scientific expertise found at the University of Hawaii, including its world-renowned Hawaii Institute of Marine Biology, Department of Chemistry, and the UH Cancer Center's Population Sciences in the Pacific Program to collaboratively identify the causes of coral decline, while developing, testing, and

promoting use of safe and effective sunscreen products. Such a study to better assess the impact of sunscreen on both marine and human life is feasible, and could be completed within a year at a cost of approximately \$165,000. These studies will provide valuable information about the effects of active sunscreen ingredients from categories I, II and III on our marine ecosystem in order to better inform future legislative initiatives.

According to the National Cancer Institute, nearly 5 million people in the US get skin cancer annually at the cost of over \$8 billion to the U.S. health care system. In Hawaii, ~7,000 people are treated for skin cancers each year. Melanoma, the deadliest form of skin cancer, is now the second most common form of cancer for females aged 15-29 years old. In Hawaii, 400 people are diagnosed with melanoma, and ~50 people die from this disease each year. Melanoma is one of the few cancer types increasing in incidence each year in the US.

We believe that together, we can define the most acceptable sunscreen products that are both effective for cancer prevention and safe for our environment. Thank you for the opportunity to submit comments on behalf of the Hawaii Skin Cancer Coalition. For more information, please contact us at Hawaii Skincancer Coalition (hawaiiiskincancercoalition.org).

Sincerely,

Kevin Cassel, DrPH
President, Hawaii Skin Cancer Coalition

REFERENCES

Corinaldesi C, Marcellini F, Nepote E, Damiani E, Danovaro R. Impact of inorganic UV filters contained in sunscreen products on tropical stony corals (*Acropora* spp.). *The Science of the total environment*. 2018;637-638:1279-85. Epub 2018/05/29. doi: 10.1016/j.scitotenv.2018.05.108. PubMed PMID: 29801220.



**CONSUMER HEALTHCARE
PRODUCTS ASSOCIATION**

February 10, 2020

Senator Rosalyn H. Baker, Chair
Senator Stanley Chang, Vice Chair
Committee on Commerce, Consumer Protection, and Health

Senator Mike Gabbard, Chair
Senator Russell E. Ruderman, Vice Chair
Committee on Agriculture and Environment

State Capitol
415 South Beretania Street
Honolulu, HI 96813

Chairs Baker and Gabbard and Vice Chairs Chang and Ruderman:

As a coalition of health, wellness and business organizations we respectfully request that you oppose SB 2621.

SB 2621 would add homosalate, octocrylene, and octisalate to the sunscreen sale and distribution ban and allows the Department of Health to adopt rules to ban additional ingredients. Policy decisions that will likely adversely impact public health should not be made ahead of a scientific consensus on this issue. This bill creates a serious public health issue by banning the sale of safe and effective sunscreen protection for the millions of consumers and tourists in Hawaii.

The U.S. Food and Drug Administration (FDA), the Centers for Disease Control and Prevention (CDC), the U.S. Surgeon General, the American Academy of Dermatology, the Skin Cancer Foundation and health care professionals worldwide emphasize that using sunscreens is a critical part of a safe sun regimen.

Skin cancer is the most common form of cancer, with one-in-five people in the U.S. expected to be diagnosed within their lifetime. Ninety percent of non-melanoma skin cancers are associated with exposure to ultraviolet (UV) radiation from the sun. Sunscreens are a proven preventative barrier to the harmful effects of solar radiation, and we are concerned that restricting the use of vital sunscreen ingredients could lead to higher skin cancer rates in the U.S.

We understand that the decline of coral reefs is an urgent issue requiring policymakers to take pressing action. However, we urge you to direct attention to proven causes of coral reef decline, which should be addressed before focusing on unproven allegations such as contamination of coastal waters by sunscreens. This proposed ingredient ban ignores the real causes of coral decline according to scientists from around the world, the foremost being climate change. Coral reefs are impacted by an increasing array of hazards – primarily from effects of pollution (acidification and runoff), global climate change and unsustainable fishing practices.

Published studies claiming to show adverse impacts of sunscreens on coral (e.g. Downs et al. 2016) are unreliable and should therefore not be used when making important policy decisions.¹ Measured sunscreen levels in U.S. coastal waters where coral live are extremely low (parts per trillion levels have been detected) - equivalent to adding a few drops of sunscreen to the Rosebowl Stadium filled with seawater (Mitchelmore et al., 2019).²

SB 2621 lacks the necessary scientific evidence to demonstrate that sunscreen ingredients are responsible for coral bleaching. We fear this legislation will create confusion, put consumers' health at risk and potentially discourage the use of sunscreens – an important part of a safe sun regimen. We respectfully ask that you oppose SB 2621.

¹ Downs C.A., Kramarsky-Winter E., Segal R., Fauth J.E., Knutson S., Bronstein O., Ciner F.R., Jeger R., Lichtenfeld Y., Woodley C.M., Pennington P., Cadenas K., Kushmaro A. and Loya, Y. 2016. Toxicopathological effects of the sunscreen UV filter, Oxybenzone (benzophenone-3), on coral planulae and cultured primary cells and its environmental contamination in Hawaii and the U.S. Virgin Islands. *Archives of Environmental Contamination and Toxicology* 70 (2), 265-288.

² Mitchelmore, C.L., He, K., Gonsior, M., Hain, E., Heyes, A., Clark, C., Younger, R., Schmitt-Kopplin, P., Feerick, A., Conwat, A. and L. Blaney. 2019. Occurrence and distribution of UV filters in coastal surface water, sediment and coral tissue from Hawaii. *Science of the Total Environment* 670, 398-410.

SB-2621

Submitted on: 2/4/2020 4:27:56 PM

Testimony for CPH on 2/11/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Alexandra Kahn	Testifying for Surfrider Oahu	Support	No

Comments:

Aloha Chairs,

Hawaii made an impactful statement when we banned the sale and distribution of sunscreens containing oxybenzone and octinoxate, and since then other island communities around the world have followed our lead. However, these are just two of the multiple harmful chemicals the average sunscreen contains. It's unfortunate that the harmful effects of sunscreens was discovered so late and that we have had decades of unknowingly hurting our marine life and our bodies, but now that we know better, we must do better.

These chemicals affect coral, which is already being negatively impacted from rising sea temperatures, other ocean pollutants, and rising earth temperatures. Effects on these corals include bleaching, damaging the DNA, deforming young corals, and even killing coral. These corals are particularly important to the Hawaiian Islands because they protect us from storms, are a habitat for the seafood we catch, and provide the waves and snorkeling/diving experiences that drive much of our tourism industry and overall economy.

Other aspects of marine life harmed by these chemicals include impairing the growth and photosynthesis of green algae- one of the primary ways to produce more oxygen to combat the dangerous levels of CO2 in the atmosphere, recently made MUCH worse by the surge of fires in Australia and other places; inducing defects on young mussels, damaging the immune and reproductive system of sea urchins, decreasing fertility and reproduction in fish, causing female characteristics in male fish, and an accumulation of the chemicals in the tissues of dolphins which can be transferred to their young.

We must do everything that we can to mitigate the impact on our reefs and that includes stricter sunscreen laws. Passing a law like this would be setting a precedent for communities around the world. It would wake up consumers to the harmful effects of sunscreen on humans and the environment and could truly shake the sunscreen and cosmetic industry- in the best way possible. We should not be putting any dangerous chemicals on or in our bodies, or in the water and air. It just doesnt make sense when there are alternatives.

Surfrider was so happy to support the original ban of oxybenzone and octinoxate chemicals in sunscreen and will work with the legislators and community to further restrict the harmful chemicals in sunscreens to help protect our marine life.

Mahalo,

Alexandra Kahn, Policy Coordinator for Surfrider Oahu

LATE

SB-2621

Submitted on: 2/10/2020 8:38:59 PM

Testimony for CPH on 2/11/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Stuart Coleman	Testifying for WAI: Wastewater Alternatives & Innovations	Support	No

Comments:

Dear Chairs and Committee Members,

I'm writing to express strong support for this bill to ban toxic chemicals and endocrine disruptors in sunscreens that harm coral reefs and human health. Hawaii was a worldwide leader in passing the first ban on toxic chemicals, and this bill will add to that list so other states can follow our lead. Mahalo for your consideration.

Aloha,

Stuart Coleman, 2927 Hibiscus Place, Hon., HI 96815

SB-2621

Submitted on: 2/5/2020 11:05:16 AM

Testimony for CPH on 2/11/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Julia	Individual	Support	No

Comments:

Dear Senators,

This bill is crucial for the protection and preservation of Hawai'i's reefs and ocean. Chemicals such as oxybenzone and octinoxate decrease corals' ability to protect themselves against bleaching. They can also be harmful to humans.

SB-2621

Submitted on: 2/6/2020 10:22:30 AM

Testimony for CPH on 2/11/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Shannon Rudolph	Individual	Support	No

Comments:

Support

SB-2621

Submitted on: 2/6/2020 8:35:25 PM

Testimony for CPH on 2/11/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Jennifer Azuma Chrupalyk	Individual	Support	No

Comments:

SB-2621

Submitted on: 2/7/2020 6:30:05 AM

Testimony for CPH on 2/11/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Cynthia Punihaole Kennedy	Individual	Support	No

Comments:

Aloha Honorable Senator Baker

I am in support of SB 2621. Since the signing of Act 104 in July 2018, research has found additional sunscreen chemicals are detrimental to corals and to human health. FDA GRASE Category 1 only lists Zinc Oxide and Titanium Dioxide as safe and effective. <https://www.fda.gov/media/124655/download> . <https://www.webmd.com/skin-problems-and-treatments/news/20200121/fda-skin-absorbs-dangerous-sunscreen-chemicals>

Mahalo for your kind consideration.

In Support of SB 2621

Dear Senator Gabbard AEN Chair and Senator Ruderman AEN Vice Chair; Senator Baker CPN Chair and Senator Chang Vice Chair and committee members:

My name is Joe DiNardo, I am a retired personal care products toxicologist, formulator and regulatory affairs person with 44+ years experience and have been working with Dr. Craig Downs for the last 6+ years or so studying the impact of sunscreens on the environment and humans.

I would like to present a different picture than what the personal care and chemical industry lobbyists are claiming in their testimony against HB 1860. With that said, the information outlined below is supported by published peer review scientific literature and not personal opinion and/or related to protecting the \$10 billion sunscreen industry.

Per their testimony on January 27, 2020 opposing HB 1860 there were several points made that are not quite as accurate as one may think. For example:

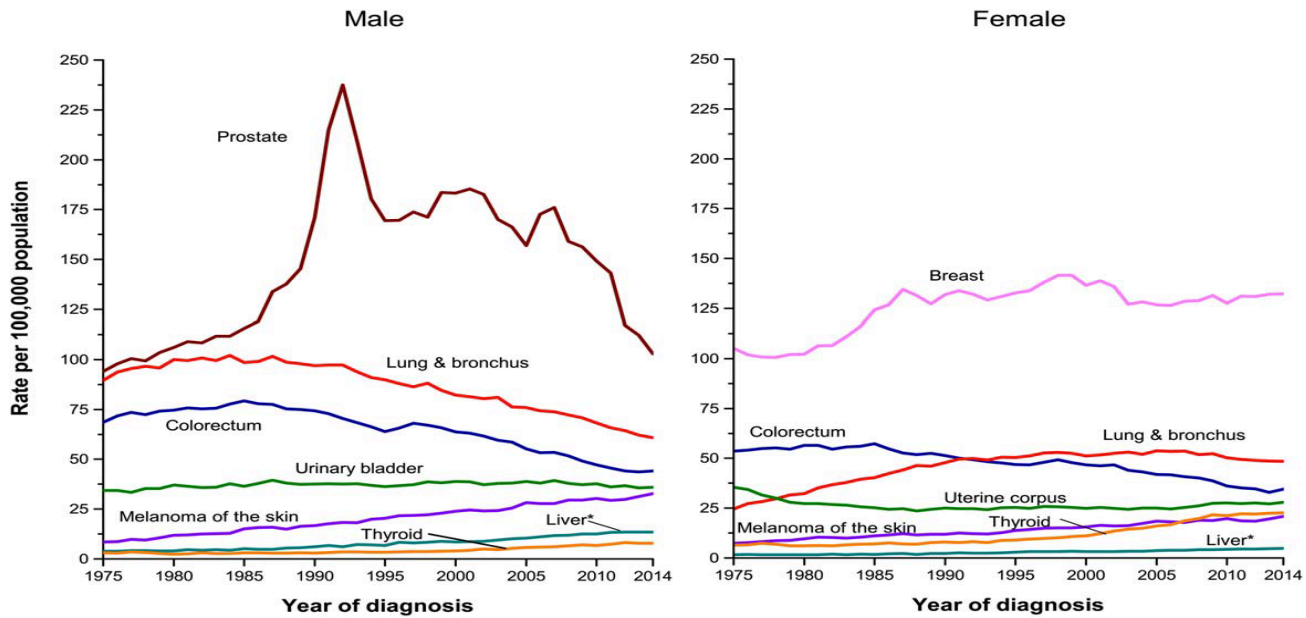
Statement I ... *“Skin cancer is the most common form of cancer, with one-in-five people in the U.S. expected to be diagnosed within their lifetime.”*

According to the **American Cancer Society** (Siegel et al 2018 Cancer statistics, CA Cancer J Clin., 68:7-30.), there are **91,270 Melanomas expected with 9,320 (~10%) cases leading to death** compared to **Breast Cancer 268,670 with 41,400 expected deaths (15.4%), Prostate Cancer 164,690 with 29,430 expect deaths (17.8%), Lung Cancer 234,030 with 154,050 expected deaths (65.8%), Colon Cancer 97,220 with 50,630 expected deaths (52%)**. Additional statistics with higher incidence rates than Melanoma are as follows: Digestive Cancers expected 319,160 with 160,820 expected deaths, Genital System Cancers 286,390 with 62,330 expected deaths, Urinary System Cancers 150,350 with 33,170 deaths expected and Lymphoma 83,180 with 20,960 deaths expected. Realizing that statistics vary from group to group, I would still say that breast, prostate, lung and colon cancers occur more frequently with a significantly higher death rate than melanoma – at least according to the American Cancer Society.

Statement II: *“Ninety percent of non-melanoma skin cancers are associated with exposure to ultraviolet (UV) radiation from the sun. Sunscreens are a proven preventative barrier to the harmful effects of solar radiation, and we are concerned that restricting the use of vital sunscreen ingredients could lead to higher skin cancer rates in the U.S.”*

Unfortunately, based on the **actual** scientific data published there is no evidence that sunscreens do anything to prevent skin cancer, in fact skin cancer rates around the world have dramatically increased over the last 40 years since their introduction. In the United States the **American Cancer Society** data (Figure 1) demonstrates that Melanoma of the skin (purple line) has increased 4 fold in men (1975 ~ 8/100,000; 2014 ~ 32/100,000) and 3 times in women (1975 ~ 7/100,000; 2014 ~ 21/100,000). Globally, the **World Health Organization** has stated **“No conclusion can be drawn about the cancer-preventive activity of sunscreens against basal cell carcinoma and melanoma. Use of sunscreens extends sun exposure ... which increases the risk of melanoma”** (Table 1). Even Australia, a country thought to have skin cancer under control, reported “Non-melanoma skin cancers increased from 412,493 in 1997 to 767,347 in 2010 and estimated 938,991 in 2015.” (Table1). In fact, even the most recent article published (Waldman and Grant-Kels, JAAD 2019, 80:574–576) on this topic concluded that: *“there are only 4 prospective studies that examine sunscreen’s role in preventing skin cancer, and none of these studies examine the efficacy of sunscreen in preventing skin cancer in otherwise healthy individuals.” ... “Some prevention of premature aging, actinic keratosis and squamous cell carcinoma was observed, but little to no benefits were observed for basal cell carcinoma or melanoma.”*

FIGURE 1. Trends in Incidence Rates for Selected Cancers by Sex, United States, 1975 to 2014



Reference: Siegel RL, Miller KD, Jemal A. (2018). Cancer statistics, 2018. CA Cancer J Clin., 68(1):7-30.

Table 1: Sunscreen and Skin Cancer: Report Card

Group	Reference	Comment
Food & Drug Administration	FDA Labeling Guidelines: https://www.fda.gov/downloads/drugs/guidancecomplianceregulatoryinformation/guidances/ucm330696.pdf .	Allowable Claims – “ helps prevent sunburn” and “if used as directed with other sun protective measures (meaning sun avoidance and protective clothing), decreases the risk of skin cancer and early skin aging caused by the sun.”
US Health and Human Resources	Guy G.P. Jr., et al. (2015). Prevalence and costs of skin cancer treatment in the U.S., 2002-2006 and 2007-2011. Am J Prev Med., 48(2):183-187.	“Skin cancer cases increased from 3.4 million in 2002–2006 to 4.9 million in 2007– 2011.”
American Cancer Society	American Cancer Society: Cancer Facts and Figures 2017: https://www.cancer.org/content/dam/cancer-org/research/cancer-facts-and-statistics/annual-cancer-facts-and-figures/2017/cancer-facts-and-figures-2017.pdf	“87,110 people will get melanoma in 2017.”
International Agency for Research on Cancer – Sunscreen Abuse	Vainio H., et al. (2000). An international evaluation of the cancer-preventive potential of sunscreens. Int. J. Cancer., 88, 838–842. Autier P. (2009). Sunscreen abuse for intentional sun exposure. Br J Dermatol., 161 Suppl 3:40-45.	“No conclusion can be drawn about the cancer-preventive activity of sunscreens against basal cell carcinoma and melanoma Use of sunscreens extend sun exposure ... which increases the risk of melanoma”
Division of Dermatology, David Geffen School of Medicine - UCLA	Chesnut C., Kim J. (2012). Is there truly no benefit with sunscreen use and Basal cell carcinoma? A critical review of the literature and the application of new sunscreen labeling rules to real-world sunscreen practices. J Skin Cancer., 480985	“There has only been one randomized and controlled study to examine sunscreen’s role in the prevention of Basal Cell Carcinoma, and no significant protective benefit was found.”
University of Granada	Martín García E., et al (2017). Changes in the	“Skin cancer incidence via World

University of Granada Spain - School of Medicine	Martín García E., et al (2017). Changes in the Incidence of Skin and Lip Cancer Between 1978 and 2007. <i>Actas Dermosifiliogr.</i> , 108(4):335-345.	"Skin cancer incidence via World Health Organization data from the Cancer Incidence in Five Continents - observed increases in global skin and lip cancers for the period 1978 to 2007."
University of Melbourne Australia - Department of Medicine	Fransen M., et al. (2012). Non-melanoma skin cancer in Australia. <i>Med J Aust.</i> , 197(10):565-568.	"Non-melanoma skin cancers increased from 412,493 in 1997 to 767,347 in 2010 and estimated 938,991 in 2015."
Cancer Council of Western Australia	Slevin T. (2013). Sunscreen, skin cancer and the Australian summer. <i>The Conversation</i> : (Retrieved from) http://theconversation.com/sunscreen-skin-cancer-and-the-australian-summer-11633 .	"It's important to understand that sunscreen is a useful adjunct to other sun protection measures (sun avoidance and protective clothing). Rather than being our first line of

Statement III: *"This proposed ingredient ban ignores the real causes of coral decline according to scientists from around the world, the foremost being climate change. Coral reefs are impacted by an increasing array of hazards – primarily from effects of pollution (acidification and runoff), global climate change and unsustainable fishing practices."*

The real cause of coral decline is simply chemical pollution – which also drives global warming (CO2 is a chemical). No one has every said that getting rid of sunscreens would make all the coral come back and/or bring peace on earth. However, **Kalalu'u Bay** through control of chemical sunscreen use appears to be seeing some **new growth** of corals (preliminary data). Globally, coral bleaching occurs when water temperature reaches ~86° F ... in Hawaii coral bleaching is occurring between 80° – 83° F. This would imply that more than global warming is at hand. We all know that there are several factors involved in the decline of coral, however, replacing chemical sunscreens with sun safe behaviors and mineral sunscreen is something everyone can do NOW!

Statement IV: *"Published studies claiming to show adverse impacts of sunscreens on coral (e.g. Downs et al. 2016) are unreliable and should therefore not be used when making important policy decisions. Measured sunscreen levels in U.S. coastal waters where coral live are extremely low (parts per trillion levels have been detected) - equivalent to adding a few drops of sunscreen to the Rosebowl Stadium filled with seawater (Mitchelmore et al., 2019)" ... "HB 1860 lacks the necessary scientific evidence to demonstrate that sunscreen ingredients are responsible for coral bleaching"*

There are several other scientists, other than Downs et al, that have demonstrated that sunscreens are toxic to corals – this is why the phrase "Published studies" (plural) was used in their statement (see references below). Industry continues to vilify Downs and his colleagues, however, industry has done **ZERO** to scientifically disprove anyone's findings. Instead they **hired** Mitchelmore (not an independent scientists) who initially came out to Hawaii and collected water samples from areas that have no people around because of sharks! There are literally hundreds of scientists, around the world that have identified sunscreens in virtually every body of water on our planet. In fact, all you have to do is stand at the top of Hanauma Bay (see photo below) ... the areas where coral appears blurry are clouds of sunscreen! Water samples taken by Rep. Ward and Senator Espero a few years ago demonstrated levels as high as 28 parts per billion in areas of the Bay.



Statement V: *“We fear this legislation will create confusion, put consumers’ health at risk and potentially discourage the use of sunscreens – an important part of a safe sun regimen. We respectfully ask that you oppose HB 1860.”*

The only thing that industry fears is losing billions of dollars more from loss of sunscreen sales. They have proven time and time again that only the bottom line matters ... the environment isn’t even an after thought. The only confusion that consumers are experiencing is what they are being told by lobbyists and past presidents of the American Academy of Dermatology and the Skin Cancer Foundation ... who have been telling people things like ... *“sunscreens save lives”* and *“sunscreens reduce cancer by 50%”* which is not only deceptive, but the complete opposite of what the scientific data indicates!

Please support SB 2621 ... not only to protect the environment from chemical pollution, but also to minimize the toxic impact that these chemicals have on all living things – including humans.

Most Respectfully, Joe DiNardo

PS: Based on published safety data (see info for testimony supporting SB 2778 below), again by hundreds of scientists from around, it appears that the chemical sunscreens currently in question by FDA are more likely to cause cancer than to prevent it.

PSS: Other published scientific papers relating to coral toxicity:

- 1) Tsui et al. Environ Sci Technol. 2017 Apr 18;51(8):4182-4190
- 2) Corinaldesi et al. Sci Rep. 2017 Aug 10;7(1):7815.
- 3) He et al. Environ Pollut. 2019 Feb;245:462-471.
- 4) Paredes et al. Chemosphere. 2014 Jun;104:44-50.
- 5) Stien et al. Anal Chem. 2019 Jan 2;91(1):990-995.

In Support of SB 2778 - Sale of only GRASE I Sunscreens in Hawaii

First, I would like to Mahalo Senators Gabbard, Riviere, Ruderman, Moriwaki, Nishihara for introducing SB 2778 which will add measures to further protect Hawaii's environment, constituents and the 10 million visitors that come to enjoy its natural beauty.

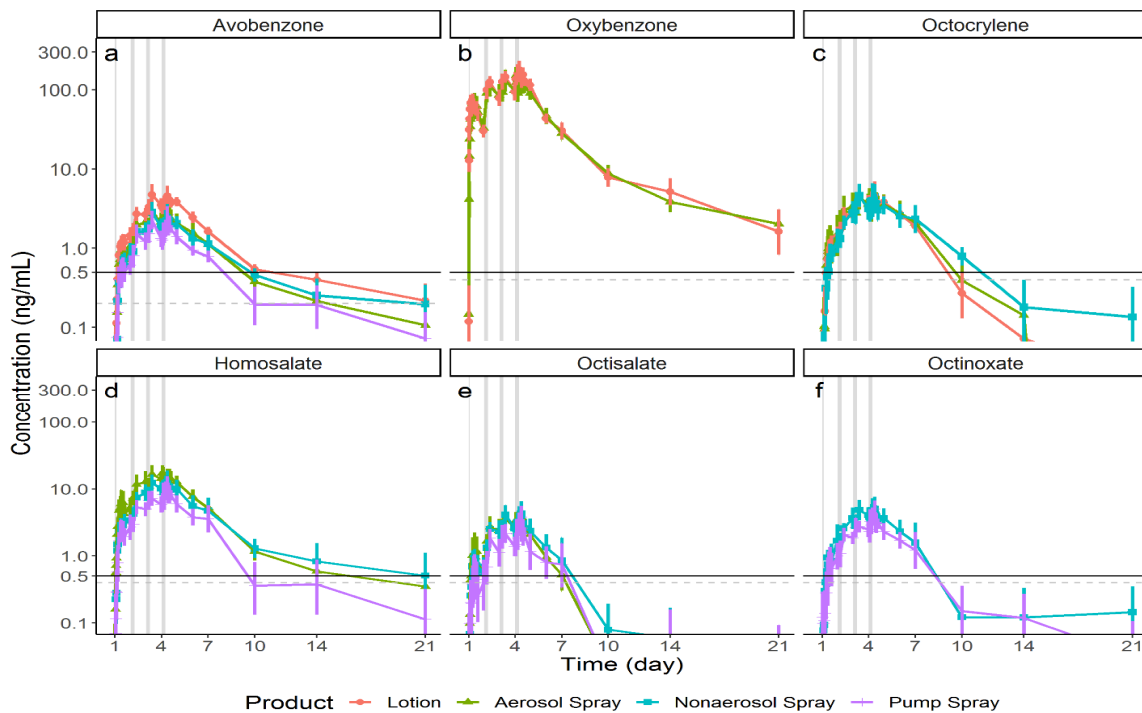
As you know, Hawaii's Act 104 (banning the sale of sunscreens containing oxybenzone or octinoxate) has caused the world to open its eyes to the environmental destruction that sunscreens have caused and continue to cause globally. Because of this, Palau, Aruba, Bonaire, the U.S. Virgin Islands, Marshall Islands, and the city of Key West have followed Hawaii's example and have introduced similar/identical bans.

Another impact of Hawaii's innovative planning/action has caused the Food & Drug Administration (FDA) to question the human safety of not just oxybenzone and octinoxate, but of all 16 sunscreens actives currently approved for use in the United States. This action has caused FDA to identify that only Zinc Oxide and Titanium Dioxide actives **are Generally Recognized as Safe and Effective** (GRASE - Category I) for human use. The remaining 14 chemicals have been reclassified as **not being GRASE** "because the public record does not currently contain sufficient data to support positive GRASE determinations". FDA has published their reasoning for this action in the February 26, 2019 Federal Register:

"For example, the available literature includes studies indicating that oxybenzone is absorbed through the skin to a greater extent than previously understood and can lead to significant systemic exposure, as well as data showing the presence of oxybenzone in human breast milk, amniotic fluid, urine, and blood plasma. The significant systemic availability of oxybenzone, coupled with a lack of data evaluating the full extent of its absorption potential, is a concern, among other reasons, because of questions raised in the published literature regarding the potential for endocrine activity in connection with systemic oxybenzone exposure. Nearly all of these sunscreen active ingredients also have limited or no data characterizing their absorption." (FYI - by law, it is industry's responsibility to provide this data)

Because of industry's inability to provide adequate safety data to FDA and their apprehension to confirm FDA's concerns about "significant systemic exposure" the FDA conducted their own study on products currently being sold that contained 6 of the chemicals in question (Figure 1) ... FDA concluded that all posed a significant risk to human health because they absorb into our blood stream above the safety cut-off point of 0.5 ng/ml (horizontal line at 0.5 on each of the graphs below) **after one day** of application. Additionally, even when applications were **stopped after 4 days**, the level of sunscreens in the blood stayed above the 0.5 ng/ml level (oxybenzone never dropped below this line even 17 days after applications were stopped).

Figure 1: Human Absorption of 6 of the 12 Chemicals in Question:



Reference: Matta et al JAMA 2020; 323:256-267

The information obtained from this experiment, confirms FDA's concerns about the safety of these chemicals and justifies their request to industry to provide data that, among other things, demonstrates these chemicals will not cause cancer or reproductive effects to offspring based on absorption levels. Another point that justifies FDA's safety concerns is based on the results obtained from a recent 2-year carcinogenicity study that was conducted by the US National Toxicology Program (NTP) on oxybenzone. The summary data released by NTP states that at the **levels tested** oxybenzone produced:

- 1) Increased incidence of **thyroid** C-cell adenomas and uterine stromal polyps in female rats.
- 2) Occurrence of brain and spinal cord malignant meningiomas in male rats.
- 3) Increased incidences of non-neoplastic lesions of the uterus and **adrenal cortex** in female rats and of the **testis** and **pancreas** in male rats.
- 4) No evidence of carcinogenic activity in male or female mice.
- 5) Increased incidences of non-neoplastic lesions of the bone marrow, spleen, and kidney in female mice and of the bone marrow, spleen, kidney, and liver in male mice.

These findings were based on oxybenzone being tested at 0.1%, 0.3% and 1% concentrations, which is **6 to 60 times lower** than the 6% level that is commonly used in sunscreen products.

So, how does the human absorption and animal carcinogenicity data presented above tie into the environmental concerns in coral and other aquatic life forms that Act 104 was based on?

- 1) FDA's long history determining that human safety is tied into the amount of chemical that is in the blood. For lack of a better term, this is "guilt by association", but something cannot produce an adverse event if it is not present.
- 2) The NTP data not only identifies the carcinogenic potential of oxybenzone, but demonstrates that it targets endocrine glands (thyroid, adrenal glands, testies, pancrease ... etc). The chemical is introduced into the system (rodents) and it produces specific adverse reactions (damage to endocrine glands) ... this is called "causation".

Therefore, one can summarize that exposure to oxybenzone is associated with specific adverse effects that impact living organisms or "**association is related to causation**". How can we extrapolate this concern to all living organisms; simple! The World Health Organization has stated that chemicals that impact endocrine glands (endocrine disruptors) are not specific to a certain species. In other words, chemicals with this potential do not care (differentiate) if you are a coral, fish, bird, democrat or republican ... the only prerequisite is that an endocrine receptor is there to impact!

Based on published safety data, it appears that the chemical sunscreens currently in question by FDA are more likely to cause cancer than to prevent it. **Please vote to support SB 2778** and continue to protect Hawaii's environment, citizens and visitors.

Most Respectfully,

Joe DiNardo (retired toxicologist with 44+ years experience and frequent Hawaii visitor)

SB-2621

Submitted on: 2/7/2020 5:15:59 PM

Testimony for CPH on 2/11/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Paul Montague	Individual	Support	No

Comments:

Chemical sunscreens should not be allowed. Only mineral sunscreens that have been proven to be safe and effective. This is to protect our coral reefs as well as public health.

SB-2621

Submitted on: 2/9/2020 11:17:43 AM

Testimony for CPH on 2/11/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Dylan P. Armstrong	Individual	Support	No

Comments:

SB-2621

Submitted on: 2/9/2020 3:32:15 PM

Testimony for CPH on 2/11/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Teasha Martines-Melim	Individual	Support	No

Comments:

SB-2621

Submitted on: 2/8/2020 12:53:41 PM

Testimony for CPH on 2/11/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Andrea Quinn	Individual	Support	No

Comments:

Dear Honorable Committee Members:

Please support SB2621 relating to sunscreens. Our marine life is our most valuable economic resource, and the reefs are already turning into virtual deserts due to fertilizer runoff, aquarium collecting and climate change. Sunscreens, many of which contribute to the destruction of our reefs, should be regulated. This will also protect our tourism dollars.

Thank you for the opportunity to present my testimony.

Andrea Quinn

Kihei

SB-2621

Submitted on: 2/10/2020 10:03:32 AM

Testimony for CPH on 2/11/2020 8:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Holly Kersten	Testifying for Sea Paradise Sailing and Snorkeling Tours	Support	No

Comments:

Aloha,

We at Sea Paradise Sailing and Snorkeling Tours support adding the chemicals homosalate, octocrylene, and octisalate to the sale and distribution sunscreen ban beginning on 1/1/2021. We would like to support this bill to help the Department of Health to adopt rules to add additional harmful chemicals to the sale and distribution ban. It is important for us to protect our delicate reefs from the harmful chemicals currently found in sunscreen. We currently provide reef safe sunscreen on our tours and check guests sunscreen for harmful chemicals prior to application. We pledge to also educate guests on our tours on the importance of the ban to protect our natural resources for future generations.