

# HAWAII JOURNAL WATCH

KAREN ROWAN MS

**Highlights of recent research from the University of Hawai'i and the Hawai'i State Department of Health**

## PASSING AND IMPLEMENTING RESTRICTIONS ON FLAVORED TOBACCO PRODUCTS

To successfully pass and implement policies that restrict the sale or use of flavored tobacco products, public health advocates should focus on engaging community partners and retailers. Researchers including Rebekah Rodericks, MSc, of the Office of Public Health Studies, interviewed 17 key informants with expertise in flavored tobacco bans in the US and Canada, and analyzed transcripts of the interviews for key themes. Results showed that comprehensive bans on the products were more effective and easier to enforce than partial bans, that media campaigns to raise awareness were important, and that education of retailers was crucial. Partnering with community advocates can help in eliciting support from elected officials and addressing resistance. The findings also suggested a 6-month preparation period is beneficial for successful implementation of new policies. Overall, the study demonstrated that tobacco policy experts are engaged in knowledge sharing and building on efforts across jurisdictions.

- Peck K, Rodericks R, Irvin L, et al. Identifying best practices in adoption, implementation and enforcement of flavoured tobacco product restrictions and bans: Lessons from experts. *Tob Control*. 2020;tobaccocontrol-2020-055884. doi:10.1136/tobaccocontrol-2020-055884

## A BLOOD TEST FOR MICRORNA TRACKS WITH COLORECTAL CANCER STAGE

A strong relationship has been found between people's levels of certain microRNA (miR) molecules measured from a blood sample and their stage of colorectal cancer (CRC). Researchers including Scott Kuwada, MD, of the UH Cancer Center, investigated 4 types of miR in 73 people with CRC and 18 healthy controls. Participants lived in Hawai'i or Japan and were an ethnically diverse group. The researchers measured the levels of these miRs in extracellular vesicles in the blood as well as "non-vesicular" miR in the plasma. Results showed that for 3 of the 4 miRs examined, the ratio of non-vesicular to extracellular vesicle miR correlated with CRC stage, compared to controls. In general, the levels of all 4 miRs in extracellular vesicles were lower in participants with more advanced CRC. The researchers concluded more study is needed to determine the utility of measuring miR levels in cancer screening.

- Shiosaki J, Tiirikainen M, Peplowska K, et al. Serum micro-RNA identifies early stage colorectal cancer in a multi-ethnic population. *Asian Pac J Cancer Prev*. 2020;21(10):3019-3026. doi:10.31557/APJCP.2020.21.10.3019

## SHARK-RELATED INJURIES IN HAWAII

Among the 61 people with shark-related injuries reported in Hawai'i from 2009 through 2019, there were 4 deaths. Researchers including Victoria Scala, MD, of the John A. Burns School of Medicine, conducted a retrospective review of incidents on the State of Hawai'i's Shark Incidents List. Results showed there were 25 cases of injuries on Maui (including all 4 deaths), and

16 on O'ahu. Most cases (57%) occurred in turbid water. Tiger sharks were involved in 71% of the cases where the shark was identified; 52% of tiger shark injuries occurred between September and November. Among the 12 patients treated at the state's level 1 trauma center, 11 had extremity injuries, including 3 who had lower extremity amputations. Two of the 12 patients had vascular injuries, and 5 had nerve injuries. The mean time from injury to emergency department arrival was 63 minutes. The researchers concluded that control of blood loss prior to hospital arrival was particularly important for better outcomes.

- Scala VA, Hayashi MS, Kaneshige J, Haut ER, Ng K, Furuta S. Shark-related injuries in Hawai'i treated at a level 1 trauma center. *Trauma Surg Acute Care Open*. 2020;5(1):e000567. doi:10.1136/tsaco-2020-000567

## ANTINFLAMMATORY MECHANISMS OF NONI FRUIT JUICE REVEALED

Juice from noni fruit (*Morinda citrifolia*) is used in Polynesia as a traditional folk medicine. Researchers including Peng Huang, of the Daniel K. Inouye College of Pharmacy, isolated 5 compounds from commercially available noni juice by using column chromatography and high-performance liquid chromatography. In *in vitro* experiments, the compounds inhibited the activity of a transcription factor called NF- $\kappa$ B, which regulates responses to inflammation. In addition, in a cell culture of macrophages that were activated to produce the inflammatory compound nitric oxide, 2 of the noni juice compounds reduced the concentration of nitric oxide present in the cultures. Results also showed the compounds may act to reduce inflammation by interacting with an enzyme called I $\kappa$ B kinase, which activates NF- $\kappa$ B. The researchers concluded that although further study is needed, the compounds' mechanisms of anti-inflammatory action suggest they could be used in the treatment of inflammation-related disorders.

- Lee D, Yu JS, Huang P, et al. Identification of anti-inflammatory compounds from Hawaiian Noni (*Morinda citrifolia* L.) Fruit Juice. *Molecules*. 2020;25(21):E4968. Published 2020 Oct 27. doi:10.3390/molecules25214968

## 2015-2016 DENGUE OUTBREAK EXAMINED

In the outbreak of dengue on Hawai'i Island in 2015-2016, 218 cases were reported, including 37 people who required hospitalization. Researchers including David I. Johnston MPH, of the Hawai'i State Department of Health (HDOH), examined the cases then administered a questionnaire with each person to collect data on symptoms and risk factors. Results showed that among the confirmed cases, 82.6% were ages 18 and older, and 50.4% were male. The most common symptoms were fever, muscle/body aches, and headache. Nearly half (47.3%) of the cases reported mosquitoes inside their home during the week before they became ill. Of the 209 who had screened windows or doors, 38.8% reported having holes or tears in the screen, and 28.9% of all cases reported having standing water on their property. The researchers concluded that although people may know how to protect themselves from mosquitoes, they do not necessarily practice these behaviors, so greater public education and outreach efforts are needed.

- Johnston DI, Viray MA, Ushiroda JM, et al. Investigation and response to an outbreak of dengue: Island of Hawaii, 2015-2016. *Public Health Rep*. 2020;135(2):230-237. doi:10.1177/0033354920904068