

HAWAI'I JOURNAL WATCH

KAREN ROWAN MS

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

A POSSIBLE GENETIC LINK TO GOUT RISK IN FILIPINOS

Filipinos may have a high prevalence of a gene variant linked with gout. Researchers including Maarit Tiirikainen PhD, of the UH Cancer Center, tested DNA samples from 190 pregnant young Filipino women in Hawai'i, looking for an allele called rs2231142 G>T. The allele occurs in the gene for the ABCG2 urate efflux transporter protein; a decrease in this protein's activity could increase blood uric acid levels. None of the participants had been diagnosed with gout at the time of the study, however, results showed that 46% of Filipinos in the study carried the gout-risk allele, while 29% of Han Chinese, 12% of Caucasians, and 3% of African Americans carried it. The researchers concluded that the higher prevalence of this allele may contribute to the higher rate of early-onset gout and reduced urinary excretion of urate reported in Filipino women and men, compared with Caucasians.

Roman Y, Tiirikainen M, Prom-Wormley E. The prevalence of the gout-associated polymorphism rs2231142 G>T in ABCG2 in a pregnant female Filipino cohort. *Clinical Rheumatology*. 2020. <https://doi.org/10.1007/s10067-020-04994-9>

ASIAN AMERICANS BENEFIT FROM CULTURALLY-RESPONSIVE CANCER SCREENING INTERVENTIONS

Asian Americans may benefit from culturally-responsive interventions aimed at increasing their rates of colorectal cancer (CRC) screening. Researchers including Sophia Kim PhD, with the Myron B. Thompson School of Social Work conducted a meta-analysis, examining 14 studies that had aimed at increasing CRC screening rates among Asian Americans. The studies all used culturally-responsive interventions such as small group sessions or language-specific education. Results showed Asian Americans who received such interventions were 1.78 times more likely to undergo CRC screening compared to those in comparison groups. The researchers recommend the use of culturally-responsive interventions to reduce the burden of CRC on Asian Americans and to promote CRC screening in this population.

Kim S, Kang M, Kim S. What are the effects of colorectal cancer screening interventions among Asian Americans? A meta-analysis. *Ethnicity & Health*. 2020;25(1)1-19. <https://doi.org/10.1080/13557858.2019.1711024>

BOX JELLYFISH COMPOUNDS ISOLATED

Researchers led by Justin Reinicke MS, of the Daniel K. Inouye College of Pharmacy, have identified 3 small molecules (low molecular weight molecules) in the venom of box jellyfish. The authors examined venom from the Hawaiian box jellyfish (*Alatina alata*) and the Japanese box jellyfish (*Chironex yamaguchi*). Using a technique called liquid chromatography-mass spectrometry, they isolated and identified the 3 new compounds, called cnidarins 4A,

4B, and 4C. Further analysis showed that these molecules occur only in the nematocysts (stinging cells) of the jellyfish; however, their role in the jellyfish venom is not clear. These compounds are the first small molecules to be identified from Class Cubozoa, or box jellyfish.

Reinicke J, Kitatani R, Masoud SS, et al. Isolation, structure determination, and synthesis of cyclic tetraglutamic acids from box jellyfish species *Alatina alata* and *Chironex yamaguchii*. *Molecules*. 2020;25(4):E883. doi:10.3390/molecules25040883

HIGH PREVALENCE OF URBAN GARDENING IN A HAWAI'I IMMIGRANT COMMUNITY

The high prevalence of urban gardening in an immigrant community in Honolulu suggests that public health programs aimed at improving nutrition in urban areas should capitalize on the knowledge of community gardening experts. Researchers led by Opal Buchthal DrPH, of the UH Office of Public Health Studies, mapped out the census blocks in Kalihi, and then sent trained observers to collect data on food-growing prevalence and practices. Results showed that 93% of the census blocks contained at least 1 property that was growing food, fruit plantings were far more common than vegetable plantings, and that 78% of foods were culturally-valued foods in Filipino and Pacific Islander diets. The findings show that garden-based nutrition programs for urban immigrant populations should be culturally-tailored and should tap into the community's expertise.

Buchthal O, Nelson-Hurwitz D, Hsu L, et al. Identifying urban immigrant food-cultivation practices for culturally-tailored garden-based nutrition programs. *J Immigr Minor Health*. 2019;10.1007/s10903-019-00952-z. doi:10.1007/s10903-019-00952-z

VECTOR OF THE 2015-2016 DENGUE OUTBREAK FOUND

The *Aedes albopictus* mosquito was the culprit in the dengue outbreak that struck Hawai'i Island from September 2015 to March 2016. The outbreak began with a case of dengue in a Hawai'i resident who had not traveled outside of the state, and spread in populated areas on the western coast of the island. Researchers led by Jeomhee M. Hasty PhD, of the Hawai'i State Department of Health, tested genetic material from 1501 mosquitoes, including *Aedes albopictus*, *Aedes aegypti*, and *Aedes japonicus*. Only *Ae. albopictus* tested positive for the dengue virus. The researchers concluded that to limit the occurrence and impact of future outbreaks of mosquito-borne infections, Hawai'i should expand vector surveillance programs and build vector control infrastructure to target *Ae. aegypti* and *Ae. Albopictus*. Extra attention should be given to targeting aquatic habitats of immature *Ae. albopictus*.

Hasty JM, Felix GE, Amador M, et al. Entomological investigation detects dengue virus type 1 in *Aedes (Stegomyia) albopictus* (Skuse) during the 2015-16 Outbreak in Hawai'i. *Am J Trop Med Hyg*. 2020;10.4269/ajtmh.19-0732. doi:10.4269/ajtmh.19-0732