Title:
University of Guam/University of Hawaii Cancer Center Partnership leads areca (betel) nut research in the Pacific Islands

Abstract:
Areca (betel) nut chewing is the 4th most used psychoactive substance in the world, and is chewed by approximately 600 million people worldwide. In Monograph 85 (2004), the International Agency for Research on Cancer deemed betel nut chewing with and without tobacco an oral carcinogen. In 2006, the NCI-sponsored University of Guam/University of Hawaii Cancer Center Partnership to Advance Cancer Health Equity began to identify areas in the monograph where research efforts were needed, and thus initiated betel nut research in the Western Pacific. Some countries in this region have reported rates of oral cancer mortality as high as 80% compared to the average worldwide 5-year cumulative of less than 50%. Over the past 12 years, a research framework to study betel nut exposure and oral cancer outcomes has evolved within the partnership. To date, 11 betel nut studies have been funded by this partnership; three molecular studies, three population measures studies, three mechanistic studies and two prevention studies, including an intervention trial. Of the 11 studies, the majority of the research is focused on the measurement of betel nut exposure and carcinogenicity (55%), followed by the measurement of pathological changes (27%) and the prevention of oral cancer (18%). The partnership’s investment has resulted in numerous community collaborations, 18 peer-reviewed publications (13 in population sciences and 5 in basic sciences), and contributions to policy prohibiting the sale of betel nut to minors. Betel nut research faculty are also involved in other federally-funded research studies with a betel nut component in the Western Pacific region. The partnership’s Betel Nut Research Group will continue to strengthen its research infrastructure, contribute to the scientific literature related to betel nut chewing, expand the research to other health outcomes, and translate the findings into appropriate practices, programs and policies to control and prevent betel nut-associated cancer and other health outcomes in Pacific Island communities.