

# Nurse Researchers Study Oral Bacteria Linked to Preterm Labor in Hawaii

Honolulu, Hawaii (January 10, 2017) – Faculty members from UH Manoa Nursing have been awarded a \$39,000 federal grant from the National Institute of Minority Health and Health Disparities through the Research Centers in Minority Institutions Translational Research Network (RTRN) to conduct a study entitled “Placental Oral Microbiota Associated with Preterm Labor in Hawaii.”



Dr. Maureen Shannon, Principal Investigator



Dr. Deborah Mattheus, assistant professor

The study will examine placental tissue samples from women in Hawaii who experienced preterm labor for the presence and type of oral bacteria. Oral bacteria that cause dental decay (cavities) can be transmitted through the bloodstream from the mouth to other parts of the body, including the placenta, and can contribute to the development of serious systemic diseases. About 40% of pregnant women experience dental decay, which is associated with pregnancy complications such as preterm labor, preterm birth and low birth weight infants.

“The first step of our project will be working in the lab, analyzing samples of placentas to determine the presence of any oral bacteria and, if so, what type is identified because there are many different types of oral bacteria. Based on what we find, the second step will be working with our research team to design and conduct an intervention study to decrease the transmission of maternal oral bacteria to other parts of

the body, as well as reduce transmission of the bacteria to the women's infants. The overall goal is to reduce dental disease in mothers so that they will not experience pregnancy complications like preterm labor and birth, or pass the cavity producing bacteria on to their infants and children," said Maureen Shannon, CNM, FNP, PhD, FAAN, FACNM, principal investigator. "We are committed to conducting research that can have a beneficial clinical impact for Hawaii mothers and their keiki."

Native Hawaiian, Pacific Islander and Filipino women have the highest rates of dental disease in Hawaii. By identifying the presence and type of oral bacteria found in placental tissue, the researchers hope to increase understanding about the way oral bacteria can contribute to the development of preterm labor. Determining the type of bacteria can help in the development of clinical interventions to reduce the rates of pregnancy complications and other diseases associated with dental decay.

"Every day, nurses advance science and find solutions for preventable medical conditions. As leaders in nursing research, studies of this type allow us to focus on the unique needs of our local populations," said Mary G. Boland, dean of UH Manoa Nursing. "Nurses not only provide safe, quality care to patients, but are also at the forefront of research to enhance health outcomes for generations to come."

The study is led by UH Manoa Nursing faculty Dr. Maureen Shannon, CNM, FNP, PhD, FAAN, FACNM, Professor, Frances A. Matsuda Endowed Chair in Women's Health, and the principal investigator, and Dr. Deborah Mattheus, PNP, PhD, APRN-Rx, Assistant Professor. An interdisciplinary team will collaborate on the study including Biorepository Manager Dr. Joshua Astern, PhD from the UH Manoa John A. Burns School of Medicine and dentists Dr. Oelisoa Andriankaja, DDS, PhD and Dr. Evangelia Morou-Bermudez, DDS, PhD from the University of Puerto Rico School of Dental Medicine.

This project received funding from the Research Centers in Minority Institutions Translational Research Network (RTRN), which is supported by the National Institute on Minority Health and Health Disparities, National Institutes of Health (NIH), through Grant Number U54MD008149.

###

### **About UH Manoa Nursing**

UH Manoa Nursing, the Nursing Capital of the Pacific, is the leader in nursing education and research in Hawaii with outreach to Asia and the Pacific Basin. We support the mission of the University of Hawaii at Manoa: to provide an innovative, caring and multicultural environment in which faculty, students and staff work together to generate and transmit knowledge, wisdom, and values to promote quality of life and health for present and future generations. The school offers the BS, master's, and doctoral programs. To reflect Hawaii's unique cultural diversity and heritage, UH Manoa Nursing is committed to increasing the representation of Native Hawaiian and other underserved people in all nursing programs. Visit us at [www.nursing.hawaii.edu](http://www.nursing.hawaii.edu).

Contact:

Desiree Uyeda, Marketing Manager

UH Manoa Nursing

[dlyamamo@hawaii.edu](mailto:dlyamamo@hawaii.edu)

office (808) 956-2904