

BIOGRAPHICAL SKETCH

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NAME: Rachael Taitano Leon Guerrero

POSITION TITLE: Associate Dean/Director of Western Pacific Tropical Research Center, College of Natural & Applied Sciences, University of Guam

eRA COMMONS USER NAME (credential, e.g., agency login): RTLEONGUERRERO

EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY
Oakland City College, Oakland City, Indiana	—	—	Biology
University of Guam, Mangilao, Guam	B.A.	05/89	Biology
University of Hawaii Manoa, Honolulu, Hawaii	M.S.	12/92	Human Nutrition
Colorado State University, Fort Collins, Colorado	R.D.	05/98	Dietetics
Colorado State University, Fort Collins, Colorado	Ph.D.	05/98	Human Nutrition

A. Personal Statement

My first funded post-graduate research experience was through the U56 MI/CCP partnership grant between the University of Guam and University of Hawaii Cancer Center. I collaborated with Dr. Suzanne Murphy and Dr. Rachel Novotny on a funded pilot project entitled “Evaluation of risk factors for chronic disease among adults in Guam”. My research work on this pilot project led to four peer-reviewed publications, and three abstracts in 2007 Annual Meeting of American Association of Public Health, 2006 Experimental Biology Conference, and 2006 National Nutrient Databank Conference. In April 2008, I was also honored with the distinction of a “Rising Star” in the National Cancer Institute Minority Institution Cancer Center Partnership Program. I then went on to collaborate with Dr. Rachel Novotny on several other funded research grants including a USDA/NIFA-funded project entitled “Children’s Healthy Living Program for Remote Underserved Populations of the Pacific Region (CHL)”; and a U54 MI/CCP full project entitled “Development of a Breast Cancer Risk Model for the Pacific (BRISK)”. The goal of the BRISK project was to conduct a retrospective case-control study with 110 cases and 220 controls to develop a model of breast cancer risk among Asian Pacific Islanders. Although I am in the process of data analysis and manuscript writing, my work on this project has already led to three abstracts in 2012 Experimental Biology Conference, 2012 12th Biennial Symposium on Minorities, the Medically Underserved and Health Equity, 2014 Experimental Biology Conference, and one publication, as well as three manuscript drafts in progress. The goal of the CHL Project is to prevent young child obesity through community-based prevention programs, based on local needs assessments that identify culturally and economically sustainable approaches. The CHL Project completed baseline data collection and entry, and the 24-month intervention phase; and we began the 24-month follow-up data collection. My experience in leading several research projects and Cooperative Extension programs at UOG have given me the ability to take on the role of Guam PI for the U54 UOG/UHCC Partnership. I assumed this role in July 2013, and look forward to providing support and leadership for the upcoming U54 renewal. In August 2014, I was promoted to the position of Associate Dean/Director of the Western Pacific Tropical Research Center (WPTRC) at the University of Guam. This new position allows me to contribute administrative support to research programs within the UOG College of Natural and Applied Sciences, as well as the university as a whole.

B. Positions and Honors**Positions and Employment**

1989 - 1990 Graduate Teaching Assistant, Department of Food Science and Human Nutrition,

- University of Hawaii, Honolulu, HI
- 1990 - 1992 Graduate Research Assistant, Department of Food Science and Human Nutrition, University of Hawaii, Honolulu, HI
- 1991 - 1993 Research Associate, Hawaii Osteoporosis Center, Honolulu, HI
- 1993 - 1994 Graduate Teaching Assistant, Department of Food Science and Human Nutrition, Colorado State University, Fort Collins, CO
- 1994 - 1997 Graduate Fellow, Center For Human Nutrition, University of Colorado Health Sciences Center, Denver, CO
- 1998 - 2003 Assistant Professor, University of Guam College of Natural & Applied Sciences, Mangilao, GU
- 2003 - 2008 Associate Professor, University of Guam College of Natural & Applied Sciences, Mangilao, GU
- 2008 - 2014 Professor, University of Guam College of Natural & Applied Sciences, Mangilao, GU
- 2014 - Associate Dean/Director, University of Guam Western Pacific Tropical Research Center, Mangilao, GU

Other Experience and Professional Memberships

- 1998 - Member, Academy of Nutrition and Dietetics
- 2005 - Member, American Society for Nutrition
- 2010 - Member, American Association of Cancer Research
- 2014 - Member, College of Nutrition

Honors

- 2008 Rising Star Award, National Cancer Institute Minority Institution Cancer Center Partnership Program

C. Contribution to Science

1. My research has focused primarily on looking at how diet and lifestyle factors of Guam residents impact their risk of chronic disease such as type 2 diabetes, cancer and obesity. Very little was published about the dietary intake patterns of children or adults on Guam before I joined the faculty at the University of Guam in 1998. The first study was published in 1968, when Jean Hankin surveyed the diet of 628 Chamorro (indigenous) adults. Twenty-seven years later, Pobocik published her study on the dietary intake patterns of 5th grade children on Guam. In 2001, Guam added 3 questions onto the BRFSS questionnaire to start capturing data on fruit/vegetable intake and body weight. Other than these limited bits of information, very little was know about dietary intake patterns of Guam. The purpose of my investigation into dietary intake of Guam residents was to re-establish a baseline of 'usual' intake and to gain a better understanding of the relationship between diet and chronic disease risk. I began this process of collecting 'baseline' information on dietary intake while I was Co-Leader of a NCI U56-funded Pilot Project that investigated risk factors associated with chronic disease. I've had the opportunity to study different aspects of dietary intake on Guam.
 - a. Leon Guerrero RT, Badowski G, Yamanaka A, Blas-Laguana M, Bordallo R, et al. University of Hawai'i Cancer Center connection: The vital role of cancer registries in the recruitment of an understudied minority population into a breast cancer study: Breast Cancer Risk Model for the Pacific. *Hawaii J Med Public Health*. 2014 Oct;73(10):335-40. PMID: [PMC4203456](#).
 - b. Paulino YC, Leon Guerrero RT, Novotny R. Women in Guam consume more calories on feast days than during non-feast days. *Micronesica*. 2011; 41(2):223-235. PMID: 25580033; PMID: [PMC4286890](#).
 - c. LeonGuerrero RT, Paulino YC, Novotny R, Murphy SP. Diet and obesity among Chamorro and Filipino adults on Guam. *Asia Pac J Clin Nutr*. 2008;17(2):216-22. PMID: [PMC2762033](#).
 - d. LeonGuerrero RT, Workman RL. Physical activity and nutritional status of adolescents on Guam. *Pac Health Dialog*. 2002 Sep;9(2):177-85. PMID: [14736097](#).

2. Recently, I've had the opportunity to partner with other USDA Land-Grant Institutions across the Pacific, including Hawaii, Alaska, Commonwealth of the Northern Marianas, American Samoa, Republic of Palau, Republic of the Marshall Islands, and the Federated States of Micronesia. We have come together on a 5-year USDA-funded child obesity prevention project entitled "Children's Healthy Living Program for Remote Underserved Minority Populations in the Pacific Region". We've already collected detailed diet, physical activity, and lifestyle factors of over 800 children on Guam. Within the next 6 months, we will be measuring these same children during a 24-month follow-up evaluation.
 - a. Fialkowski MK, DeBaryshe B, Bersamin A, Nigg C, Leon Guerrero R, et al. A community engagement process identifies environmental priorities to prevent early childhood obesity: the Children's Healthy Living (CHL) program for remote underserved populations in the US Affiliated Pacific Islands, Hawaii and Alaska. *Matern Child Health J.* 2014 Dec;18(10):2261-74. PMID: [PMC4220109](#).
 - b. Novotny R, Fialkowski MK, Li F, Paulino Y, Vargo D, et al. Systematic Review of Prevalence of Young Child Overweight and Obesity in the United States-Affiliated Pacific Region Compared With the 48 Contiguous States: The Children's Healthy Living Program. *Am J Public Health.* 2014 Jan;105(1):e22-e35. PMID: [25393168](#).
 - c. Novotny R, Fialkowski MK, Areta AA, Bersamin A, Braun K, et al. University of Hawai'i Cancer Center Connection: The Pacific Way to Child Wellness: The Children's Healthy Living Program for Remote Underserved Minority Populations of the Pacific Region (CHL). *Hawaii J Med Public Health.* 2013 Nov;72(11):406-8. PMID: [PMC3831571](#).
 - d. Wilken LR, Novotny R, Fialkowski MK, Boushey CJ, Nigg C, et al. Children's Healthy Living (CHL) Program for remote underserved minority populations in the Pacific region: rationale and design of a community randomized trial to prevent early childhood obesity. *BMC Public Health.* 2013 Oct 9;13:944. PMID: [PMC3851862](#).

3. In addition to the contributions above, I am also involved in work related to food composition and diet assessment/analysis. As the only nutrition faculty at the University of Guam, I've had the opportunity to partner with colleagues from the World Health Organization, USDA, and the University of Hawaii to look at different aspect of foods available on Guam.
 - a. Snowdon W, Raj A, Reeve E, LeonGuerrero R, Fesaitu J, et al. Processed foods available in the Pacific Islands. *Global Health.* 2013 Oct 25;9:53. PMID: [PMC4016479](#).
 - b. Leon Guerrero RT, Gebhardt SE, Holden J, Kretsch MJ, Todd K, et al. White rice sold in Hawaii, Guam, and Saipan often lacks nutrient enrichment. *J Am Diet Assoc.* 2009 Oct;109(10):1738-43. PMID: [PMC2761840](#).
 - c. Martin CL, Murphy SP, Leon Guerrero RT, Davison N, Jung YO, et al. The Pacific Tracker (PacTrac): Development of a dietary assessment instrument for the Pacific. *Journal of Food Composition Analysis.* 2008; 21s:103s-108s. PMID: [PMC4340481](#)
 - d. Paulino YC, Leon Guerrero RT, Aguon CM. Nutritional analysis of a fiesta on Guam. *Micronesica.* 2008 Jan 1;40(1/2):233-244. PMID: [PMC2743493](#).

Complete List of Published Work in MyBibliography:

<http://www.ncbi.nlm.nih.gov/sites/myncbi/rachael.leon.guerrero.1/bibliography/44478920/public/?sort=date&direction=descending>

D. Research Support

Ongoing Research Support

NIH/NCI 2U54-CA-143728

(Underwood - PI)

09/25/2015 – 08/31/2020

University of Guam/Cancer Research Center of Hawaii Partnership (2 of 2)

This grant supports the partnership between the University of Guam and University of Hawaii Cancer Center in cancer research, training, education, and outreach.

Role: PI

NIH/NIMHD 1U24MD011201-01 (Paulino - PI) 07/01/2016 – 06/30/2021

A Cohort for Studying the Burden of Cardiometabolic Diseases in Guam and Pohnpei

The major goal of this study is to study cardiometabolic diseases among in a cohort of USAPI populations, while the institutionalization of the proposed epidemiologic cohort will ensure the sustainability of population health data collection. The information will continue to inform the prevention and control of cardiometabolic diseases, as well as overall health promotion in the USAPIs.

Role: Co- Investigator

USDA-NIFA 2013-68001-30335 (Novotny - PI) 04/01/2011 – 03/30/2016

Children's Healthy Living Program for Remote Underserved Minority Populations in the Pacific Region

The goal of this project is to build the capacity of Pacific Island populations to prevent child obesity through a multi-level approach including training public health nutrition work force; conducting public health nutrition research; communicating health related information to the public; developing nutrition monitoring and surveillance systems; and building social, cultural, physical, and built environments to sustain changes.

Role: Guam Lead Investigator

Completed Research Support

NIH/NCI U54-CA-143727 (Underwood - PI) 07/01/2013 – 08/31/2015

University of Guam/Cancer Research Center of Hawaii Partnership (2 of 2)

This grant supports the partnership between the University of Guam and University of Hawaii Cancer Center in cancer research, training, education, and outreach.

Role: PI

NIH/NCI U54-CA-143727 (Underwood - PI) 12/01/2013 – 08/31/2015

University of Guam/Cancer Research Center of Hawaii Partnership (2 of 2)

Project Title: *Novel Approach to Assess Breast Density as a Risk Factor for Breast Cancer*

The goal of this pre-pilot is to develop the Electrical Breast Densitometer (EBD) device into a tool for breast cancer prediction and research.

Role: Co-Leader

NIH/NCI U54-CA-143727 (Whippy - PI) 09/01/2009 – 08/31/2014

University of Guam/Cancer Research Center of Hawaii Partnership

Project Title: *Development of a Breast Cancer Risk Model for the Pacific (BRISK)*

Project goals: 1) Test the Gail Model 2 of breast cancer risk among postmenopausal women in the Pacific (Marianas Islands); and 2) Build a new Breast Cancer Risk Model for the Pacific (BCRMP).

Role: Co-Leader

USDA-NIFA 2009-43100-05963 (Rojas - PI) 10/1/2009 – 9/30/2010

55 Plus: Guam's Approach to Healthy Aging

The goal of this project is to promote healthy living and aging of Guam's elderly through nutrition and fitness by providing timely and practical information on the value of good nutritional health and access to health promotion activities. Desired results include: increased awareness and skills to make healthy eating choices, setting reasonable fitness goals and maintaining physical activity levels, and increased awareness and skills to deal with issues associated with chronic diseases.

Role: Co-Investigator

NIH/NCI 1056-CA-096254-01A1 (Whippy - PI) 9/1/2003 – 8/31/2006

Evaluation of Risk Factors for Chronic Disease Among Adults in Guam

Project goals: 1) develop tools to accurately measure food and nutrient intake; 2) conduct a survey of a representative sample of 125 adult Chamorros and Filipinos living on Guam; and 3) develop a food frequency questionnaire to be used in future studies of diet and health.

Role: Co-Principal Investigator

NIH/NCI 1056-CA-096278-01A1

(Whippy - PI)

9/1/2005 – 8/31/2007

Factors Associated with Betel Nut Use on Guam

Project goals: 1) Use the 2007 BRFSS on Guam to analyze betel nut chewing prevalence data; 2) Conduct a series of focus groups to expand the betel nut ingestion module of the BRFSS into a comprehensive questionnaire; 3) Pilot-test the full questionnaire among a second sample of betel nut users.

Role: Co-Investigator