

USC Senior Hopes Diabetes Research will Impact Health Disparities

Candra Chaisson is a typical USC senior from Lafayette, Louisiana that loves the Gamecocks and is a huge foodie that "...can cook a mean gumbo and jambalaya." However, her work is anything but typical. She hopes to change lives with the research she is conducting through a grant from the American Diabetes Association. The study is entitled, "Relation between the fasting plasma glucose, insulin, and periodontal micro-organisms."

Candra is working with Dr. Anwar Merchant, associate professor in the Epidemiology and Biostatistics department at the Arnold School of Public Health and Affiliated Scholar of the Center for Research in Nutrition and Health Disparities, and Deepika Shrestha a Ph.D. student working with Dr. Merchant, to increase the understanding of the factors that influence fasting insulin and glucose in people with and without diabetes. It will provide clues for further studies in helping to prevent Type II diabetes. In addition to prevention, another goal is to prevent diabetes-related complications. The grant is an ancillary study to a larger study that Dr. Merchant is heading for the American Diabetes Association.

Candra, who is a double major in Biology and Public Health graduating in December 2013, has conducted research about health disparities throughout her undergraduate career as Ronald E. McNair Post-Baccalaureate Scholar at USC and at Johns Hopkins as a Diversity Summer Internship Scholar in the Fall 2012. When she saw a position posted for this study, she thought it would be a great opportunity.

"I hope that this research becomes useful in terms of making a difference among the populations that are affected the most by health disparities, and that this can potentially be used for years to come as more connections are made to improve the incidence and prevalence of obesity and diabetes," she said.

She said the best part of the research has been working with people who "are passionate about what they are doing." She said she is grateful for the patience and training of the study mentors that are teaching her valuable skills, such as using statistical software and analyzing big datasets such as The National Health and Nutrition Examination Survey (NHANES) III. She is evaluating the relationship between serum antibody titers of selected periodontal micro-organisms and fasting insulin and glucose in adults, using data from NHANES III.

Under Dr. Merchant and Deepika Shrestha, Candra is conducting analyses, literature searches, and taking a leading role on writing a manuscript for publication in a scientific journal, a rare opportunity for an undergraduate.

One thing that Candra has learned about health and health disparities is, "The environment you live in can have a significant impact on your risk for diabetes, in addition to genetic and demographic factors," she said. After graduating, Candra hopes to continue her work and get a doctorate in health policy.

Key Points

- Candra Chaisson is a senior majoring in biology and public health and working on a research project under Dr. Anwar Merchant, associate professor in the Epidemiology and Biostatistics department at the Arnold School and Affiliated Scholar of the Center for Research in Nutrition and Health Disparities.
- This study will research the factors that influence fasting insulin and glucose in people with and without diabetes and will provide clues for further studies in helping to prevent Type II diabetes.
- Another study goal is to prevent diabetes-related complications.