



Kalahari Bushmen Genome Project Underway

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Byline: Andrea Anderson

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HONOLULU (GenomeWeb News) – An international research team has started an in-depth study of Kalahari Bushmen genetics, Pennsylvania State University biochemistry and molecular biology researcher Stephan Schuster reported at the American Society of Human Genetics meeting here on Friday.

The Bushman Genome Project is an international effort aimed at bringing together detailed genetic, individual, and family information for individuals from the San, or "Bushman", population, a click-speaking, hunter-gatherer population in and around the Kalahari Desert in southern Africa.

The team, which includes University of Washington's Evan Eichler, Washington University's Elaine Mardis, and other genomics researchers, is interested in exploring human genetic diversity in this region, thought to be home to descendants of some of the earliest modern human populations.

The researchers selected participants by age, language group, and haplogroup, Schuster explained, starting with an initial cohort of 20 individuals.

So far the researchers have gotten about 10 times coverage of one individual's genome via whole genome shotgun sequencing with the Roche 454 Titanium platform and around two times coverage of a second individual. They also have sequenced the exomes of four Bushmen and at least one individual from another southern African population to around 16 times coverage using Nimblegen capture arrays and 454 sequencing, and genotyping, Schuster said.

Along with the genome sequence data, the team plans to do genotyping on thousands more individuals from southern Africa.

In addition, Schuster said the team is involved in outreach projects to engage individuals in the region. For instance, they are inviting students from South Africa's University of Limpopo to work on the project in the US and some of the researchers already involved in the project are going back to the communities involved every six months or so to return results, Schuster said.

"It is hoped that availability of the first Southern African human genome sequences will help the development of drugs that benefit this ethnic group," the team concluded in the presentation abstract. "Moreover, the data highlight the genetic richness of these largely forgotten people of Africa, emphasizing the importance of preserving this unparalleled archive of human cultural and

genetic history, and spot-lighting the need to assist indigenous groups in Africa and elsewhere in their fight against home-land loss, disease, and famine."

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