

University STEM Academy Students Conduct DNA Testing

Secondary school students, enrolled in the University of California, Riverside STEM Academy program, took part in a valuable educational experience on Saturday, January 7, 2017. The program, which meets on Saturdays from 8:00 a.m. to 3:00 p.m., provided students an opportunity to participate in a DNA test taste, which allowed each student to assess his or her hereditary tastes for bitter or tasteless.

Phenylthiocarbamide (PTC), also known as **phenylthiourea (PTU)**, is an organosulfur thiourea containing a phenyl ring. It has the unusual property that it either tastes very bitter or is virtually tasteless, depending on the genetic makeup of the taster. The ability to taste PTC is often treated as a dominant genetic trait, although inheritance and expression of this trait are somewhat more complex. Most people find the chemical known as PTC, very bitter, but 25% cannot taste it at all. The two



groups have different taste receptors on their tongues. Analysis of a 48,000 year-old bone shows that the genetic variation responsible for this difference also existed in Neanderthals. The ability to taste the chemical would help individuals avoid eating large quantities of toxic plants. But the researchers say the fact that the recessive form of the gene has survived in modern humans must mean that there is some genetic advantage in not being able to taste bitter flavors.

Dr. Carolyn Murray, founder of the STEM Academy, started the program in an effort to promote an interest in STEM careers among African-American students. The successful program is now in its third year. For more information about the University STEM Academy please visit Universitystemacademy.com.



STEM Academy Parents Learn Ways to Help Students With Self-Image



Shannon O'Brien, Executive Director of Children's Resources, Inc. was the guest speaker at the UCR STEM Academy parent seminar on Saturday, January 7, 2017. The topic, "Improving Your Child's Self-Image for Academic Achievement", explored the classroom experience from the perspective of African-American students and discussed ways to engage students through addressing cultural relevance in lesson plans.

Drawing on her experience as a former classroom teacher, community college instructor, school board member and parent workshop facilitator, O'Brien presented examples of classroom bias, low student expectations and overall frustrations of parents and educators. "When you are a direct product of the opportunities seized after the Civil Rights Era, you don't take the Dream for granted," said O'Brien. "There are teachers and students alike who don't believe in the Dream, and their efforts reflect this."

O'Brien will return to the STEM Academy on Saturday, January 21, 2017 for another presentation for parents.

