

Duke Focus 2007

The Genome Revolution & Its Impact on Society

The Courses

Genomes, Biology & Medicine (Biology 195S)

Prof. Huntington Willard

Social & Political History of Genomics (Public Policy Studies 195S)

Prof. Robert Cook-Deegan

Introduction to Computer Science & Programming: A Genomics Perspective (Computer Science 04G)

Prof. Owen Astrachan

American Protestantism, Scientific Progress, and National Identity (Religion 166)

Prof. Amy Laura Hall

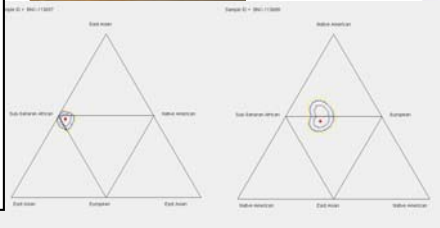
The Genome Revolution Interdisciplinary Discussion Course (Focus 99.06)

Julianne O'Daniel

Genome Ancestry Testing

We traveled to the Duke University Marine Lab in Beaufort, NC to learn about the science and social concerns behind genomic ancestry testing. For the feral horse population of Shackleford Banks along the Cape Lookout National Seashore, ancestry testing is a careful balance between preservation of the storied breed as unique and genetically healthy. Testing can confirm relatedness and help guide breeding control efforts. It can also be useful for longterm survival of the herd through targeted efforts to increase variation by introducing new, yet genetically similar horses to the ancestral breed. Politically, genetic testing helped confirm the ancestral lineage of the horses and garner their protection under the National Park Service.

Genetic ancestry testing for individuals is gaining popularity among family historians and some scientists around the globe. Multiple companies offer tests utilizing mitochondrial, Y-chromosome or autosomal DNA. The different technologies can provide very different answers scientifically. The potential impact of ancestry testing on individuals as well as whole populations is somewhat controversial. How will the test results be viewed if they do not support oral stories of ancestry? Could they be (mis-) used to prove or disprove membership in a population group? Four Duke faculty members volunteered their own DNA for ancestry testing and class discussion. Some of the results are shown here.



Human Genome Variation – Through Art

A significant portion of genome sciences is devoted to the study of how we as humans vary from each other and other living organisms. Likewise, the potential impact of this research into similarity and difference is a significant focus of social scientists and policy analysts. This fascination with human variation has also captured the imagination of artists, choreographers, authors, and others in the media and popular culture. We have examined portrayals of genome science and variation through dance, films, advertisements, books and more. Some of which are shown here.

Building from these examples, the students worked in groups to develop unique, original visual art projects that portray the theme, human genome variation. Each piece is displayed .

