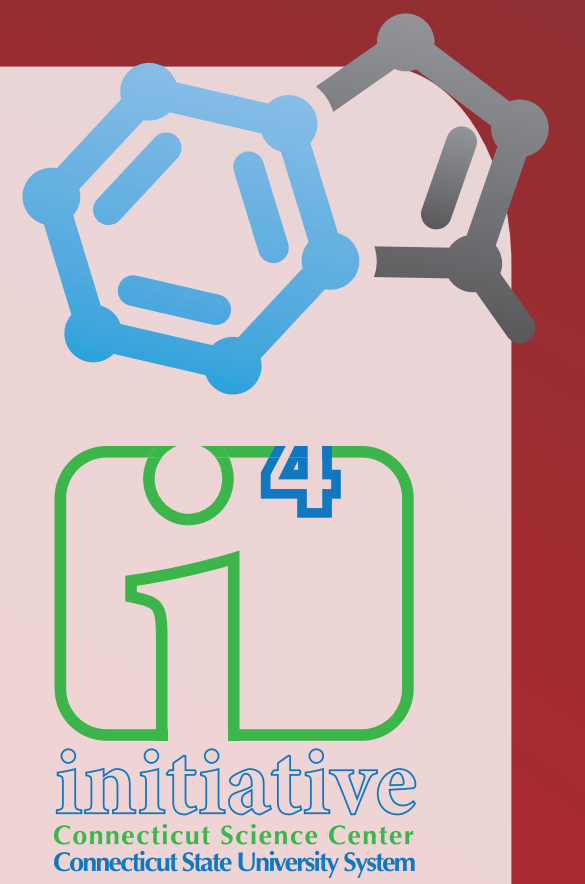


# Life's Common Thread: Genetics



This program provides a basic understanding of genetics, techniques for analyzing DNA, and research applications that illustrate how genetics is used to understand health and in tracking ancestry. Visitors will have the opportunity to analyze DNA and explore research applications that illustrate how genetics are being used to understand health and physical traits.



## Mutant Mice

Professor Thomas King of Central Connecticut State University (CCSU) specializes in the genetic analysis of mammal development and is working to identify the genetic basis for mutations resulting in curly hair in mice and no hair in rats.

Curly hair is not a disease but it is nonetheless of great interest to scientists who are curious about how animals -- like us -- develop from a single cell to become a complex organization of tissues, organs, and organ systems. How this development is directed and accomplished is still largely a mystery. Hair follicles offer a good system for investigating the genetic control of mammalian development.



King's laboratory at CCSU is working with three genetic mutants that display "bad hair;" two are rat variants and one is a mouse variant. Even though these variants show very different degrees of affectedness (from nearly hairless to merely wavy-haired), King believes that all three mutants are defective in the same gene -- a gene that normally controls an important function in the development of mammalian hair follicles. To garner evidence for this hypothesis, King's group aimed to determine which gene (among the approximately 25,000 known mammalian genes) is the one that is defective in these three follicularly-challenged rodents. To do this, King's lab focused on the curly-haired mouse variant called frizzy!

### Learn more...



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[www.CTScienceCenter.org/i4](http://www.CTScienceCenter.org/i4)

## Scientist Bio

Thomas King is professor of Biomolecular Sciences at Central Connecticut State University.

