

# Study: Some students confused by genetics

April 15 2008

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A new study suggests widespread ignorance and several misconceptions among U.S. high school students concerning the science of genetics.

The American Society of Human Genetics conducted a systematic analysis of 500 of 2,443 essays submitted by high school students. Those students were asked one of three questions: what they would study if they were a human geneticist, why should everyone know about genetics, or in what ways could knowledge of genetics change health and healthcare practice in the United States?

The essays reflected a significant number of inaccuracies and misconceptions, the researchers said.

The misconception most frequently identified was a belief that single genes are the cause of traits and inherited diseases. In actuality, multiple genetic and/or environmental factors often play a role in the expression of a trait or disease, officials said.

"Our data add to the growing literature that student misconceptions can serve as barriers to enduring understanding," said Kenna Mills Shaw, lead author of the study. "Our next challenge is to identify the pedagogical strategies that are most effective in teaching students basic genetic principles ..."

The research is available online in the journal *Genetics*.

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