Issue #11

Institute for Behavioral Genetics



#### University of Colorado Boulder

# **Community Family Study Newsletter**

#### Who is Participating?

- Community Twins. These are twins who live throughout the **Colorado Front** Range and were interviewed by researchers at the Institute for Behavioral Genetics in the past. One thousand twin pairs and some of their siblings will be asked to participate in this project.
- Community Fami*lies.* These families were originally contacted because a member of the family was undergoing treatment for substance use. Matched control families. who lived in the same area and had a similar family structure, were also asked to participate. Approximately 485 families will be contacted.



## **Understanding the Causes and Effects of Change**

It has been said that the only constant in life is change. As we age, our interests, goals, relationships and even our physical makeup undergo change. Some of these changes occur in response to the environment in which we live. If we move somewhere new, we are bound to meet new people who will impact our lives. Some changes are more biologically driven, for example the changes that happen in our bodies during puberty. Some changes are subtle and some are much more obvious, some are gradual and others happen extremely quickly. In order to understand the reasons for and the effects of change, researchers at IBG are conducting 5 and 10 year follow-up interviews with you.

If the questions we ask seem familiar, that is because many of them are the same questions we asked you years ago. We are finding that many people's answers shift over time, and we are trying to find out why. We are also looking at how individual's lives progress, and why some problem behaviors persist in certain people, while they change or disappear in others.

Of particular interest to us are the problems associated with drug and alcohol use and abuse. Why do some individuals try substances in the first place? Why do some try them and then stop using them, whereas other individuals bedependent come on drugs or alcohol? ls there such a thing as an "addictive personality", and if so, what other behaviors are associ- of the same questions ated with this personality type? As we begin to



We will ask you many from your last interview with us.

answer these questions, future researchers may be able to identify individuals at risk for addiction, and intervene before substance abuse problems become life threatening. Your answers to these questions may one day help those suffering from addiction and other potentially deadly disorders.

In addition to drug and alcohol research, we are also interested in studying behavioral patterns within families. This is why we collect data from multiple members of each family. Many behaviors have a genetic component, and by looking at data from different family members, we can find the commonalities and differences that contribute to behavioral change or stability. You are a vital part of this important research project, and we appreciate your time, effort, and personal contribution!

### What to Expect During Your Telephone or In-Person Interview

The interview and questionnaire that you will be given take approximately 3 hours to complete. Some individuals will be contacted by telephone for the interview, and others will be asked to complete an in-person interview. The in-person test session takes place in our Boulder office and we will reimburse your travel expenses, or if necessary, the test can be conducted at your home. The inperson interview is now computer-based, and this results in a more time efficient interview for you!

Both the telephone and in-person interviews cover a wide range of topics including questions about life choices, behaviors, feelings, family, and substance use. Because we are looking at genetic and environmental influences on behavior, we will also ask you to provide us with a cheek cell sample. Cheek cells are collected by a simple and painless procedure that involves swishing mouthwash around in your mouth and spitting it back into a tube.

Compensation for your time ranges from \$30-\$50 depending on the interview. If you have any questions about this interview or the research project in general, please contact us at the addresses on the back. Thank you for your participation, we look forward to talking with you!

### **University of Colorado**

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# **Behavioral Genetics: Mapping our Inner Surroundings**



For centuries explorers have mapped the world around us in order to gain knowledge and understanding of the complex place we inhabit. With advances in technology, scientists have been increasingly able to map our inner surroundings as well. In 2000, the first complete map of the human genome was created. This map charts the location of all the genes that make up a human being, around 35,000 in all. Variations in these genes contribute to differences in our physical attributes and behavior. However, researchers are just beginning to find out what many of these genes do. The field of behavioral genetics is at the forefront of this search, and the results from your tests are helping us discover many exciting new aspects of human development and behavior.

Behavioral genetics is the study of genetic and environmental factors that create behavioral differences among individuals<sup>1</sup>. This is the classic nature (genetics) vs. nurture (environment) debate. Researchers are finding that instead of "vs." however, it would be more appropriate to say "nature **and** nurture", as different combinations of genetics and environment make us who we are, it is not strictly one or the other.

Currently, researchers in behavioral genetics are focused on 1) finding behaviors and traits that are associated with specific genes and groups of genes, and 2) discovering how genes interact with the environment to make us each unique individuals. In order to find these connections, projects such as this one are being conducted around the world. Data about emotional, mental, and physical traits are collected through questionnaires and interviews, and DNA is collected through blood or saliva in order to match certain behaviors with certain genes. Researchers have begun pinpointing the functions of many genes, including those involved with reading disabilities, addictive behaviors, sleep, and memory.

This is an exciting time in the field of behavioral genetics, and your contribution to our understanding of the human experience is invaluable. Thank you again for your continued participation as we fill in the map of our inner surroundings.