

# The Start of a Real Revolution: Genetics and Psychiatric Illness

by Laura Lee Hall, Ph.D., senior research director, NAMI

**T**his year marks the 50<sup>th</sup> anniversary of Watson and Crick's discovery of the structure of DNA, the chemical substrate of our inheritance. It is also the year that researchers finished mapping the entire human genome. Thus, this year marks the beginning of a revolution in biomedicine, including advances related to mental illnesses.

A healthy dose of skepticism is a wise approach when it comes to promised scientific breakthroughs, including those in the psychiatric genetics field. But this fact is absolutely clear: This modern genome era will usher in a whole new approach to producing medications that are more targeted, specific, and have fewer side effects. Never before has science given us such tools to rationally develop psychotropic medications.

The road ahead is by no means short. While we know that genes



contribute to mental illnesses such as schizophrenia and mood disorders, the search for specific genes linked to these disorders in some people is still in its infancy. So too is our understanding of the pathway from gene to behavioral disorder, including the brain molecules and structures influenced by the gene, other factors that contribute to its expression, and how these come together to produce illness. Nevertheless, no NAMI member should doubt the implications of the new genetic era. And our advocacy must focus on making this revolution happen as soon as possible—through appropriate and adequate research funding.

The articles in this section describe what we know about the genetics of mental disorders, the recent advances in genetic science, and the promise they offer. You will also find a description of research efforts in this area that the National Institute of Mental Health supports. 