

Vincent van Gogh cut off his ear. Sylvia Plath stuck her head in the oven. History teems with examples of great artists acting in very peculiar ways. Were these artists simply mad or brilliant? According to new research reported in *Psychological Science*, a journal of the Association for Psychological Science, maybe both.

In order to examine the link between psychosis and creativity, psychiatrist Szabolcs Kéri of Semmelweis University in Hungary focused his research on neuregulin 1, a gene that normally plays a role in a variety of brain processes, including development and strengthening communication between neurons. However, a variant of this gene (or genotype) is associated with a greater risk of developing mental disorders, such as schizophrenia and bipolar disorder.

In this study, the researchers recruited volunteers who considered themselves to be very creative and accomplished. They underwent a battery of tests, including assessments for intelligence and creativity. To measure creativity, the volunteers were asked to respond to a series of unusual questions (for example, "Just suppose clouds had strings attached to them which hang down to earth. What would happen?") and were scored based on the originality and flexibility of their answers. They also completed a questionnaire regarding their lifetime creative achievements before the researchers took blood samples.

The results show a clear link between neuregulin 1 and creativity: Volunteers with the specific variant of this gene were more likely to have higher scores on the creativity assessment and also greater lifetime creative achievements than volunteers with a different form of the gene. Kéri notes that this is the first study to show that a genetic variant associated with psychosis may have some beneficial functions. He observes that "molecular factors that are loosely associated with severe mental disorders but are present in many healthy people may have an advantage enabling us to think more creatively." In addition, these findings suggest that certain genetic variations, even though associated with adverse health problems, may survive evolutionary selection and remain in a population's gene pool if they also have beneficial effects.