

# Drug addiction genes identified

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Scientists in China have identified about 400 genes that appear to make some people more easily addicted to drugs, opening the way for more effective therapies and addiction control.

Experts believe genetic factors account for up to 60 percent of a person's vulnerability to drug addiction, with environmental factors accounting for the remainder.

The researchers focused on four addictive substances -- cocaine, opiate, alcohol and nicotine -- and mapped out five main routes, or "molecular pathways," that lead to addiction, they wrote in the journal PLoS Computational Biology.

Figuring out pathways are important in the study of complex diseases as they narrow down the genes and proteins involved. In diseases such as cancer, pathways help doctors make more accurate diagnoses and predictions of the course of the disease.

For drug addiction, the researchers said: "These common pathways may underlie shared rewarding and response mechanisms and may be targets for effective treatments for a wide range of addictive disorders."

The researchers trawled through more than 1,000 peer-reviewed medical publications that linked genes and chromosome regions to drug addiction over the past 30 years and assembled a list of 1,500 addiction-related genes.

Some of these genes turned up more frequently than others in the pathways and scientists narrowed the list to 396.