Treating manic depression and mental illness is the ‘final frontier’ of CRISPR gene therapy

Since the 1980s, scientists have been searching for the genetic root of manic-depression, to better understand it and treat it, and gene-editing technologies like zinc finger nucleases, or ZFNs, have been around nearly as long.

In monogenetic diseases, like sickle cell anemia, one gene is responsible for the illness. Manic-depression has no single cause. Environmental factors, such as poverty, race, class, gender, abuse, and other precarities, play a large role.

Genes play a far smaller role, and there are at least 100 of them at play, interacting with one another and with environmental factors to manifest this complex disease.

Recently, however, some of the genes that play a part in manic-depression have been discovered, and just as quickly as scientists are coming to understand the genetic roots of this disease, they’re trying to use that knowledge to treat it.

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[Fyodor] Urnov’s research focuses on clinical applications for CRISPR, including ways it might be used to treat mental illness. “It’s a cliche to say mental illness is the final frontier,” he tells me over the phone, “but there you are.”

This is an excerpt. Read the original post here.