

DNA-based medicine achieves a breakthrough

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A German-led multinational team of scientists is reporting a breakthrough in using gene therapy to cure two men with chronic glaucomatous disease.

A multi-national team of researchers from Germany, the United States, Switzerland and Britain said both men suffered from the disease that's inherited through a defective gene, leaving left them highly susceptible to fungal or bacterial infections, The Wall Street Journal reported.

The researchers placed a healthy version of the CGD gene into a modified mouse leukemia virus. The virus was then used to insert the gene into white blood cells called neutrophils that had been taken from each patient, the Los Angeles Times reported. The experimenters, led by Manuel Grez of the Institute of Biomedical Research in Frankfurt, then destroyed some of the defective immune cells using chemotherapy and returned the neutrophils to the patients.

Within 50 days, 20 percent of the patients' neutrophils were reportedly of the healthy version, the Journal said, noting that surprised researchers because only five percent was needed to cure the disease. Since receiving the gene therapy 18 months ago, both patients have remained free of either fungal or bacterial infections.

The study appears in the journal Nature Medicine.

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