

  
THE SCOTSMAN

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## Scientists working on cell 'power plants' raise hopes of treatment for killer diseases

SCIENTISTS are close to a breakthrough in gene therapy that could wipe out a range of killer diseases and even delay ageing.

They believe they can correct mutations in genetic material called mitochondria - the "power plant" of cells - which trigger illnesses such as diabetes, Parkinson's, stroke, Alzheimer's, heart disease and cancer.

The gradual build-up of these faulty genes over a lifetime is also thought to be an important cause of ageing. But attempts to introduce normal genes into mitochondria to replace defective ones have so far failed.

However, a new technique tags genes with cellular "address codes" that tell them where to go, which crucially gets them across the mitochondrial membrane of cells grown in the lab, and into the mitochondria themselves, reports New Scientist.

About one person in 5,000 is at risk of developing a mitochondrial disease.

Mitochondria have their own DNA. If this is faulty a mitochondrial disease occurs. So far researchers have been unable to transport genes across the mitochondrial membrane into the mitochondria themselves.

So Dr Marisol Corral-Debrinski and colleagues at the Pierre and Marie Curie University in Paris picked two mitochondrial gene mutations - one that causes muscle weakness and another that causes blindness.

They tagged normal versions of these genes with two separate "address codes" and inserted them into cells grown in a lab.

Both mutations were reversed.

**This article:** <http://news.scotsman.com/health.cfm?id=1294622007>

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### Comments

1. [jennifer](#), foggy / 10:27am 16 Aug 2007

Exciting stuff!!!

2. [jennifer](#) / 4:32pm 16 Aug 2007

Has Conan been reversed?

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