‘Needle in a haystack’: Researchers glimpse mutations in first two cells as embryos develop

For the first time, scientists have caught a glimpse of the earliest genetic mutations in human development.

Using whole genome sequencing, they wound back time on cell samples from adults and revealed what took place in the genome when they were still microscopic embryos. It turns out, our first two cells contribute to our development in very different ways.

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“This is the first time that anyone has seen where mutations arise in the very early human development. It is like finding a needle in a haystack,” says geneticist Young Seok Ju from the Wellcome Trust Sanger Institute in the UK and the Korea Advanced Institute of Science and Technology.

To find these mutations, the team analysed blood and tissue samples from 279 people with breast cancer. Using samples from cancer patients allowed them to test whether mutations were present in both normal blood and tissue, and in surgically removed tumour samples.

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The researchers hope their discovery is just the first of many steps that will help us gain a better understanding of what happens to humans in the earliest days, when we’re all nothing more than just a clump of cells.

[The study can be found here.]

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion, and analysis. Read full, original post: Scientists Think They’ve Traced the Very First Mutations in a Human Life

For more background on the Genetic Literacy Project, read GLP on Wikipedia.