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Medical hopes for tiny DNA computer

By Roger Highfield
(Filed: 25/02/2003)

Fifty years after the discovery of the structure of DNA, a computing machine composed solely of DNA molecules and enzymes has been recognised by Guinness World Records as the smallest biological computing device.

Around 60 trillion of these devices could fit in a teardrop. In terms of speed and size, DNA computers may eventually surpass computers that use silicon microchips and could find uses in medicine. The research, conducted at the Weizmann Institute of Science in Israel, was published in the Proceedings of the National Academy of Sciences.

The Weizmann's Prof Ehud Shapiro made headlines a year ago for devising a programmable molecular computing machine composed of enzymes and DNA molecules.

His long-term aim is to make molecular computing devices that can work inside the body and operate as "doctors in a cell" to detect disease and direct drugs manufacture.

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