HUMAN BODY CLOCK SCIENTISTS 'CLOSE TO CURE FOR INSOMNIA'

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INSOMNIACS can dream of a better nights' sleep after scientists revealed they are close to developing an artificial human body clock which will stop them staying awake at night.

Researchers at Edinburgh University will use digital technology to try to mimic the workings of chemicals in the brain which influence internal timings.

It will see them place the key genes and proteins – likened to the "cogs and wheels" of the human body clock – into yeast to see if they trigger the same rhythmic signals that humans experience.

They are carrying out the tests in a laboratory setting rather than using humans, as their artificial device does not have its own body clock, giving the scientists complete control. It is hoped the findings will shed light on why humans sleep when they do, how quickly patterns can be changed, and what causes sleeplessness.

The study is part of a pan-European investigation into sleep disturbance, which is a growing problem in the EU where one in five employees now works shifts. Professor Andrew Millar, of the university's school of biological sciences, said the aim was to start with basic clocks and make them progressively more complicated.He added: "We will use the genetic information which we have at our disposal – and leading edge technologies – to introduce our synthetic 'clockwork' on to the blank canvas which yeast provides. "This novel way of 'learning by doing' will test how much we currently understand about the biological clock and suggest ways in which we can adapt these circuits for other purposes in the future."

Once Prof Millar's team has developed the clock's components, a prototype clock will be assembled by researchers in Szeged, Hungary.The Edinburgh study is part of the EUCLOCK project, which involves scientists at 29 sites in 11 countries.

They will carry out a range of research projects, each designed to find out more about how genes and proteins are connected in humans, mice and flies to influence the workings of biological clocks.

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30 June 2006