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The 'Virtual Human' Healthcare Model

A pan-European personalised healthcare project entitled the Virtual Physiological Human (VPH) Human Network of Excellence (NoE) may be about to revolutionise healthcare treatment and diagnosis.

The 72 million euro project is funded under the ICT Theme of the Seventh Framework Programme (FP7). It aims to help support and progress European research in biomedical modelling and simulation of the human body. In the hope of improving our ability to predict, diagnose and treat disease, if successful it could have a dramatic impact on the future of healthcare, the pharmaceutical and medical device industries. Success, for example, could significantly limit the need for animal testing and patient drug trials. This will be achieved through the creation of an entire framework to deliver personalised patient computer models for the predictive healthcare of the future.

13 institutions from seven countries are involved in the VPH network. Once the network is up and running it is hoped doctors, scientists and researchers from across Europe will be able to use it to virtually investigate the human body as a single complex organism.

The project also includes constantly updated and expanding database of knowledge to be used to develop better patient diagnosis and treatment.

A postgraduate VPH training programme at the University of Nottingham in the UK will help scientists from diverse disciplines to carry out collaborative studies across the EU. Mathematicians and medical researchers who use mathematical modelling will work together to find solutions to complex biomedical problems, for example.

The VPH project may revolutionise medical healthcare in the future. Employing emerging technologies such as genomics means that researchers in all areas can make use of enormous amounts of crucial and detailed physiological data. At the same time, advances in computer and information technology will make it easier for this information to be used to create genetic profiles of patients. It is hoped that over the next 10 years these advances will include treatments for both cancer and HIV/AIDS.

For more information, please visit: www.vph-noe.eu

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