IT Future of Medicine (ITFoM) to present a "virtual patient" at the FET Flagship Midterm Conference in Warsaw

Brussels, 24 November 2011 – The vision of the IT Future of Medicine (ITFoM) project to build a personalized patient model, a "virtual patient", will be presented at the **FET Flagship Midterm Conference and Exhibition** in Warsaw on 24-25 November 2011.

Recent breakthroughs in gene sequencing technology have been marked by a drastic reduction in time and cost. This allows the possibility that within a few years we will be able to sequence the genome of each patient, providing a basis for truly personalized medicine. A model that would integrate physiological, anatomical and life style data from individual patients should be able to simulate and predict all processes in the human body, enabling physicians to identify personalised prevention schedules, therapies and potential effects on individual patients. Using such a model, physicians will be able to prescribe a drug that will work and avoid those that would only cause side effects.

The ITFoM project aims to create such a personalized computer model. Using the genome and other –omics data in conjunction with clinical data of individuals to build a "virtual patient", this model will revolutionize modern health care by providing the opportunity for the practitioner to choose the optimal treatment for each individual and predict future health risks. The potential benefits are enormous in terms of reducing healthcare costs as well as for each individual patient: identification of efficient drug combinations on an individual basis; substantial advances in disease prevention and treatment; better data access and use for health professionals, healthcare systems, and researchers.

The individualized predictive model approach presents a huge challenge for ICT development because of the amount of data produced and needs to be integrated in modern health care planning. Such data-rich medicine also requires fundamental advances in the computational sciences. Academic groups from a range of research backgrounds have joined forces with their industry-based colleagues in making ITFoM a reality.

The ITFoM project will present outcomes and achievements of the past six months at the FET Flagship Midterm Conference and Exhibition in Warsaw. Amongst others, third generation sequencing technology will be presented by Life Technologies at the ITFoM's exhibition booth. The huge amount of data generated by sequencing methods and other lab technologies will be analysed and fed to the new model approach. Scientists from the Max Planck Institute for Molecular Genetics will show first results of the predictive modelling approach in the treatment of cancer. In addition, the perspective on how this novel approach could be implemented in health care systems of the future will be demonstrated by the ITFoM partner HealthSolve. The company has developed an easy-to-use system for nurses supporting care for elderly people in residential homes, e.g. monitoring physiological state, drug distribution etc.

Additional information about ITFoM is available at http://www.ITFoM.eu

Notes to editors

ITFoM brings together 55 partners and associated members from the whole of Europe and beyond, including world leading academic institutes and multinational companies such as Siemens, Illumina, IBM, Intel, XEROX, Oracle, Roche, Life Technologies and Agilent.

European Future Technologies (FET) Flagships are large-scale, science-driven and mission oriented initiatives that aim to achieve visionary technological goals. To prepare the launch of the two FET Flagships, six Pilot Actions are being funded with 1.5 million Euros each for a 12-month period that started in May 2011. In the second half of 2012, two of the Pilots will be selected and launched as full FET Flagship Initiatives in 2013. As one of the six Pilot Actions, the ITFoM project will present its objectives and expected impact on science, technology and society.

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