Avicenna

A strategy for *in silico* Clinical Trials

"*in silico* medicine will reduce the cost and risk (both clinical & financial) involved in clinical trials"

Avicenna is establishing a partnership between biomedical industries and European research organisations to develop the technology, methods, protocols and standards required to make *in silico* clinical trials a reality. By introducing computer simulations into the studies that are conducted to establish the safety and efficacy of new medical interventions, *in silico* medicine aims to reduce the cost and risk (both clinical and financial) involved in clinical trials.

Avicenna will:

- **Create a Roadmap:** driven by the needs of industry and society to investigate the research agenda of ISCT.
- **Establish a Pre-Competitive Alliance:** between industry & research organisations to develop the technology, methods, protocols and standards required for ISCT.
- **Identify Technologies:** Determine early examples of *in silico* clinical trials.

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Funded by the European Commission, Avicenna will run from October 2013 to September 2015. The consortium consists of a coordinator and three European partners.

About **Avicenna**

Avicenna (*Abū 'Alī al-Husayn ibn 'Abd Allāh ibn Sīnā*''), was a Persian physician and philosopher (980-1037), who first gave a formal structure to the process of evaluating the effect of a treatment on a disease in his most famous work, the Canon of Medicine (*al-Qānūn fī al-Tibb*). He introduced systematic experimentation and quantification of the study of physiology and the introduction of experimental medicine, clinical trials, randomised controlled trials and efficacy tests. The fundamental nature of clinical trials has changed surprisingly little since Avicenna's time.

The beginning of the 21st century saw the birth of *in silico* medicine, a new way to investigate living organisms and the diagnosis/treatment of diseases, through the simulation of biological processes using computer modelling.

Expected **Results**

In silico trials will help to:

- Reduce time to market
- Reduce development costs
- Reduce the need for animal testing
- Foster innovation
- Simplify the development of treatment for rare conditions
- Enable a more personalised medicine

Consortium

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Throughout 2014 Avicenna has engaged key stakeholders in a consensus process. Three out of the planned five events have taken place. These events are designed to help identify some of the primary scientific, technological, and methodological barriers that hinder the widespread adoption of *in silico* clinical trials.