Press Release

Pharma research: Computer models more accurate than animal trials

Expert systems estimate drug uptake in humans (bioavailability) more precisely than animal experiments

Emden, Germany (May 16, 2013) – In drug discovery today new drugs are tested on animals, such as rats, dogs and monkeys, to determine whether they are effective and possess sufficient oral bioavailability in these animals.

Up to now, it has been unclear whether animal studies are transferable to humans.

A detailed analysis of the bioavailability knowledge base PACT-F (**P**reclinical **A**nd **C**linical **T**rials Knowledge Base on Bioavailability) from PharmaInformatic, Germany was conducted in order to compare experimental results from animal studies and from human clinical trials. The evaluation was based on more than a hundred approved and marketed drugs.

The research, carried out by PharmaInformatic, has shown that oral bioavailability in animals is inconsistent with the values reported for humans. For many drugs large differences in oral bioavailability were found between humans and animals.

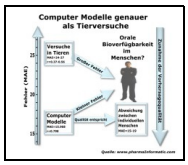
Based on PACT-F, computational models were developed to predict oral bioavailability. The final expert system, called IMPACT-F, calculates human oral bioavailability much more precisely compared to animal trials.

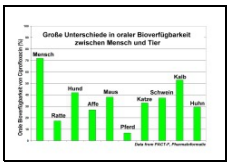
The expert system is a highly reliable way of forecasting oral bioavailability of new drugs. Bioavailability predictions of IMPACT-F were as accurate as the common deviation between individual humans taking part in the same clinical trial.

'It has taken years to develop reliable models, since an excessive amount of clinical data had to be integrated and compared.' says Dr Wolfgang Boomgaarden, founder and CEO of PharmaInformatic. 'Now we have proof that they are significantly more efficient and reliable than animal trials and we hope they will replace useless animal trials soon.'

Every year, millions of animal experiments are carried out. Alternative methods are needed to reduce animal testing. Computational models such as IMPACT-F can replace animal trials. They require no experimental effort, are less expensive and results are almost immediately available. Since they are significantly more reliable than animal models, they will increase the prospects of successful clinical trials in humans.

Detailed research results and images available.





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