KnowledgeBase Bioavailability PACT-F

Preclinical And Clinical Trials
Knowledge Base on Bioavailability

PACT-F contains experimental bioavailability results of clinical trials in humans and preclinical trials in animals. The results and conditions of those trials have been taken manually from reliable scientific publications. PACT-F contains the knowledge from more than 5000 scientific research articles related to bioavailability.

Application & Advantages

PACT-F is the fundamental knowledge base on bioavailability which allows to

- ✔   analyse factors and molecular patterns which influence bioavailability
- ✔   access bioavailability trials results of similar molecules previously investigated
- ✔   optimise and select drug candidates for clinical trials in humans
- ✔   develop computational models to predict oral bioavailability in humans

The development of PACT-F commenced in 2005. PACT-F is now the largest knowledge base on bioavailability worldwide. It contains 8296 records, which describe in detail the results of clinical trials in humans and preclinical trials in animals.

PACT-F is extensively annotated: up to 17 fields describe in detail the results and conditions of each trial, such as route of administration, species investigated, drug formulation, coadministration of drug, feeding condition, age and gender of the subjects involved, dosing scheme, genetic differences, experimental and analytical procedure, method of calculation and state of health. For further information, please see: content of PACT-F and novel research findings on bioavailability.

PACT-F is a structure-based knowledge base. This enables scientists to build relationships between drug structures and oral bioavailability. PACT-F has been used to develop computational models and expert systems such as IMPACT-F to predict human oral bioavailability. The quality and performance of those models, validated with large, independent and diverse sets of drugs, was shown to be remarkably better compared to preclinical trials in animals.

Low oral bioavailability in clinical trials is a major reason for drug candidates failing to reach the market. PACT-F is the fundamental knowledge base to analyse the factors and conditions which influence bioavailability. It provides scientists with the results and knowledge of 100 years of bioavailability research in order to improve future drug design and drug development.

PACT-F is available for licensing. The knowledge base is supplied in SD-format, which includes multiple compounds and their associated data in one file. To obtain a licence, please contact:
Dr Wolfgang Boomgaarden (licensing@pharmainformatic.com)

About PharmaInformatic

PharmaInformatic was founded in 2004 by Dr Wolfgang Boomgaarden. He has invented several drug design and virtual screening products, which have been successfully used in pharmaceutical research. Before he founded the company, he worked as a professor in bioinformatics at the University of Applied Science in Emden, Germany.

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