The HepaRG cell line: a unique in vitro hepatic cell system

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Organisation

Name of the organisation Vrije Universiteit Brussel (VUB)

Department Pharmaceutical and Pharmacological Sciences

Specific Research Group or Service In Vitro Toxicology and Dermato-Cosmetology

Country Belgium

Geographical Area Brussels Region

SCOPE OF THE METHOD

The Method relates to	Human health
The Method is situated in	Basic Research
Type of method	In vitro - Ex vivo
Specify the type of cells/tissues/organs	Terminally differentiated human hepatocellular carcinoma cells

DESCRIPTION

Method keywords

cell culture

in vitro tool

broad application

hepatic cell line

ready-to-use

Scientific area keywords

Liver cell biology

Toxicity studies

Drug metabolism

genotoxicity and carcinogenicity

hepatotoxicity screening hepatotoxicity screening

Method description

Cryopreserved differentiated HepaRG cells (obtained from Biopredic International) are derived from a human hepatocellular carcinoma. These cells are an unique *in vitro* tool that provides reproducible results and exhibit many characteristics of primary human hepatocytes such as morphology, expression of key metabolic enzymes, nuclear receptors and drug transporters. Because of these characteristics they have a very broad application versatility like *in vitro* ADME, hepatotoxicity screening and mechanistic testing applications (for instance transporters, drug-induced liver injury, genotoxicity and carcinogenicity studies).

Lab equipment

Laminar flow hood;

Phase contrast microscope;

Incubator;

Water bath (automatic);

Micropipettes;

Centrifuge.

Method status

History of use

PROS, CONS & FUTURE POTENTIAL

Advantages

Lack donor variability.

REFERENCES, ASSOCIATED DOCUMENTS AND OTHER INFORMATION

Associated documents

Toxicogenomics-based prediction of acetaminophen-induced liver injury using human hepatic cell systems.pdf