

# The HepG2 cell line: regularly used human liver-based in vitro model

Created on: 21-03-2019 - Last modified on: 28-02-2022

## Contact person

Anja Heymans

## 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

<b>The Method relates to</b>	Human health
<b>The Method is situated in</b>	Basic Research
<b>Type of method</b>	In vitro - Ex vivo
<b>Specify the type of cells/tissues/organs</b>	derived from liver tissue of a male with a well-differentiated hepatocellular carcinoma

## DESCRIPTION

### Method keywords

cell culture

in vitro tool

variety of fields

unlimited  
liver-based

### Scientific area keywords

Liver cell biology  
protein expression

### Method description

HepG2 is a human hepatoma derived cell line, which are epithelial in morphology. It was established from liver tissue of a 15-year-old Caucasian male with a well differentiated hepatocellular carcinoma. The HepG2 cell line is one of the most used human liver-based *in vitro* models. The cells secrete a variety of major plasma proteins (e.g. albumin), but show low levels of biotransformation enzymes. HepG2 cells grow mainly in islands after which they form a monolayer. They have been widely used in a variety of fields such as the study of hepatocyte function and specific protein expression.

### Lab equipment

Laminar flow hood;  
Phase contrast microscope;  
Incubator;  
Water bath (automatic);  
Micropipettes;  
Centrifuge.

### Method status

History of use

## PROS, CONS & FUTURE POTENTIAL

### Advantages

High stability;  
Unlimited life span

Coordinated by

REFERENCES ASSOC  
 sciensano



Financed by

DOCUMENTS AND OTHER I  
 Vlaanderen  
verbeelding werkt



N