

# Predictive toxicogenomics for the identification of chemical carcinogens : application to human hepatic cell lines

Citation for published version (APA):

Christina Magkoufopoulou, C. (2011). *Predictive toxicogenomics for the identification of chemical carcinogens : application to human hepatic cell lines*. [Doctoral Thesis, Maastricht University]. Datawyse / Universitaire Pers Maastricht. <https://doi.org/10.26481/dis.20111208cc>

## Document status and date:

Published: 01/01/2011

## DOI:

[10.26481/dis.20111208cc](https://doi.org/10.26481/dis.20111208cc)

## Document Version:

Publisher's PDF, also known as Version of record

## Please check the document version of this publication:

- A submitted manuscript is the version of the article upon submission and before peer-review. There can be important differences between the submitted version and the official published version of record. People interested in the research are advised to contact the author for the final version of the publication, or visit the DOI to the publisher's website.
- The final author version and the galley proof are versions of the publication after peer review.
- The final published version features the final layout of the paper including the volume, issue and page numbers.

[Link to publication](#)

## General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal.

If the publication is distributed under the terms of Article 25fa of the Dutch Copyright Act, indicated by the "Taverne" license above, please follow below link for the End User Agreement:

[www.umlib.nl/taverne-license](http://www.umlib.nl/taverne-license)

## Take down policy

If you believe that this document breaches copyright please contact us at:

[repository@maastrichtuniversity.nl](mailto:repository@maastrichtuniversity.nl)

providing details and we will investigate your claim.

## Propositions

belonging to the dissertation:

# **Predictive toxicogenomics for the identification of chemical carcinogens: *Application to human hepatic cell lines***

by

*Christina Magkoufopoulou*  
Maastricht, 8<sup>th</sup> December 2011

All models are approximations. Essentially, all models are wrong, but some are useful. However, the approximate nature of the model must always be borne in mind.

*G.E.P. Box, N.R. Draper*

Gene expression levels of HepaRG cells closely resemble those observed in human hepatocytes and human liver *in vitro*.

*This thesis - Chapter 2*

For the identification of genotoxic carcinogens, gene expression profiles induced in HepG2 cells by chemical agents perform better than those induced in HepaRG cells.

*This thesis - Chapter 2*

Evaluation of gene expression alterations induced in HepG2 cells by chemical agents facilitates the identification of false positive results from standard *in vitro* genotoxicity assays.

*This thesis - Chapter 3*

Transcriptomics approaches will overlook essential information, unless all possible functions of all known genes are fully elucidated.

*This thesis - Chapter 5*

Going from a whole genome to just a few sentinel genes is proof that the circle [of the microarrays era] is closing.

*J.M. Garcia-Sagredo*

The combination of Ames bacterial mutagenicity assay with specific gene expression alterations in HepG2 cells provides a novel and highly accurate *in vitro* genotoxicity test battery.

*This thesis - Chapter 4*

Given a large mass of data, we can by judicious selection construct perfectly plausible unassailable theories – all of which, some of which, or none of which may be right.

*P.A. Srere*

It is a capital mistake to theorize before one has data. Insensibly one begins to twist facts to suit theories, instead of theories to suit facts.

*A.C. Doyle*