

## **Promotoren**

---

**Prof. Vera Rogiers**  
**Prof. Tamara Vanhaecke**  
**Prof. Mathieu Vinken**

Department of Toxicology, Dermato-  
Cosmetology and Pharmacognosy (FAFY)

## **Leden van de examencommissie**

---

**Prof. Greet Schoeters**  
Department of Biomedical Sciences  
Universiteit Antwerpen

**Dr. Philippe Vanparys**  
Altoxicon

**Prof. Ann Massie**  
Department of Pharmaceutical Biotechnology and  
Molecular Biology  
Vrije Universiteit Brussel

**Prof. Ilse Smolders (voorzitter)**  
Department of Pharmaceutical Chemistry and  
Drug Analysis  
Vrije Universiteit Brussel



Vrije Universiteit Brussel

FACULTEIT GENEESKUNDE EN FARMACIE

**Doctoraat in de Farmaceutische  
Wetenschappen**  
Academiejaar 2011-2012

### **UITNODIGING**

Voor de openbare verdediging van het  
doctoraatsproefschrift van

**Tatyana Yordanova DOKTOROVA**

vrijdag 16 maart 2012

## **Situering van het proefschrift**

---

Through the adoption of the new legislative changes, including the 7th Amendment to the Cosmetics Directive and the REACH legislation for chemicals, the European Commission made it quite clear that 3R-alternative approaches, leading to the Refinement, Reduction and Replacement of animal experimentation need to be developed. In line with these requirements, the global goal of this doctoral thesis was to contribute to further progress in the field of 3R-alternatives, in particular with respect to toxicogenomics and liver-based in vitro modelling applied for carcinogenicity testing. Thus, the potential utility of different liver-based in vitro culture models for their discriminating power between genotoxic (GTX) carcinogens, non-genotoxic (NGTX) carcinogens and non-carcinogens (NC) using transcriptomics data is investigated. The major focus is hereby directed towards epigenetically-stabilized and conventional monolayer cultures of primary rat hepatocytes. In addition, the potential integration and use of the generated information in alternative integrating testing strategies is suggested. As such, the outcome of this thesis has the ambition to offer a valuable contribution to future carcinogen risk assessment.

## **Curriculum Vitae**

---

Tatyana Yordanova Doktorova was born on 13th of April 1981 in Zlatograd, Bulgaria. After finishing her secondary education at the English Language School "Ivan Vazov" in Smolyan, she started to study pharmacy at the Medical University in Sofia, Bulgaria. Her master thesis entitled "Screening of the histone deacetylase inhibition potency of new Trichostatin A analogues" was carried out, as a part of the Erasmus exchange program, at the Department of Toxicology, Dermato-Cosmetology and Pharmacognosy (FAFY), Belgium under the promotorship of Prof. Vera Rogiers and Prof. Tamara Vanhaecke. Inspired by the field of in vitro toxicology and the friendly team, as from April 2007 onwards, she started her PhD at the FAFY Department. Her doctoral project was part of the 6th Framework project carcinoGENOMICS in which around 20 partners from all over Europe were involved. Thus, she cooperated actively with a number of external laboratories. Her core scientific interests and experience are situated in the field of toxicogenomics-based in vitro assays and in vitro alternatives to carcinogenicity testing. Her doctoral research work was presented at several international scientific conferences and resulted in papers already published or submitted to international peer-reviewed scientific journals. In parallel with her research activities, she also succeeded in a course on handling laboratory animals (according to the Belgium law on experimental animals) and attended several workshops on toxicogenomics data analysis. During her PhD, she was co-promotor of 6 Master theses in Pharmaceutical Sciences.

U wordt vriendelijk uitgenodigd op de openbare verdediging van het proefschrift van

### **Tatyana Yordanova DOKTOROVA**

#### **'Evaluation of carcinogen-modified global gene expression profiles in liver-based in vitro models with focus on primary hepatocyte cultures'**

Op **vrijdag 16 maart 2012** om **17 uur**  
in auditorium **P. Brouwer** van de  
Faculteit Geneeskunde & Farmacie,  
Laarbeeklaan 103, 1090 Brussel