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FACULTEIT GENEESKUNDE EN FARMACIE

**Doctoraat in de Farmaceutische
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UITNODIGING

Voor de openbare verdediging van het
doctoraatsproefschrift van

Hasret ATES

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Situering van het proefschrift

In the last decades, the development of chiral drug molecules, more specifically of enantiomerically pure compounds, became a major concern in pharmaceutical industry. According to international pharmaceutical authorities, new chiral drug substances have to be identified and quantified. This requires the separation of the enantiomers. The reason for the strict regulations is related to the potential pharmacological and toxicological differences of the enantiomers in a chiral environment such as the human body, with possibly unforeseen (side)effects.

The separation of enantiomers can only be obtained when a chiral environment is created in the analytical method. Therefore different techniques and approaches are available but the most interesting are those where direct enantioseparation is applied, i.e. where a chiral selector is used. In this thesis, polysaccharide-based chiral stationary phases are investigated as chiral selectors in the Polar Organic Solvents mode of High-Performance Liquid Chromatography. It was our goal to investigate the separation performance of newly developed selectors with chlorine atoms in the amylose- and cellulose backbones of the polysaccharides.

Since the separation of chiral molecules cannot be predicted and even very similar molecules show different separation behavior, it is hard to compose a generic test set for high-throughput analysis. Therefore we tried in a second part of this work, to use mathematical tools for a rational test-set selection.

Curriculum Vitae

Hasret Ates was born on 1st of August, 1982 in Heusden-Zolder, Belgium. In 2000, she obtained her diploma from secondary school at Sint-Pauluscollege in Houthalen. In September of the same year, Hasret started her studies of Pharmaceutical Sciences at the Vrije Universiteit Brussel. Her Master thesis entitled 'Chromatographic Descriptors for Quantitative Structure-Activity Relationship' was carried out at the department of Analytical Chemistry and Pharmaceutical Technology under the supervision of Prof. Dr. J. Smeyers-Verbeke and Prof. Dr. Y. Vander Heyden. In 2006, she graduated with distinction as Pharmacist at the same university.

In October 2006, Hasret joined the department of Analytical Chemistry and Pharmaceutical Technology as pre-doctoral researcher. During this period, she was also teaching assistant in practical courses of Analytical Chemistry for bachelor and master students, was co-promotor of 4 Master theses in Pharmaceutical Sciences and of 1 Master-after-Master thesis in Industrial Pharmacy.

Hasret is the first author of 4 publications in international peer-reviewed journals and 1 book chapter and co-author of 2 international publications. She participated in several national and international scientific conferences where she presented her research in poster and oral presentations.

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

Hasret Ates

'Chlorine-Containing Polysaccharide-Based Chiral Stationary Phases in Polar Organic Solvents Chromatography'

Op **woensdag 4 juli 2012** om **17 uur** in auditorium **Brouwer** van de Faculteit Geneeskunde & Farmacie Laarbeeklaan 103, 1090 Brussel