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PhD in Pharmaceutical Sciences  
2015-2016

INVITATION to the Public defence of

**Sara DESMAELE**

To obtain the academic degree of '**DOCTOR IN PHARMACEUTICAL SCIENCES**'

**Medication use and drug related problems in stroke prevention.**

**Wednesday 29 June 2016**

Auditorium **Brouwer**, 17:00

Faculty of Medicine and Pharmacy, Laarbeeklaan 103, 1090 Brussel

How to reach the campus Jette:

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Vrije Universiteit Brussel

## Summary of the dissertation

Stroke is a major problem with important morbidity and mortality. Although different highly effective medicines are currently available for primary and secondary stroke prevention not all patients receive an optimal treatment. The aim of this thesis was to identify possible drug related problems (DRPs) in the follow-up of patients with an increased stroke risk. We focused on the use of antithrombotics, the role of other cardiovascular medication and the follow-up of patients in secondary prevention.

The magnitude and type of antithrombotic related DRPs in community pharmacies were investigated, as well as how community pharmacists handled these DRPs. The follow-up of patients with atrial fibrillation treated with vitamin K antagonists was investigated; In addition, the proportion of real life patients with atrial fibrillation eligible for therapy with one of the new direct oral anticoagulants was investigated. We further studied the possible relationship between frequently used cardiovascular medications prior to a stroke and the stroke severity. In a last part of the thesis, the medication use in secondary stroke prevention across different European countries was compared. The thesis concludes with a discussion of the important role of different health care providers, including physicians and community pharmacists in improving the care of patients at risk of a stroke.

## Curriculum Vitae

Sara Desmaele was born in Etterbeek on November 20, 1988. After studying Latin-Maths at the Mater Dei Instituut in Sint-Pieters-Woluwe, she started her pharmacy studies at the Vrije Universiteit Brussel. In 2011, she graduated as Master in Pharmaceutical Care with high distinction. After her studies, she started working as a PhD student at the department of Clinical Pharmacology and Clinical Pharmacy of the Vrije Universiteit Brussel, under supervision of Prof. Alain Dupont and Prof. Stephane Steurbaut. The topic of her PhD was medication use and drug related problems in stroke prevention. During her PhD, she was involved in several practical courses and training sessions for pharmacy students and she was co-promotor of 8 students for their master thesis. Additionally, she was involved in different training sessions for community pharmacists. She was also co-secretary of the pharmacy department council of the Vrije Universiteit Brussel. Sara is first author of four research papers published in international peer-reviewed journals and one additional manuscript is submitted. Currently, Sara is lecturer at the Erasmushogeschool Brussel where she teaches Clinical Chemistry, Pharmaceutical Care, Quality Control of Medicines and In vivo techniques. She also works as a community pharmacist.