Board of examiners

Prof. Dr. Steven Droogmans
Department of Cardiology
UZ Brussel

Prof. Dr. Yori Gidron
Department of Pharmacology and Pharmacokinetics
Center for Neurosciences
Vrije Universiteit Brussel

Prof. Dr. Veerle De Herdt
Department of Neurology
UZ Gent

Dr. Gert Jan Luijckx
Department of Neurology
UMC Groningen

Dr. Maarten Uyttenboogaart
Department of Neurology
UMC Groningen

Prof. Dr. Luc Huyghens, Chair
Department of Intensive Care Medicine
UZ Brussel

Promotoren :
Prof. Dr. Raf Brouns
Department of Neurology
UZ Brussel
Center for Neurosciences (C4N)
Vrije Universiteit Brussel

Prof. Dr. Jacques De Keyser
Department of Neurology
UZ Brussel
Center for Neurosciences (C4N)
Vrije Universiteit Brussel

Geneeskunde & Farmacie

GF

PhD in Medical Sciences
2015-2016

INVITATION to the Public defence of

Laetitia YPERZEELE

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

Prehospital diagnostics for improvement of acute stroke care.

Wednesday 27 april 2016
Auditorium **Brouwer**, 17:00
Faculty of Medicine and Pharmacy, Laarbeeklaan 103, 1090 Brussel

How to reach the campus Jette:
http://www.vub.ac.be/english/infoabout/campuses

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Summary of the dissertation

Stroke is a major health problem with increasing incidence due to aging of the population. Consequences of this disease are often devastating both for patients and their families, and the socio-economic impact is immense. The beneficial effect of the available treatment strategies is highly time dependent, as viable brain tissue is lost rapidly. Therefore, the major goals for acute stroke management are to minimize the delay until initiation of treatment ('time is brain') and to provide expert support over the continuum of stroke care ('competence is brain').

Time to treatment initiation depends on prehospital and in-hospital delays. In-hospital delays have significantly decreased due to the general implementation of stroke protocols, but prehospital delays have remained unchanged over the years.

This thesis describes the rationale and the use of two innovative diagnostic methods to improve prehospital stroke care: expert medical support via 24/7 in-ambulance telemedicine through bidirectional audio-visual communication and in-ambulance heart rate variability recording. Two prospective, observational studies were performed and demonstrated the feasibility and the reliability of these techniques in real life medical emergencies. These findings will further improve the PreSSUB telestroke system and aid the development of additional diagnostics which can be incorporated in the system's clinical decision support system.

Curriculum Vitae

Laetitia Yperzeele was born in Antwerp on the 15th of September 1983. After finishing medical school at the University of Antwerp (UA) in 2008, she worked as a resident in the department of Neurology of the ZNA Middelheim in Antwerp (2008-2010; head of department prof. dr. P. P. De Deyn) and the Antwerp University Hospital (2010-2013; head of department prof. dr. P. Cras). During her neurology residency, she developed a particular interest in the field of cerebrovascular diseases. In 2013, she started a fellowship in vascular neurology and neurosonology at the stroke unit of the Universitair Ziekenhuis Brussel (head of department prof. dr. J. De Keyser). At this time she started her PhD on the improvement of acute stroke management through application of in-ambulance telemedicine and heart rate variability (promotores prof. dr. J. De Keyser and prof. dr. R. Brouns). She is currently working as a vascular neurologist at the department of neurology of the Antwerp University Hospital (UZA).