

Statement of supervisors on the course of PhD studies of Mgr. Perta Riasová

Mgr. Petra Riasová started her doctoral studies at the Analytical Chemistry Department of the Faculty of Pharmacy in Hradec Králové, Charles University (FaF CUNI), under the supervision of Assoc. Prof. Miroslav Polášek, CSc. and consultancy of PharmDr. Pavel Jáč, Ph.D., in October 2016 after the completion of her Master's study of Pharmacy. Her research activities were focused on the development of capillary electromigration techniques for the assay of impurities in indomethacin and on the separation of flavonolignans in Milk Thistle. Since Petra Riasová has an ambitious personality, she was very active in finding a suitable host laboratory for her research internship abroad that is a mandatory part of the PhD study at FaF CUNI. Thus, she was accepted by the group of Prof. Dr. Debby Mangelings at Vrije Universiteit Brussel (VUB) for her 4.5 months internship in the summer semester of 2018. At that time she decided to continue her Ph.D. studies in the form of joint supervision (supervisors at VUB Prof. Dr. Debby Mangelings and Prof. Dr. Yvan Vander Heyden, supervisors at FaF CUNI: Assoc. Prof. Miroslav Polášek, CSc., PharmDr. Pavel Jáč, Ph.D.) with her first enrolment at VUB on March 1st 2019. The possibility of studying at VUB shifted her research interest also to the SFC technique and broadened her overall expertise in separation sciences significantly. The SFC part of her thesis involved the fundamental study of the prediction of the retention behavior in SFC systems using the coupling of chiral and achiral columns. This approach was later applied in the analysis of flavonolignans in Milk Thistle. Petra's main research resulted in four first-author manuscripts of which three were published in scientifically recognized journals such as Electrophoresis and Journal of Chromatography A. In addition, she participated in other research projects, which can be demonstrated by her co-authorship of other publications, namely in Analytical and Bioanalytical Chemistry, Food Chemistry, or Critical Reviews in Analytical Chemistry. In total, she is a co-author of six publications and one manuscript that will be submitted soon. Additionally, she presented her results also on national and international conferences in the form of poster or oral presentations. Next to the scientific activities, she also contributed to the teaching of lab classes at FaF CUNI in specialized subjects such as Special Methods of Instrumental Analysis and Selected Separation Methods.

Unfortunately, the pandemic of Covid-19 significantly impaired her experimental work on the last manuscript dealing with the separation of flavonolignans by means of SFC. Since April 2021, Petra continued in the combined form of study while having a prestigious job as

QA/RA Officer in ScreenPoint Medical in The Netherlands, a company focused on the development of AI tools for quantitative breast image analysis and computer aided detection, thus showing her ability to adapt and grow in a new environment.

Her thesis entitled “Contributions to Method Development in Capillary Electrophoresis and Supercritical Fluid Chromatography for the Analysis of Pharmaceutical Compounds” was successfully defended during the private defense at VUB on 13th June 2024 as the first part of the Joint Ph.D. defense scheme. This allowed us to meet here for the public defense today.

We are convinced that Mgr. Petra Riasová demonstrated her ability to work as a scientist and that she grew into a specialist with good erudition in the field of electromigration separation methods and SFC and their application in pharmaceutical analysis.

In Hradec Králové, 18th September

Prof. Dr. Debby Mangelings

Prof. Dr. Yvan Vander Heyden

Assoc Prof. Miroslav Polášek, CSc.,

PharmDr. Pavel Jáč, Ph.D.