

## Research Project

### HPLC-based activity profiling for Ca-channel blocking constituents in Crataegus extract

#### Project funded by own resources

**Project title** HPLC-based activity profiling for Ca-channel blocking constituents in Crataegus extract

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**Organisation / Research unit**

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**Project start** 01.11.2011

**Probable end** 31.12.2013

**Status** Completed

Endothelial hyperpermeability followed by edema formation is a hallmark of many severe disorders. Drugs that directly target endothelial barrier function are widely lacking. Extracts from hawthorn (*Crataegus* sp., Rosaceae) prevent vascular leakage by endothelial barrier-regulating systems in vitro and in vivo, by blocking Ca/PKC/RhoA and activating cAMP/Epac1/Rap1 pathways.

The project aims at identifying the metabolites in the extracts that are responsible for the activities observed in vitro and in vivo. HPLC-based activity profiling is used to rapidly pinpoint to active constituents, and structure elucidation is performed by a combination of on-line and off-line coupled spectroscopic methods. The project will provide molecular understanding of the clinically proven therapeutic properties of *Crataegus* extracts, and may provide entry points for new molecules restoring endothelial barrier function.

**Keywords** Crataegus, vascular leakage, hyperpermeability, Ca

**Financed by**

Other funds

Add publication

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Specify cooperation partners

ID	Kreditinhaber	Kooperationspartner	Institution	Laufzeit - von	Laufzeit - bis
1017879	Hamburger, Matthias	Fürst Robert PD Dr.	University of Frankfurt, Pharmaceutical Biology	01.01.2011	31.12.2016