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Press release

ERC Synergy Grant for biologist at Universität Hamburg:

6.1 million € for the investigation of signalling molecules in plants

Prof. Dr. Julia Kehr from the Department of Biology at Universität Hamburg successfully acquired an ERC Synergy Grant from the European Research Council (ERC) this year. In the project "Plant Mobile RNAs: Function, Transport and Features" (PLAMORF) Prof. Kehr will spend six years together with Dr. Friedrich Kragler from the Max Planck Institute for Molecular Plant Physiology in Golm and Prof. Dr. Richard Morris from the John Innes Centre in Norwich, Great Britain, to study signalling molecules in plants. The funding has a total volume of 6.1 million €, of which 2 million € go to the Universität Hamburg.

Like all complex organisms, higher plants need vessels to transport metabolites and signalling molecules to distant tissues. There are two major tube systems that connect all plant parts: the phloem and the xylem. The phloem carries nutrients such as sugars through the plant, while the xylem transports water and minerals. The phloem also contains a large number of different signalling molecules, including ribonucleic acids (RNAs). These RNAs can move through the phloem, transporting information to specific tissues.

But how are the different signalling molecules selected for transport? How is this process regulated? Who or what determines the destination of the molecules? And how are these signals processed in target cells? In order to answer these questions, the research team in the PLAMORF project will combine their expertise and scientific methods from the fields of cell biology, bioinformatics and protein biochemistry. For example, mobile transcripts in the phloem and in single cells of grafted plants will be identified, statistical models for RNA transport will be established, and the exact structure and function of signalling molecules will be analysed. The results will not only contribute to a deeper understanding of intercellular communication in plants, but could also play a significant role in crop breeding.

Prof. Dr. Dr. h. c. Dieter Lenzen, President of the Universität Hamburg: "This success demonstrates that we continue our work on excellence and that another prestigious project could be acquired. I congratulate Professor Kehr and the project team on this success!"

ERC Synergy Grant

The ERC Synergy Grants of the European Research Council were first awarded in 2012 as a funding instrument for a group of excellent researchers. The interdisciplinary teams consisting of two to four

scientists combine complementary skills, knowledge and resources in an innovative way. Groups can apply for funding up to ten million euros and grants are awarded for a period of up to six years.

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