

PD Dr. Sabine Lüthje

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EDUCATION

- Since 2006 **Lecturer**, University of Hamburg, Germany
2006 **Habilitation**, Plant Physiology, University of Hamburg, Germany
— **Venia legendi in Botany**, University of Hamburg, Germany
1995 **Doctorate (Dr. rer. nat)**, Biology, University of Hamburg, Germany
1989 **Diploma Degree in Biology** (Biochemistry, Applied and General Botany),
University of Hamburg, Germany
1979-1983 **Trainee** in chemical industry (Schülke & Mayr GmbH, Beidersdorf AG)

RESEARCH INTEREST AND EXPERTISE

Major topics of my team are the structure, electron transfer mechanism and function of plasma membrane-bound redox systems and class III peroxidases in oxidative stress. Education at the University of Hamburg in biochemistry, applied and general botany and more than 10 years of experience in chemical industry on preparative, analytical and physical chemistry and microbiology are the background for the scientific work. Research fellowships in 1992 and 1995 at the University of Cordoba, Spain, were focussed on cell fractionation (aqueous two-phase partitioning and free-flow electrophoresis, cell wall extraction) and protein purification (column chromatography, SDS-PAGE etc.). Projects together with the University of Antwerp, Belgium, were focused on *b*-type cytochromes (purification, absorbance spectra, redox titrations etc.). Molecular biological methods (recombinant proteins, RT-PCR, mutants etc.), protein biochemistry (purification of soluble and membrane proteins, enzyme kinetics, inhibitor studies, absorbance spectra etc.) and proteomic approaches (off-gel fractionation, IEF, SDS-PAGE, DIGE, hrCNE, BN-PAGE, BAC-PAGE, in-gel activity stains and in-silico analysis etc.) are standard methods in the lab.

SELECTED PUBLICATIONS

- C.N. Meisrimler, S. Lüthje** (2012) IPG-strips versus off-gel fractionation: Advantages and limits of two-dimensional PAGE in separation of microsomal fractions of frequently used plant species and tissues. *J. Proteomics*, <http://dx.doi.org/10.1016/j.jprot.2012.02.026>
- C.N. Meisrimler, S. Planchon, J. Renaut, K. Sergeant, S. Lüthje** (2011) Alteration of plasma membrane-bound redox systems of iron deficient pea roots by chitosan. *J. Proteomics*, **74**: 1437-1449
- S. Lüthje, C.N. Meisrimler, D. Hopff, B. Möller** (2011) Phylogeny, topology, structure and functions of membrane-bound class III peroxidases in vascular plants. *Phytochemistry* **72**:1124-1135
- A. Mika, M.J. Boenisch, D. Hopff, S. Lüthje** (2010) Membrane-bound guaiacol peroxidases are regulated by methyl jasmonate, salicylic acid, and pathogen elicitors. *J. Exp. Bot.* **61**: 831-841
- S. Lüthje, D. Hopff, A.K. Schmitt, C.-N. Meisrimler, L. Menckhoff** (2009) Hunting for low abundant redox proteins in plant plasma membranes. *Journal of Proteomics* **72**: 475-483