

Austria

<http://www.arabidopsis.org/portals/masc/countries/Austria.jsp>

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In Austria 25 research group are undertaking functional genomic research projects with *Arabidopsis* on specialized topics from development, epigenetics, chromosome biology, RNA metabolism, stress responses and signaling, plant-pathogen interactions and the functional analysis of gene families. The research activities are clustered at four institutions in Vienna and one in Salzburg and have been bundled in four consortia.

University of Natural Resources and Applied Life Science Vienna (BOKU),

Department of Applied Plant Sciences and Plant Biotechnology (DAPP)

Institute for Applied Genetics and Cell Biology (IAGZ)

Gerhard Adam (www.dapp.boku.ac.at/5499.html): *plant-pathogen interactions, detoxification of Fusarium mycotoxins*

Marie-Theres Hauser (www.boku.ac.at/zag/AG_hauser.htm): *root development, cytokinesis, ESCRT machinery, functional analysis of the ARIADNE gene family*

Christian Luschnig (www.dapp.boku.ac.at/5499.html): *Polar auxin transport, ubiquitination and degradation, chromatin architecture*

Herta Steinkellner (www.dapp.boku.ac.at/5499.html): *investigation and manipulation of the N-glycosylation pathway*

Institute of Plant Protection (IPS)

Holger Bohlmann (www.dapp.boku.ac.at/2238.html): *expression analysis of syncytia*

Florian Grundler (www.dapp.boku.ac.at/2238.html): *plant nematode interaction, sugar transport in syncytia*

Georg Seifert: *Arabinogalactan proteins and programmed cell death*

Gregor Mendel Institute of Molecular Plant Biology (GMI)

Werner Aufsatz (www.gmi.oeaw.ac.at/waufsatz.htm): *histone deacetylase in RNA silencing and stress adaptation*

Thomas Greb (www.gmi.oeaw.ac.at/tgreb.htm): *development of vascular tissue*

Claudia Jonak (www.gmi.oeaw.ac.at/cjonak.htm): *stress signaling and physiological responses, functional analysis of the GSK gene family*

Antonius and Marjori Matzke (www.gmi.oeaw.ac.at/amatzke.htm): *epigenetics*

Ortrun Mittelsten Scheid (www.gmi.oeaw.ac.at/oms.htm): *epigenetic changes in polyploids*

Karel Riha (www.gmi.oeaw.ac.at/rkriha.htm): *telomeres and genome stability*

Dieter Schweizer (www.gmi.oeaw.ac.at/dschweizer.htm): *chromosome biology, meiosis*

Hisashi Tamaru (www.gmi.oeaw.ac.at/htamaru.htm): *Asymmetric cell division and chromatin reshaping during pollen development*

University of Vienna, Max F. Perutz Laboratories (MFPL)

Department of Plant Molecular Biology

Erwin Heberle-Bors (www.mfpl.ac.at/index.php?cid=397): *epitope-tagging of MAP kinases*

Fritz Kragler (www.mfpl.ac.at/index.php?cid=52): *nature and function of systemic non-coding RNAs, proteins/RNA movement by plasmodesmata.*

Irute Meskiene (www.mfpl.ac.at/index.php?cid=53): *Specificity and functional analysis of a PP2C protein phosphatase gene subfamily*

Brigitte Poppenberger: *brassinosteroid biosynthesis*

Tobias Sieberer: *development of the shoot apical meristem*

Markus Teige (www.mfpl.ac.at/index.php?cid=55): *Calcium-dependent protein kinases*

Department of Chromosome Biology

Peter Schlögelhofer (www.mfpl.ac.at/index.php?cid=54): *Analysis of meiotic recombination*

Medical University of Vienna, Max F. Perutz Laboratories (MFPL)

Department of Medical Biochemistry

Andrea Barta (www.mfpl.ac.at/index.php?cid=68): *RNP complexes, spliceosome and small non-coding RNP complexes*

Elisabeth Waigmann (www.mfpl.ac.at/index.php?cid=57): *intra- and intercellular transport of plant viral genomes*

University of Salzburg

Department of Cell Biology

Raimund Tenhaken (<http://www.uni-salzburg.at/zbio/tenhaken>): *Biosynthesis of nucleotide sugars for cell wall polymers, programmed cell death*

CURRENT RESEARCH CONSORTIA

APAR (A Platform of *Arabidopsis* Research) is funded by the *Austrian Science Fund FWF*: The consortium understand itself as research platform that coordinates and promotes science on *Arabidopsis* in Austria. The APAR consortium has initiated together with the German AFGN consortium and research groups in Switzerland a yearly Tri-National *Arabidopsis* Meeting (TNAM).

Consortium members:

- Marie-Theres Hauser: *Functional characterization of gene families involved in root morphogenesis*
- Heribert Hirt: *Stress signal transduction*
University of Vienna, Max F. Perutz Laboratories, (MFPL), Department of Plant Molecular Biology, (www.heribert-hirt.at). Since February 2007 Heribert Hirt joined the Unité de Recherche en Genomique Végétale – URGV as future Director (<http://www.evry.inra.fr/public/index.html>)
- Claudia Jonak: *Analysis of glycogen synthase kinase/shaggy-like kinases*
- Irute Meskiene: *Specificity and functional analysis of a PP2C protein phosphatase gene subfamily*
- Karel Riha: *Functional study of the Ku complex at Arabidopsis telomeres*
- Markus Teige: *Calcium-dependent protein kinases in Arabidopsis signal transduction*

Lasting Effects of Abiotic Stress in Plant Genomes and their Potential for Breeding Strategies is funded through the *Austrian Genome Research Program GEN-AU* of the Bundesministerium für Wissenschaft, Bildung und Kultur

Consortium members:

- Christian Luschnig (coordinator)
- Werner Aufsatz
- Marie-Theres Hauser
- Heribert Hirt
- Claudia Jonak
- Ortrun Mittelsten Scheid
- Karel Riha

Integrative Analysis of Stress Response Mechanisms to Improve Plant Performance is funded by the Vienna Science and Technology Fund WWTF:

The project elucidates the role of protein kinases, viral-interacting host factors and micro RNAs in response to a combination abiotic and biotic stresses. The aim of these studies is to provide the molecular basis for breeding novel sustainable crop varieties of broad resistance against abiotic and biotic stresses.

Consortium members:

- Andrea Barta (coordinator)
- Heribert Hirt
- Claudia Jonak
- Elisabeth Waigmann

GKYKODESIGN IN PLANTS is funded by the Vienna Science and Technology Fund WWTF:

The goal of the project is the production of plant lines that are capable of producing pharmaceutically relevant glycoproteins which are, among other things, applicable in human therapy.

Consortium members:

- Herta Steinkellner (coordinator)
- Friedrich Altmann (University of Natural Resources and Applied Life Sciences Vienna, Institute of Chemistry)
- Renate Kunert (University of Natural Resources and Applied Life Sciences Vienna, Institute for Applied Microbiology)

Meetings

The 4th Tri-National *Arabidopsis* Meeting (TNAM) 2007 will be held at University of Natural Resources and Applied Life Science (BOKU) in Vienna between the 12th – 15th of September (<http://www.gmi.oeaw.ac.at/tnam2007/>)

The Meeting will discuss advances in *Arabidopsis* research carried out primarily in Austria, Germany and Switzerland. Presentations at this meeting have been divided into the following sections:

1. Molecular physiology
2. Evolution and ecology
3. Genetic and epigenetic mechanisms
4. Development and cellular communication
5. Biotic and abiotic interaction
6. Cell biology

These areas cover a large number of Tri-National research projects, making this a conference of general interest for both graduate students and senior researchers. In addition to the 21 invited speakers, ~20 posters will be selected for short oral presentations. In addition, there will be two poster session as well a prize for the best poster and best short oral presentation.

FUNDING SOURCES

- Basic research only: FWF (Fonds zur Förderung der wissenschaftlichen Forschung) (www.fwf.ac.at)
- Vienna region: WWTF (Wiener Wissenschafts-, Forschungs- und Technologiefonds) (www.wwtf.at)
- Specific programs (GEN-AU): Bundesministerium für Wissenschaft und Forschung (<http://www.gen-au.at/index.jsp?lang=en>)
- Austrian Research Promotion Agency, Ltd. (FFG) (www.fff.co.at)

PUBLIC RELATIONS - EDUCATION

Several of the research groups have been participating and opened their labs for the GEN-AU SommerSchoole, an educational program for high school students.

www.gen-au.at/artikel.jsp?id=68&base=vermitteln&lang=de