Austria

http://www.Arabidopsis.org/info/2010_projects/Austria.jsp
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Current Research Projects
Three consortia are presently performing active genome research on Arabidopsis in Austria:
1. APAR (Austrian Platform of Arabidopsis Research) is funded by the *Austrian Science Fund FWF*:
The APAR consortium is a research platform that coordinates and promotes science on *Arabidopsis* in Austria. It currently consists of the following members:

- Marie-Theres Hauser

Functional characterization of gene families involved in root morphogenesis
Institute for Applied Genetics and Cell Biology (IAGZ), University of Natural Resources and Applied Life Science (BOKU), Vienna
(www.boku.ac.at/zag/AG_hauser.htm)

- Heribert Hirt

Stress signal transduction
Department of Plant Molecular Biology, Max F. Perutz Laboratories (MFPL), University of Vienna
(www.heribert-hirt.at)

- Claudia Jonak

Analysis of glycogen synthase kinase/shaggy-like kinases
Gregor-Mendel Institute of Molecular Plant Biology (GMI) Vienna
(www.gmi.oeaw.ac.at/cjonak.htm)

- Irute Meskiene, Department of Plant Molecular Biology, MFPL Vienna

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

- Karel Riha

Functional study of the Ku complex at Arabidopsis telomeres
GMI Vienna
(www.gmi.oeaw.ac.at/rkriha.htm)

- Markus Teige

Calcium-dependent protein kinases in Arabidopsis signal transduction
Department of Biochemistry, MFPL Vienna
(www.mfpl.ac.at/index.php?cid=55)

2. Lasting effects of abiotic stress in plant genomes and their potential for breeding strategies, funded through the *Austrian Genome Research Program GEN-AU:*
Plants are especially required to withstand external stress conditions due to their sessile life-style. The project addresses mechanisms by which plants overcome unfavourable environmental conditions on long terms. In a systematic approach, combining the expertise of seven Austrian research groups, the genetic and epigenetic plasticity of plants is going to be explored under well-defined stress conditions. Using Arabidopsis as a model organism, the effect of stress on genomic variability and its potential use for plant breeding is elucidated.

Consortium members:

- Werner Aufsatz, GMI Vienna

Role of histone deacetylation in gene silencing and gene regulation
(www.gmi.oeaw.ac.at/waufsatz.htm)

- Marie-Theres Hauser, IAGZ Vienna
- Heribert Hirt, MFPL Vienna
- Claudia Jonak, GMI Vienna

- Christian Luschnig, IAGZ Vienna, Coordinator
- Ortrun Mittelsten Scheid, GMI Vienna

Epigenetic changes in polyploid plants
(www.gmi.oeaw.ac.at/oms.htm)

- Karel Riha, GMI Vienna

3. Integrative analysis of stress response mechanisms to improve plant performance, funded by the *Vienna Science and Technology Fund WWTF:*
The network combines expertise in the fields of protein kinases, viral-interacting host factors and micro RNAs to elucidate their roles in response to abiotic and biotic stresses. The research specifically focuses on integrative responses when plants are challenged with a combination of 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**,** Department of Medical Biochemistry, MFPL, Medical University of Vienna

Modes of interaction of SR splicing factors in Arabidopsis
(www.mfpl.ac.at/index.php?cid=68)

- Heribert Hirt, MFPL, University of Vienna
- Claudia Jonak, GMI Vienna
- Elisabeth Waigmann, Department of Medical Biochemistry, MFPL, Medical University of Vienna

Plant viruses as a model system for intra- and intercellular spread
(www.mfpl.ac.at/index.php?cid=57)

Other activites on an individual basis:

- Thomas Greb, GMI Vienna

Development of vascular tissue
(www.gmi.oeaw.ac.at/tgreb.htm)

- Fritz Kragler, Department of Biochemistry, MFPL Vienna

Nature and function of systemic non-coding RNAs
(www.mfpl.ac.at/index.php?cid=52)

- Peter Schlögelhofer, Department of Chromosome Biology, MFPL Vienna

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

- Gerhard Adam, IAGZ, BOKU Vienna

Detoxification of Fusarium mycotoxins
(www.dapp.boku.ac.at/5499.html?&&L=1)

- Marjorie and Antonius Matzke, GMI Vienna

Epigenetics
(www.gmi.oeaw.ac.at/amatzke.htm)

Major funding sources for Arabidopsis functional genomics:

- Basic research only: FWF (Fonds zur Förderung der wissenschaftlichen Forschung) (www.fwf.ac.at)
- Vienna region: WWTF (Wiener Wisenschafts-, Forschungs- und Technologiefonds) www.wwtf.at
- Specific programs: Bundesministerium für Wissenschaft, Bildung und Kultur, (www.bmbwk.gv.at/start.asp?bereich=5)
- Austrian Research Promotion Agence, Ltd. (FFG) (www.fff.co.at)