# Austria

http://www.Arabidopsis.org/info/2010_projects/Austria.jsp

Contact: Marie-Theres Hauser
University of Natural Resources and Applied Life Science Vienna
Email: marie-theres.hauser@boku.ac.at

In Austria, 26 research groups at the BOKU-University of Natural Resources and Applied Life Science Vienna, the GMI-Gregor Mendel Institute of Molecular Plant Biology of the Austrian Academy of Sciences, the MFPL-Max F. Perutz Laboratories and the University of Salzburg are undertaking projects on:

## Chromosome biology:

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

## Development and hormones:

- Andreas Bachmair: (www.mfpl.ac.at/index.php?cid=702): *protein modifications, ubiquitination and sumoylation*
- Thomas Greb (www.gmi.oeaw.ac.at/tgreb.htm): *vascular tissue development*
- Marie-Theres Hauser (www.boku.ac.at/zag/AG_hauser.htm): *root development, cytokinesis, cytoskeleton, protein trafficking and degradation, (epigenetic) response upon UV-B stress*
- Fritz Kragler (www.mfpl.ac.at/index.php?cid=52) *proteins/ RNA movement through plasmodesmata*, *HD protein cell.to cell transport and cell cycle regulation*
- Christian Luschnig (www.dapp.boku.ac.at/5499.html): *polar auxin transport, ubiquitination and degradation, chromatin architecture*
- Brigitte Poppenberger: *brassinosteroid biosynthesis, function of the transcription factor CESTA*
- Tobias Sieberer (www.chemie.boku.ac.at/4191.html): *AMP1 in the development of the shoot apical meristem*

## Epigenetics:

- Werner Aufsatz (www.gmi.oeaw.ac.at/waufsatz.htm): *histone deacetylase in RNA silencing and stress adaptation, roles of Arabidopsis Rpd3-type histone deacetylases in gene silencing and regulation, antibiotic resistance in plants*
- Antonius and Marjori Matzke (www.gmi.oeaw.ac.at/amatzke.htm): *epigenetics and interphase chromosomes*
- Ortrun Mittelsten Scheid (www.gmi.oeaw.ac.at/oms.htm): *epigenetic changes in polyploids*
- Hisashi Tamaru (www.gmi.oeaw.ac.at/htamaru.htm): *asymmetric cell division and chromatin reshaping during pollen development*

## Glycobiology:

- Herta Steinkellner (www.dapp.boku.ac.at/5499.html): *N-glycosylation pathway in plants*
- Richard Strasser (www.dapp.boku.ac.at/11132.html?&L=1): *galaktosyltransferases and N-acetylglukosaminidases*
- Renaud Leonard (www.chemie.boku.ac.at/4191.html): *N-glycan biosynthesis, fucosylation and defucosylation*
- Georg Seifert (https://forschung.boku.ac.at/fis/suche.person_uebersicht?sprache_in=de &person_id_in=7345): *arabinoglactan proteins and programmed cell death*
- Raimund Tenhaken (www.uni-salzburg.at/zbio/tenhaken): *biosynthesis of nucleotide sugars for cell wall polymers, UDP-glucuronic acid pyrophosphorylase,*

## Plant pathogen interactions:

- Holger Bohlmann (www.dapp.boku.ac.at/2238.html): *MIOX gene in nematode induced synzytia*
- Florian Grundler (www.dapp.boku.ac.at/2238.html): *plant nematode interaction, sugar transport in syncytia*
- Gerhard Adam (www.chemie.boku.ac.at/4191.html): *role of mycotoxins in plant-pathogen interactions*

## RNA metabolism:

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

## Stress response and signaling:

- Irute Meskiene (www.mfpl.ac.at/index.php?cid=53): *molecular mechanisms of AP2C1/2 in stress adaptation*
- Claudia Jonak (www.gmi.oeaw.ac.at/cjonak.htm): *stress signaling and physiological responses, metabolism, functional analysis of the GSK gene family,*
- Markus Teige (www.mfpl.ac.at/ index.php?cid=55): *Targets of calcium-dependent protein kinases*

## Current Research Consortia

"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 Austrian Federal Ministry of Science and Research

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

"Chromosome dynamics - unravelling the functions of chromosomal domains" is a multiorganismal project (Arabidopsis represented by Peter Schlögelhofer) with the focus on the interaction of kinetochore –microtubules, biochemistry of sister-chromatid cohesion, chromosome pairing and recombination.

"Targets of calcium-dependent protein kinases" is a multinational research consortium with participants from Austria (Markus Teige, funded by the FWF), Germany (funded by the DFG), The Netherlands (funded by NOW), and Spain (funded by MEC).

### Funding Sources

- 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 (GEN-AU) (Bundesministerium für Wissenschaft und Forschung) (http://www.gen-au.at/index.jsp?lang=en)
- Austrian Research Promotion Agency (FFG) (www.fff.co.at)

### Public Relations - Education

Several of the research groups participate in the GEN-AU SommerSchool, an educational program for high school students. www.gen-au.at/artikel.jsp?id=68&base=vermitteln&lang=de

In addition, "Dialog Gentechnik", an independent non-profit society dedicated to provide scientific information on molecular biology and different aspects of biotechnological applications is organizing the Vienna Open Lab where hands on courses are offered to school classes and the general public. http://www.viennaopenlab.at/index.php?lang=en

http://www.dialog-gentechnik.at/index.php?id=104908&txgroup=104908

### Vienna Biocenter International PhD Program

Within this international competitive program, groups of the GMI and MFPL of the University of Vienna offer up to 4 years Arabidopsis research projects. For detailed information consult the website www.univie.ac.at/vbc/PhD/