

# Nordic *Arabidopsis* Network

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

Contact: Jaakko Kangasjärvi

University of Helsinki, Finland

Email: [Jaakko.kangasjarvi@helsinki.fi](mailto:Jaakko.kangasjarvi@helsinki.fi)

## Norway

The Norwegian Plant Functional Genomics Program (NARC) started in 2003 and is fully operative. NARC is 1 of 11 genomics technology platforms forming the national functional genomics program (FUGE). The plant platform includes service activities within transcriptional profiling (full genome arrays and custom designed arrays) and bioinformatics (Atle Bones, NTNU) genotyping and clone collection (Odd-Arne Rognli, UMB), *in situ* hybridization and yeast two-hybrid screening (Reidunn Aalen, UIO). Most of the activity involves *Arabidopsis thaliana*. NARC will be extended until 2012 (first period 2003-2008). It is expected that systems biology will be a hot topic in the second period of the program. More information at: [www.forskningsradet.no/servlet/Satellite?cid=1088005968933&pagename=fuge%2FPage%2FHovedSideEng](http://www.forskningsradet.no/servlet/Satellite?cid=1088005968933&pagename=fuge%2FPage%2FHovedSideEng). In November 2006 the 5th Norwegian *Arabidopsis* meeting was held at NTNU in Trondheim by the Norwegian *Arabidopsis* Research Centre, NARC. More information at the SPPS Newsletter:

<http://www.spps.kvl.dk/cgi-bin/SPPSreader.pl?Story=NARC&Vol=0612>. Norway is a partner of the EU Plant Genomics network ERA-PG and hosted the Nordic *Arabidopsis* meeting 2004.

## Sweden

The Umeå Plant Science Center (UPSC ([www.upsc.se/](http://www.upsc.se/))) is a center of experimental plant biology in Umeå. It was created in 1999 by moving plant groups from the Umeå University and Swedish University of Agricultural Sciences (Umeå) to the same building. UPSC groups have also received National Center of Excellence status and funding for functional genomics. Their activities are mainly concentrated in trees (hybrid poplar). However, *Arabidopsis* functional genomics is heavily utilized for the determination of the function of poplar genes that have a well-conserved counterpart in *Arabidopsis*. Research topics include; plant development, flower development and hormone physiology; photosynthesis and metabolism with a special interest for stress responses (low temperature in particular); ecophysiology studying C- and N-assimilation. The research groups are supported by technical platforms in genomics, proteomics, metabolomics, production of transgenic plants, microscopy. The UPSC is also a partner in the European CATMA-project.

## Finland

The Finnish groups involved in *Arabidopsis* research are concentrating on stress-physiology and functional genomics of plant stress responses, developmental and hormone biology, and in photosynthesis. They are using genomics, proteomics, and metabolomics to determine plant defense and adaptation to biotic and abiotic stresses and the functions of the proteins in chloroplast thylakoid membranes. *Arabidopsis* genomic information is also used in functional and comparative genomics of the lower plants as a template for the eurosids. Information is stored and made available at openSputnik- the comparative genomics platform ([www.opensputnik.org](http://www.opensputnik.org)). The outcrossing relative *Arabidopsis lyrata* is being used in studies of population genetics of adaptation to abiotic conditions. The eight chromosomes of the species differ from the *A. thaliana* genome mainly by a small number fusions and reciprocal translocations. The Finnish Plant Functional Genomics Project Program was created in the spring of 2003 in order to increase collaboration in functional genomics between the participating groups. It is also member in the European plant functional genomics network ERA-PG.

## Denmark

In Denmark, a number of groups at The Veterinary and Agricultural University (beginning January 2007: renamed Faculty of Life Sciences, University of Copenhagen), University of Copenhagen (Faculty of Natural Sciences), Risø National Laboratory, Danish Institute of Agricultural Sciences (beginning January 2007: renamed Faculty of Agricultural Sciences, Aarhus University) and Aalborg University work on *Arabidopsis*. The research, which in most cases is funded by the national research councils, involves studies of several aspects of plant life. The activities are coordinated through the Plant Biotech Denmark-network ([www.plant-biotech.dk](http://www.plant-biotech.dk)). Denmark hosted the Nordic Arabidopsis meeting in 2005.

## Arabidopsis Resources

### Norway

- Norwegian *Arabidopsis* Research Centre (NARC): The Norwegian service facilities are open for all scientists at equal conditions. The program is coordinated by Atle M. Bones (NTNU) and information about the services can be found at [www.narc.no](http://www.narc.no) or by request to [narc@bio.ntnu.no](mailto:narc@bio.ntnu.no).
- University of Oslo: *in situ* hybridization and yeast-two-hybrid analyses (<http://www.imbv.uio.no/mol/groups/narc/>)
- UMB: *Arabidopsis* transformation, T-DNA genotyping, seed collection: ([www.umb.no/?viewID=2552](http://www.umb.no/?viewID=2552))

### Finland

- openSputnik: A comparative genomics platform ([www.opensputnik.org](http://www.opensputnik.org))

## Arabidopsis Funding Sources

### Norway

- Research Council of Norway ([www.forskningsradet.no](http://www.forskningsradet.no)): Functional Genomics in Norway (FUGE)-Funding

### Sweden

- Wallenberg Consortium North (WCN)- Funding ([www.wcn.se/](http://www.wcn.se/))

### Finland

- The Finnish Project Program on Plant Genomics- Funding ([www.honeybee.helsinki.fi/esgemo/pg/eng\\_index.htm](http://www.honeybee.helsinki.fi/esgemo/pg/eng_index.htm))
- The Academy of Finland- Funding ([www.aka.fi/index.asp?id=eb9a8e15a46244d989ac56c132e8d13a](http://www.aka.fi/index.asp?id=eb9a8e15a46244d989ac56c132e8d13a))