Germany

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1. AFGN

Aim and activities of AFGN

The AFGN was founded in 2001 as a DFG-funded basic research program. The AFGN program was renewed in 2007 (3rd funding period) and currently supports 22 projects. From its beginning AFGN has been organized in close coordination with the NSF 2010 Project, including joint reviewing processes. In addition, the AFGN and the 2010 Project implemented the collaborative AFGN-2010 Young Researcher Exchange Program (AFGN-2010-YREP). The program provides funding for 1 to 3 month research visits of young scientists to the US and *vice versa*. Together with colleagues from Austria and Switzerland the AFGN has initiated a yearly international conference on Arabidopsis functional genomics. In 2008, the 5th meeting will be held in Zürich, Switzerland.

AFGN continues to support basic functional genomics research in *Arabidopsis thaliana*. Two areas of research were identified which support concentrates on:

Functional Genomics of Biological Processes: The focus of the AFGN moved towards the genomic analysis of multigene networks whose members functionally interact with each other to accomplish a given biological process.

Tools and Resources for Plant Functional Genomic Research: The development of novel and, especially, quantitative genome-wide tools and technologies and additional resources in plant functional genomics to address unmet needs.

AFGN-related Arabidopsis tools and resources:

- AFGN: http://www.uni-tuebingen.de/plantphys/AFGN/
- AFGN-2010-YREP: http://www.uni-tuebingen.de/plantphys/AFGN/yrep.htm

2. GABI

The BMBF funded German plant genome research program has been launched in 1999 and is in its third major funding phase (called `GABI-FUTURE´) now. With the associated funding of ERA-Net PG projects of subcall B and a project towards sequencing the barley genome, total funding of plant genomics by the German Ministry of Education and Research (BMBF) has increased to an annual budget of approximately 15-17 million Euro plus additional 20% from industrial partners. GABI-FUTURE, structured as a public-private partnership thus is the biggest research activity in plant genomics in Germany. Research topics that are addressed in the program include further establishment of the plant genomics infrastructure, energy production under low input conditions, health promoting ingredients and improved nutritional quality, nutrient and water efficiency, biotic and abiotic stress tolerance, metabolic and developmental improvement of harvest organs and plant architecture. The total of 38 projects are assigned to five funding modules, Resources, Basics, Bridge Projects, Products, and Start, with the latter supporting junior research groups. While only few projects focus exclusively on Arabidopsis, research on this organism is an integral part of a very large fraction of projects in which basic research on *A. thaliana* is combined with research activities on crops. The bridging concept of research (translational research) introduced in the previous funding phase is thus further reinforced. This is also true for the further enhanced international cooperation, which through ERA-Net PG has been expanded from the initial bilateral as well as trilateral research programs between France (Génoplante), Spain, and Germany and opened to further partners. Under the acronym of `PLANT-KBBE´ (Transnational Plant Alliance for Novel Technologies – towards implementing the Knowledge-Based Bio-Economy in Europe) a new call for proposals has been launched for international co-operation on `bio-energy´, `biomaterials´, and `safer and healthier food´, based on the trilateral partnership and additional partners.

Within GABI, important resources such as the GABI-KAT lines, the world second largest T-DNA insertion line population, were generated and are available for the global research community. In 2005 the transfer of the confirmed insertion lines from Cologne to the Notthingham Stock Center (U.K.) started and is still continuing ensuring high-quality of seed stocks and related data. Other resource developments deal with an improved understanding of natural variation between different A. thaliana accessions. The generation of plant resources for analysis of natural diversity (natural accessions and experimental populations such as F1's, F2's, RIL's, IL's) as

well as their geno- and phenotyping to provide characterized biological material for researchers has been coordinated between colleagues from Génoplante (France) and GABI and is further progressing including deep genotyping and re-sequencing. Data warehousing, management and visualisation are points of main focus for bioinformatics activities in GABI-FUTURE such as the GABI-Primary Database, MAPMEN, and ARAMEMNON in addition to many decentralized bioinformatics groups within the research institutions. Experimental resources are developed in close international co-ordination through projects such as RyeExpress, TILLING, and DUPLO, which address Arabidopsis, barley, oilseed rape, sugar beet, rye, wheat, and potato.

GABI-related Arabidopsis tools and resources:

- GABI-KAT: http://www.gabi-kat.de/
- GABI-Matrix: http://mips.gsf.de/projects/plants/
- GABI-PD: http://gabi.rzpd.de/
- GABI-ARAMEMNON:http://www.uni-koeln.de/math-nat-fak/botanik/bot2/agflue/HOME/projects/GABI_rkunze/index.html
- GABI-TILLING: http://www.gabi-till.de/

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GABI: German Federal Ministry of Education and Research http://www.bmbf.de

Additional information:

GABI: www.gabi.de