

Sabancı University

Biological Sciences and Bioengineering Program

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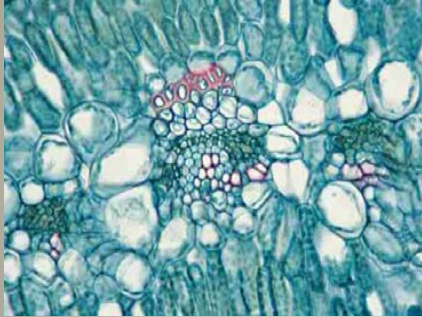
AREAS OF FOCUS

Molecular and cellular biology

Plant Biotechnology

Bioinformatics

- Molecular and Cellular Biology
- Plant Molecular Biology and Genetics
- Plant Nutrition and Physiology
- Structural and Computational Biology



Recent Projects:

Cytokine induced gene expression and its role on signal transduction pathways and gene expression, supported by the Scientific and Technological Research Council of Turkey (TÜBİTAK), 2003-2005.

Microhip design for cardiovascular risk marker detection.

Supported by Tubitak and DPT. 2005-2008

Isolation and characterization of starch biosynthetic cDNA genes from lentils (*Lens culinaris Medic.*) in collaboration with Koç University; supported by TÜBİTAK, 2005-2008.

Role of CD3 delta in T Cell Receptor signals, supported by TÜBİTAK, 2005-2008.

Screening for plant factors that modify the function of the mammalian immune system, supported by the European Union 6th Framework Program, 2005-2007.

Recent Projects:

Exploitation of wild wheat genotypes to increase the grain concentration of zinc in modern wheat in Turkey, supported by HarvestPlus consortium-Washington DC, 2004-2007.

Improving wheat cultivars grown in Turkey with high zinc and iron concentrations by using wild wheat, supported by State Planning Organization, 2005-2008.

Use of organic wastes of the Istanbul metropolitan area as compost in agricultural production supported by TÜBİTAK, 2006-2009.

Selenium status of soils and cereals in selected regions in Turkey and the role of wild wheat strains in increasing the selenium concentration of modern wheat, supported by the Scientific and Technological Research Council of Turkey (TÜBİTAK), 2006-2008.



Molecular cloning and functional expression of glyphosate target enzyme in plants, supported by European Union 6th Framework Program, 2006-2008.

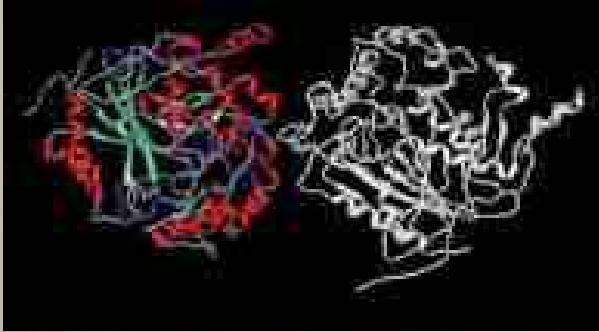
Molecular characterization of drought resistance in wild and modern wheat strains using genomics and informatics tools, supported by the Scientific and Technological Research Council of Turkey (TÜBİTAK), 2006-2009.

Development and application of techniques on molecular analysis and traceability of genetically modified products, supported by TÜBİTAK, 2005-2007.

Identification and physiological, molecular characterization of new gene resources involved in salt tolerance of *Aegilops tauschii*, supported by TÜBİTAK, 2005-2008.

Identification of historical wine grapes found in Urla using molecular and ampelographic techniques, supported by TÜBİTAK, 2006-2008.





Recent Projects:

Prevention of pilling problems in cellulosic fabrics with different enzymes and comparison of the effects, supported by the Scientific and Technological Research Council of Turkey (TÜBİTAK), 2003- 2006.

Research on enzyme use on the pre-treatment of cotton products, supported by TÜBİTAK, 2003-2006.

Cell culture facility, plant culture facility, spectrophotometry, inverted and fluorescent microscopy, gel documentation system, gel electrophoresis, radioisotope facility, PCR, HPLC, NMR, quantitative PCR, flow cytometry (FACS) and microarray facility.

11 faculty members, 25 graduate students.



Recombinant DNA techniques

- Protein purification/analysis
- Fluorescent and light microscopy
- Tissue culture
- Genomic Analyses
- Elemental Analyses
- Plant growth