

Laboratories of Reproduction and Developmental Biology

Research Centre AGROBIOTECH

Institute of Plant Genetics and Biotechnology of the Slovak Academy of Sciences

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THEMATIC RESEARCH FOCUS

Research Area: Research in the field of plant *in vitro* propagation and in the field of reproduction and developmental biology. Area of plant in vitro propagation – the aim is routine application for rapid and economically effective clonal propagation of planting material of economically important crops. Area of reproduction and developmental biology is developed on cytological and molecular levels focused on study of developmental processes of economically important crops with the aim of targeted regulation of these processes.

Excellence

- Area of plant tissue cultures
- Micropropagation of selected small fruit species
- Somatic embryogenesis of conifers, study of process on biochemical and molecular levels.

Mission: Target research orientation for solution of agricultural praxis problems and for application of research results in agricultural and forestry praxes. Application of biotechnological methods for effective production of attractive and economically valuable agricultural crops and woody species aimed to food safety increasing and also to creation of knowledge society.

TECHNOLOGIES

Content of Research

- Micropropagation of small species (Vaccinium corymbosum, Vaccinium vitis-idaea, Rubus spp., Amelanchier sp.)
- Somatic embryogenesis of Abies alba
- > xxxxx

Main Capabilities: Elaboration of protocols for efficient micropropagation of selected small fruit species. The protocols will be available for propagators and growers for propagation of these crops for needs of praxis.

Fields of Research Results Application

Agricultural praxis – propagation and cultivation of small fruit species.

KEY RESEARCH EQUIPMENT

- > Sterile laminar boxes, all equipment needed for work with in vitro cultures
- Autoclaves
- Culture rooms









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REALIZED PROJECTS

2014 – **2016**: Regeneration and clonal propagation of *Rubus* and *Prunus* spp. under in vitro conditions (VEGA)

2012 – 2013: Assessment of genetic stability of in vitro produced plants of small fruits (*Rubus* and *Vaccinium* spp.) (APVV SK-SRB)

2011 – 2013: Propagation in vitro and genetic transformation of less known small fruit species (VEGA)

2011 – 2013: Role of extracellular proteins in the process of conifer somatic embryogenesis (VEGA)

2008 – 2009: In vitro regeneration of blueberry (*Vaccinium corymbosum*), determination of genetic variability and elaboration of effective protocol for genetic transformation of *Vaccinium* spp. (APVV SK-SRB)

COLLABORATION

Academic/Research Partners

- Slovak University of Agriculture in Nitra (Slovakia)
- > Constantine The Philosopher University in Nitra (Slovakia)
- Fruit Research Institute Čačak (Serbia)
- Ataturk Central Horticultural Institute, Yalova (Turkey)

Companies

Welberry s.r.o., Nitra (Slovakia)

EXPECTATIONS

Requirements

We are looking for partners with concrete research and/or commercial ideas and goals that could be achievable using our equipment and know-how.

Offers

We offer the use of equipment and know-how of the research group.









