



University	University of Life Science “King Michael I” from Timișoara
Faculty	Faculty of Enigeneering and Applied Technologies
Department	Forestry Department
The position in the state of functions	9/I
Function	Associate Professor
The subjects in the education plan	Vegetal Biotechnologies, Genetic Engineeering, Genetic Engineeering
Scientific field	Biotechnology
The theme of the competition tests	Molecular bases of genetic modification in plants Methods used for gene transfer in plants- Protoplast transformation; Biolistic method; Agrobacterium system; In planta gene transfer; Plastid transformation; Genetic constructs; Selection of transformed cells. Stages involved in obtaining a transgenic variety- Laboratory tests; Evaluation under isolated conditions; Field trials. Strategies used to obtain herbicide-tolerant plants- glyphosate, ammonium glufosinate, sulfonylurea, bromoxynil. Strategies used to obtain pest-resistant plants- Bt technology. Genetic modification of technological traits- male sterility; flower color; ripening process; starch quality and quantity. Initiation of an in vitro culture- Preparation of culture medium- Isolation and inoculation of explants- Maintenance of cultures. Morphophysiological processes in explants cultivated in vitro- dedifferentiation, regeneration, differentiation, and in vitro morphogenesis. Micropropagation of plants- Multiplication stages; types of in vitro cultures. Acclimatization of plants obtained in vitro- transfer of plants to soil; stages in acclimatization of plantlets cultured in vitro. References: 1. Biotehnologii vegetale, Badea E., Săndulescu D. Fundația Biotech, 2001 2. Plantele transgenice în cultură, Badea E., București, 2003 3. Biotehnologia modernă. Plantele Modificate Genetic, Elena Badea, Sorina Mihacea, G. Nedelea. Editura Universitară, 2005. 4. Plante Modificate Genetic în Cultură. Impactul agronomic, ecologic și economic. Elena Badea, IP Otiman, Editura Mirton, 2006 5. Inginerie genetica, Călina Petruța Cornea, 2018
The adress where the tender file is sent	Secretariat of the Faculty of Engineering and Applied Technologies, Calea Aradului no. 119, CP 300645, Timișoara, Timiș County