Session 1 NMPB

SELECTION OF FIBROUS AND MEDICINAL PLANTS WITH HIGH WATER DEMANDS IN DROUGHT MODEL TO OBTAIN IMPROVED TOLERANCE OF PLANTS AND BIOMASS TO PRODUCTION OF NEW BIOPRODUCTS

Marcin Ożarowski
Institute of Natural Fibres and Medicinal Plants

DT-NMBP-40-2020 Creating an open market place for industrial data

- **Assessment and selection of fibrous and medicinal plants with high water demands under influence stressors in drought model and interactions with protectants to obtain improved tolerance of plants / biomass and production a new bio-fertilizers positively affecting root development and nutraceuticals.**

- **Objectives:**

1. **Improvement of morphological and biochemical characteristics of plants under influence of various abiotic factors and stressors**
2. **Selection of *in vitro* regenerated plants with developed bast fibers (industrial plants) and plants containing biologically active compounds (medicinal species)**
3. **Monitoring of growth and development, assessment of fiber quality, phytochemical evaluation and biological activities of ex vitro plants from vegetative vase and field experiments**
4. **Assessment of quality of plants / biomass under influence the protectants**
5. **Application of hemp and cereal straw, and extracts from medicinal plants as bio-fertilizers positively affecting root development**

Expertise of INFMP

•wide expertise in hemp, flax, medicinal plants:
- biotechnology, cultivation, processing, multidirectional application

Projects:

1) MAGIC – "Marginal land for growing industrial crops: Turning a burden into an opportunity'; International Consortium with the Center for Renewable Energy Sources and Saving, Greece; Horizon 2020, no. 727698

2) HaloSYS – "Integrated bioremediation system - biorefining using halophyte species"; International Consortium with the National Institute of Research and Development for Biological Sciences, Romania, ERA-NET CO-FUND FACCE SURPLUS/II/HALOSYS/02/2018

3) OTKA – "Developing of high value cultivars of essential oil plants"; International Consortium with the Corvinus university of Budapest, Hungary, the Hungarian Scientific Research Found; Project no. NN108633

SCIENTIFIC AND BUSINESS PARTNERS IN RESEARCH AREA:

(1) genetic analysis for estimation of inheritance of morphological features of plants;
(2) genotypes (varieties) of tested species from areas where high temperatures occur naturally

Keywords: drought stress, hemp, flax, medicinal plants, protectants, improving tolerance, bioactivity, phytochemical compounds, biomass

Contact details

Associate Prof. Marcin Ożarowski

Institute of Natural Fibres and Medicinal Plants

Public Research Institute

POLAND