The Franciszek Górski Institute of Plant Physiology
Polish Academy of Sciences (IPP PAS)
Kraków, Poland
www.ifr-pan.krakow.pl

Polish Biogas Association (PBA)
Gdynia, Poland
www.pba.org.pl

With support of:
Polish National Chamber of Biofuels
Warsaw, Poland
info@kib.pl

Implements EU projects supporting the development of biogas industry

Monitors the market and spends opinions on industry issues

Is the bridge between the investor and the contractor

Represents our members at the trade fairs and conferences

Distribute knowledge about biogas

Creates a platform for the exchange of information and experiences between companies operating in the biogas industry

Is a Member of the European Biogas Association and the Polish Economic Chamber of Renewable Energy
The Franciszek Górski Institute of Plant Physiology Polish Academy of Sciences
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DEPARTMENTS
• Department of Developmental Biology
• Department of Stress Biology
• Department of Cell Biology
• Department of Biotechnology
• Department of Ecophysiology
• Molecular Biology Laboratory Unit
• Laboratory of Enzymatic Biotechnology and Catalysis

INTERNATIONAL PROJECTS:
• COST ACTION (e.g. FA0901, FA0903, FA0605)
• COOPERATION BASED ON BILATERAL MEMORANDUM OF UNDERSTANDING (MOU) BETWEEN INSTITUTIONS
• COOPERATION FINANCED BY INTERNATIONAL FOUNDATIONS
COOPERATION (selected countries):

- CZECH REPUBLIC
- SLOVAKIA
- HUNGARY
- BELGIUM
- SPAIN
- RUSSIA
- GERMANY
- TAIWAN
- AUSTRIA
- ITALY
Plant responses to environmental stress

- **Abiotic** (e.g. salinity, drought)
- **Biotic** (e.g. pathogens: bacteria, fungi)

Plants cultivation

- Field conditions
- Semi-controlled conditions (fitotron chambers)
- *In vitro* cultures

Plants resistant to salinity

HALOPHYTES

- grow in areas with increased salt levels
- occur on marginal lands with salt water
- physiologically adapted to the extreme environmental conditions
Salinity, Drought, High Irradiation

STRESS FOR PLANT

Miscanthus giganteus

Mesembryanthemum crystallinum

RESPONSES OF PLANTS

- Production of **NATURAL BIOACTIVE COMPOUNDS**
- Production of natural **NUTRITIONAL METABOLITES**
- Production of **BIOMASS**
The potential use of halophytes:

- Highly productive substitutes for conventional crops at saline sites (food production, bioactive metabolites)
- Contribute to the utilization of saline soils
- Restoration of contaminated soils
- Phytoremediation of salinized soils
- New organic source for biomass production
- Renewable energy (biogas and bioethanol)
IPP PAS as a partner for future cooperation:

**Scientific Knowledge and Experience in:**
- Plant cultivation
- Halophytes and crops ecophysiology
- The role of the environment in bioactive compounds production
- The role of the environment in plant biomass production

**Facilities**
- Molecular biology
- Gas chromatography
- Column chromatography
- Electrophysiology (biophysical equipment)
- Gel electrophoresis
- Capillary electrophoresis
- Photosynthesis and spectroradiometry
- Equipment for cytophysiological studies
- Spectrofluorimeters
- Spectrophotometers
- Immunodetection techniques
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