

## Expression of interest for research cooperation

### Description of institution

Interested institution:	Polish Academy of Sciences, The Franciszek Górski Institute of Plant Physiology
Department carrying out the proposed research	Department of Biotechnology
Address and webpage	Niezapominajek 21, 30-239 Kraków, Poland, <a href="http://www.ifr-pan.edu.pl">www.ifr-pan.edu.pl</a>
Contact person (name, e-mail address, phone)	Edyta Skrzypek, <a href="mailto:e.skrzypek@ifr-pan.edu.pl">e.skrzypek@ifr-pan.edu.pl</a> , +48 12 4251833

### Research offer

#### Brief description of the department (key research facilities, infrastructure, equipment)

(up to 1000 characters)

<p>In vitro culture techniques: callus induction and regeneration, cell suspension cultures, protoplasts isolation, somatic and gametic embryogenesis, production of cereal doubled haploids.          Histological and cytological analyses.          Analysis of plant tissues ploidy by flow cytometry (MACS Quant, Miltenyi Biotec).          Hydroponic cultures of chosen crop plants.          Plant phenotyping and QTL analysis.          Spectrophotometric/chromatographic analysis of phenolics, polyamines, carbohydrates, proteins, plant pigments, enzymes activities.          Measurements of chlorophyll fluorescence (Handy PEA, Hansatech).          Measurements of chlorophyll content (SPAD, Konica Minolta).</p>
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#### Scientific area

<input type="checkbox"/> Chemistry	<input type="checkbox"/> Social Sciences and Humanities
<input type="checkbox"/> Economic Sciences	<input type="checkbox"/> Information Science and Engineering
<input type="checkbox"/> Environment and Geosciences	<input checked="" type="checkbox"/> Life Sciences
<input type="checkbox"/> Mathematics	<input type="checkbox"/> Physics

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**Research field**

(up to 500 characters)

Phenotyping and identification of QTL involved in physiologic-biochemical processes, yield and tolerance for abiotic and biotic stresses in crop plants.  
Optimization of regeneration methods for chosen species of rare and crop plants, with particular emphasis on fabace and cereals.  
Developing methods for wheat and oat doubled haploid production, determination of ploidy and identification of oat x maize hybrids obtained by wide crossing method.

**The proposed research/project description**

(up to 1000 characters)

Obtaining of oat doubled haploid via crossing with maize.  
Characterisation of oat x maize hybrids.

**Additional information (key Persons and Expertise; additional trainings, research programme, other)**

(up to 1000 characters)

We are interested in research programme and possibility to participate in haploid production method by centromere-mediated genome elimination.