



## **Expression of Interest – Individual Fellowships, Marie Skłodowska-Curie Actions**

The Institute of Plant Physiology and Genetics (IPPG, <http://www.bio21.bas.bg/ippg/en/>) is searching for experienced researchers interested in submitting a joint application for the Marie Skłodowska-Curie Individual Fellowships (Call H2020-MSCA-IF-2017).

IPPG is a leading institution in the field of plant biology in Bulgaria. It was founded in 2010 as a successor of the former Institute of Plant Physiology "Acad. M. Popov" and the Institute of Genetics "Acad. Doncho Kostov". The IPPG research team has a considerable expertise in the investigation of plant physiology and ecophysiology at various levels - molecular, cellular, biochemical and whole-plant level under both benign and stressful conditions.

The Institute is structured into three departments that include seven laboratories, where besides the research activity, training of highly qualified scientists in plant biology and its related disciplines is carried out.

***Department of Molecular Biology and Genetics*** consists of the following laboratories: Regulation of gene expression, Genome dynamics and stability, and Applied genetics and plant biotechnologies. Research activities are aimed at the genetic and epigenetic regulation of gene expression, molecular mechanisms of DNA repair and genome stability of higher plants under stress, creating new genotypes of crop plants, chromosomal and DNA markers for the identification and evaluation of genotypes with different stress tolerance.

***Department of Experimental algology*** investigates physiology and biochemistry of microalgae and cyanoprocaryotes. The research activity is focused on promoting innovative plant biotechnology for algal biomass production, high quality food and feed additives, valuable pharmaceutical raw materials and sustainable soil fertility products.

***Department of Plant ecophysiology*** consists of the following laboratories: Plant-soil interactions, Photosynthesis - activity and regulation, and Regulators of plant growth and development. The research activity is focused on improvement of nutrient use efficiency and water relations in plants, optimization of the functional activity of photosynthetic apparatus, enhancement of plant protective capacity.

## **Topics and Potential Supervisors**

***Regulation of gene expression.*** Investigation of the genetic and epigenetic aspects of the regulation of gene expression in higher plants - identification and functional analysis of genes involved in plant development and abiotic stress response, the effect of modified DNA methylation on the development and functional status of model and crop plants. Prof. Valya Vassileva, [valyavassileva@bio21.bas.bg](mailto:valyavassileva@bio21.bas.bg)

***Mechanisms of desiccation tolerance of the resurrection plant Haberlea rhodopensis under changing environmental conditions.*** Study of the acclimation mechanisms at different levels of organization of the photosynthetic apparatus (whole leaf, isolated chloroplasts). Relationship between the extent of stress treatment and level of some stress markers, activity of photosynthesis and antioxidant defense system, the synthesis of stress-induced proteins, the

changes in pigment-protein complexes, the main PSI and PSII proteins, and the expression of specific genes upon stress treatments. Prof. Katya Georgieva, [georgieva.katya.m@gmail.com](mailto:georgieva.katya.m@gmail.com)

*Plant ecophysiology.* Investigation of the interaction between biosphere and atmosphere - emissions of biogenic volatile organic compounds, primary and secondary metabolism of plants under environmental constraints. The primary focus of the studies is the physiological role of isoprenoids. Prof. Violeta Velikova, [violeta.velikova@gmail.com](mailto:violeta.velikova@gmail.com)

### **Description of the MSCA Individual Fellowships**

The MSCA Individual Fellowships support the career development and training of researchers through international and intersectoral mobility. The fellowships allow researchers to move around, into or within EU Member States and Associated Countries and spend time outside Europe. The grant provides researchers with up to two years' salary, a mobility allowance, family allowance (if required) as well as funding for research, training and networking.

Full details about the call are available at:

<https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/msca-if-2017.html>

### **Eligibility and Requirements**

Candidates should hold a doctoral degree or have at least four years of full-time research experience in a relevant life science discipline. Candidates are also expected to have an excellent CV in accordance to their career stage, a strong publications record, relevant research experience and good problem solving, troubleshooting and analytical skills, have good interpersonal and written and oral communication skills, and be able to work independently as well as within an international team. The research proposal can be based in any discipline matching IPPG expertise

At the time of the call deadline (14 September 2017), researchers must fulfil the mobility rule requirements.

### **Deadline**

Interested applicants should submit a CV (maximum 2 pages CV plus full list of publications), an outline of the proposed research (one page) and contact details to one of the supervisors in the selected thematic field **by 20 July 2017**. Pre-selected candidates will be contacted by 30 July 2017 and invited to prepare a full proposal with the IPPG supervisor.