



Post-doc position is available in NCN funded project (OPUS grant) to study molecular plant-microbe interactions.

Project title: "Cellular Dynamics of HopQ1, a Type Three Secretion Effector from *Pseudomonas syringae*"

Institution: Laboratory of Plant Pathogenesis, Institute of Biochemistry and Biophysics, PAS, Warsaw

Maximum period of position agreement: 36 months

Position starts on: October 2015

Many Gram-negative bacterial pathogens have evolved ingenious mechanisms to successfully colonize host tissue, and these methods include the delivery of type III effectors into host cells. The effectors contribute to disease development *via* manipulation of host defense system and physiology for pathogen benefit. Since such effectors often possess unique enzymatic activities or novel protein folds, it is extremely challenging to unravel their function inside host cells.

HopQ1 is a TTSS effector secreted by *Pseudomonas syringae*. Although it displays structural similarity to nucleoside hydrolases its aspartate motif in the catalytic center does not cluster with known canonical nucleoside hydrolases. We have previously shown that upon delivery into a plant cell, HopQ1 is phosphorylated and binds host 14-3-3 proteins. This interaction affects subcellular localization and stability of the effector contributing to virulence of *P. syringae*. Our current studies indicate that nucleocytoplasmic partitioning of HopQ1 may be regulated at multiple levels.

The major goal of our research is to further elucidate the mode of HopQ1 action within the host cell with a special focus on i) tracking its intracellular movements, ii) control of its nucleocytoplasmic partitioning and iii) involvement of its nuclear and cytoplasmic pools in the infection process or in the effector recognition by plant surveillance system.

Candidates Profile:

- Candidates should hold a PhD with relevant experience in the field of molecular genetics or protein biochemistry and in particular practical experience in plant biology or microbiology.
- scientific achievements including publications in recognized international scientific journals
- excellent teamwork, time management and organizational skills
- fluent in English written and spoken

Applicants should provide the following documents:

- curriculum vitae incl. a list of publications and expertise
- a motivation letter
- a copy of PhD diploma
- a reference letter

Applications in English or in Polish should be sent to dr. hab. Magda Krzymowska, krzyna@ibb.waw.pl.

Closing date: 11.09.2015