



## Job offer 04/20

The working group **VirusInteract** located at the **Leibniz-Institut DSMZ-Deutsche Sammlung von Mikroorganismen und Zellkulturen GmbH** in Braunschweig, Germany, is offering now a

### PhD student position (beginning 1.4.2020)

#### “Unravelling the nuclear manipulation by geminiviruses “

**The project:** Geminiviruses constitute a large and economically important group of single-stranded (ss) DNA plant viruses with circular genomes, causal agents of devastating crop diseases worldwide. Geminiviral replication occurs in the nucleus and uses the plant DNA replication machinery; the geminiviral genome forms minichromosomes and is subjected to epigenetic modifications, which seem to play an important role in the outcome of geminivirus-plant interactions; viral encapsidation also takes place in the nucleus. It is obvious that the nucleus is the most important subcellular compartment for geminiviral invasion; spatial information regarding the subnuclear distribution of virus-related processes, however, is lacking. Interestingly, geminiviral infection and/or expression of specific viral proteins induce characteristic changes in nuclear architecture, e.g. upon combined expression of Abutilon mosaic virus transport proteins, MP and NSP, inner nuclear envelope-derived vesicles invaginate into nuclei, but also appear associated with the nuclear surface. Additionally, changes in the localization of nuclear markers in geminivirus-infected cells also reflect an alteration of nuclear organization. These observations suggest that a concerted action of plant viral replication and shuttling/movement proteins leads to the re-organization of nuclear and membrane domains, which might be essential for viral replication, evasion of plant anti-viral mechanisms, and trafficking. Thus, the objectives of this study are i) to gain insight into the nuclear reorganization and manipulation by geminiviruses; ii) to define the nuclear interactome of geminiviruses; and iii) to identify nuclear targets of viral manipulation.

#### Your profile:

- Experiences and background in plant virology, plant cell biology and plant molecular biology
- Experience in light/fluorescence microscopy
- Master degree (or equivalent) in the above-mentioned disciplines with an overall grade of at least ‘good’
- strong English writing and communication skills
- basic experience in conducting experiments involving plant cultivation, especially *Arabidopsis thaliana*, and virus infection is desired

#### Our offer:

- working in an interdisciplinary environment as well as excellent facilities for biologic and biotechnical research
- Exciting working environment on an attractive research campus
- Opportunities to being part of the national and international scientific community
- PhD students are encouraged to attend international conferences and visits abroad with our cooperating partner in Shanghai, China, are planned
- Flexible working hours and various opportunities to reconcile work and family life
- Limited for 2 years (with the opportunity to prolong)
- Depending on the applicant's qualifications and the precise nature of the tasks, salary grade **TV-L E13 (65%)**

The DSMZ aims to employ more women in this area and therefore particularly welcomes applications from women. We also welcome applications from disabled persons. We look forward to receiving your application referring to **Job offer 04/20** until **28.02.2020**, preferably by email ([bjoern.krenz@dsmz.de](mailto:bjoern.krenz@dsmz.de); **one** pdf file including CV, motivation letter, one reference)