# Ph.D. position in bioinformatics of CRISPR-Cas RNAs

UNIVERSITÄT LEIPZIG

We are seeking a bioinformatics Ph.D. student for a project on CRISPR-Cas mechanisms. The position is in the research group of bioinformatician Zasha Weinberg at Leipzig University in Leipzig, Germany, and is a collaboration with Chase Beisel's lab, which studies CRISPR-Cas at the Helmholtz Institute for RNA-based Infection Research, in Würzburg, Germany.

The discovery and understanding of CRISPR-Cas systems revealed, surprisingly, that bacteria and archaea also have adaptive immune systems. Moreover, CRISPR-Cas enables many profound biotechnology applications, e.g. genome editing to cure genetic diseases. The larger goal of our project is to better understand CRISPR-Cas mechanisms with a view to understanding unusual biology of CRISPR-Cas and to be able to better manipulate CRISPR-Cas for engineering applications.

Your role will be to computationally analyze CRISPR-Cas systems, especially in the context of RNA secondary structure, in order to evaluate and refine hypotheses, and to make predictions about the specific CRISPR-Cas systems that are most interesting for experimental study. The position will also involve frequent close interaction with the Beisel lab, which will focus on experimental work that will complement the bioinformatics.

## SKILLS & QUALIFICATIONS

- A Master's degree or equivalent in bioinformatics or a related discipline (e.g., computer science, math, biology, biochemistry, etc) is required before beginning the Ph.D.
- Proficiency with UNIX and a scripting language, e.g., Python or Perl.
- Excellent written and spoken English.
- Strong background in bioinformatics and knowledge of statistics, and solid knowledge of molecular biology and biochemistry.
- Interest in understanding biology using computational approaches, and enthusiasm for basic science.

## DATES / TIMES / FUNDING

- Ideal start date is January 2022, but start date is flexible.
- Salary is based on the TV-L pay rates, level E13, at 65%.
- The position is expected to run for 3 years, and is funded for this duration by the DFG (German Research Foundation).

## HOW TO APPLY OR GET MORE INFORMATION

- Questions should be sent to Zasha Weinberg at zasha@bioinf.uni-leipzig.de.
- Application instructions are at `https://zashaweinberglab.org/jobs-thesis`.
- Applications will be evaluated as soon as they are received until the position is filled.

## THE ENVIRONMENT

We are part of the bioinformatics division at Leipzig University, which is international and has a friendly working atmosphere. A diverse range of research interests are represented, especially those related to RNA. Leipzig is a pleasant and affordable city, with lots of art and culture. In fact, it's the fastest-growing city in Germany (e.g., `http://goo.gl/aPrpC9`).