



The research group “Integrative Informatics for Infection Biology” (IIIB) of Dr. Lars Barquist at the Helmholtz Institute for RNA-based Infection Research (HIRI) in Würzburg (Germany) is offering a

PhD position: “Data science for functional genomics in infection biology”.

Project description:

The HIRI is recruiting an interdisciplinary doctoral student to work on developing new analyses and interpretation methods for functional genomics data relevant to infection biology [1]. The doctoral researcher will work with cutting edge Bayesian statistical techniques to model the experimental and biological processes generating this data. This modeling process will be applied to answer key questions about the roles of RNA-binding proteins in regulating the behavior of bacterial pathogens during infection [2,3], using a suite of high-throughput experimental techniques to address the effects of these proteins on gene expression [4], pathogen fitness [5], and RNA stability.

The successful applicant will work in the dynamic and international research environment of the [HIRI in Würzburg](#), which is part of the [Helmholtz Centre for Infection Research in Braunschweig](#). The selected applicant will further be embedded within the highly successful structured doctoral training program of the [Graduate School of Life Sciences \(GSLS\)](#) Würzburg.

Further reading:

- [1] Barquist and Vogel (2015) Ann Rev Genet 49:367-394.
- [2] Holmqvist et al. (2018) Mol. Cell 5(7):971-982.
- [3] Michaux et al. (2017) PNAS 114(26):6824-6829.
- [4] Westermann et al. (2016) Nature 529:496-501.
- [5] Barquist et al. (2016) Bioinformatics 32(7):1109-1111.

The Helmholtz Institute for RNA-based Infection Research (HIRI) has been established in May 2017 as joint venture between the Helmholtz Centre for Infection Research (HZI) and the Julius Maximilian University of Würzburg (JMU). Located on the Würzburg medical campus, it is the first research institution worldwide to exclusively address the role of ribonucleic acids (RNA) in infection processes. Based on these findings, the HIRI will pioneer an integrative approach to exploit the vast potential of RNA as a diagnostic molecule, target and drug for new strategies to combat infectious diseases. For further information please visit www.helmholtz-hiri.de.

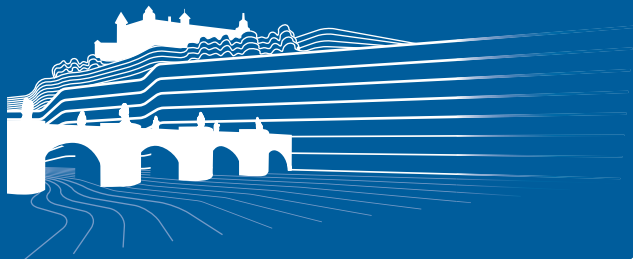
Qualifications:

- Master’s Degree/Diploma in computer science, bioinformatics, statistics, physics, or a related field
- Experience with at least one mathematical or statistical programming language (e.g. R)
- Equivalent of advanced undergraduate knowledge of probability and statistics
- Strong written and spoken English language communication skills

Desired (non-essential) background:

- Previous experience working with large-scale biological data sets, particularly RNA-seq and derived techniques
- Experience with microbiology, RNA biology, or infection biology

Equal opportunities are part of our personnel policy. The HIRI expressly invites women to apply. Equally well qualified disabled applicants will be given preference.



- Starting date:** March 15, 2019 or as soon as possible
- Initial term 1 year, with the possibility of an extension of additional 2 years -
- Salary:** follows TVöD E13 (50%) with the possibility of an additional payment of 10%
- Probation period:** 6 months
- Published:** February 1, 2019
- Application:** Applicants are required to complete the online application form here:
<https://hzi.opencampus.net/> (Please refer to the job number 07/2019.)

For more details regarding the PhD project, please contact Dr. Lars Barquist via e-mail: lars.barquist@helmholtz-hiri.de.