Job posting

Type of position
☐ scientific
☐ administrative

Target group
☐ graduates
☐ post docs
☐ other

Title
Postdoctoral position: “Data science for RNA infection biology”

Institution
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 will be the first research institution worldwide to exclusively address the role of ribonucleic acids (RNAs) in infection processes. Based on these findings, the HIRI will pioneer an integrative approach to exploit the vast potential of RNAs as a diagnostic molecule, target and drug for new strategies to combat infectious diseases. www.helmholtz-hzi.de/hiri

Position
The research department “RNA biology of bacterial infections” (RABI) of Prof. Jörg Vogel at the Helmholtz Institute for RNA-based infection research (HIRI) in Würzburg (Germany) is offering a Postdoctoral position: “Data science for RNA infection biology”

Responsibilities
Project description:
The HIRI is recruiting a postdoctoral researcher to develop methods and platforms to integrate, analyze, and visualize large-scale bacterial RNA-related datasets. We have established a wide range of high-throughput sequencing-based functional genomics assays for RNA and infection biology, including RNA-seq, RIP-seq and CLIP-seq, transposon insertion sequencing, and RNA modification detection. The successful applicant will work with experienced bioinformaticians and experimentalists to develop integrated analyses and interactive visualization platforms that will generate new biological insights from the large data sets produced by these technologies. The applicant will have ample opportunities to work with experimentalists to validate and address resulting findings; collaboration within the institute and beyond will be encouraged. Examples of the techniques and data sets available can be found in our recent publications: Westermann et al. (2016) Dual RNA-seq unveils noncoding RNA functions in host-pathogen interactions. Nature 529(7587):496-501; Barquist and Vogel (2015) Accelerating discovery and functional analysis of small RNAs with new technologies. Annu. Rev. Genet. 49:367-394; Westermann, Barquist, and Vogel (2017) Resolving host-pathogen interactions by dual RNA-seq. PLoS Pathogens
Requirements

Qualifications:
• PhD or equivalent in bioinformatics, microbiology, genomics, computer science, engineering, data science, or a related field
• Strong programming skills in at least one scripting language (Python, Perl, etc.) and R
• Previous experience working with large-scale biological data sets and relevant programming libraries (Bioconductor, BioPython, BioPerl, etc.)
• Knowledge of statistics
• Strong written and spoken English language communication skills

Desired (non-essential) background:
• Previous experience in infection biology, bacteriology, or non-coding RNA biology
• Experience with databases and query languages (e.g. SQL)
• Experience with interactive visualization libraries (e.g. d3.js, Shiny)
• Experience with machine learning, statistical modeling, and/or network inference

Application procedure (deadline etc.)

Equally well qualified disabled applicants will be given preference. The HIRI expressly invites women to apply.

Starting date: January/February, 2018 for two years with the possibility of extension
Salary: TVöD E14
Probation period: 6 months
Closing date: October 29, 2017

Application: Applications (cover letter, curriculum vitae, statement of current and future research, references, a list of publications and lectures, external funds) should be submitted not later than October 29, 2017 to the human resources department
Helmholtz Centre for Infection Research GmbH
Inhoffenstraße 7
38124 Braunschweig

or by e-mail to: JobsHZI@helmholtz-hzi.de
Contact for more details regarding the position, please contact Dr. Lars Barquist via e-mail lars.barquist@helmholtz-hzi.de.