

iDiv (German Centre for Integrative Biodiversity Research Halle-Jena-Leipzig) is a world-leading institute for integrative biodiversity research. Its central mission is to promote theory-driven synthesis and data-driven theory in integrative biodiversity research. The concept of iDiv encompasses the detection of biodiversity, understanding its emergence, exploring its consequences for ecosystem functions and services, and developing strategies to safeguard biodiversity under global change. iDiv is established as an institution in Leipzig and is run by Martin Luther University Halle-Wittenberg (MLU), Friedrich Schiller University Jena (FSU) and Leipzig University (UL) – in cooperation with the Helmholtz Centre for Environmental Research (UFZ). The science consortium is enhanced by the expertise of many research institutes (Max Planck Society, Leibniz Association) and by specific member research groups. Embedded in this active research environment, the research group *RNA Bioinformatics and High Throughput Analysis* of Prof. Dr. Manja Marz at the Friedrich Schiller University Jena has been established and offers a highly interesting position in the field of genome sequencing.

Integrated in iDiv, the Friedrich Schiller University Jena (FSU) offers the following position as soon as possible:

Postdoctoral fellowship in Genome Sequencing
(limited to 2 years, 100 percent of a full-time employment)
Salary: Entgeltgruppe 13 TV-L

in the group of Prof. Dr. Manja Marz at the Friedrich Schiller University Jena

Background:

To record biological diversity is fundamental but faces many challenges. A modern way to achieve this goal on a molecular level is genome or transcriptome sequencing by third generation sequencing methods. To analyse genomes and transcriptomes from all organisms e.g. in soil or gut of insects, we usually use different (wet-lab) extraction protocols:

(i) for bacteria we use a metagenomic approach and sequence the sample; (ii) for fungi from the same samples we typically use a different protocol for cell disruption before sequencing; (iii) for (DNA-)viruses size filtration is needed before sequencing; (iv) for RNA-viruses we need combined protocols of size fragmentation and RNA extraction before sequencing. Sometimes (v) a common host needs also to be sequenced and (vi) analysing transcriptome and genomes becomes more important. Instead of sequencing about 10 times the same sample (from different extraction protocols) to obtain the complete biodiversity, the aim of the researcher will be to develop a method to multiplex organisms from different kingdoms into one sequencing approach. We will use different spike-ins as quantitative controls.

Topic/job description:

- Coordination and design of various DNA and RNA extraction methods
- Design and calculation of various HTS sequencing approaches
- *De novo* assembly of viruses, bacteria and higher organisms
- Development of a *de novo* multi-species assembly tool

Requirements:

- PhD degree in bioinformatics, computational biology or a related area
- Deeper knowledge in statistics
- knowledge in handling with large data sets (up to 500 Terrabyte)
- experience in Programming in a script language (Python) and an object oriented language and Linux on command line
- experience with Illumina sequencing data and MinIon data is desirable
- high motivation and the ability to work both independently and in a team

Applications with reference file number 326/ 2017 are accepted until **05.12.2017 (4 Wochen ab Veröffentlichung)**.

Please use our application portal under apply.idiv.de.

All applications should include:

- A one-page cover letter (in English) describing motivation, research interests & relevant experience
- Two contact details of former PIs for recommendation
- Publication list
- Curriculum vitae
- Copy of doctoral certificate

Hard copy applications can be sent to German Centre for Integrative Biodiversity Research (iDiv) Halle-Jena-Leipzig, Dr. Joanna Hanzel; Deutscher Platz 5e, 04103 Leipzig. For queries on the application process, please contact Dr. Joanna Hanzel (joanna.hanzel@idiv.de); for research project questions, please contact Prof. Dr. Manja Marz (manja@uni-jena.de).

Severely disabled persons are encouraged to apply and will be given preference in the case of equal suitability. Applying via email is questionable under data protection law. The sender assumes full responsibility.