

# de.NBI – German Network for Bioinformatics Infrastructure



## The Mission of de.NBI:

de.NBI — The German Network for Bioinformatics Infrastructure was established on March 1st, 2015. It is characterized by the following mission statement:

- The German Network for Bioinformatics Infrastructure provides comprehensive first-class bioinformatics services to users in basic and applied life sciences research.
- Bioinformatics training and education will be coordinated by the de.NBI program in Germany through a wide range of offered workshops.
- The de.NBI program coordinates the cooperation of the German bioinformatics community with international bioinformatics network structures.



## Services and Topics provided by de.NBI:

The de.NBI consortium consists of 23 project partners which are organized in 8 service centers. Each service center is characterized by specific topics and service expertise. The illustration below provides a brief overview.

### HD-HuB-Heidelberg

#### Bioinformatics Infrastructures in Biomedical Research

- Human genetics and genomics
- Human microbiomics
- Systematic phenotyping of human cells

### BiGi-Bielefeld/Gießen

#### Microbial Genome Research for Biotechnology and Medicine

- High-performance computing services
- Repository of reusable workflows
- Comparative (meta-)genomics
- Post-genomics data integration

### BioInfra.Prot-Bochum/Dortmund

#### Bioinformatics for Proteomics

- Virtual toolbox and analysis service (focus on human / clinical data)
- Standard formats and conversion
- Quality standard database
- Proteomics study/analysis consulting

### Database Node Bremen/Braunschweig

#### Reference Databases, Standards and Tools

- Ribosomal RNAs (SILVA)
- Environmental data (PANGAEA)
- Taxon-associated metadata (BacDive)
- Enzymes (BRENDA)

### NBI-SysBio Data Management Node Heidelberg/Rostock

#### Standards-based Systems Biology

- Standards and controlled vocabularies
- Experimental data workflow management
- Data curation and exchange
- SEEK data management
- SABIO-RK database

### CIBI-Tübingen/Berlin/Konstanz

#### Integrative Bioinformatics

- Software libraries for computational mass spectrometry and sequence analysis
- Integrative workflow systems for heterogeneous data analysis and exploration
- Workflows for multi-omics data analysis

### RBC-Freiburg/Leipzig/Berlin

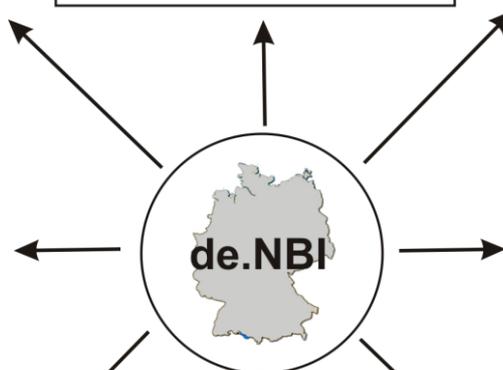
#### RNA Bioinformatics

- Detection of ncRNAs and RNA motifs
- Prediction of RNA structures and classes
- RNA targets and RNA-protein interaction
- RNA-related HTS data analysis
- Galaxy and RNA-related support

### GCBN-München/Gatersleben/Jülich

#### Crops and BioGreenFormatics

- Plant genetic resources and agricultural important traits
- Bridging genotypes to phenotypes
- Plant gene and genome analysis
- Enabling technologies to improve crops



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[www.denbi.de](http://www.denbi.de) | [contact@denbi.de](mailto:contact@denbi.de)

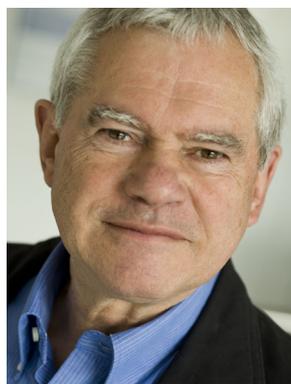
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## Internal Structure of the de.NBI Service Centers:

The German Network for Bioinformatics Infrastructure consists of six well-equipped and networked service centers that provide and continuously further develop distinct bioinformatics services according to the existing field of scientific expertise and their bioinformatics resources. In addition, a Database Node with prominent and well-maintained data resources and a Data Management Node is integrated in de.NBI.

| CENTER   | COORDINATOR             |
|--|-------------------------|
| <b>Heidelberg Center for Human Bioinformatics (HD-HUB)</b><br>» DKFZ Heidelberg   EMBL Heidelberg   Universität Heidelberg   | R. Eils, Heidelberg     |
| <b>Bielefeld-Gießen Center for Microbial Bioinformatics (BiGi)</b><br>» Universität Bielefeld   Universität Gießen   | J. Stoye, Bielefeld     |
| <b>Bioinformatics for Proteomics (BioInfra.Prot)</b><br>» Medizinisches Proteom-Center der Universität Bochum   Leibniz-Institut für Analytische Wissenschaften — ISAS e.v. Dortmund           | M. Eisenacher, Bochum   |
| <b>Center for Integrative Bioinformatics (CIBI)</b><br>» Freie Universität Berlin   Universität Konstanz   Universität Tübingen  | O. Kohlbacher, Tübingen |
| <b>RNA Bioinformatics Center (RBC)</b><br>» Universität Freiburg   Universität Leipzig   Max-Delbrück-Zentrum für Molekulare Medizin Berlin  | R. Backofen, Freiburg   |
| <b>German Crop BioGreeninformatics Network (GCBN)</b><br>» Forschungszentrum Jülich   Leibniz-Institut für Pflanzengenetik und Kulturpflanzenforschung Gatersleben   Helmholtz-Zentrum München | U. Scholz, Gatersleben  |
| <b>Database Management Node</b><br>» Jacobs University Bremen — SILVA   Universität Bremen — PANGEA   Leibniz-Institut DSMZ Braunschweig — BacDive   TU Braunschweig — BRENDA                  | F. O. Glöckner, Bremen  |
| <b>Data Management Node (NBI-SysBio)</b><br>» HITS Heidelberg Institut für Theoretische Studien   Universität Rostock  | W. Müller, Heidelberg   |



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