
## ANALYSES & SERVICES

### MICROORGANISMS

- biochemical analyses, e.g. fatty acids, polar lipids, peptidoglycan structure, respiratory quinones, metabolic activities
- bioinformatic services, e.g. sequencing, microbial diversity analysis
- microbiological analyses, e.g. identification of bacteria or fungi, chemotaxonomic characterisation, antibiotic susceptibility testing
- material used as reference, e.g. genomic DNA, peptidoglycan, biomass production, mock communities

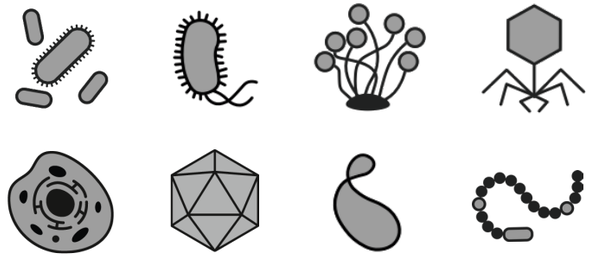
### HUMAN AND ANIMAL CELL LINES

- authentication of human cell lines
- animal cell line species testing
- mycoplasma detection and elimination
- online STR analysis
- virus testing
- provision of DNA

### PLANT VIRUSES

- next generation virus discovery using high-throughput sequencing
- biological assays and resistance screening
- molecular and serological diagnostic investigations
- transit quarantine

### SAFE AND PATENT DEPOSIT



## CULTURE COLLECTION

All bioresources deposited in our open collection are available for the scientific community.

### MICROORGANISMS

**Subcollections**

- Gram-positive, Gram-negative, halophilic, phototrophic, extremophilic, pathogenic bacteria as well as cyanobacteria and actinomycetes
- archaea
- bacteriophages
- protists
- underrepresented bacterial phyla
- microbiomes from human, mouse, pig and chicken
- plasmids / genomic DNA

### HUMAN AND ANIMAL CELL LINES

- authenticated human cell lines
- focus on leukemia and lymphoma
- next-generation cancer models
- animal cell lines from mammals, insect, fish, bird, amphibia

### PLANT VIRUSES

- most comprehensive virus collection worldwide
- infectious and authenticated reference material
- antisera and diagnostic ELISA kits and positive controls

**Leibniz Institute**
DSMZ-German Collection
of Microorganisms
and Cell Cultures GmbH

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*Recognized as a non-profit scientific institution by the Hanover tax office

Leibniz Association

certified by
DIN EN ISO 9001:2015

home of more than 84,000 biological resources

# LEIBNIZ INSTITUTE DSMZ


DSMZ
Digital Diversity

## DSMZ- QUICK OVERVIEW

Founded in 1969, our bioresource center is the most comprehensive worldwide. We host the most diverse collection of microorganisms with 80 % of all formally described bacterial species. Since 1996 our institute is a member of the Leibniz Association. Located on the Science Campus Braunschweig-Süd, Germany, more than 84,000 biological resources are deposited at our collection, including:

- > 38,100 different strains of bacteria and archaea
- > 8,900 fungal strains
- > 1,200 bacteriophages
- > 910 human and animal cell lines
- > 890 plant viruses plus antisera
- > 21,000 different types of bacterial genomic DNA

In addition to the open collection we also offer safe and patent deposit of bioresources. A portfolio of scientific services and analyses is available for the global science community. Supplemental to our physical collection we host several digital collections and bioinformatic tools, providing free access to a plethora of data relevant to life sciences.

As supplier of bioresources and scientific services for academia and industry, we are certified according to e. g. DIN EN ISO 9001. Since 2018 we are listed as a Registered Collection in compliance with the Nagoya Protocol, ensuring use and transfer of genetic resources conformable to law.

Our institute is also a state-of-the-art research infrastructure with focus on systematics and evolution, functional diversity and pathobiology.

## DIGITAL COLLECTIONS

Our bioinformatics tools and databases are publicly available, easy to use and free of charge. All of them are currently integrated in the *DSMZ Digital Diversity* platform.

### TOOLS FOR PROKARYOTIC RESEARCH

- Bac*Dive* (the Bacterial Diversity Metadatabase)
- Media*Dive* (the world's largest collection of cultivation media)
- GGDC (Genome-to-Genome Distance Calculator)
- LPSN (List of Prokaryotic names with Standing in Nomenclature)
- Single-gene phylogenies and gene similarities
- TYGS (Type Strain Genome Server)

### TOOLS FOR VIRUS RESEARCH

- VICTOR (Virus Classification and Tree Building Online Resource)
- Phage*Dive*

### TOOLS FOR EUKARYOTIC RESEARCH

- DSMZCell*Dive* (Tools for Diving into Cell Line Data)

### CROSS-DOMAIN

- BRENDA (the comprehensive enzyme information system)
- SILVA (quality checked and aligned ribosomal RNA sequence data)
- StrainInfo

## RESEARCH

We are not only one of the world's most important biological resource centers, but also a modern research infrastructure with more than 80 scientists.

### OUR CROSS-SECTORAL RESEARCH FOCUSES ON

- microbial diversity and underlying evolutionary mechanisms
- diversity of microbial functions and adaptations
- molecular mechanisms of biotic interactions
- development of methods for the access and *ex situ* preservation of biodiversity
- bioresources for economy and health research
- cancer and stem cell research
- plant health promotion
- metabolomics
- interlinking knowledge and providing large scale FAIR research data

## QUALITY & COMPLIANCE

We are a long-term partner of numerous research institutes and industrial companies worldwide and have been certified to meet the internationally valid quality standard of ISO 9001. The following features are covered by the certificate:

- biological resource centre: collection, preservation and supply of biological material and associated primary data in the fields of microorganisms, protists and cyanobacteria, plant viruses, human and animal cell lines, DNA;
- international depositary authority (IDA) for the deposit of biological material for the purposes of patenting;
- service provider for identification, authentication and diagnostic of biological material

In addition, we follow the OECD Best Practice Guidelines for Biological Resource Centres and are applying for ISO 20387, General requirements for biobanking. Our department of Plant Virus is accredited as a reference material producer according ISO 17034.

As one of the few institutions worldwide, we are certified for the identity verification of phage investigational drugs for the use in humans (§64 section 3f German Medicines Act).

We are the first biological resource centre ever to be recognized as Registered Collection (01-DE-2018) in compliance with EU regulation 511/2014 (Nagoya Protocol). Our customers can therefore use a biological resource obtained from us in a legally compliant way directly after purchasing it. In Germany, we are the only recognized international depository under the Budapest Treaty.