



# PHARMACEUTICS & BIOTECHNOLOGY

## FROM JENA

*»Liquid and illiquid preparations  
and cristal suspensions produced  
under aseptic conditions ...«*

**Pharmaceutics & Biotechnology from Jena**  
Location for the advanced.

# Life Sciences for the Ambitious



Wacker Biotech Jena



A scientist examines samples in the laboratory at 4-Antibody Jena



Production of laser scanning microscopes – Carl Zeiss Microimaging Jena



Centre for Bioinstruments Jena



Fluorescence measurement at the flow cytometer – InflaRx GmbH Jena

*Jena is one of the grand traditional locations in the field of pharmaceuticals and biotechnology and home to companies and institutes with an international reputation as well as successful startup companies with seminal developments. They all benefit from the internationally perfectly networked location and the constantly growing world market for pharmaceutical products and solutions in the field of biotechnology.*

## Solutions for the Advanced ...

In 1558, the School of Medicine was one of the founding faculties of the Jena University. Pharmacy in a modern sense was not (yet) practiced there, but the institution held a medicinal herb garden (Hortus Medicus) for the production of medicinal plants and 'to the benefit of all medical students'.

In 1942, Hans Knöll was the first to carry out a laboratory process for the production of penicillin in continental Europe in his laboratory in Jena. In 1950, the company Jenapharm emerged from Knöll's laboratory. Nowadays, Jenapharm has become the market leader in the field of oral contraception in Germany, belongs to the leading companies for hormone replacement therapy and has specialized in women's health care.

Cooperation in biotechnology, medical engineering and optical technology has a long tradition in Jena. The Alere Technologies GmbH is just one example how successful this cooperation can be. It was founded in 1998 as a startup company and has now become an internationally successful developer and producer for science and diagnostics. Another guarantor for success: Carl Zeiss MicroImaging. Being the leading manufacturer of microscope systems, the company offers all-in-one solutions for biomedical research, health care and industry.

The Beutenberg Campus in Jena hosts a large number of research institutions such as the Leibniz Institute for Natural Product Research and Infection Biology – Hans Knöll Institute, the Leibniz Institute for Age Research – Fritz Lipman Institute, the Centre for Molecular Biomedicine and the Institute of Virology and Antiviral Therapy of Jena's Friedrich Schiller University, the Max Planck Institutes for Biogeochemistry and Chemical Ecology as well as the BioCentiv Centre for Bioinstruments. In addition,

the Campus hosts renowned research groups such as the Centre for Innovation Competence called Septomics in the field of sepsis research and the Jenaer Biochip Initiative.

Biologists, biochemists, pharmacists and nutritionists learn their skills at the Friedrich Schiller University Jena. Practical experience is vital from the very beginning, for instance at the "School for Microbial Communication", a graduate school supported by the Excellence Initiative. Eligible junior employees can also be found among the graduates of the Department of Medical Engineering and Biotechnology of the University of Applied Sciences Jena.

Founders can make their plans come true in specific laboratories of the Centre for Bioinstruments, with the support of BioCentiv, or in the Technology and Innovation Park Jena. One story of success: Wacker Biotech, a former outsourcing of the Hans Knöll Institute and a full subsidiary of Wacker Chemie since 2005, with their new production line for biopharmaceuticals in Jena.

## Solutions and Services ...

- Bioinstruments: devices, methods, processes, materials and services for solutions in the sector of life sciences
- Development, production and packaging of sterile dosage forms such as high-quality vial compounds, pre-filled syringes as well as innovative implants
- GMP-suitable contract manufacturing of biopharmaceuticals for clinical screenings and market supply, and proprietary protein secretion and fermentation technologies
- Microscope systems and all-in-one solutions for biomedical research, health care and industry
- Pharmaceutical analytical development of steroidal and non-steroidal preparations for oral and parenteral application

- Development of bacterial nanocellulose as an innovative polymer for research
- Biotechnological and molecular biological technologies for the complex analysis of biological samples
- Technologies for the development of therapeutic antibodies
- Therapeutic approaches for the prevention and treatment of sepsis
- Development of innovative diagnostic solutions and therapeutics for the treatment of infectious diseases

## Success stories from Jena ...

- 4-Antibody AG ..... [www.4-antibody.com](http://www.4-antibody.com)
- BioControl Jena GmbH ..... [www.biocontrol-jena.com](http://www.biocontrol-jena.com)
- Carl Zeiss MicroImaging GmbH ..... [www.zeiss.de/mikro](http://www.zeiss.de/mikro)
- Dyomics GmbH ..... [www.dyomics.com](http://www.dyomics.com)
- glycosense AG ..... [www.glycosense.de](http://www.glycosense.de)
- InflaRx GmbH ..... [www.inflarx.com](http://www.inflarx.com)
- JenAffin GmbH ..... [www.jenaffin.de](http://www.jenaffin.de)
- Jenahexal Pharma GmbH ..... [www.jenahexal.de](http://www.jenahexal.de)
- Jenapharm GmbH & Co. KG ..... [www.jenapharm.de](http://www.jenapharm.de)
- Jenpolymers Ltd. .... [www.jenpolymers.de](http://www.jenpolymers.de)
- Jesalis GmbH ..... [www.jesalis.de](http://www.jesalis.de)
- Wacker Biotech GmbH ..... [www.wacker.com/biologics](http://www.wacker.com/biologics)
- WERNER BioAgents ..... [www.webioage.com](http://www.webioage.com)
- Zenteris GmbH ..... [www.zenteris.de](http://www.zenteris.de)

## Networks, Research and Education ...

- Beutenberg-Campus Jena e.V. .... [www.beutenberg.de](http://www.beutenberg.de)
- BioCentiv GmbH ..... [www.biocentiv.com](http://www.biocentiv.com)
- Cluster Biotechnologie – Life Science Central Germany ..... [www.cluster-biotechnologie.de](http://www.cluster-biotechnologie.de)
- University of Applied Sciences Jena:
  - Department of Medical Engineering and Biotechnology ..... [www.mt.fh-jena.de](http://www.mt.fh-jena.de)
  - Friedrich Schiller University Jena:
    - Faculty of Biology and Pharmacy ..... [www.uni-jena.de/BiolPharmFakultaet.html](http://www.uni-jena.de/BiolPharmFakultaet.html)

- Centre for Molecular Biomedicine ..... [www.uni-jena.de/zmb.html](http://www.uni-jena.de/zmb.html)
- Friedrich Loeffler Institute – Federal Research Institute for Animal Health ..... [www.fli.bund.de](http://www.fli.bund.de)
- INNOVENT e.V. Technology Development Jena ... [www.innovent-jena.de](http://www.innovent-jena.de)
- Institute of Photonic Technology ..... [www.ipht-jena.de](http://www.ipht-jena.de)
- Jena BioChip-Initiative ..... [www.jbci.uni-jena.de](http://www.jbci.uni-jena.de)
- Leibniz Institute for Age Research – Fritz Lipmann Institute (FLI) ..... [www.fli-leibniz.de](http://www.fli-leibniz.de)
- Leibniz Institute for Natural Products Research and Infection Biology – Hans Knöll Institute (HKI) ..... [www.hki-jena.de](http://www.hki-jena.de)
- Max Planck Institute for Biogeochemistry ... [www.bgc-jena.mpg.de](http://www.bgc-jena.mpg.de)
- Max Planck Institute for Chemical Ecology ..... [www.ice.mpg.de](http://www.ice.mpg.de)
- Pharmapark Jena ..... [www.pharmapark-jena.de](http://www.pharmapark-jena.de)
- University Medical Centre Jena:
  - Institute of Virology and Antiviral Therapy ..... [www.med.uni-jena.de/virologie/](http://www.med.uni-jena.de/virologie/)
  - Placenta-Lab ..... [www2.uni-jena.de/ufk/placentalabor/cms/](http://www2.uni-jena.de/ufk/placentalabor/cms/)
- Centre for Innovation Competence Septomics ... [www.septomics.de](http://www.septomics.de)

***Jena's companies and institutions are internationally sought-after specialists for life sciences.***

## Contact JenaWirtschaft – Business Development

Would you like to contact Jena's companies or gather information on the location? We provide competent, discreet and free advice.

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