

BREATH Partners

Hannover Medical School (MHH)

In the BREATH Research Network, the clinical research carried out at the MHH is of outstanding importance. Further areas of focus lie in the field of lung transplantation and stem cell research.

Alongside the platforms, the following clinics and institutes at the MHH are involved in BREATH:

- Clinic for Pneumology
- Clinic for Pediatric Pneumology, Allergology and Neonatology
- Clinic for Immunology and Rheumatology
- Clinic for Psychosomatics and Psychotherapy
- Clinic for Heart, Thorax, Transplantation and Vascular Surgery
- Institut of Functional and Applied Anatomy
- Institute of Diagnostic and Interventional Radiology

Fraunhofer Institute of Toxicology and Experimental Medicine

At Fraunhofer ITEM, scientists are carrying out research in the fields of chronic obstructive and interstitial pulmonary disease and the pathophysiology of allergic diseases. Clinical studies at different phases are conducted in cooperation with the Clinical Research Center (CRC) Hannover.

Leibniz University Hannover

The Leibniz University contributes expertise in the field of healthcare research and with regard to health economics issues. A further area of research is imaging using laser technology.

CAPNETZ FOUNDATION

Active throughout Germany, the aim of the CAPNETZ FOUNDATION is to improve the care of adults and children with community-acquired pneumonia (CAP). It is also involved in the development of the bronchiectasis register PROGNOSIS.



Contact

BREATH – BIOMEDICAL RESEARCH IN ENDSTAGE AND OBSTRUCTIVE LUNG DISEASE HANNOVER

Member of the German Center for Lung Research (DZL)

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Member of the
German Center for Lung Research



About BREATH

In the BREATH research network, more than 60 doctors and scientists are working together to carry out research on topics related to lung diseases.

BREATH is one of the five sites within the German Center for Lung Research (DZL). In line with the joint mission

„Translational research to combat widespread lung diseases“

the scientists pursue the aim to translate research results into clinical applications as quickly as possible.



The DZL focuses on eight **diseases**:

- Asthma and allergy
- Pneumonia – acute lung injury
- Chronic obstructive pulmonary disease (COPD)
- Cystic fibrosis
- Lung fibrosis and interstitial lung disease
- End-stage lung disease
- Lung cancer
- Pulmonary hypertension

The diversity of the participating scientists at BREATH allows the site to be involved in the research of all eight disease areas. Conducting clinical studies is a further focus of BREATH.

The MHH is the largest lung transplant center in Europe. Among its most outstanding achievements of recent years is the development of the extracorporeal membrane oxygenation (ECMO) on conscious patients as well as extensive research results in the fields of pulmonary fibrosis, asthma and allergies together with infectiology.

Platforms

The Biobank, Imaging and Pathology platforms play an important role in the research at BREATH.

Biobank Platform

At the MHH, the Hannover Unified Biobank (HUB) has established a centralized, harmonized, modern and unified biobank, that develops and implements challenging biobanking standards. Biomaterials are processed here according to Standard Operating Procedures (SOPs) with a high level of automation.

Imaging Platform

Imaging techniques are key instruments in the understanding of living systems. The imaging platform covers the whole spectrum of imaging techniques and resolution levels, from radiological imaging of the complete human lung to small animals to quantification of the structure of the lung.



Pathology Platform

Human, freshly collected lung material is extremely valuable for the translational research, in order to examine and understand the mechanisms of different lung diseases.

At the BREATH site, explanted lungs are prepared for research immediately after removal, providing the scientists with material of outstanding quality. For this process, sophisticated logistics and state-of-the-art histopathological and molecular pathological diagnostics are required.

Commitment

Promotion of Young Scientists

BREATH attaches particular importance to qualified promotion of young scientists.

Stipends are available for **PhD students and postdocs** are integrated as members of the research staff. In Hannover, the young scientists gain a sound consolidation of their scientific abilities and skills and are given specific support in setting up and developing their own list of publications.



The DZL Academy provides them with access to the Germany-wide, top-level network of the DZL.

Patients

BREATH regularly holds patient seminars on various lung diseases. Alongside lectures by and discussions with experts, exchange with other affected persons and patient organizations is encouraged.

BREATH is supported in raising awareness of patients by the Lung Information Service (LID). Through its online presence, the LID is able to give an overview of the symptoms, diagnosis and therapy of lung diseases in commonly understandable terms.

Experts

BREATH aims to disseminate knowledge on latest research and treatment approaches also to the non-university sector.

For this reason, BREATH regularly invites doctors from non-university hospitals as well as general practitioners to take part in expert events.

