

Fraunhofer Institute for Toxicology and Experimental Medicine, ITEM

# PRESS RELEASE

-----  
**PRESS RELEASE**

January 12, 2021 || Page 1 | 4  
-----

## **Institute management in tandem: Prof. Dr. Dr. Thomas Thum has joined Fraunhofer ITEM as institute director**

On January 1, 2021, Prof. Thomas Thum joined the Fraunhofer Institute for Toxicology and Experimental Medicine ITEM in Hannover as new institute director. He will henceforth manage the institute together with Prof. Norbert Krug, who has been director of Fraunhofer ITEM for the past four years. In addition, Prof. Thum has accepted the call to a full professorship in “Translational validation of innovative therapeutics” at the nearby Hannover Medical School (MHH), a position that is linked to the Fraunhofer Institute directorship.

For many years, the specialist in cardiology and bioscience has been doing research on the functional characterization and translational potential of novel therapeutic RNA strategies targeting cardiovascular diseases, most recently at MHH as professor and director of the Institute of Molecular and Translational Therapeutic Strategies. With over 400 publications, he is a world-renowned expert in this subject area. At present, Prof. Thum’s research activities are focused on the diagnosis and therapy of organ dysfunction and fibrosis, gene therapy approaches as well as mechanisms of COVID-19 and appropriate therapeutic strategies with regard to the cardiovascular system and beyond. He has founded the successful biotech company Cardior Pharmaceuticals GmbH as a spin-off from MHH and has filed and licensed numerous patents in the areas of RNA diagnostics and therapy.

### **Broader focus: the heart complementing the lung**

Prof. Thum’s research focus ideally complements the existing focuses of Fraunhofer ITEM in the field of lung and airway research. Besides chronic lung conditions, heart failure in particular is playing an important role, a worldwide increasing disease with a prevalence of currently up to 60 million patients and one of the main reasons for hospitalization. Especially due to the COVID-19 pandemic and the long-term consequences of this disease, the number of patients with heart failure is likely to increase significantly. Despite the growing importance of this medical condition, however, there has been little progress in the research on heart failure over the past 20 years.

---

#### **Editor**

**Cathrin Nastevska** | Fraunhofer Institute for Toxicology and Experimental Medicine, ITEM | Phone +49 511 5350-225 |  
Nikolai-Fuchs-Straße 1 | 30625 Hannover | [www.item.fraunhofer.de](http://www.item.fraunhofer.de) | [cathrin.nastevska@item.fraunhofer.de](mailto:cathrin.nastevska@item.fraunhofer.de)

**Fraunhofer Institute for Toxicology and Experimental Medicine, ITEM**

“We are pursuing a completely novel approach,” says Prof. Thum. “Using high-throughput methods and platform technologies, we are seeking RNA-based strategies as effective therapies for heart disease. We have already made remarkable progress in this area and industry is showing strong interest. For Fraunhofer ITEM, enhancing its research focus to include also the organ system heart is both a challenge and a great opportunity. In past collaborative projects, we already identified promising synergies and potential. I am very much looking forward to further expanding these together now!”

---

**PRESS RELEASE**January 12, 2021 || Page 2 | 4

---

**Benefit for translational medicine**

While Professor Thum's work in the context of his new professorship at MHH will have a primary focus on basic research, his Fraunhofer activities will be more of a translational and application-oriented nature, in line with the Fraunhofer model. “We are very pleased that Prof. Thum, who is an outstanding researcher, will further expand and strengthen the synergies between MHH and Fraunhofer ITEM,” says MHH president Prof. Michael Manns. These further strengthened ties with MHH and the intensified translation from bench to bedside will be a benefit to Fraunhofer's innovative strength in health research and eventually also to mankind. Prof. Thum has already successfully advanced several molecules identified in his laboratories to the stage of clinical use in humans.

“Key criteria for the success of a Fraunhofer Institute include not only scientific success, but also transfer competence. This is why I am very happy to be able to shape the future of Fraunhofer ITEM together with Prof. Thum, to provide decisive scientific impetus and translate it into applications,” emphasizes Prof. Krug. “The institute's continued development is essential in making our vision – being pioneers for sustainable health – come true.”

Both institute directors will manage Fraunhofer ITEM in tandem. Prof. Thum will be in charge of the institute's divisions of Preclinical Pharmacology and Toxicology, Chemical Safety, and Translational Biomedical Engineering. In addition, he will set up a new research unit “Cardiovascular Research” at the institute. Prof. Krug will continue to be in charge of the division of Clinical Airway Research, the Braunschweig-based division of Pharmaceutical Biotechnology and the Regensburg-based division of Personalized Tumor Therapy.

[Read more about Prof. Thomas Thum:](#)

- [R&D focuses](#)

---

Research for human health is the central topic at Fraunhofer ITEM – with a focus on the lungs and airways. The emphasis is on protecting health from potentially harmful substances, airborne substances in particular, and also on investigating and developing novel diagnostic and therapeutic approaches in the fields of inflammatory and allergic respiratory conditions, both at the preclinical and clinical levels. Complementing these thematic focuses, Fraunhofer ITEM also engages in other subject areas, such as development and manufacturing of biopharmaceuticals, tumor therapy, and translational biomedical engineering.

**Fraunhofer Institute for Toxicology and Experimental Medicine, ITEM**

- [Curriculum vitae](#)
- [List of publications](#)

-----  
**PRESS RELEASE**

January 12, 2021 || Page 3 | 4  
-----

#### **About Fraunhofer ITEM:**

The Fraunhofer Institute for Toxicology and Experimental Medicine ITEM is one of 74 institutions of the Fraunhofer-Gesellschaft, Europe's leading organization for applied research. Protecting man from health hazards in our industrialized world and contributing to the development of novel therapeutic approaches are the aims Fraunhofer ITEM is pursuing with its contract research. The institute's R&D portfolio comprises three business units, with a focus on airway research: Drug Development, Chemical Safety and Assessment, and Translational Biomedical Engineering. In addition, the institute's Regensburg-based division does research on personalized tumor therapy. With a staff of approximately 380 at its locations in Hannover, Braunschweig and Regensburg, the institute cooperates in projects with industry, service providers and universities that drive economic development and serve the wider benefit of society.

[Read more about Fraunhofer ITEM](#)

#### **About the Hannover Medical School:**

The hospital of the Hannover Medical School (MHH) is a maximum medical-care hospital with a nationwide catchment area. The university teaches medicine, dentistry, biochemistry, biomedicine, midwifery and health sciences. Its main research areas are transplantation and stem cell research / regenerative medicine, infection and immunology research, biomedical engineering and implant research.

[Read more about the Hannover Medical School](#)

#### **Press contact:**

Fraunhofer ITEM  
Dr. Cathrin Nastevska  
Phone +49 511 5350-225  
cathrin.nastevska@item.fraunhofer.de

---

Research for human health is the central topic at Fraunhofer ITEM – with a focus on the lungs and airways. The emphasis is on protecting health from potentially harmful substances, airborne substances in particular, and also on investigating and developing novel diagnostic and therapeutic approaches in the fields of inflammatory and allergic respiratory conditions, both at the preclinical and clinical levels. Complementing these thematic focuses, Fraunhofer ITEM also engages in other subject areas, such as development and manufacturing of biopharmaceuticals, tumor therapy, and translational biomedical engineering.

**Fraunhofer Institute for Toxicology and Experimental Medicine, ITEM**



Prof. Dr. Dr. Thomas Thum  
© Fraunhofer ITEM, Ralf Mohr

-----  
**PRESS RELEASE**

January 12, 2021 || Page 4 | 4  
-----

---

Research for human health is the central topic at Fraunhofer ITEM – with a focus on the lungs and airways. The emphasis is on protecting health from potentially harmful substances, airborne substances in particular, and also on investigating and developing novel diagnostic and therapeutic approaches in the fields of inflammatory and allergic respiratory conditions, both at the preclinical and clinical levels. Complementing these thematic focuses, Fraunhofer ITEM also engages in other subject areas, such as development and manufacturing of biopharmaceuticals, tumor therapy, and translational biomedical engineering.