



INSTITUTE OF IMAGE-GUIDED  
SURGERY

# INSTITUTE OF IMAGE-GUIDED SURGERY

Meeting your needs for research,  
device performance evaluation  
and training

# Our excellence at your service

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The Strasbourg Institute for Image-Guided Surgery is a **multidisciplinary** center with an international reputation in the treatment of pathologies using minimally invasive therapies. Composed of medical experts, an efficient operational structure, and an exceptional technical platform, the IHU is at the forefront of **preclinical research**.

Thanks to these assets, the IHU offers its services to support companies, laboratories and start-up companies wishing to carry out **preclinical studies** to evaluate their **medical devices**.

Our entire staff puts its skills and commitment to your study, to provide you with **fast, reliable** and quality results that will significantly advance your project. We are able to advise and support you in a wide variety of fields, on all types of medical devices, with or without **artificial intelligence**.

The IHU is careful to respect the **confidentiality** of your projects as well as the intellectual property related to your innovation.

Finally, the IHU is the first French academic center, and one of the few European academic centers, to have obtained recognition of compliance with **Good Laboratory Practices** for the evaluation of medical devices.



# An outstanding technical platform

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The technical platform is designed to conduct experimental studies as close as possible to hospital practices, in order to facilitate the transfer of preclinical studies to clinical studies. Thus, the IHU has a **2,000m<sup>2</sup>** space composed of **5 operating theatres**, including **3 hybrid suites**, high-end imaging modalities and a range of equipment for minimally invasive surgery and endoscopy.

Choosing the IHU means having access to the following equipment:

- › A 1.5T magnetic resonance imaging (MRI) system
- › A computed tomography scanner (CT-scan)
- › A robotic fluoroscopy C-arm (CBCT)
- › Two fluoroscopy C-arms
- › A set of systems for laparoscopy and endoscopy, including echo-endoscopy
- › Ultrasound scanners



# Tailor-made services

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The IHU supports you throughout the development of your project, from the **feasibility and proof-of-concept phases to regulatory studies**.

The human-sized and highly responsive team allows you to benefit from **very short lead times** for the management and completion of your study.

Our managers, surgeon-researchers, veterinarians, preclinical assistants and radiology technicians are particularly attentive to your needs and, thanks to the diversity of their skills, are able to advise you from a **scientific, medical** and **veterinary** point of view, in order to offer you a **tailor-made study** that meets or exceeds the objectives of your project.

We also have an internal structure that ensures the respect of animal welfare and an **accelerated process of ethical validation** of submitted projects, which represents for you a **saving of time** and a peace of mind.



Figure 1: Temporal Data generation

1. The dataset is generated by the user using the Temporal Data Generator tool. The user can generate data for a specific time period (e.g., 1 year) and a specific number of data points (e.g., 1000).

Figure 2: Temporal Data acquisition

2. The data is acquired from the user using the Temporal Data Acquisition tool. The user can specify the time period and the number of data points to be acquired.

# Good Laboratory Practice

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The IHU is one of the few European academic centers recognized as compliant with **Good Laboratory Practices** for the evaluation of **medical devices**. Following this international regulation is a guarantee for your study to obtain reliable and acceptable results for the marking of your medical device.

We follow the OECD regulation and thanks to the Mutual Recognition Agreement, the **FDA** has the authority to enter into agreements to recognize inspections conducted by foreign regulatory authorities like ANSM in France.

The IHU already performed several GLP studies to assess the **safety, usability** and **performance** of a variety of medical devices.



# A team of experts

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The IHU works with internationally renowned experts as well as senior surgeons, most of them GLP trained.

IHU's personnel are experts in **gastro-intestinal**, **hepato-biliary** and **pancreas** surgery and endoscopy.

We can also rely on the local pool of hospital practitioners to meet your needs in other fields of surgery (cardiovascular surgery, gynecology, orthopedics...).



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Professor of Surgery, Scientific Director  
and Chief Innovation Officer



**SILVANA PERRETTA, MD, PhD**  
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**RÉMY BEAUJEUX, MD, PhD**  
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**CEZAR MATAU, MD**  
Interventional pulmonologist  
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**JUAN VERDE, MD**  
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**AFSHIN GANGI, MD, PhD**  
Professor of Interventional Radiology



**ALAIN GARICA, MD**  
Surgeon and Preclinical  
Research Manager



**JULIEN GARNON, MD**  
Interventional Radiology

# A portfolio of preclinical models

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The IHU Strasbourg has developed a state-of-the-art portfolio of phantoms, ex vivo and in vivo models, covering a wide range of pathologies and applications for training and preclinical research.

**Phantoms** and **ex vivo models** can be a good first step to test a prototype and can give useful feedback to improve the device (e.g. usability). They are also a gold-standard and ethically compliant for training sessions in MIS.

We can also provide you with **human corpses**, thanks to a collaboration with the Anatomy Institute of Strasbourg.

**Live model** is the next level to assess the safety, biocompatibility and performance of a device. We are able to perform **acute** as well as **chronic studies** in porcine models.

Our team of experts can also develop **specific porcine models** upon request and offer its expertise and advice.

Among the different models we do, there are intra-abdominal collections, biliary obstruction, biological tumors, cholecystitis, stroke aneurysm, or intracerebral parenchymal hematoma.



# A GLP animal facility

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We have a GLP compliant animal facility to house **pigs** and **mini-pigs** (weight range 20-80kg).

The pigs are housed in boxes that follow the European regulation in terms of **animal welfare**. They have toys, social contacts (with other pigs or human beings) and are visited at least once a day, everyday.

The facility is composed of two rooms:

- › The « **acclimatization room** » with 2 boxes which can house up to **10 pigs**
- › The « **study room** » with 5 boxes which can house up to **10 pigs**

The animal facility is equipped with **video surveillance cameras** to support the animal caretakers to watch after the pigs remotely.

The IHU Strasbourg's objective is to obtain the **AAALAC** (Association for Assessment and Accreditation of Laboratory Animal Care) accreditation for its animal facility.



# They trust us

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*"Our experience with the pre-clinical study team at IHU Strasbourg has been excellent. Having carried out a number of studies there, in different disciplines (bronchoscopy, endoscopic ultrasound, laparoscopy and open procedures) as well as hands-on training days, **their precision and support, both in study design and execution, are outstanding.**"*

Anne Bunk, Global Segment Leader & Product Manager - [Creo Medical](#)

*"We appreciated the outstanding interventional neuroradiology expertise combined with **state-of-the-art imaging equipment.**"*

Julie Lafaurie, Pre-clinical activity Lead - [Sensome](#)

*"Switching our test site to IHU was a **huge improvement. Modern equipment, customer friendly communication, good expertise.** It is a pleasure to work with them.."*

Michael Engel, Product Development - [ewimed](#)

*"IHU offers **a great technical platform of medical imaging** for preclinical testing when developing a long term implantable medical device. The platform is supported **by talented and creative people** where everyone can pitch in and contribute ideas to assess device design."*

Charles-Thibault Burcez, Product Development Manager - [Defymed](#)

*"It was a great and interesting journey at IHU centre with a very welcoming and professional team. The meeting was extremely well prepared and organized making the **training smooth and educational.**"*

Alice Vignas, Clinical Project Manager - [lysogene](#)



# Practical Information

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For any additional information or a quote:

**Amélie GRESSIER**

Preclinical activities Manager

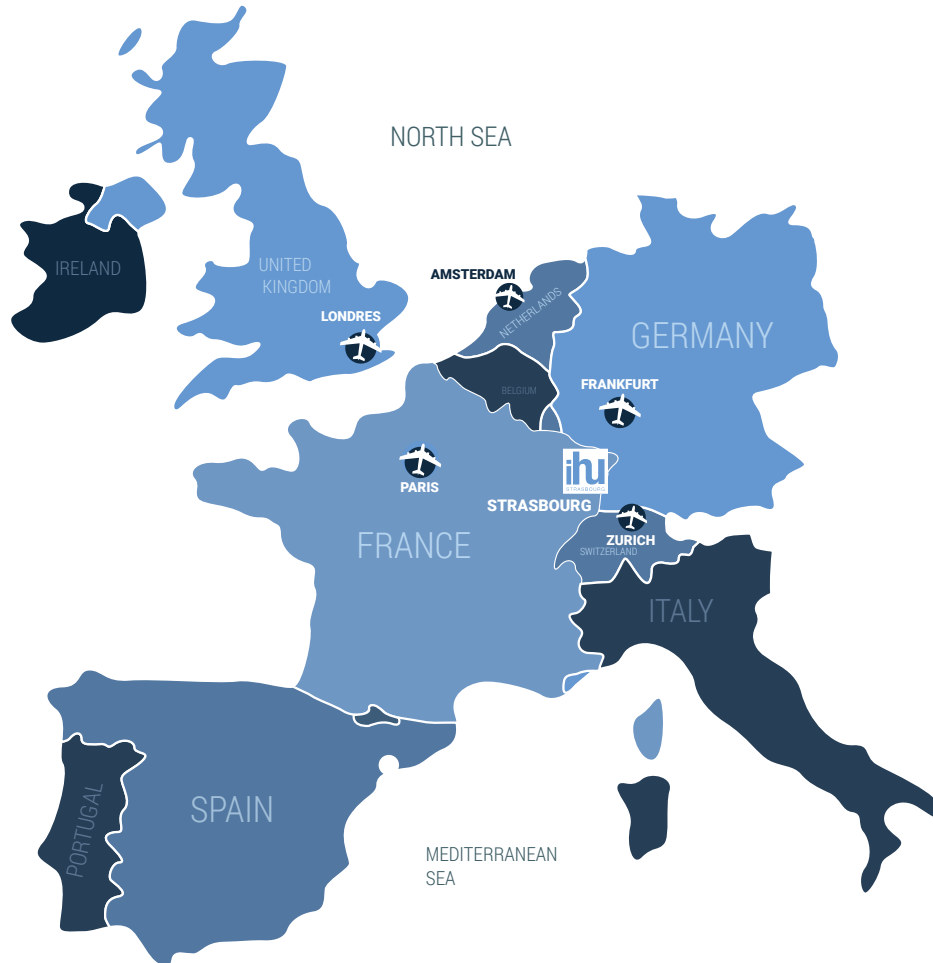
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**Localization:**

Strasbourg is easily accessible in less than two hours by plane from 5 international airports.

The IHU is located 30 minutes from Strasbourg airport.





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