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## Inserm





The Centre de Recherche des Cordeliers (CRC) was created in 2007 on the historic campus of the Faculty of Medicine in Paris, under the impetus of Professor Hervé Fridman. Today, it is under the supervision of Inserm, Université Paris Cité and Sorbonne Université, with the participation of the CNRS and AP-HP (Network of Paris hospitals).

The Center has been under the direction of Professor Jessica Zucman-Rossi since 2019.

The researchers at the Centre de Recherche des Cordeliers aim to understand the fundamental mechanisms underlying the development of chronic diseases, in particular cancer, and to improve the care of patients.

# A continuum from basic research to medical application

The Centre de Recherche des Cordeliers is developing multidisciplinary research activities in the fields of oncology, immunotherapy, physiopathology, genomics, bioinformatics, and medical ethics:



- in close collaboration with the University-Hospital Group Paris Centre and the network of 40 hospitals of the Assistance Publique -Hôpitaux de Paris (AP-HP)
- with more than 70 clinical research projects underway
- in a wide variety of cancers: digestive (colon, pancreatic, liver), gynecological (breast, ovary, uterine), lung, kidney, rare cancers, and pediatric cancers.

# New scientific concepts to tailor medicine to the patients

Researchers at the Centre de Recherche des Cordeliers have made significant conceptual discoveries in cancers, chronic diseases and their treatment, including:



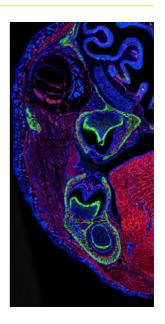
- the interaction between environmental exposure and genetics for predicting the risk of developing a pathology,
- the impact of the cellular and metabolic microenvironment on the initiation and progression of cancers,
- the discovery of novel treatments and the prediction of response to cancer immunotherapy.

# Bringing together research in immunology and cancer...

### ...at the national level

Several research networks of excellence in cancer and personalized medicine have been created and are coordinated by researchers from the Center.

- The Labex Immuno-Oncology, created in 2011 by Guido Kroemer, unites 7 laboratories, 5 of which are located in the Center.
- The Comprehensive Cancer Center CARPEM (CAncer Research for PErsonalized Medicine) of the French National Cancer Institute, created in 2011 by Pierre Laurent-Puig, includes 11 research teams from the Center.
- The EquipEx Onco-Pheno-Screen, created in 2021 by Guido Kroemer, is a multi-dimensional cancer characterization platform located at the Centre de Recherche des Cordeliers, in partnership with the Institut Curie and the Institut Gustave Roussy.



### ...at the international level

- Coordination of the Worldwide Immunoscore Consortium
   (17 countries and 23 research centers) by Jérôme Galon.
- Presidency of the European Academy of Tumor Immunology (EATI) by Guido Kroemer.
- Coordination of the *International Training Network* EDUC 8 by Sébastien Lacroix-Desmazes.
- Presidency of the International Liver Cancer Association (ILCA) by Jessica Zucman-Rossi.

### **CRC** at a Glance

550 people

**16** research teams

4 technology platforms

9000 m<sup>2</sup> of laboratory space

**33** nationalities

# **Cutting-edge technologies** for excellence in research

High-performance tools for imaging, genomics, cell culture, functional exploration, and bioinformatics are available to researchers through the Center's technological core facilities.

These facilities are certified ISO 9001 and NFX 50-900. They are open to the entire scientific community.



## An internationally recognized research center

 SCImago 2022 international ranking of academic institutions:

7<sup>th</sup> French institution across all disciplines, 3<sup>rd</sup> in medicine, and 2<sup>nd</sup> in oncology.

Clarivate world ranking:

6 researchers on the list of the most influential researchers on the planet (*Highly Cited Researchers*).

• More than 800 scientific articles published each year, a quarter in highly prestigious journals (impact factor greater than 10: *Nature, Nature Medicine, Science, Cell, NEJM, The Lancet*, etc...).



## Some major publications since 2019

An innovative clinical trial for kidney cancer,

**Lancet Oncology 2022** 

Immunotherapy of sarcoma,
Nature 2020

Mineralocorticoids and retinopathy, **Diabetes 2021** 

Immune contexture and CAR T Cells. **Nature Medicine 2022** 

IgG-endopeptidase and gene therapy, **Nature Medicine 2020** 

Therapeutics and caloric restriction, **Cell Metab 2019** 

F-choline PET scan and cancer, **Gastroenterology 2019** 

SPI1 mutation and Waldenström Macroglobulinemia,

Cancer discovery 2019

Alcohol and liver cancer genetics, Lancet Oncology 2022

Covid variants and therapeutic response, **Nature 2021** 

Immunotherapy, sarcoma and kidney cancer,

Nature Medicine 2022



# Innovation at the heart of the CRC: from the bench to industry

With the support of Inserm Transfert, scientific discoveries are regularly promoted to economic and industrial players.

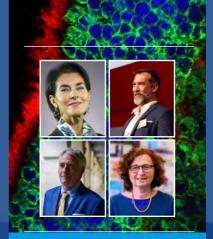
- 115 patents filed since 2012
- 14 biotechnology companies created by CRC researchers



## Numerous scientific collaborations with industry

To identify new therapeutic targets and develop diagnostic and prognostic markers and new drugs.

- 24 industrial contracts in 2022
- Nine industry doctoral contracts (CIFRE contracts) in 2022



## Prestigious awards for innovation

### FRANCINE BÉHAR-COHEN

Inserm Innovation Prize 2021 for the development of an innovative non-viral gene therapy in ophthalmology and the creation of the biotechnology company Eyevensys.

### JÉRÔME GALON

European Inventor Award 2019, Jeantet-Collen Prize 2020, and Prix Galien 2021, for Immunoscore®, a cancer diagnosis and prognosis tool, and the creation of the biotechnology company HalioDx (Veracyte Group).

#### GUIDO KROEMER

Baillet Latour Biomedical Award 2018, Prix Galien for Research in Pharmacology 2015, and Léopold Griffuel Award 2012, for work on apoptosis, autophagy, and cancer.

### JESSICA ZUCMAN-ROSSI

Albert 1st of Monaco Prize 2021 and Inserm Research Prize 2012, for identifying genetic and non-genetic mechanisms of benign and malignant liver tumors in adults and children.







# Stimulating curiosity and transmitting knowledge

Promoting scientific communication and the appeal of science to the general public is a priority of the Center, and is achieved through several approaches:

## We train the researchers of tomorrow in our laboratories

- More than 100 PhD students affiliated with 15 doctoral schools.
- More than 50 undergraduate and graduate students annually.
- 25 medical doctors trained in research every year.
- Scientific integrity training cycle for students, researchers, and technicians.

## We open our laboratories to the widest possible audience

- Annual National Science Festival: 500 visitors welcomed in the Center's laboratories.
- More than 50 high school students carry out a project in our laboratories each year (Apprentice Researchers Program and internships).



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