

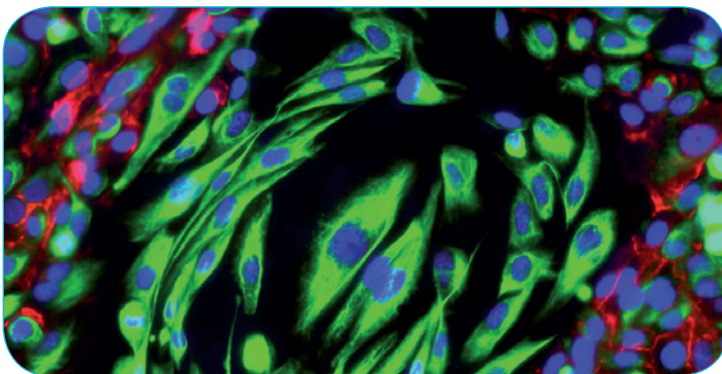
The theme-based multi-organization institute for Cancer (ITMO Cancer) aims to propose and implement concrete actions to improve the performance and competitiveness of French cancer research. The objective is to ensure good coordination between all cancer research teams,

regardless of their affiliation, by leading strategic thinking and facilitating its operational application in the cancer community. It also promotes interdisciplinary exchanges and the transfer of fundamental knowledge to the clinic.

## ITMO CANCER STRATEGIC CHALLENGES

### Multidisciplinary Basic Research

- ▶ Studying the role of the non-coding genome in tumorigenesis
- ▶ Developing knowledge of the protein and metabolic characteristics of cancer cells and their environment
- ▶ Pursuing understanding of cancer mechanisms, adaptive tumour dynamics, genetic and non-genetic plasticity
- ▶ Deciphering and understanding the role of micro-environment, describing the early stages of the antitumour immune response
- ▶ Understanding dormancy and resistance mechanisms
- ▶ Pursuing identification of risk factors: Genetics - Environment - Nutrition
- ▶ Studying cancer through evolution, including early, pre-neoplastic and possibly reversible stages



Emergence of mesenchymal tumor cells (in green) following the transformation of mammary epithelial cells (in red)  
Alain Puisieux © Inserm

## The forces involved in the field

**800** research teams

**6,000** researchers, lecturers, engineers and technicians from universities, hospitals, EPST and institutes

**46,400** articles during 2015 to 2019 period  
(source Cellule Mesures, indicateurs, bibliométrie - Inserm, January 2020)

**8<sup>th</sup>** world rank for the publications number in the field in 2019  
(source Cellule Mesures, indicateurs, bibliométrie - Inserm, January 2020)

**3<sup>rd</sup>** world rank for the proportion of Top 1% highly cited papers in the field in 2019  
(source Cellule Mesures, indicateurs, bibliométrie - Inserm, January 2020)

## ITMO scientific experts

### Executive team

**Director:** Alain EYCHENE (Inserm, INCa)

**Deputy Director:** Yvan de LAUNOIT (CNRS)

**Assistant Director:** Muriel ALTABEF (Aviesan)

### Expert committee

- ▶ MarcAUDEBERT (Inrae)
- ▶ Isabelle BALDI (CHU)
- ▶ MarcBILLAUD (CNRS)
- ▶ GaëlCRISTOFARI (Inserm)
- ▶ ValérieDARDHALON (CNRS)
- ▶ Pierre-Antoine DEFOSSEZ (CNRS)
- ▶ Marie-Odile FAUVARQUE (CEA)
- ▶ Florence HUBERT (AMU)
- ▶ Sébastien INCERTI (CNRS)
- ▶ Valérie LALLEMAND (Inserm)
- ▶ Fatima MECHTA-GRIGORIOU (Inserm)
- ▶ Thomas MERCHER (Inserm)
- ▶ Bruno QUESNEL (CHU)
- ▶ Claude SARDET (CNRS)
- ▶ Jean-Emmanuel SARRY (Inserm)
- ▶ Ariel SAVINA (AstraZeneca)
- ▶ Eric SOLARY (Gustave-Roussy)

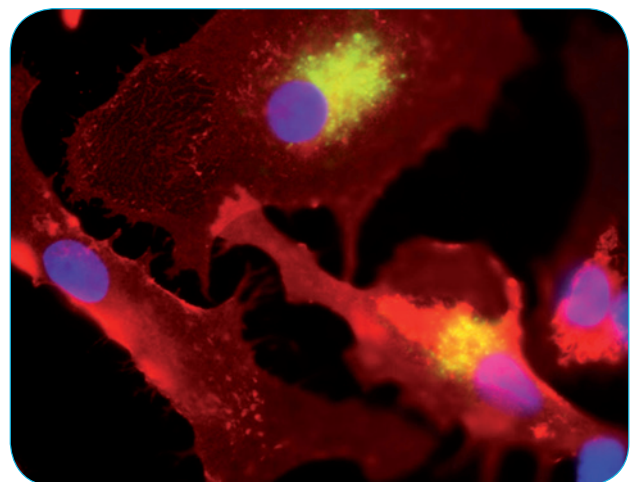
### Translational and Clinical Research

- ▶ Putting the patient as a pivotal actor of research
- ▶ Developing and diversifying animal models and their comparison; refining preclinical models to validate therapies and understand their side effects
- ▶ Developing alternative models
- ▶ Facilitating the drug design and repositioning of the old molecules
- ▶ Promoting new biomarkers for early diagnosis and follow-up (prediction of relapse/resistance, toxicity of treatments, including immunotherapy)
- ▶ Developing sensitive, precise and reproducible technologies
- ▶ Developing stratification methods to predict clinical benefit and to select patients responding to treatment.

### Promotion and support of research work

- ▶ Producing quality and reproducible data and results, with emphasis on the quality and the representativeness rather than on number of the information
- ▶ Highlighting researchers work on the basis of its quality and utility rather than its quantity
- ▶ Promoting transdisciplinary training at doctoral school level, encouraging interdisciplinary vocations, developing continuous training dedicated to cancer research.

Download full Strategic Challenges on:  
<https://itcancer.aviesan.fr>



Fragments of cancer cells internalized by dendritic cell.  
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