

Dr. Isabelle SOUBEYRAN MD, PhD

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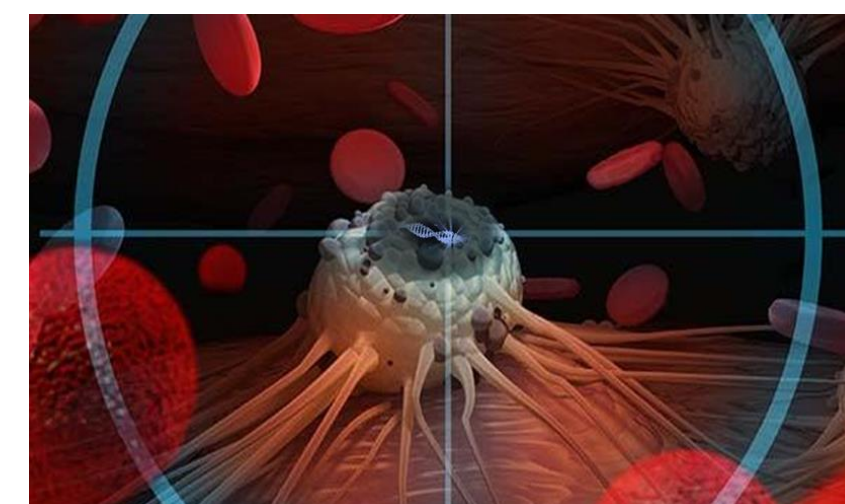
Routine Diagnostics



The Molecular Pathology unit employs molecular screening technologies,

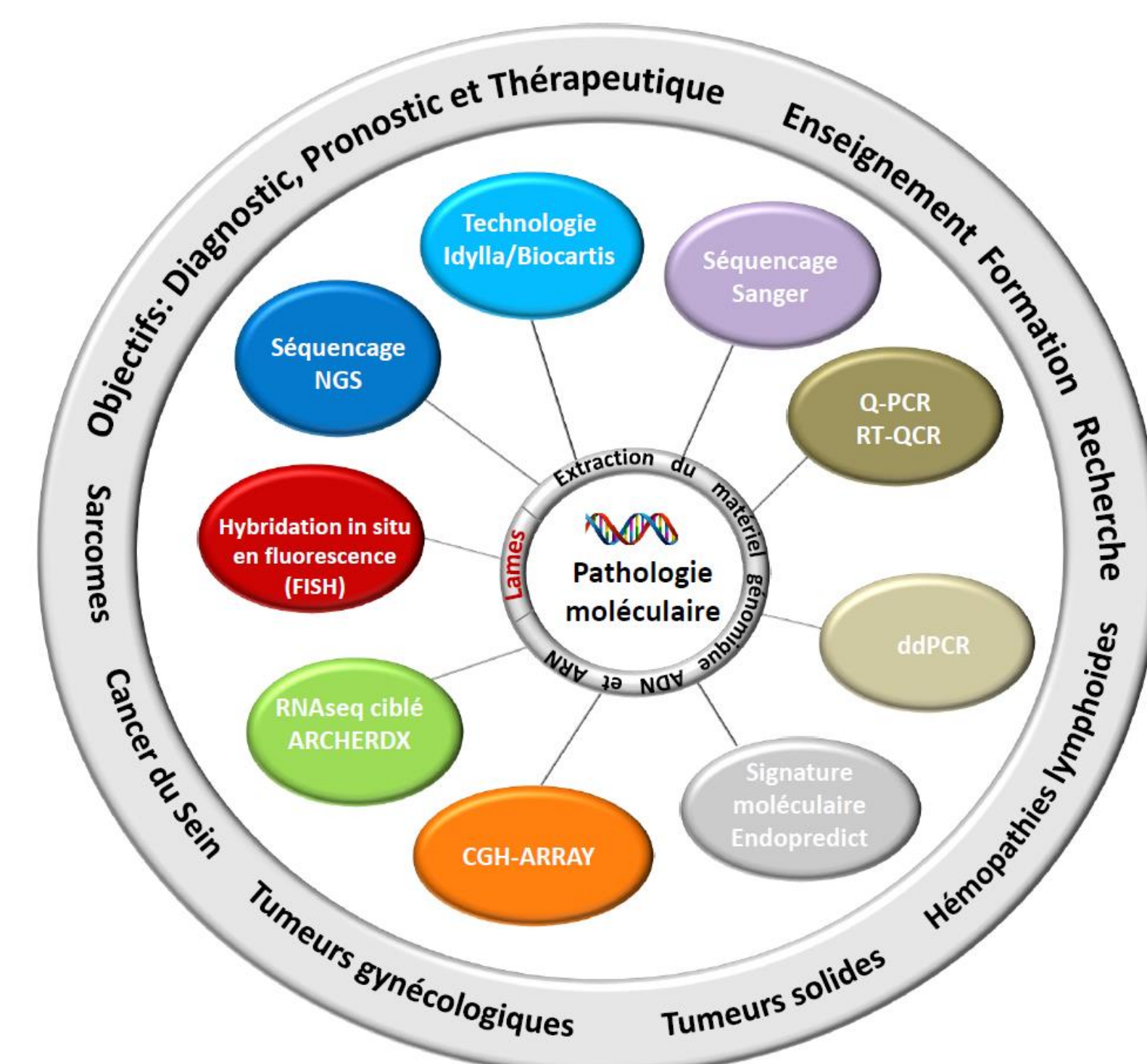
allowing for the identification of specific genetic alterations contributing to the diagnosis, prognosis or the identification of therapeutic targets. Thanks to its expertise and access to innovative technologies, the unit also actively participates in clinical research activities. To date, we are participating in 15 national clinical studies at the institute initiative, in clinical studies with industrial promoters as well as multiple internal pilot research projects.

- Molecular biology: **3411** + **736** analysis
- FISH: **1951** + **25** analysis
- CGH Arrays: **182** + **268** assays



Key technologies

- Genomic material extraction from FFPE tissues as well as liquid biopsies
- SANGER/ NGS Sequencing technique
- QPCR/RT-PCR / Droplet Digital PCR
- Molecular signature; EndoPredict (Myriad); CINSARC signature (Affymetrix, Clariom chip)
- Idylla technology (Biocartis)
- CGH Array (Affymetrix Oncoscan and Cytoscan, Agilent CGH technology)
- NGS RNASeq ciblé ARCHERDX; RNAseq total Trusight Affymetrix
- FISH: Fluorescent *in situ* hybridization



Collaborative Research Project

► Collaborative research project examples (Current)

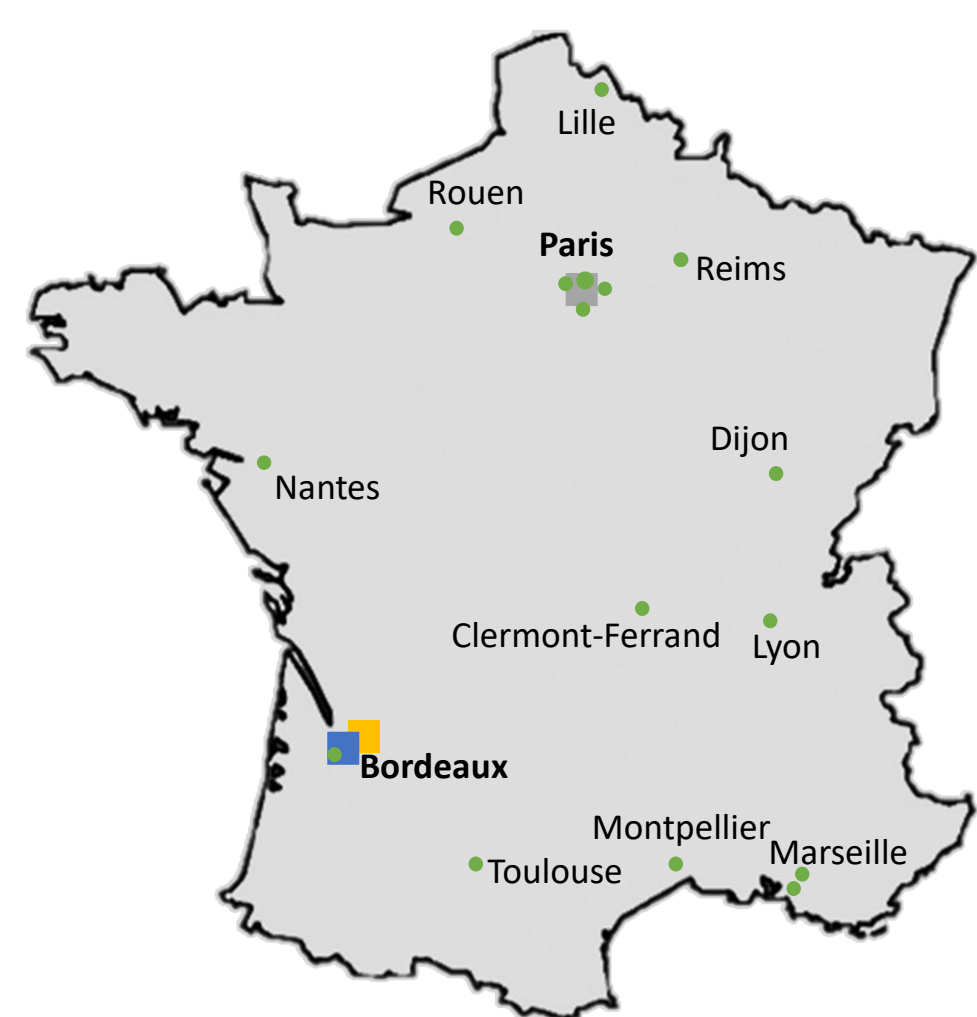
CIRSARC: Phase III clinical trial evaluating the potential benefit of intensified neoadjuvant chemotherapy in patients with operable soft tissue sarcoma considered at high risk of relapse according to the CINSARC signature / 334 patients/ 10 centers/ 2 platforms

BIP-AIRIC : Immunotherapy study based on BIP project (Bergonié Institute Profiling) : Fighting cancer by targeting molecular alterations with specific drugs in early clinical trials / 200 patients/ 4 centers/ 1 platform

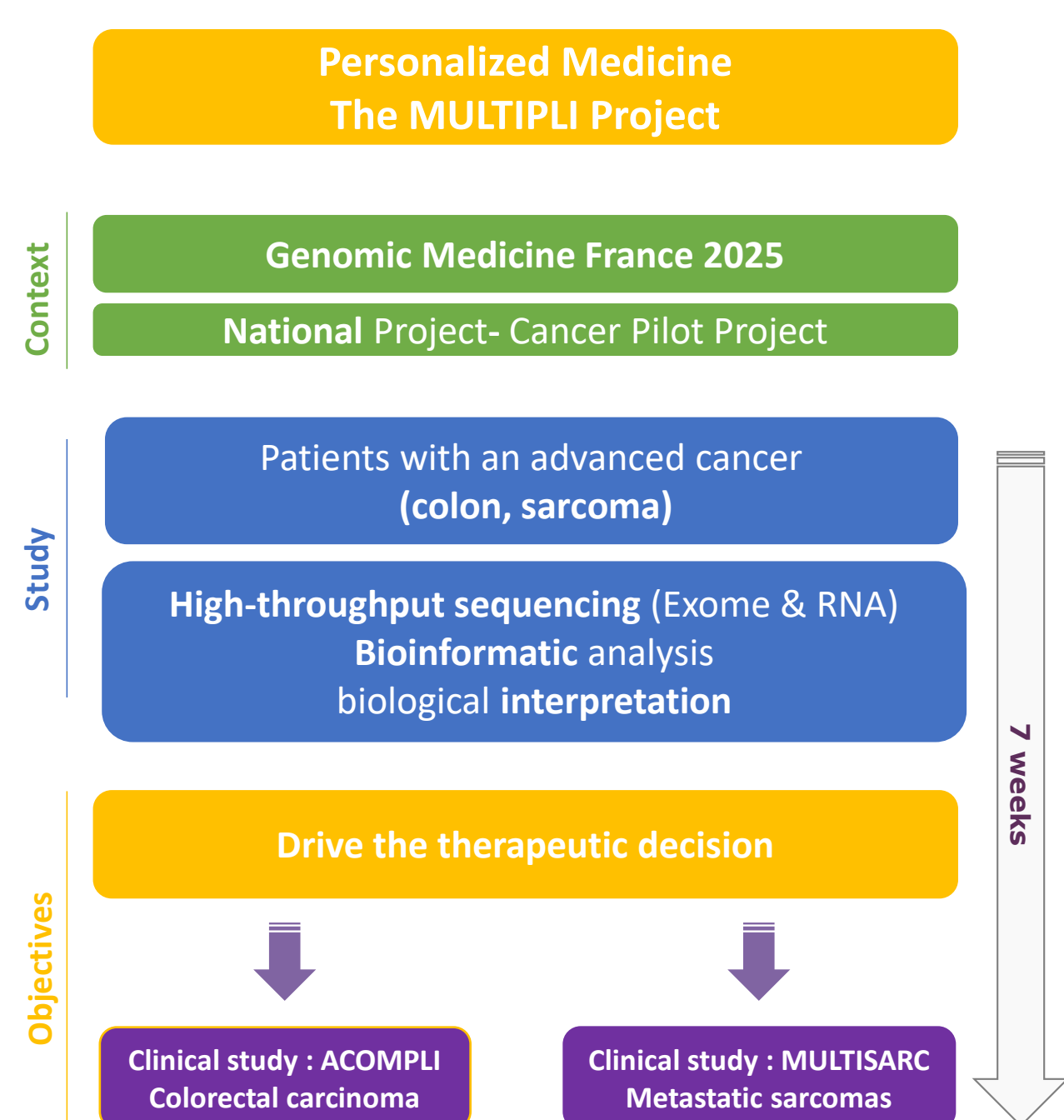
COLCONVERT: Based on the RETRODREAM cohort, this study investigated the role of protein precursors maturation by the convertases in colon cancer as a new prognostic and therapeutic strategy / 40 samples

MULTIPLI: Multicentric study based on patients with inoperable and/or metastatic locally advanced soft tissue sarcoma (MULTISARC) or metastatic colorectal cancer (ACOMPLI) / 2396 patients / Within Genomic Medicine France 2025/1 platform

FOCUS on MULTIPLI



- 15 Participating centers
- Molecular biology platform
- Bio-informatic Platform
- Sequencing technological platform



► Collaborative research project examples (To come...)

CIRCULAR: Assessment of the added value of liquid biopsy compared to FFPE samples for the treatment of advanced non-small cell lung cancer / 550 patients / 10 centers and platforms/ Funding Astra Zeneca.

DEAR: DEtection of ALK rearrangements by RNA-seq Archer / Funding Takeda

Impact of TCR structure analysis in the prediction of immunotherapy responses

GIRONDE : Genomic index evaluation by Oncoscan CNV FFPE Assay (Affymetrix) versus SurePrint G3 (Agilent) / 65 samples / Funding ThermoFisher

GREAT: Genomic BRCA and Extensive ovArian cancer Testing: Evaluation of the clinical characteristics of patients with epithelial ovarian cancer based on the presence in the tumor of BRCA mutations or of genomic and molecular abnormalities beyond BRCA mutations. 4500 patients/250 centers / Funding Arcagy Gineco

Expertises & Recognition

- Participation on national and international research projects in collaboration with academic structure and/or private companies
- Participation in multidisciplinary board and molecular tumor board sessions
- Active participation in University Teaching: Molecular pathology inter-university diploma, Molecular pathology EPU, International masters, University diplomas in oncology and cytogenetic
- Center of reference for Medical student, PhDs Student training in Biology, oncology or anatomocytopathology
- Participation and intervention at national and international meetings

Team



Houda BEN REJEB MD, Benjamin BONHOMME MD, Sabrina CROCE MD, Emmanuel KHALIFA MD, Gaëtan MACGROGAN MD, Isabelle SOUBEYRAN, MD, PhD / Isabelle HOSTEIN, PhD, Claire LARMONIER, PhD/Bioinformaticien: Mme Jennifer CHIRON / Technicians: Marine BAIRRAO, Larry BLANCHARD, Aymeric DELABARRE, Yannick LEGER, Estelle MARION, Laetitia NEGRE-MAYEUR, Flora REBIER, Charlotte PRIMOI, Julie SENTIS, Ghislaine SIERANKOWSKI / Manager: Karine PEUTAT / Quality manager: Anulka KESTEMONT / Administrative support: Muriel DUGA, Isabelle Le Polles, Emmanuelle HENG, Céline MOREL.

Publications

Leroy L, *et al.* Thyroid. 2019 Dec 31.
Croce S *et al.* Mod Pathol. 2019 Jul;32(7):1008-1022.
Cousin S, *et al.* J Hematol Oncol. 2018 Jun 25;11(1):86.
Bonhomme B, *et al.* Thyroid. 2017 May;27(5):682-692.
Godbert Y, *et al.* J Clin Oncol. 2015 Jul 10;33(20):e84-7.

(examples within the last 5 years)

Collaborations



ASSISTANCE
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ThermoFisher
SCIENTIFIC



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AstraZeneca