## ITCC FELLOWSHIP 2024 – Gustave Roussy Cancer Center (Villejuif, France)

Gustave Roussy is a leading national and international early clinical trials institution. Gustave Roussy is certified since 2014 as CLIP$^2$ early clinical trial center by the French National Cancer Institute (INCa).

The clinical early drug development team of the pediatric and adolescent oncology department of Gustave Roussy is constituted by four permanent faculty members (B Geoerger, P Berlanga, S Abbou, C Rigaud), 4 research assistants, 1 research nurse and 1 medical assistant with longstanding expertise in early clinical trials who assure the daily training of the clinical fellows. There is a close collaboration with the phase 1 unit of our adult department (DITEP) and our adult sarcoma unit; several adult trials are open for adolescents and recruitment benefits form the close collaboration and from the similar structures at Gustave Roussy. Coverage of all pediatric hematology and oncology is assured through the common meetings with the CLIP partners as well as the various clinical tumor boards at IGR and the international clinical molecular tumor boards.

Some examples of the active involvement in early clinical trial development at the national and international level are, among others, the MAPPYACTCS (NCT02613962) and AcSé-ESMART (NCT02813135) trials and the SACHA (NCT04477681) observational study, all led and sponsored by Gustave Roussy.

- MAPPYACTS (NCT02613962) was an international prospective precision medicine trial aiming to define tumor molecular profiles in pediatric patients with recurrent/refractory malignancies in order to suggest the most adapted salvage treatment. MAPPYACTS main results were published in 2022. Multiple ancillary studies based on the MAPPYACTS results are ongoing. Thanks to this work, high-throughput sequencing (WGS, WES, RNA-seq) has been introduced into the standard of care at relapse or treatment failure for children and adolescents in France within the Plan France Médecine Génomique 2025 (PFMG2025). MAPPYACTS 2 was opened in September 2022, in order to allow the adequate discussion on the molecular alterations identified in the tumor of these patients within a clinical molecular tumor board, and allow clinical and translational research.
- The “Secured Access–European proof-of-concept therapeutic Stratification trial of Molecular Anomalies in Relapsed or refractory Tumors” (AcSé-ESMART) platform trial (NCT02813135) started recruitment in July 2016 and since then more than 250 patients have been included in 16 trial arms. Since 2019, nine new arms have been opened in the ESMART trial. Eleven arms have completed recruitment and are closed. Importantly, six closed trial arms have been published in high-impact journals. Several new arms are in preparation for opening in 2024.
- The “Secured Access to Innovative Medicines for Children with Cancer (SACHA)” observational study, that collects prospectively safety and activity data for compassionate or off-label innovative anticancer treatment in children, adolescents and young adults in France. The study is open in all center of the French Society of Pediatric Oncology (SFCE) and almost 700 patients have been included so far. First

global results and several patients' cohorts have been recently published in high-impact journals. Based on this experience, the Innovative Therapies for Children with Cancer (ITCC) Consortium has developed the SACHA International Project (ITCC-105), also coordinated by Gustave Roussy.

Since 2013, we hold a weekly international molecular tumor board within our precision medicine programs (MOSCATO-01, MAPPYACTS, FMG2025, MICCHADO, MAPPYACTS2) with biologists, bioinformaticians, physician-scientists and project managers of profiling platforms and all treating physicians of the included patients to share the molecular results as well as the therapeutic options and experience from ongoing trials. The pediatric department of Gustave Roussy is employing and training clinical fellows since February 2011. Until today 20 pediatric haematologist-oncologists from France, Italy, Spain and Germany have been trained in new drug development. Most of them are now responsible for this activity in their institutions.

Currently, the Pediatric and Adolescent Department of Gustave Roussy is seeking a pediatric oncologist willing to invest in new drug development and be actively involved in the phase I/II unit as part of the 2024 ITCC Fellowship.

The aim of this fellowship is to pursue a training in new drug development and early phase trials in pediatric oncology:

1) The fellow will actively participate to early clinical trial patients' management at Gustave Roussy. She/he will conduct the process from patients screening and inclusion, to end of study. This will require, clinical skills in pediatric oncology, to become familiarized with all ongoing protocols in the institution, and the willing to work in a multi-disciplinary team with data managers, clinical research nurses, physicians in the institution, in France and even abroad.
2) The fellow will actively participate to the clinical and molecular tumor boards, as well as telephone conferences and clinical investigators meetings for phase 1/2 studies. She/he will have to interact with pharmaceutical industries.
3) Several training opportunities are available at our institution, and will be offered to the training fellow according to his/her previous background and expertise. Some examples: Pediatric Hematology-Oncology University diploma (DIUOP; 1 year course consisting of 10 2-days modules), Medical Oncology University Diploma (DES; 1 year course consisting of 10 2-days modules), DUERTECC (1 year with a translational research project and diploma), several shorter courses focused on new drug development, immune-oncology, etc.
4) The fellow will be involved in the analysis of already available data within the SACHA observation study, that will lead to at least one publication in a high-impact journal.
5) Last but not least, the fellow will be involved in the design of new clinical protocols. As a translational research objective, the fellow is expected to build an early clinical trial protocol that could be implemented within the ongoing the AcSé-ESMART platform trial.