

Màj 16/04/2020

## UE 2.2. Current concepts in Oncology

12 ECTS

Parcours *Basic and clinical oncology, towards precision medicine*

### ST5: Tumor Resistance and Targeted Therapy

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The aim of this two-day seminar is to bring general knowledge on tumor resistance, particularly in response to therapies. The molecular and cellular mechanisms of chemoresistance, either intrinsic or acquired, would be presented using concrete and varied examples of treatments used in different cancer models from hematological malignancies to solid tumors.

**Duration:** 2 days

#### Program

**Context:** Targeted therapies represent an exciting new approach and are increasingly being used to treat cancer. They participate in the growing development of personalized medicine, taking advantage of the increase in the individual knowledge from each tumor and each patient. Despite the increasing number of new targeted therapeutic approaches, the main causes of targeted therapies failures are related to resistances to treatment, either pre-existing in the primary tumors or induced by previous conventional or by targeted therapies themselves.

**Content:** After introducing the main cellular pathways involved in chemoresistance, targeted therapies and their related resistance will be presented through concrete examples based on the targeting of oncogenes directly associated with a given cancer (oncogenic dependence). Tyrosine kinase inhibitors, protein/protein interaction inhibitors, inducers of cell differentiation, proteasome inhibitors or inhibitors of general oncogenic pathways will be presented among other examples (BCR- ABL, PML-RARA, IDH1/2, BTK, BCL2, ERBB, RAF, MET, YAP/TEAD...).

The development of targeted therapies and the problematic of chemoresistance will be addressed both at the fundamental and clinical level by speakers in the field of academic research in cancer biology, but also through the eye of a chemist for drug design, or of clinicians being at the bedside of the patients.

#### Educational team

Marie-Hélène DAVID, Nicolas JONCKHEERE, David TULASNE, Alexis CORTOT, Nicolas LEBEGUE, Stéphanie POULAIN, Catherine ROCHE-LESTIENNE, Jérôme KLUZA, Salomon MANIER, Philippe COTELLE.