

The Developmental Biology, Cancer, Genetics and Epigenetics domain at Institut Curie regroups 19 teams including 7 junior teams from the following units: CNRS UMR3215/INSERM U934, CNRS UMR3244, and CNRS UMR3664 around a common theme : the investigation of the genetic and epigenetic basis of normal physiological processes such as development and abnormal situations such as cancer. We host and actively promote young group leaders to enhance the scientific dynamics of this domain and foster the emergence of new talents.

Using appropriate model organisms (e.g. yeast, mouse, drosophila, Xenopus and zebrafish), as well as human material, we apply a wide range of inter-disciplinary approaches, including physics and biology. We also nurture close collaborations with the hospital, interacting with pathologists and hosting them in our labs. Our scientific interests are focused on questions that are pertinent to the processes of cell division, morphogenesis, stem cell function and germ line development, with a view to understanding mechanisms of genome stability, gene expression and epigenetic changes, that are also relevant to cancer. To explore these questions at different scales, we use a wide range of technologies including stem cell biology, advanced biochemistry, super-resolution microscopy, genetic engineering, and bioinformatics in close link with the technological platforms of the Institut Curie. In the field of biomedical research, we are particularly involved in the development of biomarkers for cancer, for diagnostic and therapeutic purposes.