The Multiscale Physics-Biology-Chemistry and cancer (molecules, cells, tissues & organisms) domain at Institut Curie regroups 30 teams from the following units: UMR144 CNRS, UMR168 CNRS, and UMR3666 CNRS - U1143 INSERM.

The common theme is the use of cross-disciplinary approaches involving physics, chemistry and biology to produce fundamental insights in cell biology and innovative tools for biomedical research. Our scientific interests are focused on questions that are pertinent to the organization, function, migration, differentiation and division of normal and cancer cells. A large scope of techniques is used that covers many length (electron and superresolution microscopies, intravital imaging of cells and tissues…) and time (from single particle tracking in the millisecond range to hours-long cell migration) scales, involves single and multicellular systems, and expertise in synthetic organic chemistry, biomimetic systems, 3D organoid cultures, theoretical physics, microfluidics, micropatterning, mechanical micromanipulation, and optogenetics. In the field of biomedical research, we are particularly involved in the development of strategies for targeted delivery and immunotherapy against cancer.