



## Cancer, Ageing and Rejuvenation Graduate School - CARE

### Master's Programme

2022 - 2023

<b>Title of the Teaching Unit (UE): Technologies in life sciences- Theoretical aspects</b>		
<b>Semester: 7</b>	<b>Number of ECTS: 3</b>	<b>Hourly volume: 28h MC : 12h &amp; DC : 16h</b>
<b>Teaching Team</b>	<p>Leader : Valérie Lobjois</p> <p>Teaching team : F. Lopez, J. Rouquette, V. Lobjois, researchers and engineers, etc...</p>	
<b>Objective</b>	<p>Which technique to use according to the scientific question asked ?</p> <ul style="list-style-type: none"> <li>- Technical bases of operation of different technologies of molecular, cellular and tissue exploration</li> <li>- Identification of the fields of application</li> <li>- Advantages and limits of these technologies</li> <li>- Sample preparation conditions</li> </ul> <p>These aspects will be addressed for the following fields :</p> <ul style="list-style-type: none"> <li>- Fluorescence microscopy</li> <li>- Flow cytometry / Cell sorting</li> <li>- Proteomics</li> <li>- Genomics and transcriptomics</li> <li>- Metabolomics</li> <li>- Technological couplings</li> </ul> <p>This teaching will be a theoretical basis for the UE Technologies for the exploration of life, of the M2 of the IT2 course.</p>	
<b>Content</b>	<p>The lessons will be based on the interventions of researcher/engineer pairs who will present their complementarity in the resolution of a biological problem. The technical aspects of the approaches presented will be developed in the « practical sessions » (TD) through the analysis of documents such as equipment manuals and the analysis of experimental data from the bibliography. Some of the sessions may be taught in reverse order.</p>	
<b>Pre-requisites</b>		
<b>Keywords</b>		
<b>Skills</b>		
<b>Block of Skills</b>		