



<p>Project Title:</p>	<p><i>Nanocomposite polymer beads for cell detection and in-vitro culture</i></p>
<p>Project Short description</p>	<p>The main objective of this project is to develop functionalized polymer beads with encapsulated magnetic nanoparticles for two different applications:</p> <ul style="list-style-type: none"> - Detection and quantification of circulating tumor cells (CTC) in a magnetoresistive biosensor, and - <i>In vitro</i> culturing of CTC after their isolation from blood samples. <p>To achieve such objective, several tasks are required, such as:</p> <ul style="list-style-type: none"> - Preparation and characterization of the polymer beads by different methods (SEM, DLS, TGA, Zeta Potential, Magnetometry, etc.) - Surface functionalization of the polymer beads with specific antibodies for CTC adhesion. <p>This project is multidisciplinary, involving collaboration with other groups specialized in magnetoresistive sensors and clinical oncology.</p> <div data-bbox="634 936 1261 1247" data-label="Diagram"> </div>
<p>Required degree and Background knowledge of students, minimum grade point average, etc...</p>	<p>Candidate should have a Bachelor's degree in chemistry, biology or related fields, and have good command of English language.</p>

Supervisor at INL

<p>Name:</p>	<p>Ana Vila, Carlos Rodríguez-Abreu</p>
<p>Position:</p>	<p>Research Fellow, Staff Researcher</p>
<p>email:</p>	<p>ana.vila@inl.int , carlos.rodriquez@inl.int,</p>