



PhD in BIOINGEGNERIA / BIOENGINEERING - 40th cycle

THEMATIC Research Field: MULTI-OMICS ANALYSIS OF AMNIOTIC FLUID DERIVED CELLS

Monthly net income of PhDscholarship (max 36 months)

€ 1400.0

In case of a change of the welfare rates during the three-year period, the amount could be modified.

Context of the research activity

<p>Motivation and objectives of the research in this field</p>	<p>It has been recently described and characterized the possibility of deriving cells from the amniotic fluid. These cells open up the possibility of developing tissue engineering based treatments and disease modelling for congenital pathologies that can be diagnosed pre-birth. In the context of an ERC funded project this PhD project aims at developing an extensive multi-omics characterizations of amniotic fluid derived cells and to develop protocols aimed at the culture of these cells based on the outcomes of the multi-omics data analysis.</p>
<p>Methods and techniques that will be developed and used to carry out the research</p>	<p>The successful candidate will be responsible of:</p> <ul style="list-style-type: none"> - Developing a bioinformatic pipeline to analyse multi-omics data resulting from amniotic derived cells - Develop custom-made code and workflows using open source bioinformatic softwares - Perform extensive comparison of the generated data with available repositories - Perform cell culture and preparation for multi-omics analysis
<p>Educational objectives</p>	<p>Bioinformatic analysis Multi-omics analysis Mammalian cell culture Microscopy Cellular and molecular biology</p>
<p>Job opportunities</p>	<p>Academic and clinical research</p>



	Life science companies
Composition of the research group	0 Full Professors 1 Associated Professors 0 Assistant Professors 1 PhD Students
Name of the research directors	Alessandro Filippo Maria Pellegata

Contacts	
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Additional support - Financial aid per PhD student per year (gross amount)	
Housing - Foreign Students	--
Housing - Out-of-town residents (more than 80Km out of Milano)	--

Scholarship Increase for a period abroad	
Amount monthly	700.0 €
By number of months	6

Additional information: educational activity, teaching assistantship, computer availability, desk availability, any other information
<p>Educational activity: The student will be encouraged to attend to courses at POLIMI or abroad 2 / 3in International Schools.</p> <p>Teaching assistantship: There are various forms of financial aid for activities of support to the teaching practice.</p> <p>The PhD student is encouraged to take part in these activities, within the limits allowed by the regulations.</p> <p>Computer and desk availability: the student will be allowed to access facilities of the DCMIC.</p>