

## PhD PROGRAMME IN:

### SYSTEMS BIOLOGY IN IMMUNE AND INFECTIOUS DISEASES

<b>Course title:</b>	<b>ADVANCED IMMUNOLOGY</b>
<b>Aim of the course:</b>	This course aims at further extending participants' knowledge of recent developments in immunology and improving the understanding of key scientific questions and approaches in immunological research.
<b>Lecturer:</b>	Marco Gargaro, PhD
<b>Venue:</b>	to be defined
<b>Course Program:</b>	<ul style="list-style-type: none"><li>• Introduction to Inflammation</li><li>• Innate Cytokines-IL-1, TNF<math>\alpha</math>, Type I IFN</li><li>• Macrophage and Dendritic Cell Development</li><li>• NK Cells – Definitions and Functions</li><li>• Basic Concepts of Histocompatibility</li><li>• Innate Lymphoid Cells</li><li>• Overview of T Cell Biology</li><li>• Th1, Th2, Th17 Development</li><li>• Mucosal Immunity</li><li>• Laboratory of Basic Flow Cytometry</li><li>• Introduction to Single-Cell RNA Sequencing</li><li>• Verification Test</li></ul>
<b>Target audience:</b>	The course is mainly meant for PhD students in Systems Biology in Immune and Infectious Pathologies PhD programme. However, the course is open to all scientists with an interest in the issue.