

Curriculum Vitae

Giuseppe Scirocco

PERSONAL DATA

Date of birth: September 17, 1998
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EDUCATION

- 2017, Scientific high school diploma at the school II.SS. Publio Virgilio Marone - Vico del Gargano FG
- 2022, Bachelor's degree in Biology (L-13) at the University of Padua (PD), Italy
 - Thesis title: "Study of phosphorylation of ATAD3B and possible implications for its ability to oligomerize"
 - Supervisor: Prof. Maria Eugenia Soriano García-Cuerva
- 2024, Master's degree in Medical and Molecular Biotechnology (LM-9) at the University of Verona (VR), Italy
 - Thesis title: "Characterization of tumor-driven hematopoiesis deviation"
 - Supervisor: Prof. Stefano Ugel
- *Ongoing*, PhD in Inflammation, Immunity and Cancer, Department of Medicine, Section of Pathology, at the University of Verona (VR), Italy.

WORK EXPERIENCE AND SCIENTIFIC ACTIVITY

1. Laboratory of Molecular Biology

January - July 2022,

University of Padua, Italy

Coordinated by Prof. Maria Eugenia Soriano García-Cuerva

My research focused on the ATAD3 mitochondrial protein family, particularly on the potential oligomerization of ATAD3A and ATAD3B and their role in breast cancer cells. The study showed that ATAD3A and ATAD3B do not form hetero-oligomers and that the dominant-negative effect of ATAD3B on ATAD3A is independent of ATAD3B phosphorylation.

2. Laboratory of Immunology

November 2023 - June 2024

Integrated University Hospital of Verona, Italy.

Coordinated by Prof. Vincenzo Bronte and Stefano Ugel.

My research focused on tumor-driven hematopoietic deviation and its role in the expansion of immunosuppressive myeloid cells. Using a syngeneic fibrosarcoma model in immunocompetent C57BL/6 mice, I investigated tumor-induced alterations in hematopoiesis. The study identified an expansion of the myeloid-biased MPP3 population, together with an increase in monocytic and granulocytic progenitors and a reduction in B and T lymphocytes. HSC transfer experiments further suggested that tumor-exposed HSCs retain a tumor-induced “memory” that may contribute to cancer progression and relapse.

3. Laboratory of Neuroimmunology

October 2025 to present

University of Verona, Italy

Coordinated by Prof. Gabriela Constantin

My PhD project focuses on the characterization of neutrophil progenitors in experimental autoimmune encephalomyelitis (EAE), an animal model of multiple sclerosis (MS). I investigate whether MS-associated inflammation alters neutrophil granulopoiesis and the expression of granule-derived molecules during neutrophil maturation. Using bone marrow samples from healthy and EAE mice, as well as peripheral blood from MS patients and healthy donors, the project aims to identify disease-associated changes in neutrophil development and degranulation that may contribute to central nervous system inflammation.

LABORATORY SKILLS

- General cell culture techniques:
 - Human and murine cell lines (Daudi, SH-5YSY, SIM-A9, HAFs, HEK293T, MCF7, MDA436)
 - Primary neurons isolated from brain of newborn mice (healthy and with Alzheimer’s like disease)
 - Primary astrocytes isolated from brain of newborn mice (healthy and with Alzheimer’s-like disease)
 - Primary microglial cells isolated from brain of newborn mice (healthy and with Alzheimer’s-like disease)
 - Primary monocyte/macrophages isolated from the bone marrow of adult mice (healthy and EAE)
 - Primary fibroblasts isolated from the bone marrow of adult mice
 - Organotypic brain and spinal cord slice cultures (healthy, EAE and with Alzheimer’s like disease)
 - CD34-derived granulocytes from the human bone marrow

- Human macrophages from circulating monocytes
- General molecular biology techniques, including genomic DNA extraction, purification, PCR-amplification
- SDS-PAGE, Protein purification and Western blotting, crosslinking and Phos-tag SDS-PAGE
- mRNA-based transfection
- *In vitro* functional assays
- Advanced flow cytometry on blood (both human and murine), and on cells isolated from a wide variety of organs (brain, meninges, liver, spleen, lymph nodes, intestine, kidney, spinal cord, bone marrow) of mice with Alzheimer's-like disease or with experimental autoimmune encephalomyelitis (EAE), the animal model of multiple sclerosis.
- Single-cell RNA sequencing analysis on leukocytes (CD45⁺/high cells) isolated from blood, brains, meninges, liver, and bone marrow of mice with Alzheimer's like disease, on leukocytes from spinal cords, meninges, and bone marrow of mice with EAE, the animal model of multiple sclerosis, and on leukocytes isolated from blood, CSF, meninges and brain of human patients.
- Histochemistry, immunohistochemistry and immunofluorescence procedures: organ cryopreservation, cutting, staining techniques and imaging analysis.
- Extraction and purification of HSCs from bone marrow
- Optical microscopy:
 - Brightfield; Darkfield; Phase contrast; Differential interference contrast
- Advanced platform for live-cell imaging using wide-field deconvolution microscopy (Zeiss Axio Observer 7)

HANDLING AND USE OF LABORATORY ANIMALS

- Handling and use of laboratory mice.
- Blood collection from cheek and orbital sinus.
- Intraperitoneal, subcutaneous, intranasal and intravenous injections.
- Peripheral organs perfusion. Organ extraction. Serum and organ tissue preparation and cryopreservation
- Adoptive cell transfer in mice
- Irradiation procedure for rodents
- Mouse inbreeding and genotypization
- EAE induction by active immunization with MOG₃₅₋₅₅ or PLP₁₃₉₋₁₅₁ peptide.

DIGITAL SKILLS

- ZEN2 software for the analysis of immunohistochemistry, immunofluorescence, and time lapse acquisitions.
- IMARIS software for the analysis of time-lapse imaging acquisitions to study the behavior of peripheral immune cells co-cultured in vitro with neural cells.
- FlowJo software for cytofluorimetric data analysis
- GraphPad Prism to perform statistical analysis.
- ImageJ for the analysis of immunohistochemistry.
- Microsoft Office suite and Windows, macOS, Android, and iOS operating systems.
- RStudio packages for data analysis
- Adobe Acrobat DC

COURSES

- BLS-D for non-health professionals
- General worker training on health and safety in the workplace
- Specific training for workers employed in scientific activities in teaching, research and analysis laboratories – high risk class (2022)
- Training in the safe use of liquid nitrogen (2024)
- FlowJo training, BD Life Sciences, Informatics
- Basic Training in Generative Artificial Intelligence, University of Verona
- Course to perform functions A, B, C and D for mice (*Mus musculus*), rats (*Rattus norvegicus*), fish (*Danio rerio*) according to the Ministerial Decree of 5 August 2021
- Firefighting training - high fire risk level 3 - Legislative Decree 81/2008 (2024)

PUBBLICATIONS

Terrabuio E., Pietronigro E.C., Rossi B., Scirocco G., Celauro S., Mainieri F., Donini M., Ferrarini I., Canè S., Finotti G., Della Bianca V., Constantin G., **Neutrophils induce alteration of meningeal macrophage compartment in multiple sclerosis.** *Manuscript in preparation*

CONGRESS PARTICIPATION

- VIII ISCCA Congress 29-31 May 2024, Verona, Italy.
- XXXVI AINI Congress, 4-6 May 2026, Rome, Italy.
 - o Poster presentation: *Neutrophil progenitors show increased release of granule molecules in multiple sclerosis*
 - o Young member of the Italian Society of Neuroimmunology (AINI)

LANGUAGES

- English, Level B2 university certification, University of Padua

I hereby authorize the treatment of my personal data according to the Italian Legislative Decree no. 196 dated 30/06/2003 and to art. 13 GDPR (EU Regulation 2016/679) for the purpose of recruiting and selecting staff.

A handwritten signature in black ink, appearing to read "Giorgio Scimone". The signature is fluid and cursive, with the first name "Giorgio" written in a larger, more prominent script than the last name "Scimone".