



Andrea Bracaglia

Address: Italy (Home)

WORK EXPERIENCE

01/02/2024 – CURRENT Rome, Italy

RESEARCH FELLOW ON THE PROJECT "ROLE OF FIBRO-ADIPOGENIC PROGENITORS IN THE REGULATION OF MUSCLE HOMEOSTASIS" UNIVERSITY OF ROME LA SAPIENZA, DR. MADARO'S LABORATORY

Acquisition of advanced bioinformatic skills for the analysis of single-cell RNA-Seq, single-nuclei RNA-Seq and Spatial Transcriptomics, for data visualization and interpretation.

01/08/2023 – 31/01/2024 Rome, Italy

RESEARCH COLLABORATOR ON THE PROJECT "TRANSCRIPTIONAL AND EPIGENETIC REGULATION IN AGE-DEPENDENT PROGRESSIVE DECLINE OF SKELETAL MUSCLE REGENERATIVE CAPACITIES" FOUNDATION SANTA LUCIA, LABORATORY OF EPIGENETICS AND REGENERATIVE PHARMACOLOGY

01/02/2023 – 31/07/2023 Rome, Italy

RESEARCH COLLABORATOR ON THE PROJECT "FUNCTIONALIZED NANOPARTICLES FOR TARGETED GENOME EDITING IN DUCHENNE MUSCULAR DYSTROPHY" CATTOLICA UNIVERSITY OF THE SACRED HEART

01/11/2019 – 28/04/2023 Rome, Italy

PHD IN CELLULAR AND MOLECULAR BIOLOGY, UNIVERSITY OF TOR VERGATA FOUNDATION SANTA LUCIA IRCCS, EPIGENETICS AND REGENERATIVE PHARMACOLOGY LABORATORY

During my PhD I learnt what it means to work in a Molecular Biology laboratory. I learnt how to organize and plan several experiments and to perform different molecular biology techniques. I also acquired skills in *in vitro* and *in vivo* manipulation working with cell cultures and mouse models. During this period, I developed and consolidated numerous technical skills in many biology fields:

Cell Biology: Ability to work under laminar flow hood in sterile conditions; maintainance in culture of different cell lines, like human fibroblasts (IMR90 and BJ cells), mouse myoblasts (C2C12) and fibroblasts (10T1/2), different fibroblasts derived from patients affected by Hutchinson-Gilford progeria syndrome and human Rhabdomyosarcoma cell lines; capacity to maintain cells in culture for many passages in order to generate a replicative senescence model for the purpose of the PhD project; ability to perform cells treatments with different drugs and downstream analysis.

Molecular Biology: Protein extraction (whole cell extract or subcellular fractionation) and Western blot analysis; RNA extraction, PCR and RT-PCR; DNA extraction for Genotyping and Electrophoresis; Immunofluorescence on fixed cells, muscle slice or single myofibers; Co-immunoprecipitation and Chromatin-Immunoprecipitation; RNA Fluorescence in Situ Hybridization; Comet assay.

Histology: Cryostat sectioning of frozen muscle tissue; Immunofluorescence and hematoxylin and eosin staining on muscle slices.

In vivo experimentation on mice: Procedures: intraperitoneal and intramuscular injections; drug administration by oral gavage; animal sacrifice by cervical dislocation; Organs and blood collection and storage for analysis.

Microscopy: Optical and fluorescence microscopy; Confocal microscopy.

Bioinformatic skills: Analysis of high-throughput data with R software, using different packages for statistical analysis, data visualization and Gene Ontology; Familiarity with online bioinformatic tools for sequence alignment (FASTA, BLAST), oligo's design (UCSC Genome Browser, Primer-BLAST), proteomic and sequencing downstream analysis (GeneCards, UniProt, STRING, Cytoscape, PANTHER, Ingenuity Pathway Analysis).

I discussed my thesis with the title "Transcriptional and epigenetic regulation in age-dependent progressive decline of skeletal muscle regenerative capacities".

03/06/2019 – 31/10/2019 Rome, Italy

RESEARCH FELLOWSHIP ON THE PROJECT "STUDY OF AUTOPHAGIC FLUX INDUCED BY STAT3" FOUNDATION SANTA LUCIA, LABORATORY OF EPIGENETICS AND REGENERATIVE PHARMACOLOGY

I collaborated on the study of STAT3 as a mediator of autophagy in young and old muscle progenitors, setting and performing different experiments and techniques:

- Molecular biology techniques: Western blot, Real Time PCR, Immunofluorescence, Co-Immunoprecipitation;

- Histological analysis on muscle sections;
- Myofibers isolation, culture and immunofluorescence;
- *In vitro* and *in vivo* treatments.

EDUCATION AND TRAINING

01/11/2019 – 28/04/2023 Rome, Italy

PHD IN CELLULAR AND MOLECULAR BIOLOGY, UNIVERSITY OF TOR VERGATA Foundation Santa Lucia
IRCCS, Epigenetics and Regenerative Pharmacology laboratory

Thesis "Transcriptional and epigenetic regulation in age-dependent progressive decline of skeletal muscle regenerative capacities"

11/2022 – 12/2022 Rome, Italy

INTERNAL TRAINING INTERNSHIP Service Animal House, Foundation Santa Lucia

22/11/2021 – 01/12/2021 Rome, Italy

FELASA LABORATORY ANIMAL SCIENCE Foundation Santa Lucia

05/06/2019 – 07/06/2019 Rome, Italy

THE USE OF STATISTICS IN THE BIOMEDICAL RESEARCH - BASE COURSE (EDITION 2019/II) Foundation Santa Lucia

14/12/2018 Rome, Italy

SECOND LEVEL MASTER IN FORENSIC GENETICS University of Tor Vergata

Final grade 110/110 Cum Laude

12/07/2017 Rome, Italy

MASTER'S DEGREE IN BILOGY FOR MOLECULAR, CELLULAR AND PHYSIOPATHOLOGICAL RESEARCH
University of Roma 3

During my Master's degree internship I learnt how to autonomously work on a scientific project, setting and performing different techniques aimed to analyze and quantify DNA damage: M-FISH, Micronucle analysis and Comet assay.

Final grade 110/110 Cum Laude |

Thesis "Analysis of early and persistent genotoxic effects of iodine-131 treatment in patients affected by differentiated thyroid carcinoma"

27/05/2014 Rome, Italy

BACHELOR'S DEGREE IN BIOLOGICAL SCIENCE University of Roma 3

Final grade 100/110 | **Thesis** "Relationship between melatonin and hyperglycemia: new possible mechanisms"

07/2009 Rome, Italy

HIGH SCHOOL DIPLOMA Scientific high school Keplero

LANGUAGE SKILLS

Mother tongue(s): **ITALIAN**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	B2	B2	B2	B2	B2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

● PUBLICATIONS

Ruggieri, V., Scaricamazza, S., Bracaglia, A., D'Ercole, C., Parisi, C., D'Angelo, P., Proietti, D., Cappelletti, C., Macone, A., Lozanoska-Ochser, B., Bouchè, M., Latella, L., Valle, C., Ferri, A., Giordani, L., & Madaro, L. (2025). Polyamine metabolism dysregulation contributes to muscle fiber vulnerability in ALS. *Cell Reports*, 44(1). <https://doi.org/10.1016/j.celrep.2024.115123>

Catarinella G, Nicoletti C*, Bracaglia A*, Procopio P, Salvatori I, Taggi M, Valle C, Ferri A, Canipari R, Puri PL, Latella L. SerpinE1 drives a cell-autonomous pathogenic signaling in Hutchinson-Gilford progeria syndrome. *Cell Death Dis.* 2022 Aug 26;13(8):737. doi: 10.1038/s41419-022-05168-y. PMID: 36028501; PMCID: PMC9418244.

*Second name, equal contribution

Catarinella G*, Bracaglia A*, Skafida E, Procopio P, Ruggieri V, Parisi C, De Bardi M, Borsellino G, Madaro L, Puri PL, Sacco A, Latella L. STAT3 inhibition recovers regeneration of aged muscles by restoring autophagy in muscle stem cells. *Life Sci Alliance*. 2024 Jun 6;7(8):e202302503. doi: 10.26508/lsa.202302503. PMID: 38843935; PMCID: PMC11157169.

*First name, equal contribution

● CONFERENCES AND SEMINARS

11/06/2023 – 16/06/2023 Lucca, Italy

Poster presentation at Gordon Research Conference 2023: Intrinsic and Extrinsic Control of Myogenesis Under Physiological and Pathological Conditions

Poster title: Transcriptional and proteomic regulation in age-dependent progressive decline of skeletal muscle regenerative capacities

12/10/2023 – 15/10/2023 Assisi, Italy

Talk session at Interuniversity Institute of Myology 2023

Talk title: Transcriptional and proteomic regulation in age-dependent progressive decline of skeletal muscle regenerative capacities

17/10/2019 – 20/10/2019 Assisi, Italy

Poster presentation at Interuniversity Institute of Myology Meeting 2019

Talk title: Transcriptional and epigenetic regulation in age-dependent progressive decline of skeletal muscle regenerative capacities

● HONOURS AND AWARDS

2023

Become part of the IIM Young Committee

Best Talk Award, 20th IIM Meeting, 12-15 October 2023 - Assisi, Italy

I hereby consent to the processing of the data I provided in this CV. I declare my agreement with the data protection regulations in the data privacy statement

Rome , 07/01/2025