



Andrea Bracaglia

Address: Italy (Home)

● WORK EXPERIENCE

01/02/2024 – CURRENT Rome, Italy

RESEARCH GRANT UNIVERSITY OF ROME LA SAPIENZA

01/08/2023 – 31/12/2023 Rome, Italy

OCCASIONAL EMPLOYMENT 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 UNIVERSITÀ CATTOLICA DEL SACRO CUORE

Project title: "Functionalized nanoparticles for targeted genome editing in Duchenne Muscular Dystrophy".

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; maintenance in culture of different cell lines, like human fibroblasts (IMR90 and BJ cells), mouse myoblasts (C2C12) and fibroblasts (10T1/2), 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

OCCASIONAL EMPLOYMENT 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 2021 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

● ADDITIONAL INFORMATION

PUBLICATIONS

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.

*Equal contribution

Catarinella G*, Bracaglia A*, Skafida E, Procopio P, De Bardi M, Borsellino G, Puri PL, Sacco A, Latella L. STAT3-mediated autophagy enhances muscle regeneration during aging.

*Equal contribution

Under review on EMBO reports

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

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