## PERSONAL INFORMATION    Vittorio Padovano

**MOLECULAR BIOLOGIST**

PhD. Student, Molecular and cellular neuroscience, gene expression regulation, neurodevelopment and neurodegeneration, iPSC models

## EDUCATION AND RESEARCH

**Nov. 2021 - current**    **Ph.D. student in Genetics and Molecular Biology**

Sapienza Università di Roma, Department of Biology and Biotechnology Charles Darwin

Thesis advisor: Prof. Irene Bozzoni
Localization meets function: deciphering the role of lncRNAs and the synaptic transcriptome in motoneurons

**July 2023**    **Advanced Techniques in Molecular Neuroscience, summer school**

Cold Spring Harbor Laboratory, New York, USA

Advisor: Joseph Lo Turco, Cary Lai, Anne Schaefer
Advanced school of molecular neuroscience that provides theoretical and practical understanding of the latest techniques in the field

**Oct. 2019 – Oct. 2021**    **Master's degree student in Genetics and Molecular Biology**

Sapienza Università di Roma, Department of Biology and Biotechnology Charles Darwin

Thesis advisor: Prof. Irene Bozzoni
The depletion of a lncRNA produces a neurodegenerative in vivo phenotype through the alteration of ER stress response
Final grade: 110/110 cum laude

**Oct. 2016 – Nov. 2019**    **Bachelor's degree student in Biological Sciences**

Sapienza Università di Roma, Department of Biology and Biotechnology Charles Darwin

Thesis advisor: Prof. Laura Ciapponi
The function of CNBP in Myotonic Dystrophy type II
Final grade: 110/110 cum laude

**Oct. 2016 – Current**    **Superior School of Advanced studies, Life Sciences**

Sapienza Università di Roma

Advisor: Joseph Lo Turco, Cary Lai, Anne Schaefer
Sapienza college that aims at expanding students academic curiosity and research skills, fostering multi-disciplinary collaborations
Advisor: Prof. Domenico Raimondo
Analysis of the thermal stability of proteins: a network-based approach
Advisor: Prof. Irene Bozzoni, Prof. Alessandro Fatica
Molecular analysis of motoneuronal lncRNAs interactions

## PERSONAL SKILLS

**Mothertongue**    Italian

**Other**

| | COMPREHENSION | | SPEAKING | | WRITING |
|---|---|---|---|---|---|
| | LISTENING | READING | INTERACTION | ORAL | |
| English | C1 | C1 | C1 | C1 | C1 |
| | C1, CAE Cambridge | | | | |
| French | A2 | A2 | A2 | A2 | A2 |
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**Tutoring and teaching**    Tutoring of two MD's students in Prof. Bozzoni's lab
Tutoring of Superior School of Advanced Studies's
students (SSAS)

▪ Teaching in SSAS courses during Ph.D.

**Technical skills**

Genomics
RNA-sequencig (total RNA, smallRNA, Riboseq)
Library preparation for RNA sequencing
Cell culture
Cell line culture, transfection, RNAi
mESC culture and motoneuron differentiation
iPSC culture and motoneuron differentiation
iPSC transfection via electroporation or lipofection
CRISPR-Cas9 genome editing, clonal selection, genotyping
iPSC-derived motoneurons and skeletal muscle co-culture
Neuron culture in Boyden's chambers and microfluidic devices
Mouse model
Mouse colony handling, non-invasive procedures, tissue collection, cryosectioning, vibratome
sectioning
Imaging
Histochemistry
Immunofluorescence and IF based cell
type analysis in tissues and cell culture
RNA FISH (RNAscope, HCR)
ImageJ-based and Imaris data analysis
Spinning disk and laser scanning confocal image acquisition
Biochemistry
Molecular cloning, recombinant protein production
RNA and protein extraction, qPCR, western blot
RNA immunoprecipitation, CLIP, RNA pull-down, RNA antisense purification
APEX2-proximity labeling and RNA pulldown
Synaptosome preparation from tissue and cell culture
Computational skills
R-based DE analysis of RNA sequencing data (edgeR, Deseq2, GO)

**Prizes and scholarships**    Best poster award in neuroRNA meeting 2022
'Laureato eccellente' prize 2021, Fondazione Sapienza
Fondazione Sapienza Scholarship 2023

▪ Ermenegildo Zegna Founder's Scholarship 2023

**Other activities**  Genetics and Molecular Biology Ph.D. School students
representative
Biology and Molecular Medicine Ph.D. annual
▪ symposium organization

**Funding**  Avvio alla ricerca tipo 1, progetti di Ateneo
Nov 2023 - Nov 2024
Sapienza Università di Roma
Title: The ALS synaptome: assessing the transcriptome
▪ and translatome of degenerating motoneurons

## OTHER INFORMATION

**Publications**  Pellegrini F*, Padovano V*, Biscarini S, Santini T, Setti A,Galfrè SG, Silenzi V, Vitiello E, Mariani D, Nicoletti C,Torromino G, De Leonibus E, Martone J, Bozzoni I. A KOmouse model for the lncRNA Lhx1os produces motor neuron alterations and locomotor impairment. iScience. 2022 Dec 28;26(1):105891. doi: 10.1016/j.isci.2022.105891. PMID: 36647387; PMCID: PMC9840152.

**Abstracts in meetings**  ▪ **Padovano V.**, Setti A., Pellegrini F., Mariani D., Martone J., Bozzoni I. The synaptic transcriptome and translatome of human ALS motoneurons. Poster session in RNA Society meeting 2024, Edinburgh.

▪ **Padovano V.**, Flaminia P., Biscarini S., Santini T., Setti A., Galfrè S.G., Silenzi V., Vitiello E., Mariani D., Nicoletti C., Torromino G., De Leonibus E., Martone J., Bozzoni I. A KO mouse model for a lncRNA produces motor neuron alterations and locomotor impairment. Poster session in neuroRNA conference. RNA regulation in brain function and disease. 28th September to 30th September 2022. Online meeting. *Winner of the best poster award*.

▪ Pellegrini F., **Padovano V.**, Biscarini S., Santini T., Setti A., Galfrè S.G., Silenzi V., Vitiello E., Mariani D., Nicoletti C., Torromino G., De Leonibus E., Martone J., Bozzoni I. The KO of a motoneuron-specific lncRNA causes an in vivo locomotor impairment and the dysregulation of the ER stress response. Poster session in SIBBM meeting. RNA world 3.0., 20th to 22nd June 2022, Sapienza Università di Roma.

▪ **Padovano V.**, Flaminia P., Biscarini S., Santini T., Setti A., Galfrè S.G., Silenzi V., Vitiello E., Mariani D., Nicoletti C., Torromino G., De Leonibus E., Martone J., Bozzoni I. A KO mouse model for a motor neuron specific lncRNA recapitulates an ALS-like neurodegenerative phenotype. Poster session in Non-coding Genome, 11th edition, 11th to 18th May 2022, Institut Curie.

▪ Biscarini S., Pellegrini F., **Padovano V.**, Carvelli A., Santini T., Bozzoni I. Regulation of gene expression by lncRNAs in mESC-derived motor neurons. Poster session in Non-coding Genome, 9th edition, 26 February to 4th March 2020, Institut Curie.

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**Dati personali**  Autorizzo il trattamento dei miei dati personali ai sensi del Decreto Legislativo 30 giugno 2003, n. 196 "Codice in materia di protezione dei dati personali".

Data                                                                                            f.to
8 Ottobre 2024