

PERSONAL INFORMATION

Paolo Maccallini

POSIZIONE RICOPERTA

Research Fellow/ Post Doc

WORK EXPERIENCE

01/07/2024 – to date

Research Fellow

Dept. Biology and Biotechnology C. Darwin, La Sapienza University of Rome

Project title: “Sequenziamento di interi genomi ed analisi bioinformatica di regioni ripetitive”; project funded by Next Generation EU.

01/07/2022 – 30/06/2024

Research Fellow

Dept. Biology and Biotechnology C. Darwin, La Sapienza University of Rome

Project title: “Relation between Transcriptional stress, R-Loop formation and genome instability in Drosophila and in Humans”; project funded by AIRC IG 26496 (PI, Dr. Grazia Daniela Raffa).

15/04/2020 – 15/06/2022

Research Fellow

IBPM-CNR

Project title: “Exploiting the Drosophila model system to investigate the function of human proteins involved in telomere maintenance; project funded by AIRC IG 2017 Id. 20528 (PI, Dr. Maurizio Gatti, Maria Patrizia Somma).

01/02/2019 – 31/01/2020

Research Fellow

Dept. Biology and Biotechnology C. Darwin, La Sapienza University of Rome

Project title: “Exploiting the Drosophila model system to investigate the function of human proteins involved in telomere maintenance”.

EDUCATION AND TRAINING

01/06/2021 – 31/12/2021

“Vedere per credere: Scuola di Microscopia – Edition for Researchers”

Scuola di Microscopia – Fondazione Golinelli (G-LAB), Bologna
Online advanced training course in light and fluorescence microscopy, image acquisition and interpretation

01/11/2014 – 15/02/2018

PhD in Genetics and Molecular Biology

La Sapienza University of Rome

Classification: Excellent

Protocol n° 14744, released by La Sapienza University of Rome in 15/02/2018

8 EQF

11/2015

Qualified Biologist Enable to the Biologist Profession passing the Italian State Exam

La Sapienza University of Rome

Protocol number not available in the certificate, released by La Sapienza University of Rome, in November 2015

01/10/2012 – 22/10/2014

Master Degree in Genetics and Molecular biology applied to basic and biomedical research

La Sapienza University of Rome

Protocol n° 11523/173, released by La Sapienza University of Rome, in 22/10/2014

7 EQF

01/10/2005 – 23/02/2012

Bachelor Degree in Biological Sciences

La Sapienza University of Rome

Protocol n° 9918/130, released by La Sapienza University of Rome, in 23/02/2012

6 EQF

PERSONAL SKILLS

Mother tongue(s) Italian

Other language(s)

UNDERSTANDING

SPEAKING

WRITING

Listening

Reading

Spoken interaction

Spoken production

English

B2

B2

B2

B2

B2

Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user
Common European Framework of Reference for Languages

Communication skills

- Clear presentation of experimental data and research progress during internal lab meetings and seminars.
- Active participation in journal and data club discussions, contributing to critical interpretation of scientific literature.
- Effective communication within collaborative and interdisciplinary research projects.

Organisational / managerial skills

- Planning and coordination of experimental schedules and laboratory activities in multi-project research environments.
- Management of experimental workflows, data organization and documentation according to research quality standards.
- Contribution to team coordination and laboratory efficiency, supporting collaborative research activities.

Job-related skills

Nucleic Acids Handling and Analysis: Extensive experience in the extraction, purification, quantification and manipulation of DNA and RNA from different biological sources (human, Drosophila and bacterial samples), including downstream applications for gene expression analysis, molecular cloning and sequencing-based approaches.

Gene Expression and Transcriptional Regulation Assays: Advanced expertise in PCR-based technologies and transcriptional analysis, including qualitative and quantitative approaches for the study of gene expression.

Chromatin, RNA and Genome Stability Analysis: Strong background in experimental approaches aimed at investigating chromatin dynamics, RNA metabolism and DNA–RNA hybrid structures, including immunoprecipitation-based assays applied to transcriptional regulation and genome instability.

Protein Biochemistry and Interaction Studies:

Experience in protein extraction, separation and detection techniques for the analysis of protein expression, post-translational regulation and molecular interactions in different experimental contexts.

Cellular Models and Functional Assays:

Proficient in the use of mammalian and insect cellular systems for functional studies, including cell culture maintenance, transfection and experimental manipulation.

In vivo Genetic Models (Drosophila melanogaster):

Extensive expertise in classical and molecular genetics applied to Drosophila, including generation and analysis of mutant and transgenic lines, controlled gene expression systems and functional phenotypic assays.

Microscopy and Imaging Approaches:

Hands-on expertise in confocal bio-imaging and fluorescence microscopy, including acquisition optimization and quantitative image analysis for biological research applications.

Laboratory Instrumentation Management:

Proven ability to independently operate and manage core laboratory instrumentation required for molecular, biochemical and cellular research activities.

Computer skills

Scientific Data Analysis and Management

Experience in the organization, processing and interpretation of experimental data derived from molecular biology, biochemistry and imaging-based assays.

Statistical and Quantitative Analysis

Use of statistical tools for data processing, graphical representation and quantitative analysis of experimental results.

Image Analysis and Microscopy Software

Practical experience in microscopy image visualization and analysis using dedicated software platforms.

Bioinformatics Resources and Databases

Routine use of major biological databases for gene and protein annotation, functional analysis and literature-based data interpretation.

Productivity and Documentation Tools

Advanced use of digital tools for scientific documentation, data organization and presentation.

Driving licence

Category B

ADDITIONAL INFORMATION

Publications

H Index: 3 (Scopus)

5 (Google Scholar)

- Livia Scatolini, Lucia Graziadio, Damiano Guerrini, **Paolo Maccallini**, Carmen Marino, Raffaella di Vito, Amber Hassan, Manuela Grimaldi, Marco Fidaleo, Roozbeh Dehghannasiri, Gabriele Proietti, Roberto Piergentili, Erica Salvati, Stefano Cacchione, Cristiano De Pittà, Ylli Doksani, Anna Maria D'Ursi, James Wakefield, Lu Chen, Maurizio Gatti, Alessio Colantoni, Alessandro Usiello, Grazia D. Raffa. RNase H1 counteracts DNA damage and ameliorates SMN-dependent phenotypes in a *Drosophila* model of Spinal Muscular Atrophy. bioRxiv 2025.04.17.649348; doi: <https://doi.org/10.1101/2025.04.17.649348>
- Chen L, Roake CM, **Maccallini P**, Bavasso F, Dehghannasiri R, Santonicola P, Mendoza-Ferreira N, Scatolini L, Rizzuti L, Esposito A, Gallotta I, Francia S, Cacchione S, Galati A, Palumbo V, Kobin MA, Tartaglia GG, Colantoni A, Proietti G, Wu Y, Hammerschmidt M, De Pittà C, Sales G, Salzman J, Pellizzoni L, Wirth B, Di Schiavi E, Gatti M, Artandi SE, Raffa GD. TGS1 impacts snRNA 3'-end processing, ameliorates survival motor neuron-dependent neurological phenotypes in vivo and prevents neurodegeneration. Nucleic Acids Res. 2022 Nov 28;50(21):12400-12424. doi: 10.1093/nar/gkac659. Erratum in: Nucleic Acids Res. 2022 Sep 12; PMID: 35947650; PMCID: PMC9757054.
- Galati A, Scatolini L, Micheli E, Bavasso F, Cicconi A, **Maccallini P**, Chen L, Roake CM, Schoeftner S, Artandi SE, Gatti M, Cacchione S, Raffa GD. The S-adenosylmethionine analog sinefungin inhibits the trimethylguanosine synthase TGS1 to promote telomerase activity and telomere lengthening. FEBS Lett. 2022 Jan;596(1):42-52. doi: 10.1002/1873-3468.14240. Epub 2021 Dec 5. PMID: 34817067.
- **Maccallini P**, Bavasso F, Scatolini L, Bucciarelli E, Noviello G, Lisi V, Palumbo V, D'Angeli S, Cacchione S, Cenci G, Ciapponi L, Wakefield JG, Gatti M, Raffa GD. Intimate functional interactions between TGS1 and the Smn complex revealed by an analysis of the *Drosophila* eye development. PLoS Genet. 2020 May 26;16(5):e1008815. doi: 10.1371/journal.pgen.1008815. PMID: 32453722; PMCID: PMC7289441.
- **Maccallini P**, Di Giorgio ML, Esposito A, Micheli E, Bavasso F, Gallotta I, Verni F, Feiguin F, Cacchione S, McCabe BD, Di Schiavi E, Raffa GD. WDR79/TCAB1 plays a conserved role in the control of locomotion and ameliorates phenotypic defects in SMA models. Neurobiol Dis. 2017 Sep;105:42-50. doi: 10.1016/j.nbd.2017.05.005. Epub 2017 May 11. PMID: 28502804.

Conferences

09/2022	Telomere function and evolution in health and disease Troia, Portugal Poster session presented
06/2022	SIBBM - The RNA World 3.0 Rome, Italy Poster session presented
02/2020	2nd International Scientific Congress of SMA Europe Paris-Evry, France
10/2018	Corso in "SEQUENZIAMENTO DI NUOVA GENERAZIONE (NGS) NEL LABORATORIO DI GENETICA UMANA" Rome, Italy
03/2017	58th Annual Drosophila Research Conference San Diego, California Poster session presented
11/2017	8th Biology BeMM Symposium Biology and Molecular Medicine PhD School Rome, Italy Member of the organizing committee
Memberships	Member of "Ordine Nazionale dei Biologi", section A, n° AA_07415, since 24/01/2018

.....

