



## Luca Monti

**Date of birth:** 10/06/1986 | **Nationality:** Italian | **Email address:** [luca.monti@unipv.it](mailto:luca.monti@unipv.it)

### WORK EXPERIENCE

03/02/2025 – CURRENT Pavia, Italy

#### **LABORATORY TECHNICIAN** UNIVERSITY OF PAVIA

Biochemistry Laboratory Technician, Department of Biology and Biotechnology - Biochemistry Section, University of Pavia, Italy.

15/11/2018 – 02/02/2025 Milan, Italy

#### **UNIVERSITY TECHNICIAN** UNIVERSITY OF MILAN

Deputy of the Animal Welfare Responsible Person, according to Legislative Decree 26/2014, for the User/Breeder Facility of the Department of Biosciences, Via Giovanni Celoria 26, University of Milan, Italy.

Responsibilities:

- Ensuring compliance with current legislation regarding animal use for scientific purposes (Legislative Decree 26/2014);
- Animal welfare consultancy for experimental protocol drafting, ensuring adherence to animal protection and welfare regulations;
- Supervision of proper execution of experimental procedures;
- Oversight of animal welfare standards during experiments;
- Design, management, and maintenance of the Quality System within the University animal facilities;
- Management of animal registers;
- Management of facility equipment and infrastructure;
- Planning and supervision of ordinary, preventive, and extraordinary maintenance of animal facility equipment;
- Management and monitoring of environmental parameter within the animal facility, according to Legislative Decree 26/2014;
- Health monitoring and care of housed animals;
- Documentation and record-keeping of incoming animal health certificates;
- Management of animal health monitoring programs and planning of necessary treatments;
- Archiving and evaluation of health monitoring reports;
- Management of rodents, lagomorphs, and aquatic species colonies.
- From 15/01/2024: Member of the Animal Welfare Body (OPBA) of the University of Milan.

17/07/2017 – 14/11/2018 Milan, Italy

#### **GLP QUALITY ASSURANCE AUDITOR** GLP SR-TIGET (SAN RAFFAELE-TELETHON INSTITUTE FOR GENE THERAPY) TEST FACILITY

GLP (Good Laboratory Practice) Quality Assurance Auditor, SOP Administrator and System Administrator at the GLP SR-TIGET Test Facility, San Raffaele Hospital, Milan, Italy.

Responsibilities:

- Ensuring compliance with GLP principles;
- Conducting study-specific audits, facility audits, and process audits;
- Reviewing and managing Standard Operating Procedures (SOPs) and Study Documentation (Study Plan, Study Report, Amendments, and Deviations);
- Identifying, implementing, and monitoring Corrective and Preventive Actions (CAPA) in accordance with GLP guidelines;
- System Administrator for the Gallios Flow Cytometer, ProCyte DX Analyzer, and Ascentos Toxicology and Pathology LIMS.

01/01/2014 – 30/06/2017 Pavia, Italy

#### **POSTDOCTORAL FELLOW** UNIVERSITY OF PAVIA

Postdoctoral Fellow at the Department of Molecular Medicine, Biochemistry Unit, University of Pavia, Italy.  
Supervisor: Prof. Antonio Rossi.

Research focus: Development and characterization of murine models for studying rare hereditary osteochondrodysplasias (Diastrophic Dysplasia and Desbuquois Dysplasia).

Techniques applied:

- Biochemical techniques: Protein extraction and purification; SDS-PAGE and Western Blotting; Spectrophotometry; HPLC.
- Molecular biology techniques: DNA and RNA extraction and purification; PCR and Real-Time PCR; DNA electrophoresis; Southern Blotting; Cell culture; Molecular cloning.
- Histological techniques: Microtome and cryostat sectioning; Immunohistochemistry; Optical and fluorescence microscopy.

Additional research interest: Investigation of N-acetylcysteine as a potential treatment for Diastrophic Dysplasia by testing its effects on the previously characterized murine model.

2010 – 2011 Pavia, Italy

**PREDOCTORAL FELLOW** UNIVERSITY OF PAVIA

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Predoctoral Fellow at the Department of Biochemistry, University of Pavia, Italy.

Supervisor: Prof.ssa Maria Enrica Tira.

Research focus: study of the fibronectin-collagen interaction in megakaryocyte differentiation.

## ● EDUCATION AND TRAINING

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2011 – 2014 Pavia, Italy

**PH.D. IN BIOMOLECULAR SCIENCES AND BIOTECHNOLOGY** Istituto Universitario di Studi Superiori (IUSS) of Pavia

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Research activity conducted at the Department of Molecular Medicine, Biochemistry Unit, University of Pavia, and Istituto Universitario di Studi Superiori (IUSS) of Pavia, Italy.

PhD thesis title: *"Murine models of osteochondrodysplasias: a useful tool to study the molecular bases of the diseases and to develop new treatments."*

Supervisor: Prof. Antonio Rossi.

Research activity: The aim of the research was to investigate the pathophysiological mechanisms underlying osteochondrodysplasias caused by defects in proteoglycan biosynthesis. In particular, the study focused on generating murine models to explore the molecular bases of Desbuquois Dysplasia and Diastrophic Dysplasia.

2010

**QUALIFICATION AS A PROFESSIONAL BIOLOGIST** University of Pavia

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2008 – 2010 Pavia, Italy

**MASTER'S DEGREE IN MEDICAL BIOTECHNOLOGY** University of Pavia

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Thesis activity conducted at Department of Biochemistry, University of Pavia, Italy.

Supervisors: Prof. Alessandra Balduini and Prof. Maria Enrica Tira.

Thesis title: *"Nuovi meccanismi biochimici di interazione tra megacariociti e collagene di tipo I".*

Final grade: 110/110 cum laude.

2005 – 2008 Pavia, Italy

**BACHELOR'S DEGREE IN BIOTECHNOLOGY** University of Pavia

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Thesis activity conducted at Department of Biochemistry, University of Pavia, Italy.

Supervisor: Prof. Maria Enrica Tira.

Thesis title: *"Adesione in vitro dei megacariociti: ruolo del complesso fibronectina-collagene".*

Final grade: 110/110 cum laude.

2000 – 2005 Terni, Italy

**SCIENTIFIC HIGH SCHOOL DIPLOMA** Liceo Scientifico Statale "Galileo Galilei"

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Scientific High School Diploma with final grade 88/100.

## ● SKILLS

### Technical Skills

- Biochemical Techniques: HPLC, protein extraction and purification, spectrophotometric techniques, SDS-PAGE, Western Blotting, ELISA.
- Molecular Biology Techniques: DNA and RNA extraction, PCR and Real-Time PCR, DNA electrophoresis, Southern Blotting, cell culture, molecular cloning.
- Histological Techniques: sample preparation using microtome and cryostat, immunohistochemistry, optical and fluorescence microscopy.
- Animal handling and welfare management: experience in rodent, lagomorph, and aquatic species.

## ● LANGUAGE SKILLS

Mother tongue(s): **ITALIAN**

Other language(s):

|                | UNDERSTANDING |         | SPEAKING          |                    | WRITING |
|----------------|---------------|---------|-------------------|--------------------|---------|
|                | Listening     | Reading | Spoken production | Spoken interaction |         |
| <b>ENGLISH</b> | B2            | B2      | B2                | B2                 | B2      |

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

## ● DIGITAL SKILLS

Microsoft Office package: Microsoft Word, Excel, PowerPoint, Access | Use of communication programs (Mail, Google Meet, Zoom, Skype) Use of Email (Yahoo Mail, Gmail) | Laboratory Information Management System | Scientific Databases

## ● COMMUNICATION AND INTERPERSONAL SKILLS

### Communication skills

Good dialectic and communication skills, further developed through participation in numerous national and international conferences, as well as through tutoring and staff training activities carried out at the University of Pavia, the GLP SR-TIGET Test Facility in Milan, and the University of Milan.

## ● ORGANISATIONAL SKILLS

### Organisational and management skills

- Excellent teamwork orientation.
- Good organizational skills, aimed at achieving goals and meeting deadlines.
- Aptitude for learning new techniques.

## ● HONOURS AND AWARDS

29/09/2015

### Best Young Investigator Award – FEBS-MPST

Best Young Investigator Award at 5<sup>th</sup> FEBS-MPST (Federation of European Biochemical Societies - Matrix Pathobiology, Signaling & Molecular Targets) advanced course, 24<sup>th</sup>-29<sup>th</sup> September 2015, Rhodes, Greece.

13/04/2011

### Master's Degree Thesis Award – University of Pavia

Master's Degree Thesis Award granted on 13/04/2011 by the University of Pavia (Prot. n° 15057, titolo III, classe 9, fascicolo n° 34, anno 2011).

## ● TEACHING ACTIVITY

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26/09/2024

### **Modulo 3.2 specie zebrafish, nell'ambito del corso accreditato dal Ministero della Salute: "I Dibattiti Aperti Nella Sperimentazione Animale"**

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Course helded by University of Milan, Guido Bernardini Foundation and Istituto Zooprofilattico della Lombardia e dell'Emilia Romagna (IZSLER).

23/01/2024 – 31/01/2025

### **Modulo 3.2 specie topi, nell'ambito del corso "formazione specifica per il personale coinvolto nella sperimentazione animale a fini scientifici"**

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Course helded by University of Milan.

23/01/2024 – 31/01/2025

### **Modulo 3.2 specie zebrafish, nell'ambito del corso "formazione specifica per il personale coinvolto nella sperimentazione animale a fini scientifici"**

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Course helded by University of Milan.

01/02/2013 – 30/06/2013

### **Practical tutoring for the “Chemistry and Propedeutical Biochemistry” and “Biochemistry” courses**

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Practical tutoring for the students of the Medicine and Surgery "Harvey" Master's Degree Course, University of Pavia.

## ● PUBLICATIONS

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### **Improvement of the skeletal phenotype in a mouse model of diastrophic dysplasia after postnatal treatment with N-acetylcysteine.**

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Paganini C, Gramegna Tota C, **Monti L**, Monti I, Maurizi A, Capulli M, Bourmaud M, Teti A, Cohen-Solal M, Villani S, Forlino A, Superti-Furga A, Rossi A.  
Biochem Pharmacol. 2021 Mar;185:114452. doi: 10.1016/j.bcp.2021.114452. Epub 2021 Feb 3.  
PMID: 33545117

### **Calcium activated nucleotidase 1 (CANT1) is critical for glycosaminoglycan biosynthesis in cartilage and endochondral ossification.**

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Paganini C, **Monti L**, Costantini R, Besio R, Lecci S, Biggiogera M, Tian K, Schwartz JM, Huber C, Cormier-Daire V, Gibson BG, Pirog KA, Forlino A, Rossi A.  
Matrix Biol. 2019 Aug;81:70-90. doi: 10.1016/j.matbio.2018.11.002. Epub 2018 Nov 12.  
PMID: 30439444

### **Testing the Cre-mediated genetic switch for the generation of conditional knock-in mice.**

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Capulli M, Costantini R, Sonntag S, Maurizi A, Paganini C, **Monti L**, Forlino A, Shmerling D, Teti A, Rossi A.  
PLoS One. 2019 Mar 13;14(3):e0213660. doi: 10.1371/journal.pone.0213660. eCollection 2019.  
PMID: 30865697

### **Polyethylene Glycol-Poly-Lactide-co-Glycolide Block Copolymer-Based Nanoparticles as a Potential Tool for Off-Label Use of N-Acetylcysteine in the Treatment of Diastrophic Dysplasia.**

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Chiesa E, **Monti L**, Paganini C, Dorati R, Conti B, Modena T, Rossi A, Genta I.  
J Pharm Sci. 2017 Dec;106(12):3631-3641. doi: 10.1016/j.xphs.2017.08.004. Epub 2017 Aug 19.  
PMID: 28826881

### **In situ characterization of protein aggregates in human tissues affected by light chain amyloidosis: a FTIR microspectroscopy study.**

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Ami D, Lavatelli F, Rognoni P, Palladini G, Raimondi S, Giorgetti S, **Monti L**, Doglia SM, Natalello A, Merlini G.  
Sci Rep. 2016 Jul 4;6:29096. doi: 10.1038/srep29096.  
PMID: 27373200

## **N-acetylcysteine treatment ameliorates the skeletal phenotype of a mouse model of diastrophic dysplasia.**

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**Monti L**, Paganini C, Lecci S, De Leonardis F, Hay E, Cohen-Solal M, Villani S, Superti-Furga A, Tenni R, Forlino A, Rossi A. Hum Mol Genet. 2015 Oct 1;24(19):5570-80. doi: 10.1093/hmg/ddv289. Epub 2015 Jul 23. PMID: 26206888

## **Fast screening of glycosaminoglycan disaccharides by fluorophore-assisted carbohydrate electrophoresis (FACE): applications to biologic samples and pharmaceutical formulations.**

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Karousou E, Asimakopoulou AP, Zafeiropoulou V, Viola M, **Monti L**, Rossi A, Passi A, Karamanos N. Methods Mol Biol. 2015;1229:143-59. doi: 10.1007/978-1-4939-1714-3\_14. PMID: 25325951

## **Altered signaling in the G1 phase deregulates chondrocyte growth in a mouse model with proteoglycan undersulfation.**

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De Leonardis F, **Monti L**, Gualeni B, Tenni R, Forlino A, Rossi A. J Cell Biochem. 2014 Oct;115(10):1779-86. doi: 10.1002/jcb.24844. PMID: 24820054

## **FACE analysis as a fast and reliable methodology to monitor the sulfation and total amount of chondroitin sulfate in biological samples of clinical importance.**

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Karousou E, Asimakopoulou A, **Monti L**, Zafeiropoulou V, Afratis N, Gartaganis P, Rossi A, Passi A, Karamanos NK. Molecules. 2014 Jun 12;19(6):7959-80. doi: 10.3390/molecules19067959. PMID: 24927366

## **Diastrophic dysplasia sulfate transporter (SLC26A2) is expressed in the adrenal cortex and regulates aldosterone secretion.**

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Spyroglou A, Bozoglu T, Rawal R, De Leonardis F, Sterner C, Boulkroun S, Benecke AG, **Monti L**, Zennaro MC, Petersen AK, Döring A, Rossi A, Bidlingmaier M, Warth R, Gieger C, Reincke M, Beuschlein F. Hypertension. 2014 May;63(5):1102-9. doi: 10.1161/HYPERTENSIONAHA.113.02504. Epub 2014 Mar 3. PMID: 24591336

## **Alteration of proteoglycan sulfation affects bone growth and remodeling.**

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Gualeni B, de Vernejoul MC, Marty-Morieux C, De Leonardis F, Franchi M, **Monti L**, Forlino A, Houillier P, Rossi A, Geoffroy V. Bone. 2013 May;54(1):83-91. doi: 10.1016/j.bone.2013.01.036. Epub 2013 Jan 28. PMID: 23369989

## ● **CONFERENCES AND SEMINARS**

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### **Partecipazione a congressi**

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Participation in numerous national and international congresses related to extracellular matrix research and animal use for scientific purposes.

## ● **DRIVING LICENCE**

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Driving Licence: B

## ● **HOBBIES AND INTERESTS**

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Electric Bass Guitar

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