

SILVIA LOPA

WORK CONTACTS

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SUMMARY

I am currently working as a Postdoctoral Researcher at the Cell and Tissue Engineering Laboratory (IRCCS Istituto Ortopedico Galeazzi, Milan, IT). I graduated in “Industrial Biotechnology” in 2009 and I received my PhD in “Biotechnology Applied to Medical Science” in 2014.

During my PhD, I participated to several scientific projects in collaboration with clinicians as well as with industrial and international academic partners, including Limacorporate s.p.a. (IT), the University of Lyon (FR), and the University of Twente (NL). In particular, in 2013 I spent six months at the Erasmus MC (Rotterdam, NL) as visiting PhD student in the context of an international research collaboration. In 2012 I was selected as one of the six members worldwide of the Tissue Engineering Young Investigator Council, which is part of the Editorial Board of Tissue Engineering. In 2010 and 2011 I participated to the TERMIS European Summer Schools and I was awarded with a grant during the latter. So far, I have authored or co-authored 14 scientific publications on international journals and I have contributed to the writing of 5 funding grants.

SKILLS

Communication skills, interpersonal and team-working skills, critical thinking and problem solving, decision making and organizational skills, responsibility and reliability.

PROFESSIONAL EXPERIENCE

03/2014 – Present Postdoctoral Researcher

Cell and Tissue Engineering Laboratory
 IRCCS Istituto Ortopedico Galeazzi, Milan, Italy

Main tasks Research project management, networking of research units, writing of scientific manuscripts, funding grants, scientific reports and ethical committee protocols, planning of experimental activities, data analysis, presentation of scientific data in international congresses, mentoring of Master and PhD students

Research topics Adult stem cells, biomaterials, inflammation, bioreactors, biofabrication, prostheses

01/2010 – 02/2014 PhD Student

Cell and Tissue Engineering Laboratory
 IRCCS Istituto Ortopedico Galeazzi, Milan, Italy

Main tasks Research project management, networking of research units in national and international projects, writing of scientific manuscripts, funding grants and scientific reports, planning and execution of experimental activities, data analysis, presentation of scientific data in international congresses, mentoring of Master students

Research topics Adult stem cells, biomaterials, inflammation, bioreactors, prostheses

04/2013 – 10/2013	PhD Visiting Student Erasmus University Medical Center, Rotterdam, The Netherlands
Main tasks	Planning and execution of experimental activities, data analysis, scientific manuscript writing
Research topics	Adult stem cells, inflammation
05/2012 – 06/2012	PhD Visiting Student Institut de Biologie et Chimie des Protéines, Lyon, France
Main tasks	Planning and execution of experimental activities, data analysis, scientific manuscript writing
Research topics	Biomaterials, bioreactors
04/2009 – 12/2009	Postgraduate Researcher Dipartimento di Biotecnologie Mediche e Medicina Traslazionale Università degli Studi di Milano, Milan, Italy
Main tasks	Planning and execution of experimental activities, data analysis, scientific manuscript writing
Research topics	Adult stem cells, biomaterials
11/2007 – 03/2009	Master Student (internship) Dipartimento di Biotecnologie Mediche e Medicina Traslazionale Università degli Studi di Milano, Milan, Italy
Main tasks	Planning and execution of experimental activities, data analysis
Research topics	Adult stem cells, biomaterials

MENTORING EXPERIENCE

6 Master Students in Biomedical Engineering (Politecnico di Milano, Milan, IT; University of Twente, Twente, NL; MIT Massachusetts Institute of Technology, Boston, USA)

1 Master Student in Biology (Università degli Studi di Milano, Milan, IT)

1 Master Student in Veterinary Biotechnology Science (Università degli Studi di Milano, Milan, IT)

1 Master Student in Industrial Biotechnology (Università degli Studi di Milano-Bicocca, Milan, IT)

1 PhD Student in Veterinary and Animal Science (Università degli Studi di Milano, Milan, IT)

EDUCATION

2014	PhD Biotechnology Applied to Medical Science, Università degli Studi di Milano
2011	TERMIS Summer School Biomaterials and Regenerative Medicine: from molecular and cell biology to tissues and organs repair, Università degli Studi di Trento
2010	TERMIS Summer School Making an impact: the preparation of high quality papers in Tissue Engineering & Regenerative Medicine, University of Sheffield

2009 **MSc**
Industrial Biotechnology (110/110), Università degli Studi di Milano-Bicocca
The study course included an internship (18 months) in a research laboratory (Dipartimento di Biotecnologie Mediche e Medicina Traslazionale, Università degli Studi di Milano)

2006 **BSc**
Molecular Biotechnology (106/110), Università degli Studi di Milano-Bicocca
The study course included an internship (6 months) in a research laboratory (Dipartimento di Biotecnologie e Bioscienze, Università degli Studi di Milano-Bicocca)

LANGUAGES

English **Highly proficient in spoken and written English**
(Common European Framework C1)

Spanish **Basic communication skills in Spanish**
(Common European Framework A1)

COMPUTER SKILLS

Microsoft Windows operating systems (XP, Vista, and Windows 7)

Microsoft Office package

Statistical analysis and Design of Experiment (DoE) softwares (GraphPad Prism[®], G*Power; JMP[®])

Image analysis and manipulation softwares (ImageJ, GIMP, Adobe Photoshop)

Internet Explorer and other browsers

CERTIFICATIONS

FCE First Certificate of English

ECDL European Computer Driving License

AWARDS

Tissue Engineering Young Investigator Council (2012-2013)

Selected as one of the six members worldwide of the Tissue Engineering Young Investigator Council

Tissue Engineering and Regenerative Medicine Society Summer School Grant (2011)

Grant assigned to PhD students on the basis of their work experience and scientific production

OTHER WORK EXPERIENCE

2001-2007 Seasonal employment as sales assistant in a bookshop (Jul-Oct)

DRIVING LICENCE

B, car owner

SCIENTIFIC PUBLICATIONS

Lopa S, Piraino F, Kemp RJ, Di Caro C, Lovati AB, Di Giancamillo A, Moroni L, Peretti GM, Rasponi M, Moretti M. Fabrication of multi-well chips for spheroid cultures and implantable constructs through rapid prototyping techniques. *Biotechnol Bioeng*. **2015**

Lovati AB, **Lopa S**, Talò G, Previdi S, Recordati C, Mercuri D, Segatti F, Zagra L, Moretti M. In vivo evaluation of bone deposition in macroporous titanium implants loaded with mesenchymal stem cells and strontium-enriched hydrogel. *J Biomed Mater Res B Appl Biomater*. **2015**

Colombini A, **Lopa S**, Ceriani C, Lovati AB, Croiset SJ, Di Giancamillo A, Lombardi G, Banfi G, Moretti M. In vitro characterization and in vivo behavior of human nucleus pulposus and annulus fibrosus cells in clinical-grade fibrin and collagen-enriched fibrin gels. *Tissue Eng Part A*. **2015**

Lopa S, Colombini A, Stanco D, de Girolamo L, Sansone V, Moretti M. Donor-matched mesenchymal stem cells from knee infrapatellar and subcutaneous adipose tissue of osteoarthritic donors display differential chondrogenic and osteogenic commitment. *Eur Cell Mater*. **2014**

Lopa S, Madry H. Bioinspired scaffolds for osteochondral regeneration. *Tissue Eng Part A*. **2014**

Laganà M, Arrigoni C, **Lopa S**, Sansone V, Zagra L, Moretti M, Raimondi MT. Characterization of articular chondrocytes isolated from 211 osteoarthritic patients. *Cell Tissue Bank*. **2014**

Lopa S, Colombini A, Sansone V, Preis FW, Moretti M. Influence on chondrogenesis of human osteoarthritic chondrocytes in co-culture with donor-matched mesenchymal stem cells from infrapatellar fat pad and subcutaneous adipose tissue. *Int J Immunopathol Pharmacol*. **2013**

Lopa S, Mercuri D, Colombini A, De Conti G, Segatti F, Zagra L, Moretti M. Orthopedic bioactive implants: Hydrogel enrichment of macroporous titanium for the delivery of mesenchymal stem cells and strontium. *J Biomed Mater Res A*. **2013**

Lopa S, De Girolamo L, Arrigoni E, Stanco D, Rimondini L, Baruffaldi Preis FW, Lanfranchi L, Ghigo M, Chiesa R, Brini AT. Enhanced biological performance of human adipose-derived stem cells cultured on titanium-based biomaterials and silicon carbide sheets for orthopaedic applications. *J Biol Regul Homeost Agents*. **2011**

Conforti E, Arrigoni E, Piccoli M, **Lopa S**, de Girolamo L, Ibatìci A, Di Matteo A, Tettamanti G, Brini AT, Anastasia L. Reversine increases multipotent human mesenchymal cells differentiation potential. *J Biol Regul Homeost Agents*. **2011**

de Girolamo L, Arrigoni E, Stanco D, **Lopa S**, Di Giancamillo A, Addis A, Borgonovo S, Dellavia C, Domeneghini C, Brini AT. Role of autologous rabbit adipose-derived stem cells in the early phases of the repairing process of critical bone defects. *J Orthop Res*. **2011**

Quirici N, Scavullo C, de Girolamo L, **Lopa S**, Arrigoni E, Deliliers GL, Brini AT. Anti-L-NGFR and -CD34 monoclonal antibodies identify multipotent mesenchymal stem cells in human adipose tissue. *Stem Cells Dev*. **2010**

Arrigoni E, **Lopa S**, de Girolamo L, Stanco D, Brini AT. Isolation, characterization and osteogenic differentiation of adipose-derived stem cells: from small to large animal models. *Cell Tissue Res*. **2009**

de Girolamo L, **Lopa S**, Arrigoni E, Sartori MF, Baruffaldi Preis FW, Brini AT. Human adipose-derived stem cells isolated from young and elderly women: their differentiation potential and scaffold interaction during in vitro osteoblastic differentiation. *Cytotherapy*. **2009**

PARTICIPATION TO INTERNATIONAL CONGRESSES

- 2014** **OARSI** (Osteoarthritis Research International Society)
Paris, France
- 2013** **TERMIS** (Tissue Engineering and Regenerative Medicine Society)
Istanbul, Turkey
- 2012** **ICRS** (International Cartilage Repair Society)
Montreal, Canada
- 2011** **WRM** (World Conference on Regenerative Medicine)
Leipzig, Germany
- 2011** **TERMIS** (Tissue Engineering and Regenerative Medicine Society)
Granada, Spain
- 2011** **ORS** (Orthopedic Research Society)
Long Beach, CA, USA