CURRICULUM VITAE

Name: Annamaria
Surname: Massa
Birth date: 09/06/1988
Birth place: San Giovanni Rotondo (FG)

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Education and Qualifications

- 1st March 2013- current: PhD fellow at the Laboratory for Orthopaedic Pathophysiology and Regenerative Medicine, Istituto Ortopedico Rizzoli, Bologna, Italy (Prof. Nicola Baldini).

- June 2014 - September 2014: Research Fellow (Marco Polo program), Institute of Oral Biology, Center of Dental Medicine, Zurich, Switzerland (Prof. Thimios Mitsiadis).

- Juanuary 2014: Trade practice qualification for biologist.

- January 2013: PhD Course, Biomedical Sciences, Department of Biomedical and Neuromotor Sciences, University of Bologna, Italy.

- December 2012: Medical Biotechnology Second Level Degree, University of Bologna, Italy; Discussion about thesis theme: *"Isolamento e coltura di hMSC per terapie cellulari di rigenerazione ossea"*.
  Chairmans: Prof.Giovanna Cenacchi and Prof. Nicola Baldini.
  Vote: 110/110 cum laude.

- March 2012 - December 2012: Professional training, Laboratory for Orthopaedic Pathophysiology and Regenerative Medicine, Istituto Ortopedico Rizzoli, Bologna, Italy (Prof. Nicola Baldini).

- December 2010: Biotechnology First Level Degree, University of Bologna, Italy. Discussion about thesis theme: *"La down-modulazione down - modulazione di CDH1 (e-caderina) nella disregolazione del checkpoint mitotico associata al gene bcr- abl della leucemia mieloide cronica"* .
  Chairman: Prof. Maria Alessandra Santucci.
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- March 2010 – December 2010: Professional training, Laboratory for Molecular Biology, Istituto di Ematologia Seragnoli, Bologna, Italy.

- July 2007: Istituto "M.Immacolata"- San Giovanni Rotondo, Italy. Scientific Secondary School Certification.

Languages

- Spoken: Italian, English (level B2)
  Written: Italian, English (level B2)

Training courses

- March 2014: "*Sicurezza sul lavoro, modulo generale, formazione dei lavoratori* ", Istituto Ortopedico Rizzoli, Bologna.

- April 2013: "*Uso del citofluorimetro Epics XL e del software di analisi Expo32"* Istituto Ortopedico Rizzoli, Bologna.

- March 2013: "*Il mantenimento ed il miglioramento del sistema di gestione qualità aziendale secondo il mosello di accreditamento regionale e la norma UNI EN ISO 9001:2008",* Istituto Ortopedico Rizzoli..

- March 2013: " *Contenuti tecnico-professionali (conoscenze e competenze) specifici di ciascuna professione, specializzazione e attività ultraspecialistica",* Istituto Ortopedico Rizzoli.

Publication

*Hypoxia enhances proliferation and stemness of human adipose-derived mesenchymal stem cells***.**
Fotia C, **Massa A**, Boriani F, Baldini N, Granchi D**.** Cytotechnology, 2014 May 6.

Meeting presentations

- **Massa A**, Fotia F, Boriani F, Granchi D, Baldini N. "*The dual role of hypoxia on Adipose Stem Cells (ASC)*". 13^{th}-16^{th} October 2013. "8th tri-annual Combined Meeting of Orthopaedic Research Societies", San Servolo, Venice, Italy. POSTER PRESENTATION.
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- 10^{th}-13^{th} June 2014. TERMIS EU Chapter, Genova, Italy.

- **Massa A**, Fotia F, Boriani F, Granchi D, Baldini N. "*THE HYPOXIC MICROENVIRONMENT IMPROVES THE OSTEOGENIC POTENTIAL OF ADIPOSE-DERIVED STEM CELLS (ASC)".* 10^{th}-11^{th} October 2014. IORS 2014, XVI Congresso Nazionale della Italian Orthopaedic Research Society, Ferrara, Italy. ORAL PRESENTATION

Areas of research

- Isolation and characterization of Mesenchymal Stem Cells (MSC) from different sources (bone marrow, adipose tissue and dental pulp).
- Osteogenic differentation of MSC.
- Investigation of stem cell niche features (oxygen tension and pH).
- Evaluation of Hemidesmus indicus effect (Ayurvedic medicinal plant) on MSC and osteoblast.
- CAM assay.

Technical skills

- *Cell cultures:*

  - Human mesenchymal stem cells derived from: adipose tissue, bone marrow, dental pulp.
  - Osteoblast clones isolation from human mesenchymal stem cells.
  - Osteoclasts isolation from human peripheral blood.
  - Hypoxic cell culture.
  - Osteosarcoma cell lines (Saos-2, MG63, HOS).
  - Sphere forming cells.

- *Cellular techniques:* cell differentiation (osteogenic, adipogenic and chondrogenic differentiation), sphere forming test, invasion assay, Alizarin Red, Von Kossa and Alkaline phosphatase staining, Oil Red O staining, Alcian blue, Alamar blue assay, Boyden chamber assay, Hematoxylin and eosin staining, immunocytochemistry, imaging.

- *Molecular biology techniques:* DNA and RNA extraction, electrophoresis, PCR, RT-PCR, quantitative RT-PCR (Real-Time), Western blotting, functional assays, ELISA.

Dr. Annamaria Massa