

GABRIELE SCATTINI

Pharmaceutical Biotechnology, PhD

Education and Training

2022 - Research fellow - Project title "Sviluppo e caratterizzazione morfo-funzionale di un modello biologico tridimensionale da impiegare nello studio in vitro di patologie umane e veterinarie", University of Perugia-IZSLER

2018 - 2022 - PhD in Health and Veterinary Experimental Sciences - Biotechnology Applied to Veterinary Science - University of Perugia. Thesis title "*Hacking Extracellular Vesicles: characterization and engineering of Mesenchymal Stromal Cells from canine adipose tissue aimed at the production of functionalized EVs*" (SSD VET-01)

2016 - 2018 - Master degree in Pharmaceutical Biotechnology (110/110 & L) - University of Perugia. Thesis title "Production of recombinant FVIII in *Nicotiana tabacum* for pharmaceutical uses" "Engineering of *Nicotiana tabacum* for recombinant FVIII synthesis for pharmaceutical uses"

2012 - 2016 - Bachelor degree in Biotechnology (110/110 & L) - University of Perugia. Thesis title "*CRISPR/Cas system: application and engineering in biomedical field*"

2012 - High school graduation - Biological institute ITAS "Giordano Bruno", PG

Research fields of interest

Regenerative medicine: stem cell biology, tissue engineering, gene and genome editing.

In-vitro preclinical models: cell-based assay, 3D-culture, organoids.

Biopharmaceutical: cell therapy, protein design and production, drug delivery, extracellular vesicles.

Teaching activity

- 2022 - Co-supervisor for experimental thesis "The secretome of horse adipose derived-MSC: in vitro evaluation of angiogenic potential"
- 2016, 2017, 2018, 2019, 2021 - Seminars for Pharmaceutical Biotechnology students "CRISPR/Cas system" (at the request of Prof. F. Fallarino, UniPG)
- 2018 - Seminars for Philosophy student "Biotechnology and bioethics" (at the request of Prof. L. Conti, UniPG)
- 2017 - Seminar for Pharmacy student "Cell therapy" (at the request of Prof. U. Grohmann, UniPG)
- 2017 - Lessons for biotechnology students "Amino acids metabolism and immune system" (training activity in "Molecular Immunology" course, Prof. K. Fettucciari, UniPG)

Honors and awards

- Award for the best short-presentation at annual congress SIGA-SIBV (Pisa, 2017)
- Awarded as a deserving student by Department of Pharmaceutical Sciences, UniPG (25/10/2018)

Publications

- 1) *Imaging extracellular vesicles by transmission electron microscopy: Coping with technical hurdles and morphological interpretation.* Pascucci L, Scattini G. *Biochimica et Biophysica Acta - General Subjects*, 2021, 1865(4), 129648.

Congresses participation

- SIBV-SIGA annual meeting, (2017; Pisa, Italy)
- 1°congresso: la medicina rigenerativa oggi: presente, futuro, campi di applicazione. (2019; Viterbo, Italy)
- GISM annual meeting (2019; Genova, Italy), (2022; Torino, Italy)
- ISEV International meeting (2021)
- SISVET (2021), (2022; Lodi, Italy)
- StemNet International meeting, (2021; Padova, Italy)

Congress Oral presentations

- SISVET 2021 - Scattini G, Musa L, Mecocci S, Ceccarini MR, Casagrande Proietti P, Capomaccio S, Bufalari A, Gialletti R, Barbato O, Avellini L, Beccari T, Pascucci L; *"Hacking Extracellular Vesicles": use of reporter protein to study the traffic of bio-molecules within extracellular vesicles*
- SISVET 2022 - Scattini G, Pellegrini M, Severi G, Pascucci L; *Mesenchymal Stromal Cells from canine adipose tissue comprise subpopulations characterized by time dependent binding affinity to culture plastic*
- GISM annual meeting 2022 - Scattini G, Pascucci L; *Mesenchymal Stromal Cell-derived Migrasomes: a morphological study*

Congress Oral presentations (not presenting author)

- Scientific Works. Series C. Veterinary Medicine. Vol. LXV (1), 2019 - Bufalari A, Crovace A, Di Meo A, Petrescu VF, Peteoaca A, Pascucci L, Scattini G, Del Sal B, Moretti G.; *Preliminary clinical evaluation of Mesenchymal Stromal Cell treatments for ununited anconeal process and Legg-Calve'-Perthes disease in dogs*

- SISVET 2022 - Toppi V, Scattini G, Musa L, Pascucci L, Chiaradia E, Tognoloni A, Franciosini MP, Casagrande Proietti P; *Role of Outer Membrane Vesicles (OMVs) from S. Infantis in antimicrobial resistance: evaluation of β -lactamase activity*

Invited lecture

- GismVet webinar - 14 December 2021 - "Attività anti-infiammatoria delle Cellule Mesenchimali Stromali (MSC) e le loro interazioni con il sistema Immunitario"

Congress Poster presentations

- SIBV-SIGA - Scattini G, De Marchis F, Bellucci M, Matino D, Fallarino F, Pompa A; *Expression of human FVIII coagulation factor in plant*
- StemNet 2021 - Scattini G, Pellegrini M, Severi G, Pascucci L; *Canine adipose-derived mesenchymal stromal cells display different adhesion times after isolation: a novel approach to improve cell yield or the evidence of distinct sub-populations?*
- StemNet 2021 - Scattini G, Musa L, Mecocci S, Ceccarini MR, Casagrande Proietti P, Capomaccio S, Bufalari A, Gialletti R, Barbato O, Avellini L, Beccari T, Pascucci L; *Hacking extracellular vesicles: exploring a method to load proteins of interest into extracellular vesicles from mesenchymal stromal cells*
- GISM 2022 - Scattini G, Pascucci L; *Mesenchymal Stromal Cell-derived Migrasomes: a morphological study*
- GISM 2022 - Scattini G, Boni P, Fruganti A, Dini F, Pascucci L; *Mesenchymal stromal cells for the treatment of cranial cruciate ligament rupture of dogs*

Scientific affiliation

- Since 2019, GISM member (Gruppo Italiano Staminali Mesenchimali)
- Since 2020, AMV member (Associazione Morfologi Veterinari)

Technical expertises

Cell Biology: cell isolation from various tissues, cell culture, cell analysis by Flow-Cytometry, cell analysis by microscopy techniques, cell-based assay (viability, migration, differentiation, toxicity), cell transfection, large scale expansion of MSC for clinical uses.

Molecular Biology: primer design, q-PCR, RT-PCR, cDNA cloning, DNA and RNA extraction, protein extraction-purification, Western Blotting, ELISA, Pulse-Chase labeling, recombinant protein production, protein engineering.

Histology: tissue and cell sample processing for light microscopy, histochemistry, immuno-istochemistry, immuno-fluorescence, scanning and transmission EM sample preparation, immunogold labeling.

3° Mission

MSCs isolation and production unit, Department of Veterinary Medicine, UniPG (<https://www.sviluppumbria.it/-/medicina-rigenerativa-veterinaria>)

Public communication

- Performer at Sharper European Researchers' Night (2017, 2018, 2019)
- Exhibit guide at "GubbioScienza" (1-6/07/2017), committed by Psiquadro
- Exhibit guide at "Bolle di sapone" (march-june 2019), committed by Psiquadro and Galleria Nazionale dell'Umbria
- Performer at Roma Science Van (29/05/2022), committed by Roma Culture

Perugia, 26/10/2022