



UNIVERSITÀ
DEGLI STUDI
DELL'AQUILA



DISCAB
Dipartimento di Scienze
Cliniche Applicate
e Biotecnologiche

CURRICULUM VITAE SIMONA POMPILI



PERSONAL INFORMATION	<p>Simona Pompili Department of Biotechnological and Applied Clinical Sciences Building "Angelo Camillo De Meis", Via Vetoio, Coppito, L'Aquila, 67100, Italy simona.pompili@univaq.it</p>
CURRENT POSITION	<p>Researcher (RtdB) in Human Anatomy (SSD BIO/16)</p>
<p>EDUCATION OTHER QUALIFICATIONS</p>	<ul style="list-style-type: none"> • 2017: PhD in "Experimental Medicine" (XXIX cycle). Scientific Disciplinary sector BIO/16, with the thesis entitled: "Role of the GSK-3 and PPAR-γ in the epithelial to mesenchymal transition in an experimental model of DSS-induced intestinal fibrosis". Department of Biotechnological and Applied Clinical Sciences - University of L'Aquila, Via Vetoio, Coppito 2, L'Aquila, Italy. • 2017: Advanced course in confocal microscopy, image acquisition and analysis. The FIRC Institute of Molecular Oncology (IFOM) Via Adamello, 16, 20139, Milan, Italy. • 2015: Advanced course for education in the laboratory animal science field. Technical and scientific evaluation for research proposal. Istituto Zooprofilattico Sperimentale dell'Abbruzzo e del Molise (IZSAM), Giuseppe Caporale, Campo Boario, Teramo, 64100, Italy. • 2014: Qualification to the Profession of Biologist, University of L'Aquila, Via Vetoio, Coppito 2, L'Aquila, Italy. • 2013: Master's Degree Course in Biology of Health and Nutrition with 110 and Iode. Department of Biotechnological and Applied Clinical Sciences - University of L'Aquila, L'Aquila, Italy. • 2013: Trainee at Institute of Translational Pharmacology, National Council of Research (CNR) Via Giosuè Carducci, 32, 67100, L'Aquila.
ACADEMIC APPOINTMENTS	<ul style="list-style-type: none"> • 2020-2029: National scientific qualification (ASN) for Associate Professor sector BIO/16, 05/H1. • 2021-2024: Researcher in Human Anatomy (SSD BIO/16), at the Human Anatomy Laboratory, Department of Biotechnological and Applied Clinical Sciences - University of L'Aquila, Via Vetoio, Coppito 2, L'Aquila, Italy. • 2020-2021: Research Fellow, in collaboration with Dompè Pharmaceutic, at the Human Anatomy Laboratory, Department of Biotechnological and Applied Clinical Sciences - University of L'Aquila, Via Vetoio, Coppito 2, L'Aquila, Italy. • 2017-2020: Post-Doc Fellow at the Human Anatomy Laboratory, Department of Anatomical, Histological, Forensic Medicine and Orthopedic Sciences, "La Sapienza" University of Rome, Italy.



UNIVERSITÀ
DEGLI STUDI
DELL'AQUILA



DISCAB
Dipartimento di Scienze
Cliniche Applicate
e Biotecnologiche



	<ul style="list-style-type: none">• 2014-2017: PhD studentship in “Experimental Medicine”, curriculum Medical Biotechnology - Department of Biotechnological and Applied Clinical Sciences - University of L’Aquila, Via Vetoio, Coppito 2, L’Aquila, Italy.• 2011-2013: Trainee-Thesis student at the Human Anatomy Laboratory, Department of Biotechnological and Applied Clinical Sciences - (ex-Experimental Medicine Department) - University of L’Aquila, Via Vetoio, Coppito 2, L’Aquila, Italy. Master’s Degree Course in Biology of Health and Nutrition.• 2006-2011: Trainee-Thesis student at the Human Anatomy Laboratory, Department of Biotechnological and Applied Clinical Sciences - (ex-Experimental Medicine Department) - University of L’Aquila, Via Vetoio, Coppito 2, L’Aquila, Italy. Degree Course in Biological Sciences.
--	--



TEACHING EXPERIENCE

- **2023-2024: Teaching assignment in Human Anatomy [DM0059], bachelor's degree in biotechnology**, University of L'Aquila.
- **2023-2024: Teaching assignment in Human Anatomy [B0018], bachelor's degree in human movement and sports science**, University of L'Aquila.
- **2023-2022: Teaching assignment in Human Anatomy [B0018], bachelor's degree in human movement and sports science**, University of L'Aquila.
- **2022-2021: Teaching assignment in Human Anatomy [B0018], bachelor's degree in human movement and sports science**, University of L'Aquila.
- **2018-2021: Honorary Fellow in Human Anatomy** - Scientific Disciplinary Sector BIO/16 - **master's degree course in Medicine and Surgery** - University of L'Aquila, Via Vetoio, Coppito 2, L'Aquila, Italy.
- **2016-2021: Honorary fellow in Human Anatomy** - Scientific Disciplinary Sector BIO/16 – **bachelor's degree courses in medical field** (6 courses) and Physical Education, University of L'Aquila, Via Vetoio, Coppito2, L'Aquila, Italy.
- **2014-2017: Theoretical and practical lessons of Human Anatomy**- Scientific Disciplinary Sector BIO/16, in the role of PhD student and honorary fellow at **bachelor's degree courses in medical field** (6 courses) and Physical Education, University of L'Aquila, L'Aquila, Italy.

RESEARCH ACTIVITIES

- The Research activity is focused on several biomedical topics, mainly on the characterization of *digestive tract and hepatic parenchyma*. In particular:**
- Evaluation of **morphological and functional alterations of digestive tract in experimental models of colitis** (trinitrobenzene sulfonic acid and dextran sodium sulfate) **and in patients** suffering from inflammatory bowel diseases (IBD).
 - Evaluation of the **TGF- β involvement in the onset and progression of fibrotic processes affecting intestinal wall**, though the characterization of its canonical (Smads) and non-canonical (i.e. S1P, AGE, MAPKs) pathways.
 - Evaluation of **TGF- β antagonists** (i.e. GED-0507-34 Levo) **as potential pharmacological target** for the management of **intestinal fibrosis**.
 - Evaluation of **hepatic parenchyma modification** following the administration of hyperglucidic and lipidic diets **in experimental models of non-alcoholic fatty liver diseases/non-alcoholic steatohepatitis (NAFL/NASH)**.
 - Evaluation of **del G-protein coupled receptor 120 agonist**, as possible therapeutic target in the **treatment of liver fibrosis**.
 - Evaluation of **intestinal wall degeneration** following the administration of hyperlipidic diets **in experimental model of metabolic alteration**.



	<p>Other Research fields:</p> <ul style="list-style-type: none"> • Evaluation of several pathways in the pathogenesis of brain tumors in experimental murine models and patients, and identification of potential pharmacological targets. • Evaluation of several pathways in the pathogenesis of prostatic tumors in experimental murine models and patients, and identification of potential pharmacological targets. • Morphological, immunohistochemical and immunofluorescent evaluations of molecules involved in the onset and development of fibrosis affecting the pelvic organs. • Evaluation of morphological and molecular alterations in the pathogenesis of nasal polyposis. <p>Principal collaborations with others research groups:</p> <ul style="list-style-type: none"> • Participation to the Research proposal entitled: "Evaluation of the efficacy of new agonists of GPR-120 receptor in intestinal and hepatic inflammatory and metabolic alterations induced by Western-style diet (hyperlipidic and hyperglycemic) in mice, founded by Dompè Pharmaceuticals. • Participation to the Research proposal entitled: "Olive phenols as multifunctional bioactives for healthier foods: evaluation of simplified formulation to obtain safe meat products and new foods with higher functionality" (PRIN 2015). • Participation to Research project entitled: "Morphological and functional alteration of intestinal wall in patients suffering from diabetes mellitus: role of TGF beta/Smads/AGEs pathways. • Participation to Research project entitled: "The role of MAPKs, TGF beta/Smads signaling and AGEs in the pathogenesis of nasal polyposis. • Participation to Research project entitled: "The role of the AGEs in the epithelial to mesenchymal transition in patients suffering from Inflammatory Bowel Disease. • Participation to Research project (PROG-100) entitled: "Evaluation of intestinal hepatic and aortic inflammation and fibrosis in mice subjected to hyperlipidic diets. • Participation to Research project entitled: "Immunohistochemical evaluations and prognostic value of different isoforms of HDACs in high grade gliomas. • Participation to Research project entitled: "Alteration of vascular wall in the lower limbs of patients suffering from prolapse of genital organs: clinical and morphological evaluations".
<p>RESPONSIBILITY IN ACADEMIC ACTIVITIES</p>	<p>• 2023: Member of Internationalization Committee at the Department of Biotechnological and Applied Clinical Sciences.</p>



UNIVERSITÀ
DEGLI STUDI
DELL'AQUILA



DISCAB
Dipartimento di Scienze
Cliniche Applicate
e Biotecnologiche



	<ul style="list-style-type: none"> • 2023: Member of the teaching board of the PhD course in Experimental Medicine (XXXIX cycle), at the Department of Biotechnological and Applied Clinical Sciences. • 2022: Member of Student Affairs Committee of bachelor's degree in human movement (L22), at the Department of Biotechnological and Applied Clinical Sciences. • 2016: Participation with the pop-up shop at the Univaq street science "the Research in the centre", at the Department of Human Sciences, Viale Duca degli Abruzzi, L'Aquila. • 2015: Participation with the researcher pop up shop at the Sharper, European Researchers' Night, at the Palazzetto dei nobili, L'Aquila.
<p>EDITORIAL BOARD, EDITORIAL ACTIVITIES, SOCIETY MEMBERSHIP</p>	<ul style="list-style-type: none"> • Guest Editor in the Special issue "Extracellular Vesicles as Means of the Activation, Metabolic Change Induction, and Remodeling of the Tumor Microenvironment". <i>Frontiers in Oncology</i>. • Reviewer of International Scientific journals with medium and high impact factor (Life, Antioxidant, Pharmaceuticals). • Member of Italian Society of Anatomy and Histology (Società Italiana di Anatomia e Istologia, SIAI). • Member of Italian Society of Histochemistry (Società Italiana di Istochimica, SII).
<p>SCIENTIFIC ACHIEVEMENTS BIBLIOMETRIC INDICATORS</p>	<p>Scopus Author ID: 55211558500; Wos Researcher ID: AAL-2988-2021. http://orcid.org/0000-0001-8628-1517.</p>
<p>SELECTED PUBLICATIONS</p>	<ul style="list-style-type: none"> • Pompili S, Vetuschi A, Latella G, Smakaj A, Sferra R, Cappariello A. PPAR-Gamma Orchestrates EMT, AGE, and Cellular Senescence Pathways in Colonic Epithelium and Restrains the Progression of IBDs. <i>Int J Mol Sci</i>. 2023 May 18;24(10):8952. doi: 10.3390/ijms24108952. PMID: 37240299; PMCID: PMC10219383. • Vernia F, Tatti T, Necozone S, Capannolo A, Cesaro N, Magistroni M, Valvano M, Pompili S, Sferra R, Vetuschi A, Latella G. Is mastocytic colitis a specific clinical-pathological entity? <i>Eur J Histochem</i>. 2022 Nov 28;66(4). doi: 10.4081/ejh.2022.3499. • Pompili S, Vetuschi A, Sferra R, Cappariello A. Extracellular Vesicles and Resistance to Anticancer Drugs: A Tumor Skeleton Key for Unhinging Chemotherapies. <i>Front Oncol</i>. 2022 Jun 23; 12:933675. doi: 10.3389/fonc.2022.933675. • Vetuschi A, Cappariello A, Onori P, Gaudio E, Latella G, Pompili S*, Sferra R. Ferroptosis resistance cooperates with cellular senescence in the overt stage of nonalcoholic fatty liver disease/nonalcoholic steatohepatitis. <i>Eur J Histochem</i>. 2022 Jun 21;66(3):3391. doi: 10.4081/ejh.2022.3391. * Equally contributed as last author. • Sferra R*, Pompili S*, Cappariello A, Gaudio E, Latella G, Vetuschi A.



Prolonged Chronic Consumption of a High Fat with Sucrose Diet Alters the Morphology of the Small Intestine. *Int J Mol Sci.* 2021 Jul 6;22(14):7280. doi: 10.3390/ijms22147280. PMID: 34298894; PMCID: PMC8303301. *
Equally contributed as first author.

- **Pompili S**, Latella G, Gaudio E, Sferra R, Vetuschi A. The Charming World of the Extracellular Matrix: A Dynamic and Protective Network of the Intestinal Wall. *Frontiers in Medicine.* (Lausanne). 2021 Apr 16; 8:610189. doi: 10.3389/fmed.2021.610189. PMID: 33937276; PMCID: PMC8085262.
- Vetuschi A, Battista N, **Pompili S***, Prete R, Taticchi A, Selvaggini R, Latella G, Corsetti A, Sferra R. The Anti-inflammatory and anti-fibrotic effect of olive phenols and *Lactiplantibacillus plantarum* IMC513 in dextran sodium sulfate (DSS)-induced chronic colitis. *Nutrients.* Submitted.
(*Corresponding author).
- **Pompili S**, Vetuschi A, Gaudio E, Tessitore A, Capelli R, Alesse E, Latella G, Sferra R, Onori P. Long-term abuse of a high-carbohydrate diet is as harmful as a high-fat diet for development and progression of liver injury in a mouse model of NAFLD/NASH. *Nutrition.* 75–76: 110782.
- Vetuschi A, **Pompili S**, Di Marco GP, Calvaruso F, Iacomino E, Angelosante L, Festuccia C, Colapietro A, Sferra R. Can the AGE/RAGE/ERK signalling pathway and the epithelial-to-mesenchymal transition interact in the pathogenesis of chronic rhinosinusitis with nasal polyps? *Eur J Histochem.* 10; 64(1): 3079.
- Gravina GL, Mancini A, Colapietro A, Delle Monache S, Sferra R, Pompili S, Vitale F, Martellucci S, Marampon F, Mattei V, Biordi L, Sherris D, Festuccia C. The Brain Penetrating and Dual TORC1/TORC2 Inhibitor, RES529, Elicits Anti-Glioma Activity and Enhances the Therapeutic Effects of Anti-Angiogenetic Compounds in Preclinical Murine Models. *Cancers (Basel).* 21;11(10). pii: E1604.
- Varrassi M, Sferra R, Gravina GL, **Pompili S**, Fianza RC, Ventura M, Splendiani A, Barile A, Vetuschi A, Di Cesare E. Carotid Artery Plaque Characterization with a Wide-Detector Computed Tomography Using a Dedicated Post-Processing 3D Analysis: Comparison with Histology. *Radiol. Med.* 124(9):795-803. doi: 10.1007/s11547-019-01026-8.
- **Pompili S**, Sferra R, Gaudio E, Viscido A, Frieri G, Vetuschi A, Latella G. Can Nrf2 Modulate the Development of Intestinal Fibrosis and Cancer in Inflammatory Bowel Disease? *Int J Mol Sci.* 20(16). pii: E4061.
- Sferra R, **Pompili S***, D'Alfonso A, Sabetta G, Gaudio E, Carta G, Festuccia C, Colapietro A, Vetuschi A. Neurovascular alterations of muscularis propria in the human anterior vaginal wall in pelvic organ prolapse. *Journal of Anatomy.* 235, 281-288. **(* the authors equally contributed).**
- Mancinelli R, Mammola C.L, Sferra R, **Pompili S**, Vetuschi A, Pannarale L. Role of the angiogenic factors in cholangiocarcinoma. *Applied Sciences (Switzerland)* 9:7, 1393.
- Vetuschi A, **Pompili S**, Gaudio E, Latella G, Sferra R. PPAR-γ with its anti-



inflammatory and anti-fibrotic action could be an effective therapeutic target in IBD. *Eur Rev Med Pharmacol Sci.* 22(24):8839-8848. doi: 10.26355/eurrev_201812_16652.

- Sferra R*, **Pompili S***, Ventura L, Dubuquoy C, Specca S, Gaudio E, Latella G, Vetuschi A. Interaction between sphingosine kinase/sphingosine 1 phosphate and transforming growth factor- β /Smads pathways in experimental intestinal fibrosis. An in vivo immunohistochemical study. *Eur J Histochem.* 31;62(3). doi: 10.4081/ejh.2018.2956. (*** the authors equally contributed**).
- Vetuschi A*, **Pompili S***, Gallone A, D'Alfonso A, Carbone MG, Carta G, Festuccia C, Gaudio E, Colapietro A, Sferra R (2018). Immunolocalization of Advanced Glycation End Products, Mitogen Activated Protein Kinases, and Transforming Growth Factor- β /Smads in Pelvic Organ Prolapse. *J Histochem Cytochem.* 66(9):673-686. doi: 10.1369/0022155418772798. (*** the authors equally contributed**).
- Mancini A, Colapietro A, **Pompili S**, Del Fattore A, Delle Monache S, Biordi LA, Angelucci A, Mattei V, Liang C, Gravina GL, Festuccia C. Dual PI3 K/mTOR inhibition reduces prostate cancer bone engraftment altering tumor-induced bone remodeling. *Tumour Biol.* 40(4):1010428318771773. doi: 10.1177/1010428318771773.
- Festuccia C, Mancini A, Colapietro A, Gravina GL, Vitale F, Marampon F, Delle Monache S, **Pompili S**, Cristiano L, Vetuschi A, Tombolini V, Chen Y, Mehrling T. The first-in-class alkylating deacetylase inhibitor molecule tinostamustine shows antitumor effects and is synergistic with radiotherapy in preclinical models of glioblastoma. *J Hematol Oncol.* 11(1):38. doi: 10.1186/s13045-018-0587-3.
- Gravina GL, Mancini A, Colapietro A, Marampon F, Sferra R, **Pompili S**, Biordi LA, Iorio R, Flati V, Argueta C, Landesman Y, Kauffman M, Shacham S, Festuccia C. Pharmacological treatment with inhibitors of nuclear export enhances the antitumor activity of docetaxel in human prostate cancer. *Oncotarget.* 30;8(67):111225-111245. doi: 10.18632/oncotarget.22760.
- Tessitore A, Mastroiaco V, Vetuschi A, Sferra R, **Pompili S**, Ciccarelli G, Bernabei R, Capece D, Zazzeroni F, Capalbo C, Alesse E. Development of hepatocellular cancer induced by long term low fat-high carbohydrate diet in a NAFLD/NASH mouse model. *Oncotarget.*
- Sferra R, **Pompili S**, Festuccia C, Marampon F, Gravina GL, Ventura L, Di Cesare E, Cicchinelli S, Gaudio E, Vetuschi A. The possible prognostic role of histone deacetylase and transforming growth factor β /Smad signaling in high grade gliomas treated by radio-chemotherapy: a preliminary immunohistochemical study. *Eur J Histochem* 2017 61(2): 69-105. doi: 10.4081/ejh.2017.2732.
- Marampon F, Megiorni F, Camero S, Crescioli C, McDowell HP, Sferra R, Vetuschi A, **Pompili S**, Ventura L, De Felice F, Tombolini V, Dominici C, Maggio R, Festuccia C, Gravina GL. HDAC4 and HDAC6 sustain DNA double strand break repair and stem-like phenotype by promoting



radioresistance in glioblastoma cells. *Cancer Lett.* 1: 397:1-11. doi: 10.1016/j.canlet.2017.03.028. PMID: 28342984.

- Di Gregorio J, Sferra R, Specca S, Vetuschi A, Dubuquoy C, Desreumaux P, **Pompili S**, Cristiano L, Gaudio E, Flati V, Latella G. Role of glycogen synthase kinase-3 β and PPAR- γ on epithelial-to-mesenchymal transition in DSS- induced colorectal fibrosis. *PLoS One.* 16;12(2): e0171093. doi: 10.1371/journal.pone.0171093. eCollection 2017. PMID:28207769.
- Sferra R, Vetuschi A, **Pompili S**, Gaudio E, Specca S, Latella G. Expression of pro-fibrotic and anti-fibrotic molecules in dimethylnitrosamine-induced hepatic fibrosis. *Pathol Res Pract.* 213(1):58-65. doi: 10.1016/j.prp.2016.11.004. Epub 2016 Nov 11. PMID: 27894619.
- Vetuschi A, D'Alfonso A, Sferra R, Zanelli D, Pompili S, Patacchiola F, Gaudio E, Carta G. Changes in muscularis propria of anterior vaginal wall in women with pelvic organ prolapse. *Eur J Histochem.* 60(1):2604. doi: 10.4081/ejh.2016.2604. PMID: 26972719.
- Marampon F, Gravina G, Ju X, Vetuschi A, Sferra R, Casimiro M, **Pompili S**, Festuccia C, Colapietro A, Gaudio E, Di Cesare E, Tombolini V, Pestell RG. Cyclin D1 silencing suppresses tumorigenicity, impairs DNA double strand break repair and thus radiosensitizes androgen-independent prostate cancer cells to DNA damage. *Oncotarget.* (5):5383-400. doi: 10.18632/oncotarget.
- Gravina GL, Mancini A, Muzi P, Ventura L, Biordi L, Ricevuto E, **Pompili S**, Mattei C, Di Cesare E, Jannini EA, Festuccia C. CXCR4 pharmacological inhibition reduces bone and soft tissue metastatic burden by affecting tumor growth and tumorigenic potential in prostate cancer preclinical models. *Prostate.* 75(12):1227-46. doi: 10.1002/pros.23007. Epub 2015 Jun 12. PMID: 26073897.
- Vetuschi A, Latella G, **Pompili S**, Gaudio E, Sferra R. Features of intestinal lesions in the clinical course of inflammatory bowel diseases. *Ital J Anat Embryol.* 119(3):286-303. Review. PMID:26749690.
- Sferra R, Vetuschi A, Catitti V, Ammanniti S, **Pompili S**, Melideo D, Frieri G, Gaudio E, Latella G. *Boswellia serrata* and *Salvia miltiorrhiza* extracts reduce DMN-induced hepatic fibrosis in mice by TGF-beta1 downregulation. *Eur Rev Med Pharmacol Sci.* 16(11):1484-98. PMID: 23111960.