

PERSONAL INFORMATIONS

Federica Campolo, PhD

POSITION

Assistant Professor (RTD/A - SSD/MED46)

AFFILIATION

Department of Experimental Medicine, "La Sapienza" University of Rome, Viale Regina Elena 324, 00161 Rome, Italy

RESEARCH ACTIVITY

- **October 2022 - actually:** Researcher of the Department of Experimental Medicine, "La Sapienza" University of Rome. Project title: "*Highlights on the fate of endogenous and exogenous glucocorticoids by liquid chromatography/mass spectrometry. Untangling the metabolic pathways to predict cardiovascular and immune outcomes*"

- **February 2020 – March 2022:** Research fellow of the Department of Experimental Medicine, "La Sapienza" University of Rome. Project title: "*Identification of new biomarkers and clinical determinants for management of pituitary tumor related syndromes patients*".

- **April 2018 - December 2019:** Collaborator of the Department of Experimental Medicine, "La Sapienza" University of Rome. Project title: "*Type 2 Diabetes and glucose metabolism disorders physiopathology*".

- **April 2016 - March 2018:** Research Scientist at the Oncology Unit of IRBM Science Park, Pomezia, Italy. The research activity was focused on "*Epigenetic drugs discovery*."

- **April 2015 - March 2016:** Research fellow of the Department of Experimental Medicine, "La Sapienza" University of Rome. Project title: "*Development and characterization of Phosphodiesterase type 5 (PDE5) knock out mouse models*".

- **February 2013 – January 2015:** Research fellow of the Department of Experimental Medicine, "La Sapienza" University of Rome. Project title: "*Identification of the role of Sox2 and c-Kit in cardiac regeneration after myocardial hypertrophy*".

- **November 2009 – January 2013:** PhD student of the XXV PhD Program in Sciences and Biotechnologies of Developmental and Reproductive Biology at the Department of Biomedicine and Prevention of "Tor Vergata" University of Rome. Project title: "*Identification of the role of Kit^{D814Y} mutation in the genesis of cancer revealed by a knock-in mouse model and identification of the role of Sox2 in early embryo development*".

- **September 2007 – October 2009:** Thesis student (Master Degree) at the Department of Life Sciences and Public Health of the Catholic University of Rome. Project title: "*Identification of a new marker of chemoresistance in the ovarian cancer*".

- **September 2006 – July 2007:** Thesis student (Three-year Degree) at the Department of Life Sciences and Public Health of the Catholic University of Rome. Project title: "*An association study between autism and the related chromosomic region 15q11- q13*".

EDUCATION

- **22/01/2013:** XXV PhD Program in Sciences and Biotechnologies of Developmental and Reproductive Biology at the Department of Biomedicine and Prevention of "Tor Vergata" University of Rome".

- **15/10/2009:** Master Degree in Medical Biotechnologies, highest honor, Catholic University of Rome, Italy.

- **26/07/2007**: Three-years Degree in Health Biotechnologies, highest honor, Catholic University of Rome, Italy.

PERSONAL SKILLS

Languages Italian (mother tongue), English, French

DIGITAL SKILLS

Familiar with the following softwares/browsers: Windows OS, Mac OS, Microsoft Office, Adobe Illustrator, GraphPad, SPSS, ImageJ, Adobe Photoshop, Vector NTI, SnapGene, Zen (Zeiss), Metamorph (Nikon), Blast, Miranda, Target Scan, Swiss Prot, Ensemble, Expasy, UCSC genome browser.

COURSES

- **QX200 Droplet Digital PCR Detection System and QuantaSoft Analysis Software**
BioRad Laboratories Inc. – Hercules, CA, USA
15-9-2016
- **Mouse genetics: models for human disease**
ICGEB – Trieste, ITA
8/11-4-2013
- **Sicurezza sul lavoro: Lavoratori Rischio Basso - ESAARCO**
IRBM Science Park – Pomezia – ITA
30-11-2016
- **INCell Analyzer 2000 System**
GE Healthcare – Chicago – USA
13-02-2017

Driving Licenses

A, B

OTHER INFORMATIONS

Scientific societies affiliation

Active member and participant to the activities of “Società Italiana Ricerca Traslazionale E Professioni Sanitarie” (SIRTEPS)
Active member and participant to the activities of “Società Italiana di Andrologia e Medicina della Sessualità” (SIAMS)
Active member and participant to the activities of “Neuroendocrine Tumors Innovation Knowledge and Education” (NIKE) Project

Editorial committees membership

Guest Editor *Cancers*
Guest Editor *Frontiers in Biosciences Landmark*
Guest Editor *Frontiers in Endocrinology*
Reviewer *Journal of Endocrinology*
Reviewer *International Journal of Molecular Sciences*
Reviewer *Life*
Reviewer *Cell Biology*
Reviewer *Cancers, Antioxidant*
Reviewer *Biomedicine*
Reviewer *Biology*
Reviewer *Biomedicine*
Reviewer *Journal of Translational Medicine*

Grants and awards

PI of the funded project “Role of Phosphodiesterase 5 in metabolic alterations induced by exposure to Bisphenol A.?” - **2023** Bando per la Ricerca di Ateneo - La Sapienza University of Rome

PI of the funded project “Understanding the Origin and Behavior of Ectopic Lipids eXcess depots: the OBELIX study” **2022** PRIN (P2022CE79J)

PI of the funded project "Priming metabolism with phosphodiesterases: any role for Phosphodiesterase 5? - **2022** Bando Seed PNRR - MIUR

PI of the funded project "Role of Phosphodiesterase 5 in the physiopathology of adipose tissue" - **2021** Bando per la Ricerca di Ateneo - La Sapienza University of Rome

PI of the funded project "Role of cAMP-specific Phosphodiesterase 8 in Leydig cell tumors" **2020** Bando per la Ricerca di Ateneo – La Sapienza University of Rome

Participant of the funded project "Study of the molecular mechanisms involved in the control of the initial stages of human spermatogenesis and of the role played by the sperm factor TR-KIT in male fertility" **2009** PRIN (2009FW5SP3_001) PI. Prof. Pellegrino Rossi

Teaching activity

Lecturer for the master's degree course in Medicine and Surgery Policlinico Umberto I – Teaching Pre-Clinical Scientific Medical Methodology II – A.Y. 2022/2023 – La Sapienza University of Rome

Subject expert for the degree course in "Biomedical laboratory techniques" - Teaching "The quality of biomedical services - Organization and regulations of the profession - A.Y. 2020/2021 – La Sapienza University of Rome

Tutor for the PhD Course in Endocrinological Sciences A.Y 2020/2021 – La Sapienza University of Rome

National/International conferences/meetings attendance

Participation in oral communication and poster presentation in more than 20 national conferences e 5 international conferences

Invited lectures

22/23-11-2019 "Meccanismi molecolari dell'infertilità". 2nd national conference meeting AndroYoung Società Italiana di Andrologia e Medicina della Sessualità – Firenze -ITA

Prizes, awards, scholarships and nominations received for the research activity

September 2022 – actually Assistant Professor SSD MED/46 (*DR 2661/2022*) – Department of Experimental Medicine –La Sapienza University of Rome – Italy

April 2021 – March 2022 Research Fellow - Department of Experimental Medicine –La Sapienza University of Rome – Italy

February 2020 – March 2021 Research Fellow - Department of Experimental Medicine –La Sapienza University of Rome – Italy

April 2016 – March 2018 Research Scientist – Oncology Unit – IRBM Science Park – Pomezia – Italy

April 2015 – March 2016 Research Fellow - Department of Experimental Medicine –La Sapienza University of Rome – Italy

February 2013 – January 2015 Research Fellow - Department of Experimental Medicine –La Sapienza University of Rome – Italy

2012 EMBO-EMBL Symposium "Germline: Immortality through totipotency" Travel Grant n°18968

Editorial activity

Italian Edition of the book "Principles of Human Anatomy" 12th edition, Gerard J. Tortora and Mark T. Nielsen (chapters 10,13), Casa Editrice Ambrosiana ISBN: 978-88-08-18486-3.

Scientific production

46 lavori; H-index **15**; Citazioni totali **671** (Scopus)

Palmisano B., Farinacci G., **Campolo F.**, Tavanti C., Stefano A., Donsante S., Ippolito E., Giannicola G., Venneri M.A., Corsi A. and Riminucci M. "A pathogenic role for brain-derived neurotrophic factor (BDNF) in fibrous dysplasia of bone."
(2024) Bone

Leopizzi M., Mundo L., Messina E., **Campolo F.**, Lazzi S., Angeloni A., Marchese C., Leoncini L., Giordano C., Slack F. and Trivedi P. "Epstein-Barr virus-encoded EBNA2 downregulates ICOSL by inducing miR-24 in B-cell lymphoma".
(2024) Blood

Fanciulli G., La Salvia A., Di Molfetta S., Cannavale G., Puliani G., Verrico M., **Campolo F.**, Colao A. Faggiano A.; NIKE Group. "Predictive Factors of Response to Streptozotocin in Neuroendocrine Pancreatic Neoplasms"
(2023) Journal of Clinical Medicine

Campolo, F., Sesti F., Feola T., Puliani G., Faggiano A., Tarsitano MG., Tenuta M., Hasenmajer V., Ferretti E., Verrico M., Gianfrilli D. and Venneri, M.A., Isidori A.M and Giannetta E. "Platelet-derived circRNAs signature in patients with gastroenteropancreatic neuroendocrine tumors".
(2023) Journal of Translational Medicine

Tenuta M., Pandozzi C., Sciarra F., **Campolo, F.**, Gelibter A., Sirgiovanni G., Cortesi E., Lenzi A., Isidori A.M., Sbardella E. and Venneri, M.A. "Circulating Natural Killer Cells as Prognostic Value for Non-Small-Cell Lung Cancer Patients Treated with Immune Checkpoint Inhibitors: Correlation with Sarcopenia".
(2023) Cancers

Sciarra, F., Franceschini, E., **Campolo, F.** and Venneri, M.A. "The Diagnostic Potential of the Human Blood Microbiome: Are We Dreaming or Awake?".
(2023) International Journal of Molecular Sciences

Campolo, F., Assenza, M.R., Venneri, M.A., Barbagallo, F. "Once upon a Testis: The Tale of Cyclic Nucleotide Phosphodiesterase in Testicular Cancers".
(2023) International Journal of Molecular Sciences

Sciarra, F., **Campolo, F.**, Franceschini, E., Carlomagno, F., Venneri, M.A. "Gender-Specific Impact of Sex Hormones on the Immune System".
(2023) International Journal of Molecular Sciences

Vitale G., Carra S., Alessi Y. **Campolo F.**, Pandozzi C., Zanata I. Colao A. Faggiano A.; NIKE Group. "Carcinoid Syndrome: Preclinical Models and Future Therapeutic Strategies"
(2023) International Journal of Molecular Sciences

De Arcangelis V., De Angelis L., Barbagallo F., **Campolo F.**, De Oliveira do Rego A., Pellegrini M., Naro F., Giorgi M. and Monaco L.
"Phosphodiesterase 5a Signalling in Skeletal Muscle Pathophysiology"
(2023) International Journal of Molecular Sciences

Tozzi R.*, **Campolo F.***, Baldini E., Venneri M.A, Lubrano C., Ulisse S., Gnessi L. and Mariani S.
"Ketogenic Diet Increases Serum and White Adipose Tissue SIRT1 Expression in Mice"
(2022) International Journal of Molecular Sciences

Sesti, F., Puliani, G., Feola, T., **Campolo, F.**, Sciarra F., Hasenmajer V. Lenzi A., Faggiano A., Isidori, A.M., Venneri M.A., Giannetta, E.,
"Characterization of circulating immune cells and correlation with Tie2/Angiopoietins level in well differentiated neuroendocrine gastroenteropancreatic tumors: a cross-sectional analysis".
(2022) Endocrine

Campolo F.*, Capponi C.* , Tarsitano M.G., Tenuta M., Pozza C., Gianfrilli D., Magliocca F.M., Venneri M.A., Vicini E., Lenzi A., Isidori A.M. and Barbagallo F.
"cAMP-specific phosphodiesterase 8A and 8B isoforms are differentially expressed in human testis and Leydig cell tumor"
(2022) Frontiers in Endocrinology

Ruggeri RM, Benevento E, De Cicco F, Fazzalari B, Guadagno E, Hasballa I, Tarsitano MG, Isidori AM, Colao A, Faggiano A; **NIKE Group.**
"Neuroendocrine neoplasms in the context of inherited tumor syndromes: a reappraisal focused on targeted therapies".

(2022) Journal of Endocrinological Investigation

Fanciulli G., Modica R., La Salvia A., **Campolo F.**, Florio T., Mikovic N., Plebani A., Di Vito V., Colao A., Faggiano A.

"Immuno-therapy of Neuroendocrine Neoplasms: Any Role for the Chimeric Antigen Receptor T Cells?"

(2022) Cancers

Cardarelli S., Miele A.E., **Campolo F.**, Massimi M., Mancini P., Biagioni S., Naro F., Giorgi M., Saliola M.

"Cellular Redox Metabolism Is Modulated by the Distinct Localization of Cyclic Nucleotide Phosphodiesterase 5A Isoforms"

(2022) International Journal of Molecular Sciences

Pofi, R., Giannetta, E., Feola, T., Galea, N., Barbagallo, F., **Campolo, F.**, Badagliacca, R., Barbano, B., Ciolina, F., Defeudis, G., Filardi, T., Sesti, F., Minnetti, M., Vizza, C.D., Pasqualetti, P., Caboni, P., Carbone, I., Francone, M., Catalano, C., Pozzilli, P., Lenzi, A., Venneri, M.A., Gianfrilli, D., Isidori, A.M.

"Sex-specific effects of daily tadalafil on diabetic heart kinetics in RECOGITO, a randomized, double-blind, placebo-controlled trial".

(2022) Science Translational Medicine

Puliani, G., Sesti, F., Anastasi, E., Verrico, M., Tarsitano, M.G., Feola, T., **Campolo, F.**, Di Gioia, C.R.T., Venneri, M.A., Angeloni, A., Appetecchia, M., Lenzi, A., Isidori, A.M., Faggiano, A., Giannetta, E., Alvaro, D., Anastasi, E., Angeloni, A., Bagni, O., Bangrazi, C., Bassi, M., Bezzi, M., Bulzonetti, N., Cantisani, V., Caronna, R., Casella, G., Catalano, C., Centello, R., Cortesi, E., D'Ambrosio, F., Della Rocca, C., De Santis, A., Di Gioia, C.R.T., Di Vito, V., Feola, T., Gianfrilli, D., Genco, A., Giannetta, E., Iafrate, F., Isidori, A.M., Marchetti, P., Maccioni, F., Molino, A., Muscaritoli, M., Pandozzi, C., Puliani, G., Severi, C., Tomao, S., Tombolini, V., Venuta, F., Verrico, M., Nettare Unit

"Angiogenic factors as prognostic markers in neuroendocrine neoplasms".

(2022) Endocrine

Degjoni, A., **Campolo, F.**, Stefanini, L., Venneri, M.A.

"The NO/cGMP/PKG pathway in platelets: The therapeutic potential of PDE5 inhibitors in platelet disorders".

(2022) Journal of Thrombosis and Haemostasis.

Campolo, F.*, Catanzaro G.*, Venneri, M.A., Ferretti, E., Besharat, Z.M.

"MicroRNA loaded edible nanoparticles: an emerging personalized therapeutic approach for the treatment of obesity and metabolic disorders".

(2022) Theranostics.

Muscogiuri, G., Barrea, L., **Campolo, F.**, Sbardella, E., Sciammarella, C., Tarsitano, M.G., Bottiglieri, F., Colao, A., Faggiano, A., on behalf of NIKE

"Ketogenic diet: a tool for the management of neuroendocrine neoplasms?".

(2022) Critical Reviews in Food Science and Nutrition.

Tenuta, M., Gelibter, A., Pandozzi, C., Sirgiovanni, G., **Campolo, F.**, Venneri, M.A., Caponnetto, S., Cortesi, E., Marchetti, P., Isidori, A.M., Sbardella, E.

"Impact of sarcopenia and inflammation on patients with advanced non-small cell lung cancer (Ncsl) treated with immune checkpoint inhibitors (icis): A prospective study".

(2021) Cancers.

Campolo, F., Pofi, R., Venneri, M.A., Isidori, A.M.

"Priming metabolism with the type 5 phosphodiesterase: the role of cGMP-hydrolyzing enzymes".

(2021) Current Opinion in Pharmacology.

De Felici, M., Klinger, F.G., **Campolo, F.**, Balistreri, C.R., Barchi, M., Dolci, S.

"To be or not to be a germ cell: The extragonadal germ cell tumor paradigm".

(2021) International Journal of Molecular Sciences.

Pofi, R., Giannetta, E., Galea, N., Francone, M., **Campolo, F.**, Barbagallo, F., Gianfrilli, D., Venneri, M.A., Filardi, T., Cristini, C., Antonini, G., Badagliacca, R., Frati, G., Lenzi, A., Carbone, I., Isidori, A.M.

"Diabetic Cardiomyopathy Progression is Triggered by miR122-5p and Involves Extracellular Matrix: A 5-Year Prospective Study".

(2021) JACC: Cardiovascular Imaging.

Croci, S., Venneri, M.A., Mantovani, S., Fallerini, C., Benetti, E., Picchiotti, N., **Campolo, F.**, Imperatore, F., Palmieri, M., Daga, S., Gabbi, C., Montagnani, F., Beligni, G., Farias, T.D.J., Carriero, M.L., Di Samo, L., Alaverdian, D., Aslaksen, S., Cubellis, M.V., Spiga, O., Baldassarri, M., Fava, F., Norman, P.J., Frullanti, E., Isidori, A.M., Amoroso, A., Mari, F., Furini, S., Mondelli, M.U., GEN-COVID multicenter study, Chiariello, M., Renieri, A., Meloni, I.

"The polymorphism L412F in TLR3 inhibits autophagy and is a marker of severe COVID-19 in males"

(2021) Autophagy.

Isidori, A.M., Giannetta, E., Pofi, R., Venneri, M.A., Gianfrilli, D., **Campolo, F.**, Mastroianni, C.M., Lenzi, A., d'Ettore, G.

"Targeting the NO-cGMP-PDE5 pathway in COVID-19 infection. The DEDALO project"

(2021) Andrology.

Cesarini, V., Guida, E., **Campolo, F.**, Crescioli, C., Di Baldassarre, A., Pisano, C., Balistreri, C.R., Ruvolo, G., Jannini, E.A., Dolci, S.

"Type 5 phosphodiesterase (PDE5) and the vascular tree: From embryogenesis to aging and disease"

(2020) Mechanisms of Ageing and Development.

Sciarra, F., Franceschini, E., **Campolo, F.**, Gianfrilli, D., Pallotti, F., Paoli, D., Isidori, A.M., Venneri, M.A.

"Disruption of circadian rhythms: A crucial factor in the etiology of infertility"

(2020) International Journal of Molecular Sciences.

Venneri, M.A., Barbagallo, F., Fiore, D., De Gaetano, R., Giannetta, E., Sbardella, E., Pozza, C., **Campolo, F.**, Naro, F., Lenzi, A., Isidori, A.M.

"PDE5 Inhibition Stimulates Tie2-Expressing Monocytes and Angiopoietin-1 Restoring Angiogenic Homeostasis in Diabetes"

(2019) Journal of Clinical Endocrinology and Metabolism.

Todaro, F., Campolo, F., Barrios, F., Pellegrini, M., Di Cesare, S., Tessarollo, L., Rossi, P., Jannini, E.A., Dolci, S.

"Regulation of Kit Expression in Early Mouse Embryos and ES Cells"

(2019) Stem Cells.

Assenza, M.R., Barbagallo, F., Barrios, F., Cornacchione, M., **Campolo, F.**, Vivarelli, E., Gianfrilli, D., Auletta, L., Soricelli, A., Isidori, A.M., Lenzi, A., Pellegrini, M., Naro, F.

"Critical role of phosphodiesterase 2A in mouse congenital heart defects"

(2018) Cardiovascular Research.

Di Siena, S., **Campolo, F.**, Gimmelli, R., Di Pietro, C., Marazziti, D., Dolci, S., Lenzi, A., Nussenzweig, A., Pellegrini, M.

"Atm reactivation reverses ataxia telangiectasia phenotypes in vivo article"

(2018) Cell Death and Disease, .

Campolo, F., Zevini, A., Cardarelli, S., Monaco, L., Barbagallo, F., Pellegrini, M., Cornacchione, M., Di Grazia, A., De Arcangelis, V., Gianfrilli, D., Giorgi, M., Lenzi, A., Isidori, A.M., Naro, F.

"Identification of murine phosphodiesterase 5A isoforms and their functional characterization in HL-1 cardiac cell line"

(2018) Journal of Cellular Physiology.

Gevi, F., **Campolo, F.**, Naro, F., Zolla, L.

"The cardioprotective effect of sildenafil is mediated by the activation of malate dehydrogenase and an increase in the malate-aspartate shuttle in cardiomyocytes"

(2017) Biochemical Pharmacology.

Di Siena, S., Gimmelli, R., Nori, S.L., Barbagallo, F., **Campolo, F.**, Dolci, S., Rossi, P., Venneri, M.A., Giannetta, E., Gianfrilli, D., Feigenbaum, L., Lenzi, A., Naro, F., Cianfone, E., Mancuso, T., Torella, D., Isidori, A.M., Pellegrini, M.

"Activated c-Kit receptor in the heart promotes cardiac repair and regeneration after injury"

(2016) Cell Death and Disease.

Dolci, S., **Campolo, F.**, De Felici, M.

"Gonadal development and germ cell tumors in mouse and humans"

(2015) Seminars in Cell and Developmental Biology.

Tassinari, V., **Campolo, F.**, Cesarini, V., Todaro, F., Dolci, S., Rossi, P.

"Fgf9 inhibition of meiotic differentiation in spermatogonia is mediated by Erk-dependent activation of Nodal-Smad2/3 signaling and is antagonized by Kit Ligand"

(2015) Cell Death and Disease.

Desimio, M.G., **Campolo, F.**, Dolci, S., De Felici, M., Farini, D.

"SOHLH1 and SOHLH2 directly down-regulate stimulated by retinoic acid 8 (STRA8) expression"

(2015) Cell Cycle.

Campolo, F., Dolci, S.

"Sox2 induces Mesenchymal to Epithelial transition in somatic cells"

(2013) Italian Journal of Anatomy and Embryology.

Di Siena, S., **Campolo, F.**, Rossi, P., Jannini, E.A., Dolci, S., Pellegrini, M.

"UV and genotoxic stress induce ATR relocalization in mouse spermatocytes"

(2013) International Journal of Developmental Biology.

Campolo, F., Gori, M., Favaro, R., Nicolis, S., Pellegrini, M., Botti, F., Rossi, P., Jannini, E.A., Dolci, S.

"Essential role of Sox2 for the establishment and maintenance of the germ cell line"

(2013) Stem Cells.

Tentori, L., Muzi, A., Dorio, A.S., Dolci, S., **Campolo, F.**, Vernole, P., Lacal, P.M., Praz, F., Graziani, G.

"MSH3 expression does not influence the sensitivity of colon cancer HCT116 cell line to oxaliplatin and poly(ADP-ribose) polymerase (PARP) inhibitor as monotherapy or in combination"

(2013) Cancer Chemotherapy and Pharmacology.

Tentori, L., Leonetti, C., Muzi, A., Dorio, A.S., Porru, M., Dolci, S., **Campolo, F.**, Vernole, P., Lacal, P.M., Praz, F., Graziani, G.

"Influence of MLH1 on colon cancer sensitivity to poly(ADP-ribose) polymerase inhibitor combined with irinotecan"

(2013) International Journal of Oncology.

Barrios, F., Filipponi, D., **Campolo, F.**, Gori, M., Bramucci, F., Pellegrini, M., Ottolenghi, S., Rossi, P., Jannini, E.A., Dolci, S.

"SOHLH1 and SOHLH2 control Kit expression during postnatal male germ cell development"

(2012) Journal of Cell Science.

La sottoscritta dichiara di essere consapevole che il presente curriculum vitae sarà pubblicato sul sito istituzionale dell'Ateneo, nella Sezione "Amministrazione trasparente", nelle modalità e per la durata prevista dal d.lgs. n. 33/2013, art. 15"

29-02-2024

F.to Federica Campolo