



Curriculum Vitae

PERSONAL INFORMATION

Name and Surname

MARIA PELULLO

Nationality

Italian

Citizenship

Italian

EDUCATION

- **Nov 5th 2018- Nov 30th 2022:** Post-Graduate Specialty School Degree in “Clinical Pathology and Clinical Biochemistry”, School of Medicine, Sapienza University, Rome, Italy.

Thesis Title: “*Identificazione di un nuovo biomarcatore prognostico per il tumore al colon-retto*”.

Tutor: Prof. G. Giannini. Vote: 70/70 *cum laude*.

- **Mar 20th 2020 – to date:** Enrolled in the National Order of Biologists, #AA_085099

- **Nov 1st 2009 - Oct 31st 2012:** PhD Degree in Molecular Medicine XXV cycle, School of Medicine, Sapienza University, Rome, Italy.

Thesis Title: “*Interazione in cis di Notch3 e Jagged1: identificazione di un nuovo meccanismo molecolare coinvolto nella progressione della leucemia linfoblastica acuta a cellule T*”. Supervisor: Prof.ssa I. Screpanti, Dept. Molecular Medicine, Laboratory of Molecular Pathology, Sapienza University, Rome, Italy.

- **Oct 1st 2007 - Oct 26th 2009:** Master’ Degree in Biology Applied to Biomedical Research (CL 6/S) at Sapienza University of Rome, Italy.

Thesis Title: “*Ruolo della cooperazione tra recettori Notch e specifici ligandi nella leucemia a cellule T*”. Supervisor: Prof.ssa I.Screpanti, Dept. Experimental Medicine, Sapienza University. Vote: 110/110 *cum laude*.

WORK EXPERIENCE

- **Dec 1st 2018 – to date:** Co.Co.Co. at Center of Nano and Neuro-Sciences, Italian Institute of Technologies (CL2NS@Sapienza, IIT), Rome, Italy.

- **Apr 1st 2016 - Nov 31st 2018*:** Postdoctoral Research Fellowship (cat B-II; SSD: MED/04) at Sapienza University of Rome, Department of Molecular Medicine. Project Title: “The emerging role of Jagged1 in sustaining colorectal cancer aggressiveness: it does not always act in the shadow of Notch”.

* **Maternity leave: Sep 18th 2016 – May 18th 2017**

- **Jan 1st 2013 - Dec 31st 2015:** Postdoctoral Research Fellowship (cat B-I; SSD: MED/04) at Sapienza University of Rome, Department of Molecular Medicine. Project Title: “Regolazione epigenetica dei recettori Notch”.

FINANTIAL GRANTS and Awards

- **2022: PI** of financial grant “Avvio alla ricerca”. Project Title: “*Jagged1-ICD: a new prognostic and predictive marker for Breast Cancer*”. # AR2221816BA28342;

- **2022:** Award “Contributi premiali per i ricercatori e assegnisti di ricerca per rafforzarne la condizione professionale e potenziare il sistema della ricerca del Lazio”, Programma Fondo Sociale Europeo Plus (FSE+) 2021- 2027. (Codice SIGEM 22009D). Determinazione n. G15808 del 16/11/2022.



- **2021: PI** of EPIC-XS INTERNATIONAL CONTEST, in collaboration with University of Copenhagen, Faculty of Health and Medical Sciences, Novo Nordisk Foundation Center for Protein Research, Proteomics Program. Project Title: “*Identification of nuclear Jagged1 interactome in solid tumors*”.
- **2016: PI** of financial grant “Avvio alla ricerca”. Project title: “*The emerging role of Jagged1 in sustaining colorectal cancer aggressiveness: it does not always act in the shadow of Notch*”.
- **2016 (2 months):** Bursary awarded by ISTITUTO PASTEUR ITALIA - Fondazione Cenci Bolognetti. Project title: “*Novel mechanistic insights on Notch3 signaling role in T Cell Leukemia*”.
- **2012 (2 months):** Bursary awarded by ISTITUTO PASTEUR ITALIA - Fondazione Cenci Bolognetti. Project title: “*Dissection of Notch signaling-dependent pathways involved in the progression of T cell leukemia*”.

TEACHING

- **Sept 08th 2021 – to date:** Expert on the subject. Facoltà di Farmacia e Medicina, CdL in TECNICHE di LABORATORIO BIOMEDICO Corso B sede S. Camillo Forlanini (29877). INSEGNAMENTO: Basi cellulari e molecolari della vita. SSD MED/03.
- **Oct 03th 2022 – to date:** Expert on the subject. Facoltà di Farmacia e Medicina, CdL Magistrale in Medicina e Chirurgia Canale D sede Policlinico Umberto I. INSEGNAMENTO: Patologia e Fisiopatologia Generale. SSD MED/04.

PERSONAL SKILLS AND COMPETENCE

a. Cellular and Molecular Biology skills:

- Work in sterility conditions by handling eukaryotic cell of human and mouse origin;
- Isolation and maintenance of murine embryonic fibroblast (MEF) and murine cerebellar granule cell progenitors (GCPs); Isolation of stem cells deriving from human tissue of CRC;
- Isolation of lymphocytes from murine thymus, lymph nodes and spleen and from human blood;
- Extraction of DNA from cells and tissue; cloning specific nucleic acid sequences and site-direct mutagenesis; setting and conduction of PCR;
- Extraction of RNA, Retro-transcription (RT-PCR), and quantitative PCR (qRT-PCR);
- Transient and stable transfection of nucleic acid, shRNA, and siRNA interference. Isolation of cellular-clone stably transfected with expression vectors;
- Luciferase assays;
- Lentiviral and Retroviral infection (work in P3 level cell room);
- Immunofluorescence for the identification and localization of endogenous and exogenous proteins in cells;
- Proliferation, clonogenic and apoptotic assays (MTT, BrdU, Colony Assay);
- Migration and invasion assays of tumoral cells *in vivo* e *in vitro*;
- Whole and fractioned proteins extraction (membrane, cytosol, nucleus, raft) from cells and tissue; recombinant protein expression, Western Blot;
- Microvesicles extraction;
- Immunoprecipitation (IP), Chromatin Immunoprecipitation (ChIP);
- Extraction and transformation of plasmid DNA;
- Using several laboratories instruments, including ultracentrifuges, flow cytometer (FACS) optical and confocal microscopy;
- Housing of several murine animal models and surgery.

b. Clinical Pathology Skills:

- Peripheral Venous blood sampling;
- Blood count determination and preparation of PVS slides;
- Immunometric determination of blood groups and transfusion compatibility;
- Immunometric and turbidimetric determination of tumor markers;



- Determination and evaluation of coagulation and fibrinolysis parameters;
- Reading of urine sediments;
- Automatic systems of clinical chemistry;
- Serum protein electrophoresis; serum and urine immunofixation; immunoglobulin dosages with immunometric methodology.

TRAINING

- “**Corso di microscopia in campo chiaro e a fluorescenza**”, Rome 6-7/6/2018
- “**Metodi alternativi alla sperimentazione animale**”, il 26/01/2016 Rome, Italy
- “**Droplet Digital™ PCR Scientific Conference: Technology Evolution and New Applications**”, 16/11/2015, Rome, Italy
- “**Scienze degli animali da laboratorio**”, Rome 11-12/12/2014
- “**Publishing Connect Author Workshop**” Elsevier Campus 17/12/2014, Rome, Italy
- “**Corso real-time PCR**”, 03-12-2012, Rome, Italy
- “**Corso introduttivo all’uso del sistema Genomatix**” 22-23/02/2011, Rome, Italy
- “**Il controllo delle metastasi mediato da microRNA**” 28/4/2011, Rome, Italy
- “**MicroRNA in medicina**”, 9/4/2009, Rome, Italy

NATIONAL AND INTERNATIONAL MEETINGS

- **Congresso Europeo di Patologia (ECP)**, Basilea, Svizzera, 03-07/09/2022. RELATORE (SPEAKER), con presentazione dal titolo “*The activation of Jagged1 signaling by chemotherapeutic agents counteracts the Oxaliplatin/5Fluorouracil- mediated anti-cancer effects: a novel mechanism of drug resistance in colon cancer.*”
- **Congresso Nazionale SIPMeT**, Perugia, Italia, 10-12/12/2021. RELATORE (SPEAKER), con presentazione dal titolo “*Jagged1 Retrograde Signalling Sustained By gamma-Secretase Inhibitors Confers Colorectal Cancer Resistance Against Chemotherapy*”
- **52° CONGRESSO NAZIONALE SIBIOC - MEDICINA DI LABORATORIO**, 06/10/2020-8/10/2020;
- **SIC “Italian Society of Cancer”** (6-8 November 2019, Naple, Italy) Poster: “*Jag1-ICD reverse signalling sustains colorectal cancer progression and chemoresistance*” Authors: **Pelullo M.**, Nardoza F., Zema S., Screpanti I. and Bellavia D.
- **SIPMeT** (13-14 September 2019, Florence, Italy) Poster: “*γ-secretase inhibition sustains Jagged1 processing: role in CRC development*” Authors: **Pelullo M.**, Nardoza F., Zema S., Serafini M., Screpanti I. and Bellavia D.
- **The Notch Meeting XI** (6-10 October 2019, Athens, Greece) Poster: “*Jag1-ICD reverse signalling sustains colorectal cancer progression and chemoresistance*”. Authors: F. Nardoza, **M. Pelullo**, S. Zema, I. Screpanti, D. Bellavia
- **ABCD Congress 2019** (19-21 September 2019, Bologna, Italy) Poster: “*Mam11, not only a transcriptional co-activator of Gli1*”. Authors: S. Zema, **M. Pelullo**, F. Nardoza, M. Serafini, I. Screpanti, D. Bellavia
- **ABCD Congress 2019** (19-21 September 2019, Bologna, Italy) Poster: “*Jag1-ICD reverse signalling sustains colorectal cancer progression and chemoresistance*”. Authors: F. Nardoza, **M. Pelullo**, S. Zema, I. Screpanti, D. Bellavia
- **29th Annual Conference of Italian Association of Cell Culture (Onlus-AICC)**, 23-25 November 2016 L’Aquila, Italy Poster: “*MAM11 acts cooperatively with Gli proteins to regulate Sonic hedgehog signaling pathway*” Authors: Quaranta R., **Pelullo M.**, Nardoza F., Zema S., Di Marcotullio L., Screpanti I., Bellavia D.
- **29th Annual Conference of Italian Association of Cell Culture (Onlus-AICC)**, 23-25 November 2016 L’Aquila, Italy Poster:” “*The emerging role of Jagged1 in sustaining colorectal cancer aggressiveness*” Authors: **M. Pelullo**, S. Zema, R. Quaranta, I. Screpanti, D. Bellavia



- **Notch Meeting IX 4-8 October 2015**, Athens, Greece Poster: *“The emerging role of Jagged1 in sustaining colorectal cancer aggressiveness: it does not always act in the shadow of Notch”* Authors: **M. Pelullo**, R. Quaranta, S. Zema, S. Delle Vigne, I. Screpanti, D. Bellavia
- **ABCD 2015**, Congresso Biennale dell’Associazione di Biologia Cellulare e del Differenziamento, 17-19 September 2015, Bologna, Italy Poster: *“MAML1 acts cooperatively with and functions as a novel co-activator for Gli1-mediated transcription”* Authors: Quaranta R., **Pelullo M.**, Delle Vigne S., Nespoli M., Screpanti I., Bellavia D.
- **“32° Congresso Nazionale SIPMeT”**, Società Italiana di Patologia e Medicina Traslazionale, 17-20 September 2014, Palermo, Italy Poster: *“MAML1 in the Crosstalk between Notch and Hedgehog Pathways in Differentiation and Disease”* Authors: Quaranta R., **Pelullo M.**, Delle Vigne S., Screpanti I., Bellavia D.
- **Notch Meeting VII 6-10 October 2013**, Athens, Greece Poster: *“Notch3 and Jagged1 cis-interaction reinforces Notch signaling and sustains T-ALL development”* Authors: **M. Pelullo**, R. Quaranta, S. Checquolo, M. P. Felli, R. Palermo, A. Gulino, I. Screpanti, D. Bellavia
- **ABCD 12-14 September 2013**, Ravenna, Italy Poster: *“Notch3 and Jagged1 cis-interaction reinforces Notch signaling and sustains T-ALL development”* Authors: **M. Pelullo**, R. Quaranta, S. Checquolo, M. P. Felli, R. Palermo, A. Gulino, I. Screpanti, D. Bellavia
- **FISV 24-27 September 2013**, Rome, Italy Poster: *“Notch3 and Jagged1 cis-interaction reinforces Notch signaling and sustains T-ALL development”* Authors: **M. Pelullo**, R. Quaranta, S. Checquolo, M. P. Felli, R. Palermo, A. Gulino, I. Screpanti, D. Bellavia
- **SIPMeT 24-27 September 2012**, Rome, Italy Poster: *“Specific and unique relationship between Notch3 and Jagged1 in T-ALL leukemia”* Authors: **M. Pelullo**, R. Quaranta, D. M. Lauer, S. Checquolo, C. Talora, M. P. Felli, I. Screpanti, D. Bellavia
- **The Notch Meeting V**, 02-06 October 2011, Athens, Greece Poster: *“The Prolyl-Isomerase PIN1 represent a regulator of Notch3 activity”* Authors: S. Checquolo, R. Palermo, G. Franciosa, **M. Pelullo**, D. Bellavia, A. Gulino, I. Screpanti

SCIENTIFIC PUBLICATION

- **Loss of ATP2C1 function promotes trafficking and degradation of NOTCH1: Implications for Hailey-Hailey disease.**
A. Zonfrilli, F. Truglio, A. Simeone, **M. Pelullo**, V. De Turre, D. Benelli, S. Checquolo, D. Bellavia, R. Palermo, D. Uccelletti, I. Screpanti, S. Cialfi, C. Talora. *Exp Dermatology* 2023 Feb 14. doi: 10.1111/exd.14769. IF: 4.511
- **5FU/Oxaliplatin-induced Jagged1 cleavage counteracts apoptosis induction in colorectal cancer. A novel mechanism of intrinsic drug-resistance.**
M. Pelullo, S. Zema, M. De Carolis, S. Cialfi, M.V. Giuli, R. Palermo, C. Capalbo, G. Giannini, I. Screpanti, S. Checquolo and D. Bellavia. *Frontiers in Oncology*, 2 June 2022. doi: 10.3389/fonc.2022.918763 IF.:5,924
- **MicroRNAs as Modulators of the Immune Response in T-Cell Acute Lymphoblastic Leukemia**
Del Gaizo M., Sergio I., Lazzari S., Cialfi S., **Pelullo M.**, Screpanti I., Felli M.P. *International Journal of Molecular Sciences*, 2 Genuary 2022; doi: 10.3390/ijms23020829. I.F.: 5,924
- **miR-125b/NRF2/HO-1 axis is involved in protection against oxidative stress of cystic fibrosis: a pilot study**
Pelullo M., Savi D., Quattrucci S., Cimino G., Pizzuti A., Screpanti I., Talora C., Cialfi S. *Exp. Therapeutic Medicine*, 2 April 2021; doi: 10.3892/etm.2021.10017. I.F.: 2,447
- **A dynamic role of Mastermind-like1: a journey through the main (path)ways between development and cancer**
Zema S.*, **Pelullo M. ***, Nardoza F., Felli M.P., Screpanti I., Bellavia D. *Frontiers in Cell Developmental Biology*, 21 December2020; doi: 10.3389/fcell.2020.613557. I.F.: 6,684



*coautoraggio

- **Notch3 contributes to T-cell leukemia growth via regulation of the unfolded protein response**
Giuli M.V., Diluvio G., Giuliani E., Franciosa G., Di Magno L., Pignataro M.G., Tottone L., Nicoletti C., Besharat Z.M., Peruzzi G., **Pelullo M.**, Palermo R., Canettieri G., Talora C., d'Amati G., Bellavia D., Screpanti I., Checquolo S. *Oncogenesis*, 1 October 2020; doi: 10.1038/s41389-020-00279-7. I.F.: 7,485
 - **Exogenous peptides are able to penetrate human cell and mitochondrial membranes, stabilize mitochondrial tRNA structures, and rescue severe mitochondrial defects**
Perli E., Pisano A., Pignataro M.G., Campese A.F., **Pelullo M.**, Genovese I., Turrís V., Ghelli A.M., Cerbelli B., Giordano C., Colotti G., Morea V., d'Amati G. *FASEB Journal*, 18 April 2020; doi: 10.1096/fj.201903270R. I.F.: 5,192
 - **CD73 expression and pathologic response to neoadjuvant chemotherapy in triple negative breast cancer**
Cerbelli B., Botticelli A., Pisano A., Campagna D., De Luca A., Ascierio P.A., Pignataro M.G., **Pelullo M.**, Rocca C.D., Marchetti P., Fortunato L., Costarelli L., d'Amati G. *Virchows Archiv.* 16 April 2020; doi: 10.1007/s00428-019-02722-6. I.F.: 4,064
 - **Kras/ADAM17-dependent Jag1-ICD reverse signaling sustains colorectal cancer progression and chemoresistance**
Pelullo M., Nardoza F., Zema S., Quaranta R., Nicoletti C., Besharat Z.M., Felli M.P., Cerbelli B., d'Amati G., Palermo R., Capalbo C., Talora C., Di Marcotullio L., Giannini G., Checquolo S., Screpanti I., Bellavia D. *Cancer Research*, 10 September 2019; doi: 10.1158/0008-5472.CAN-19-0145. I.F.: 12,701
 - **Wnt, Notch, and TGF- β pathways impinge on hedgehog signaling complexity: an open window on cancer.**
Pelullo M., Zema S., Nardoza F., Checquolo S., Screpanti I., Bellavia D. *Frontiers in Genetics*, 21 August 2019; doi: 10.3389/fgene.2019.00711. I.F.: 4,599
 - **Histone modifications drive aberrant notch3 expression/activity and growth in T-ALL**
Tottone L., Zhdanovskaya N., Carmona Pestana A., Zampieri M., Simeoni F., Lazzari S., Ruocco V., **Pelullo M.**, Caiafa P., Felli M.P. Checquolo S., Bellavia D., Talora C., Screpanti I., Palermo R. *Frontiers in Oncology*, 3 April 2019; doi: 10.3389/fonc.2019.00198. I.F.: 6,244
 - **IL-4-dependent Jagged1 expression/processing is associated with survival of chronic lymphocytic leukemia cells but not with Notch activation**
De Falco F., Del Papa B., Baldoni S., Sabatini R., Falzetti F., Di Ianni M., Martelli M.P. Mezzasoma F., **Pelullo M.**, Marcomi P., Sportelletti P., Screpanti I., Rosati E. *Cell Death and Disease*, 26 November 2018; doi: 10.1038/s41419-018-1185-6. I.F.: 8,469
 - **Mam11 acts cooperatively with Gli proteins to regulate Sonic hedgehog signaling pathway**
R. Quaranta*, **M. Pelullo***, S. Zema, F. Nardoza, S. Checquolo, D. Lauer, F. Bufalieri, R. Palermo, M.P. Felli, A. Vacca, C. Talora, L. Di Marcotullio, I. Screpanti, D. Bellavia. *Cell Death and Disease*, 20 June 2017; doi: 10.1038/cddis.2017.326. I.F.: 8,469
- * coautoraggio
- **Impaired mitochondrial biogenesis is a common feature to myocardial hypertrophy and end stage ischemic heart failure**
A. Pisano, B. Cerbelli, E. Perli, **M. Pelullo**, V. Bargelli, C. Preziuso, M. Mancini, L. He, M. GD Bates, J. R Lucena, P. L. Della Monica, G. Familiari, V. Petrozza, C. Nediani, R. W Taylor, G. d'Amati, C. Giordano. *Cardiovascular Pathology*, 25 September 2015; doi: 10.1016/j.carpath.2015.09.009. I.F.: 2,185
 - **Notch3/Jagged1 circuitry reinforces Notch signaling and sustains T-ALL**
Pelullo M., Quaranta R., Talora C., Checquolo S., Cialfi S., Felli M.P., Palermo R., Di Marcotullio L., Gulino A., Screpanti I., Bellavia D. *Neoplasia Journal*, 12 December 2014; doi:



10.1016/j.neo.2014.10.004. I.F.: 4,252

- **Mouse sertoli cells sustain de novo generation of Treg cells by triggering the Notch pathway through soluble Jagged**

Campese A.F., Grazioli P., de Cesaris P., Riccioli A., Bellavia D., Pelullo M., Padula F., Filippini A., Latella G., Screpanti I., Riparo E., Starace D. *Biology of Reproduction*, 1 March 2014; doi: 10.1095/biolreprod.113.113803. I.F.: 4,285

- **Glucocorticoid sensitivity of T-cell lymphoblastic leukemia/lymphoma is associated with glucocorticoid receptor-mediated inhibition of Notch1 expression**

Cialfi S., Palermo R., Manca S., Checquolo S., Bellavia D., Pelullo M., Quaranta R., Dominici C., Gulino A., Screpanti I., Talora C. *Leukemia*, 13 July 2012; 27(2): 485-8; doi: 10.1038/leu.2012.192. I.F.: 11,528

- **Notch3 and canonical NF-kappaB signaling pathways cooperatively regulate Foxp3 transcription.**

Al. Barbarulo, P. Grazioli, A.F. Campese, D. Bellavia, G. Di Mario, M. Pelullo, A. Ciuffetta, S. Colantoni, A. Vacca, L. Frati, A. Gulino, M.P. Felli, I. Screpanti. *Journal of Immunology*, 2011 Jun 1;186(11):6199-206. doi: 10.4049/jimmunol.1002136. I.F.: 5,788

Rome, Apr 27th 2023

Signature

Maria Pelullo