

Curriculum vitae, Dr. Jenny Bulgarelli, PhD



PERSONAL INFORMATION

Work address: Via Piero Maroncelli 40, Meldola (FC), Italia

Birth: 03/01/1986

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ORCID: 0000-0002-6551-0189, **Research ID:** AAB-6083-2021, **Scopus ID:** 55248386300

CURRENT POSITION

06/2020-present	Postdoc Researcher (permanent position from April 2022) as coordinator of the Clinical and experimental Immune-monitoring platform at IRCCS Istituto Romagnolo per lo Studio dei Tumori "Dino Amadori" S.r.l.
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PAST EXPERIENCES and POSITIONS

11/2014-05/2020	Postdoc Research temporary contract at IRCCS Istituto Romagnolo per lo Studio dei Tumori "Dino Amadori" S.r.l. in the Immunotherapy, Cell therapy and Biobank Unit. Research field: Immune-monitoring and analysis of antigen-specific response in patients treated with dendritic cell vaccine and other immunotherapies. Study of melanoma tumor cell heterogeneity in relation to the response or resistance to the therapy.
06/2017	Visiting Scientist, Institut de Génétique et de Biologie Moléculaire et Cellulaire (IGBMC), ILLKIRCH, France; Under the founded european project entitled "Dissecting phenotypic heterogeneity of human melanoma: building a rationale for active immunotherapies overcoming immunologically-induced dedifferentiation - ITEM "ERA-NET on Translational Cancer Research (TRANSCAN- JTC 2014)"
09/2013-08/2014	Research fellow, Laboratory of hematopoietic stem cells, Centre for Regenerative Medicine "Stefano Ferrari", Department, University of Modena and Reggio Emilia, Italy; Supported by AIRC research grant for in vitro and in vivo study of novel putative markers for diagnosis and prognosis of myeloproliferative syndromes.
05/2011-04/2013	PhD student with a research fellow, Laboratory of experimental hematology, Department of Medical and Surgical Science, University of Modena and Reggio Emilia, Italy; Supported by AIRC research grant for the study of the Endothelin-1 signaling pathway in chronic lymphocytic leukemia and the involvement in survival, proliferation and interaction with endothelial cells.

EDUCATION

01/02/2024-present	Enrolled in a second-level master's degree program in "Immuno Oncologia e terapie cellulari", Sapienza University in Rome.
01/2011-04/2014	Ph.D. in Molecular and Regenerative Medicine, University of Modena and Reggio Emilia, Italy.
03/2011	Qualification as a Professional Biologist (Licensed as a Biologist from 01/2019) University of Modena and Reggio Emilia, Italy.
11/2008-10/2010	Master Degree, Medical and pharmaceutical Biotechnology, University of Modena and Reggio Emilia, Italy. Thesis title: Cellular dialogue between endothelium and chronic lymphocytic leukemia cells: study of molecular mechanisms. Supervisor: Prof. Roberto Marasca. Final grade: 110/110 cum laude

09/2005-10/2008	Bachelor's Degree, Biotechnology, University of Modena and Reggio Emilia, Italy. Thesis title: Bone marrow vascularization and modulation of angiogenic factor expression in hypoxia in chronic lymphatic leukemia. Supervisor: Prof. Roberto Marasca
09/2000-07/2005	High School graduation, final grade: 100/100. Technical Institute for Social Activities, oriented on biological topics "F. Selmi" (Modena)

First Language (Mother Tongue) **Italian**

Other Languages **English**

- Reading skills	Excellent
- Writing skills	Excellent
- Oral expression skills	Excellent

SKILLS, TECHNICAL COMPETENCIES AND SCIENTIFIC ACTIVITIES

Laboratory Techniques (Cellular and Molecular Biology):

Isolation of PBMCs from blood sampling/Buffy-Coat, enzymatic and mechanical dissociation of biopsy specimens from surgery, isolation and expansion of lymphocytes and obtaining primary tumor cultures from surgical specimens, multiparameter cytofluorimetry and immunomonitoring, Cytokine-Bead-Array (CBA) assay, ELISpot, ELISA, magnetic cell separation and in vitro culture of leukocyte populations isolated from blood (lymphocytes, monocytes, dendritic cells), in vitro culture of tumor cells, antigen-specific response assay, in vitro angiogenesis and migration assays, cell adhesion assessment, megakaryocytic differentiation of hematopoietic stem cells and clonogenic assay in semisolid culture, assays for assessment of cell viability and proliferation (MTT assay, CFSE staining, Annexin/PI Staining), extraction and quantification of nucleic acids (DNA, RNA), retrotranscription and Real-Time PCR (Taqman and SYBR Green), Western-Blot, immunohistochemistry both standard (DAB) and sequential (AEC), preparation of Next Generation Sequencing Libraries (including for single cell transcriptomics on 10xGenomics platform).

COMPUTER SKILLS

Office package, Photoshop, GraphPad Prism 9, DNA, RNA and protein sequence analysis, cytofluorimetry sample analysis (FlowJo, Diva Software), gene expression profile analysis (IPA, Ingenuity Pathway Analysis). Image analysis for tumor microenvironment characterization: ImageJ/FIJI, QuPath, Aperio ImageScope. Single cell transcriptomics analysis with Loupe Browser. RefWorks for bibliography.

RELATIONAL AND ORGANIZATIONAL SKILLS AND ABILITIES

Excellent ability to plan laboratory experiments, excellent ability to write scientific projects and experimental papers, team spirit and openness to collaboration with national and international groups. Friendly with colleagues and neat.

AWARDS AND HONORS

10/2022	Winner as CoPI of Bando "Giovani Ricercatori- Ricerca Finalizzata 2021 provided by the Italian Ministry of Health. Project Title: Nanotechnology-based Platforms for the improvEment of therapeutic strateGies in soft tissue sArcoma and melanoma leSiOns (PEGASO)
05/2016	14th CIMT Annual Meeting Travel Award winner Poster presentation: "The double face of dendritic cell vaccination in metastatic melanoma: inducing intratumor immune response can switch tumor cells toward dedifferentiated state." <i>Bulgarelli J*, Ancarani V, Pancisi E, Petrini M, Riccobon A, Fiammenghi L, Cassan S, Soldati V, Ridolfi L, De Rosa F, Gentili G, Amadori D, Ridolfi R, Guidoboni M, Granato A.M.</i>

SPECIFIC TRAININGS

15/06/2023	"Good Clinical Practice: dalla teoria alla pratica". IRCCS Istituto Romagnolo per lo Studio dei Tumori "Dino Amadori".
24/03/2021	"Good Clinical Practice (Investigator Version), version #2.1. Roche/Genentech.
10-11/10/2016	Corso di CTP System "Novità in ambito normative sulle terapie avanzate" e "Analisi del rischio ed applicazioni in ambito GMP". IRCCS Istituto scientifico romagnolo per lo studio e la cura dei tumori, Italy
28/09-02/10/2015	Next generation sequencing (NGS) data analysis. IRCCS Istituto scientifico romagnolo per lo studio e la cura dei tumori, Italy.

23-25/10/2012	"Ion Torrent" instrument use for next-generation sequencing applications. CGR, University of Modena and Reggio Emilia, Italy.
19/10/2012	IFOM-IEO External Seminar "Coupling Cell function to Cell Migration: the example of Dendritic Cells". IFOM-IEO Campus Milano.
18/10/2012	IFOM-IEO External Seminar "Aneuploidy in cellular adaptation, drug resistance and cancer". IFOM-IEO Campus Milano.
09/06/2012	GIC Seminar "La citometria e le sue applicazioni", Brescia.
12-13/09/2011	Bioinformatics Course "EuGESMA Bioinformatics School 2011". CGR, University of Modena and Reggio Emilia, Italy.
22/02/2011	THE NGS DAY 2011 "The first Unimore workshop on next generation sequencing". University of Modena and Reggio Emilia, Italy.

SUPERVISION OF GRADUATE STUDENTS

11/2018-02/2020	Supervision of a graduate student in Biology (Dr. Claudia Piccinini), Master Degree, University of Bologna, Italy.
01-09/2013	Supervision of a student in Biotechnology (Dr. MariaGiulia Nozzi), Bachelor's Degree, University of Modena and Reggio Emilia, Italy.

ORGANISATION OF SCIENTIFIC MEETINGS

04-05/05/2023	Faculty member of the congress "GLIOBLASTOMA: NUOVI ORIZZONTI NELL'ERA DELLA TERAPIA PERSONALIZZATA", IRCCS IRST, Meldola, Italy.
13/09/2023	Faculty member of the congress "PERSONALIZED MEDICINE IN LOCALLY ADVANCED RESECTABLE GASTRIC CANCER: WHERE WE ARE, WHERE WE ARE GOING", IRCCS IRST, Meldola, Italy.
28-29/10/2022	Member of the Organizing Committee of the 4th International Translational Courses in Rare Cancers, IRCCS IRST, Meldola, Italy.
17-18/12/2020	Member of the Organizing Committee of the 3rd International Translational Courses in Rare Cancers, IRCCS IRST, Meldola, Italy.
24/05/2019	Member of the Organizing Committee of "Immunologia dei tumori: tutto quello che vorreste sapere ma non hai il coraggio di chiedere", IRCCS IRST, Meldola, Italy.

ORAL PRESENTATIONS

04-05/05/2023	Glioblastoma-nuovi orizzonti nell'era della terapia personalizzata. "Monitoraggio della risposta immune in clinica". IRCCS-IRST Meldola.
28-29/10/2022	4th International Translational Course in Rare Cancers (ITCRC). "New technologies to answer open questions: Multi-omics approaches for immune monitoring and tumor microenvironment investigation in solid tumors"
13/09/2022	Discussant at "PERSONALIZED MEDICINE IN LOCALLY ADVANCED RESECTABLE GASTRIC CANCER: WHERE WE ARE, WHERE WE ARE GOING". IRCCS-IRST Meldola.
20-23/10/2013	44° Congresso Nazionale SIE 2013, Verona, Italy. "Endothelin-1/ETA receptor signalling mediates growth and proliferative signals in Chronic Lymphocytic Leukemia cells"

POSTER PRESENTATIONS

20-23/09/2023	7th International Cancer Immunotherapy Conference CICON 2023. "Personalized adjuvant dendritic cells vaccination in Melanoma patients: Insights into immunological landscape". Milan, Italy.
07-09/12/2022	ESMO Immuno-Oncology Annual Meeting 2022, Geneva Switzerland. "Exploiting multi-omic integrated data from DC-vaccinated melanoma patients for the generation of an advanced adoptive T cell therapy"
11-14/12/2019	ESMO Immuno-Oncology Annual Meeting 2019, Geneva Switzerland. "Radiotherapy as an immunological booster in patients with metastatic melanoma or renal cell carcinoma treated with High-Dose Interleukin-2 (HDIL2): final data"
10-12/05/2016	14th CIMT Annual Meeting 2016, Mainz, Germany. "The double face of dendritic cell vaccination in metastatic melanoma: inducing intratumor immune response can switch tumor cells toward dedifferentiated state"

16-19/10/2011 43° Congresso Nazionale SIE 2011, Napoli, Italy. "Altered composition of circulating monocytic population in chronic lymphocytic leukemia B-cells patients"

INSTITUTIONAL RESPONSIBILITIES

2020- present	Coordinator of the Clinical and Experimental Immunomonitoring platform
2020- present	Consultant for the acquisition of the following laboratory equipment: plate fluorometer (member of the evaluating commission), Protein Simple ELISA System Immunoassay platform (technical specifications writing consultant)

REVIEWING ACTIVITIES

2018- present	Invited reviewer for scientific journals (Cancers, Vaccines, International Journal of Molecular Sciences, Frontiers in Immunology)
On-call editor for Special Issues (Vaccines, Cancers)	

MEMBERSHIPS OF SCIENTIFIC SOCIETIES

2023	Member of the Network Italiano per la Bioterapia dei Tumori (NIBIT)
2022-present	Member of the Network Officine Terapie Avanzate APS (NOTA)
2020	Member of the Society for Immunotherapy of Cancer (SITC)

PUBLICATIONS

- 1) Analysis of the response of AXL and/or MITF melanoma subpopulations to immunotherapy. M Willemsen*; **Bulgarelli***; et al. (*these authors contributed equally to this work). Submitted to Immuno-Oncology and Technology
- 2) First step results from a Phase II Study of a Dendritic cell vaccine in Glioblastoma patients (CombiG-vax). *Ridolfi L, et al.* Accepted in Frontiers in Immunology
- 3) Dendritic cell vaccines as cancer treatment: focus on 13 years of manufacturing and quality control experience in advanced therapy medicinal products. *Granato AM, et al. Bulgarelli J corresponding author.* Accepted in Cytotherapy.
- 4) Sequencing of checkpoint or BRAF/MEK inhibitors on brain metastases in melanoma. *Ascierto P, et al.* In revision in NEJM Evidence
- 5) Comprehensive Genomic Profiling on Metastatic Melanoma: results from a network screening from 6 Italian Cancer Centres. *Matteo Pallocca, et al.* J Transl Med. 2024 Jan 6;22(1):29. doi: 10.1186/s12967-023-04776-2.
- 6) 4-year survival and biomarkers evaluation from a phase II study of sequential immunotherapy and targeted therapy for metastatic BRAF V600-mutated melanoma (SECOMBIT). *Milena Casula, et al.* Nat Commun. 2024 Jan 2;15(1):146. doi: 10.1038/s41467-023-44475-6.
- 7) Immuno Markers in Newly Diagnosed Glioblastoma Patients Underwent Stupp Protocol after Neurosurgery: A Retrospective Series. *Gurrieri L, et al.* J Neurooncol. 2023 Aug 16. doi: 10.1007/s11060-023-04357-9.
- 8) The Renewal of Cancer Immunotherapy. **Bulgarelli J, et al.** Editorial in Vaccines (Basel). 2023 Mar 4;11(3):592. DOI: 10.3390/vaccines11030592
- 9) Stability Program in Dendritic Cell Vaccines: A "Real-World" Experience in the Immuno-Gene Therapy Factory of Romagna Cancer Center. *Elena Pancisi, et al.* Vaccines (Basel) 2022 Jun 23;10(7):999. doi: 10.3390/vaccines10070999.
- 10) Radiotherapy and high-dose interleukin-2: clinical and immunological results of a proof of principle study in metastatic melanoma and renal cell carcinoma. **Bulgarelli J, et al.** Front Immunol. 2021 Oct 27;12:778459. doi: 10.3389/fimmu.2021.778459.
- 11) Effects of a Diet Based on Foods from Symbiotic Agriculture on the Gut Microbiota of Subjects at Risk for Metabolic Syndrome. *Turroni S, et al.* Nutrients. 2021 Jun 17;13(6):2081. doi: 10.3390/nu13062081.
- 12) Dendritic cell vaccination in metastatic melanoma turns "non-T cell inflamed" into "T-cell inflamed" tumors. **Bulgarelli J, et al.** Front Immunol. 2019 Oct 9;10:2353. doi: 10.3389/fimmu.2019.02353.
- 13) Complementary vaccination protocol with dendritic cells pulsed with autologous tumour lysate in patients with resected stage III or IV melanoma: protocol for a phase II randomised trial (ACDC Adjuvant Trial). *Ridolfi L, et al.* BMJ Open. 2018 Aug 5;8(8):e021701. doi: 10.1136/bmjopen-2018-021701.
- 14) Skewing effect of sulprostone on dendritic cell maturation compared with dinoprostone. **Bulgarelli J, et al.** Cytotherapy. 2018 Jun;20(6):851-860. doi: 10.1016/j.jcyt.2018.04.002.
- 15) Dendritic cell vaccination for metastatic melanoma: a 14-year monoinstitutional experience. *De Rosa F, et al.* Melanoma Res. 2017 Aug;27(4):351-357. doi: 10.1097/CMR.0000000000000356.

- 16) Increased SHISA3 expression characterizes chronic lymphocytic leukemia patients sensitive to lenalidomide. *Maffei R, et al. Leuk Lymphoma*. 2018 Feb;59(2):423-433. doi: 10.1080/10428194.2017.1339872.
- 17) Myb controls erythroid versus megakaryocyte lineage fate decision through the miR-486-3p-mediated down-regulation of c-maf. *Bianchi E, et al. Cell Death & Differentiation* 2015 Dec;22(12):1906-21. doi: 10.1038/cdd.2015.30.
- 18) Lenalidomide interferes with tumor-promoting properties of nurse-like cells in chronic lymphocytic leukemia. *Fiorcari S, et al. Haematologica*. 2014 Feb;100(2):253-62. doi: 10.3324/haematol.2014.113217.
- 19) Endothelin-1 promotes survival and chemoresistance in chronic lymphocytic leukemia B cells through ETA receptor. *Maffei R,* Bulgarelli J,* et al. PlosOne*. 2014 Jun 5;9(6):e98818. doi: 10.1371/journal.pone.0098818. (* these authors contributed equally to this work)
- 20) Endothelium-mediated survival of leukemic cells and angiogenesis-related factors are affected by lenalidomide treatment in chronic lymphocytic leukemia. *Maffei R, et al. Experimental Hematology Journal*. 2014 Feb;42(2):126-36.e1. doi: 10.1016/j.exphem.2013.10.007.
- 21) ANGPT2 promoter methylation is strongly associated with gene expression and prognosis in chronic lymphocytic leukemia. *Martinelli S, et al. Epigenetics*. 2013 2013 Jul;8(7):720-9. doi: 10.4161/epi.24947.
- 22) The Monocytic population in chronic lymphocytic leukemia shows altered composition and deregulation of genes involved in phagocytosis and inflammation. *Maffei R, et al. Haematologica*. 2013 Jul;98(7):1115-23. doi: 10.3324/haematol.2012.073080.
- 23) Clinical heterogeneity of de novo 11q deletion chronic lymphocytic leukaemia: prognostic relevance of extent of 11q deleted nuclei inside leukemic clone. *Marasca R, et al. Hematol Oncol*. 2013 Jun;31(2):88-95. doi: 10.1002/hon.2028.
- 24) Physical contact with endothelial cells through β 1- and β 2- integrins rescues chronic lymphocytic leukemia cells from spontaneous and drug-induced apoptosis and induces a peculiar gene expression profile in leukemic cells. *Maffei R, et al. Haematologica*. 2012 Jun;97(6):952-60. doi: 10.3324/haematol.2011.054924.

H-index: 10 (Scopus)

"The undersigned, with regard to the processing of personal data, as a result of this consent to the processing of such data in accordance with the purposes and methods set forth in Legislative Decree no. 196/2003."

"The undersigned, aware that - pursuant to art. 76 of D.P.R. 445/2000 - mendacious declarations, falsity in deeds, and the use of false deeds are punishable under the criminal code and special laws, declares that the information provided is true."

Meldola, 30/07/2024

Dr.ssa Jenny Bulgarelli, PhD

