

# ILARIA GRAZIA ZIZZARI

## Curriculum Vitae

### GENERAL INFORMATION

Full Name: **Ilaria Grazia Zizzari**

Citizenship: Italian

E-mail: [ilaria.zizzari@uniroma1.it](mailto:ilaria.zizzari@uniroma1.it)

### PRESENT POSITION

2020 – to date: **RTD-A SC 06/A2, SSD MED/05** at Sapienza University of Rome, Department of Experimental Medicine, Laboratory of Tumor Immunology and Cell therapy

2021 - **Awarded the National Scientific Qualification (ASN)** as Associate Professor for the SC 06/A2 call 2018-2020

2021 - **Awarded the National Scientific Qualification (ASN)** as Associate Professor for the SC 06/N1 call 2018-2020

### EDUCATION

September 2016: **Residency in Clinical Pathology**  
“Sapienza” University Rome, Policlinico Umberto I

March-June 2013: Course of "Writing Scientific Articles", Cattolica University, Rome

November 2011: Course in Clinical Immunology, EFIS-EJI (The European Network of Immunology Institutes), Paris

March 2011: **PhD in Immunological Science**  
Department of Experimental Medicine, Laboratory of Tumor Immunology and Cell Therapy, “Sapienza” University Rome

October –December 2010: cGMP course for Cell Therapy , “Sapienza” University, Rome

November 2009: **License to practise as Biologist**  
(Section A of Italian Biologist Board from 28.11.2013, n. AA\_069543)

April 2009: Flow Cytometry course at Becton Dickinson Spa, Milan

October 2007: **Graduated with honors (110/110 cum laude) in Medical and Molecular Biotechnology**, “Sapienza” University, Rome

### ACCADEMIC APPOINTEMENTS

- 2021: **Member of the Scientific Board** of the Master in Immuno-Oncology II level (code: 29056), “Sapienza” University of Rome
- December 2020-to date: **Member of Scientific experts established at the MIUR (REPRISE)** for the section “Basic Research”
- May 2020 – to date: **Member Board of PhD Course** “in *Network oncology and Precision Medicine*” (code: 30887), “Sapienza” University of Rome
- April 2020 – to date: **RTD-A MED/05** at Sapienza University of Rome, Department of Experimental Medicine
- 2011-March 2020: **Research Fellowship SSD MED/04**  
 Department of Experimental Medicine, Sapienza University of Rome:  
 ✓ 2011-2014 Project “Application of stem cells in regenerative medicine” co-founded by Regione Lazio (*ai sensi dell’art.51 della Legge 449/97*)  
 ✓ 2013 Project “La Lectina MGL come modulatore dell’immunosoppressione nei vaccini antitumore” (*ai sensi dell’art. 22 della Legge 240/2010*) (waiver to resume third year of renewal of the co-financed allowance by the Regione Lazio pursuant to Article 51 of Law 449/97)  
 ✓ 2014-2015 Project: “Ruolo della lectina MGL nell’immunità innata” (*ai sensi dell’art. 22 della Legge 240/2010*)  
 ✓ 2015-2016 Project: “The role of MGL in DC-NK crosstalk” (*ai sensi dell’art. 22 della Legge 240/2010*)  
 ✓ 2016-2020\* Project: “Glycoantigens in ovarian cancer: dissecting novel patterns of immune recognition in cancer patients” (*ai sensi dell’art. 22 della Legge 240/2010*)  
 \*(maternity leave 24.12.18- 30.06.19)
- 2018-2020: **Elected Representative of Research fellows** of the Department of Experimental Medicine, Sapienza University of Rome
- December 2018-June 2019: **Maternity leave**
- 2017-2020: **Member of the working group for "Immunological Monitoring** in Clinical Trials of “Experimental Immunotherapy in Oncology" within the project "*Rete del Lazio per la Medicina Traslazionale e Sviluppo delle Bioterapie dei tumori*” directed by Istituto Superiore di Sanità

## **TEACHING EXPERIENCE**

- 2016-2018:  
2019-2020: Subject expert, "Clinical Nursing in Specialized Area" Course, "Oncology" Module, second year, second semester Nursing Degree Course V, Viterbo campus, University Sapienza of Rome
- 2016-2018:  
2020-2021: Professor at Master in “Immuno-Oncology” II level, University Sapienza Rome
- 2017-2018: Teaching of Clinical Biochemistry and Molecular Biology, Course of Physiopathological bases of diseases, Health Assistants Course, Sapienza University of Rome
- 2020 – to date: Teaching of General Pathology and Pathophysiology MED/04, Course of Medicine and Surgery D, Sapienza University of Rome
- 2020 – to date: Teaching of Physiology BIO/09, Course of Anatomico-physiological basis of the human body, Nursing Course J - ASL Roma 1, Sapienza University of Rome
- 2020 – to date: Teaching of Clinical Pathology MED/05, Course of Physiopathological bases of diseases,

Occupational Therapy Course A, Sapienza University of Rome

2020 – to date: Teaching of Technical Sciences of Laboratory Medicine MED/46, Course of Physiopathological bases of diseases, Nursing Course G - ASL Roma 5, Sapienza University of Rome

### **FUNDING INFORMATION (Grant as PI-principal investigator or I-investigator)**

2009-2012: **Investigator** "AIRC Investigator Grant 2009" (Associazione Italiana per la Ricerca Cancro). Project: "*MGL receptor on dendritic cells: novel mechanism of DC targeting for cancer vaccination*". (AIRC: IG 2009 Id.9249, PI: Prof.ssa Marianna Nuti).

2011-2013: **Investigator** PRIN 2009. Project: "*Meccanismi di immunosoppressione/tolleranza nell' interazione tumore e sistema immunitario: identificazione di nuove strategie per ristabilire l'immunosorveglianza*" (n°:2009XMZPKW\_001; Scientific Coordinator: Prof.ssa Nuti Marianna)..

2013-2016: **Investigator** PRIN 2010-2011. Project: "*Le scienza "omiche" come strumento per la ricerca traslazionale in oncologia*" (n.º: 2010ZESJWN\_003,; Scientific Coordinator Prof. Tomasello Francesco)

2013-2014: **PI** Project "Avvio alla ricerca, tipologia B, Ricerca Scientifica Sapienza Anno 2013. Title of the project: "*Generation and characterization of novel recombinant immunogens to target DCs for cancer vaccines*" (n°:C26N13XPZA).

2014-2015: **PI** Project "Avvio alla ricerca, tipologia B, bando Ricerca Scientifica Sapienza 2014. Title of the project: "*The role of MGL in DC-NK crosstalk*" (N°:C26N14AHKZ).

2016-2019: **Investigator**: "AIRC Investigator Grant 2015". Project: "*Glycoantigens in ovarian cancer: dissecting novel patterns of immune recognition in cancer patients*" (AIRC: IG 2015 Id.17432, PI: Prof.ssa Marianna Nuti).

2016-2017: **PI** Project "Avvio alla ricerca, tipologia B, bando Ricerca Scientifica Sapienza 2016". Title of the project: "*Immune checkpoint inhibitors and immune fitness: new predictive biomarkers for optimal clinical efficacy*" (N°:AR216154CDB95AC5).

2017-2018: **PI** Project "Avvio alla ricerca, tipologia B, bando Ricerca Scientifica Sapienza 2017. Title of the project: "*Prognostic and predictive role of microbioma in NSCLC patients treated with anti-PD1 therapy*" (N°: AR21715C5E4E4300).

2020: **PI** Project "Ricerca di Ateneo 2020 (Piccoli). Title of the project: "*Impact of circulating immune molecules on clinical outcome of uveal melanoma patients*" (N°: RP120172A7DF1B76).

### **SCIENTIFIC COLLABORATIONS**

#### **International**

- Copenhagen Center for Glycomics, Department of Cellular and Molecular Medicine and School of Dentistry, Faculty of Health Sciences, **UNIVERSITY of COPENAGHEN** (Prof. H.Clausen)
- Research Oncology Department, **KING'S COLLEGE OF LONDON**, Guy's Hospital, London, United Kingdom (Prof.ssa J.Burchell)
- Graduate School of Pharmaceutical Sciences, **UNIVERSITY OF TOKIO, JAPAN** (Prof. T. Irimura)

## **National**

- Unit of Parasitology and Unit of Human Microbiome, BAMBINO GESU' CHILDREN'S HOSPITAL IRCCS, Rome (Direttore: Dott.ssa Lorenza Putignani)
- Medical Oncology Unit, Fondazione-Policlinico Agostino Gemelli-Cattolica University, Rome
- Medical Oncology Unit, Department of Clinical and Molecular Medicine and Department of Radiological, Oncological and Pathological Science, Sapienza University of Rome
- Department of Translational and Precision Medicine, Sapienza University of Rome
- Department of Gynecological Science, Sapienza University of Rome

## **EDITORIAL EXPERIENCE**

**2017-2018:** **Guest Editor** for the Special Issue “Immunobiology of Solid Cancers: Cellular and Molecular Pathways as Potential Diagnostic and Therapeutic Targets”. BioMed Research International Journal (Impact Factor=2.476; Journal Citation Reports 2016; ISSN Print: 2314-6133; ISSN Online: 2314-6141)

**2020-2021:** **Guest Editor** for the Special Issue: "Immunocyto/Histochemistry in the Era of Immunotherapy " Journal of Personalized Medicine" (Impact Factor=4.94; Journal Citation Reports 2020; ISSN 2075-4426)

**2020-to date:** **ACADEMIC EDITOR** for *Oncology section*, BioMed Research International Journal (Impact Factor=3.411; Journal Citation Reports 2020; ISSN Print: 2314-6133)

## **AWARDS, HONORS and SOCIETY MEMBERSHIPS**

**2009:** **Abstract selected for oral presentation:** Zizzari I, Veglia F, Rahimi H, Napoletano C, Bellati F, Benedetti Panici P, Frati L, Rughetti A. *HER2-based recombinant immunogen for dendritic cells targeting through FcγR 2nd* International Congress of Immunology ECI, Berlin

**2010:** **Abstract selected for oral presentation:** Zizzari I, Napoletano C, Rughetti A, Nuti M *Mgl engagement modulates Dc phenotype and induces Erk1/2 and Nf-KB signaling pathways* 5th ENII EFIS/EJI Immunology Summer School 2010, 9-16 Maggio, Capo Caccia, Sardegna

**2010:** **Fellowship winner** ENII/EFIS (The European Network of Immunology Institutes) for the al 5<sup>th</sup> Immunology Summer School, Capo Caccia

**2011:** **Fellowship winner** of the ENII/EFIS Course in “Clinical Immunology”, Paris

Member of SIICA Scientific society (Società Italiana di Immunologia, Immunologia Clinica edAllergologia)

Member of SIPMET Scientific society (Società Italiana di Patologia e Medicina Traslazionale)

Member of MITO Scientific society (Multicenter Italian Trials in Ovarian Cancer and Gynecologic Malignancies)

## **SCIENTIFIC PRODUCTION**

Research identifiers:

ORCID ID: 0000-0001-8263-7248

SCOPUS AUTHOR ID: 46661944300

**LIST OF PUBLICATIONS SELECTED FOR THE EVALUATION  
(18 out of 31 manuscripts in the last 7 years, 2014-2021)**

1. Botticelli A, Cirillo A, Strigari L, Valentini F, Cerbelli B, Scagnoli S, Cerbelli E, **Zizzari IG**, Della Rocca C, D'Amati G, Polimeni A, Nuti M, Merlano MC, Mezi S, Marchetti P. *Anti-PD-1 and Anti-PD-L1 in Head and Neck Cancer: A Network Meta-Analysis*. FRONTIERS IN IMMUNOLOGY 2021. doi: 10.3389/fimmu.2021.705096. IF (2020): 7.561  
Citations: 0 (Scopus), 0 (WoS)
2. **Botticelli A\* & Zizzari IG\***, Scagnoli S, Pomati G, Strigari L, Cirillo A, Cerbelli B, Di Filippo A, Napoletano C, Scirocchi F, Rughetti A, Nuti M, Mezi S, Marchetti P. *The Role of Soluble LAG3 and Soluble Immune Checkpoints Profile in Advanced Head and Neck Cancer: A Pilot Study*. JOURNAL OF PERSONALIZED MEDICINE 2021. doi: 10.3390/jpm11070651. IF (2020): 4.954  
**\*Equal contribution**  
Citations: 0 (Scopus), 0 (WoS)
3. Nevi L, Di Matteo S, Carpino G, **Zizzari IG**, Safarikia S, Ambrosino V, Costantini D, Overi D, Giancotti A, Monti M, Bosco D, De Peppo V, Oddi A, De Rose AM, Melandro F, Bragazzi MC, Faccioli J, Massironi S, Grazi G, Benedetti Panici P, Berloco PB, Giuliante F, Cardinale V, Invernizzi P, Caretti G, Gaudio E, Alvaro D. *DCLK1, a Putative Stem Cell Marker in Human Cholangiocarcinoma*. HEPATOLOGY 2021. doi: 10.1002/hep.31571. IF (2020): 17.425  
Citations: 3 (Scopus), 0 (WOS)
4. **Zizzari IG**, Di Filippo A, Scirocchi F, Di Pietro FR, Rahimi H, Ugolini A, Scagnoli S, Vernocchi P, Del Chierico F, Putignani L, Rughetti A, Marchetti P, Nuti M, Botticelli A, Napoletano C. *Soluble Immune Checkpoints, Gut Metabolites and Performance Status as Parameters of Response to Nivolumab Treatment in NSCLC Patients..* JOURNAL OF PERSONALIZED MEDICINE 2020. doi: 10.3390/jpm10040208. IF (2019): 4.433  
Citations: 2 (Scopus), 2 (WOS)
5. **Zizzari IG**, Napoletano C, Di Filippo A, Botticelli A, Gelibter A, Calabrò F, Rossi E, Schinzari G, Urbano F, Pomati G, Scagnoli S, Rughetti A, Caponnetto S, Marchetti P, Nuti M. *Exploratory Pilot Study of Circulating Biomarkers in Metastatic Renal Cell Carcinoma*. CANCERS 2020. doi:10.3390/cancers12092620. IF (2019): 6.126  
Citations: 3 (Scopus), 3 (WOS)
6. Ugolini A, **Zizzari IG**, Ceccarelli F, Botticelli A, Colasanti T, Strigari L, Rughetti A, Rahimi H, Conti F, Valesini G, Marchetti P, Nuti M. *IgM-Rheumatoid factor confers primary resistance to anti-PD-1 immunotherapies in NSCLC patients by reducing CD137<sup>+</sup>T-cells*. EBIO MEDICINE 2020. doi: 10.1016/j.ebiom.2020.103098. IF (2019): 5.736  
Citations: 2 (Scopus), 2 (WOS)  
**Press release:**  
<https://www.uniroma1.it/en/notizia/immunotherapy-lung-cancer-towards-personalised-medicine>  
<https://www.dotnet.it/articolo/32449/trovato-il-fattore-nemico-dell-immunoterapia-anti-tumorale/>
7. Napoletano C, Steentoff C, Battisti F, Ye Z, Rahimi H, **Zizzari IG**, Dionisi M, Cerbelli B, Tomao F, French D, d'Amati G, Panici PB, Vakhrushev S, Clausen H, Nuti M, Rughetti A. *Investigating Patterns of Immune Interaction in Ovarian Cancer: Probing the O-glycoproteome by the Macrophage Galactose-Like C-type Lectin (MGL)*. CANCERS 2020. doi: 10.3390/cancers12102841. IF (2019): 6.126

Citations: 1 (Scopus), 3 (WOS)

8. Rossi E, Schinzari G, **Zizzari IG**, Maiorano BA, Pagliara MM, Sammarco MG, Fiorentino V, Petrone G, Cassano A, Rindi G, Bria E, Blasi MA, Nuti M, Tortora G. *Immunological Backbone of Uveal Melanoma: Is There a Rationale for Immunotherapy?* *CANCERS* 2019. doi: 10.3390/cancers11081055. IF (2018): 6.162  
Citations: 14 (Scopus), 15 (WOS)
9. Napoletano C, Ruscito I, Bellati F, **Zizzari IG**, Rahimi H, Gasparri ML, Antonilli M, Panici PB, Rughetti A, Nuti M. *Bevacizumab-Based Chemotherapy Triggers Immunological Effects in Responding Multi-Treated Recurrent Ovarian Cancer Patients by Favoring the Recruitment of Effector T Cell Subsets.* *JOURNAL OF CLINICAL MEDICINE* 2019. doi: 10.3390/jcm8030380. IF (2018): 5.688  
Citations: 9 (Scopus), 12 (WOS)
10. D'Aloia MM, **Zizzari IG**, Sacchetti B, Pierelli L, Alimandi M. *CAR-T cells: the long and winding road to solid tumors.* *CELL DEATH AND DISEASE* 2018. doi:10.1038/s41419-018-0278-6. IF (2018): 5.959  
Citations: 173 (Scopus), 181 (WOS)
11. **Zizzari IG\***, Napoletano C, Botticelli A, Caponnetto S, Calabrò F, Gelibter A, Rughetti A, Ruscito I, Rahimi H, Rossi E, Schinzari G, Marchetti P, Nuti M. *TK Inhibitor Pazopanib Primes DCs by Downregulation of the  $\beta$ -Catenin Pathway.* *CANCER IMMUNOLOGY RESEARCH* 2018. doi: 10.1158/2326-6066.CIR-17-0594. IF (2018): 8.619 \***Corresponding**  
Citations: 26 (Scopus), 26 (WOS)
12. Botticelli A, Cerbelli B, Lionetto L, **Zizzari IG**, Salati M, Pisano A, Federica M, Simmaco M, Nuti M, Marchetti P. *Can IDO activity predict primary resistance to anti-PD-1 treatment in NSCLC?* *JOURNAL OF TRANSLATIONAL MEDICINE* 2018. doi: 10.1186/s12967-018-1595-3. IF (2018): 4.098  
Citations: 48 (Scopus), 45 (WOS)
13. Nuti M, **Zizzari IG**, Botticelli A, Rughetti A, Marchetti P. *The ambitious role of anti angiogenesis molecules: Turning a cold tumor into a hot one.* *CANCER TREATMENT REVIEWS* 2018. doi: 10.1016/j.ctrv.2018.07.016. IF (2018): 8.332  
Citations: 13 (Scopus), 10 (WOS)
14. **Botticelli A\*** & **Zizzari IG\***, Mazzuca F, Ascierio PA, Putignani L, Marchetti L, Napoletano C, Nuti M, Marchetti P. *Cross-talk between microbiota and immune fitness to steer and control response to anti PD-1/PDL-1 treatment.* *ONCOTARGET* 2017. Doi: 0.18632/oncotarget.12985. IF (2016): 5.168  
\***Equal contribution**  
Citations: 34 (Scopus), 29 (WOS)
15. Antonilli M, Rahimi H, Visconti V, Napoletano C, Ruscito I, **Zizzari IG**, Caponnetto S, Barchiesi G, Iadarola R, Pierelli L, Rughetti A, Bellati F, Panici PB, Nuti M. *Triple peptide vaccination as consolidation treatment in women affected by ovarian and breast cancer: Clinical and immunological data of a phase I/II clinical trial.* *International Journal of Oncology* 2016. doi: 10.3892/ijo.2016.3386. IF (2016): 3.079  
Citations: 17 (Scopus), 18 (WOS)
16. **Zizzari IG**, Napoletano C, Battisti F, Rahimi H, Caponnetto S, Pierelli L, Nuti M, Rughetti A. *MGL Receptor and Immunity: When the Ligand Can Make the Difference.* *Journal of Immunology Research* 2015. doi: 10.1155/2015/450695. IF (2015): 2.812  
Citations: 31 (Scopus), 27 (WOS)

17. **Zizzari IG**, Martufi P, Battisti F, Rahimi H, Caponnetto S, Bellati F, Nuti M, Rughetti A, Napoletano C. *The Macrophage Galactose-Type C-Type Lectin (MGL) Modulates Regulatory T Cell Functions*. PLoS ONE 2015. doi: 10.1371/journal.pone.0132617. IF (2015): 3.057  
Citations: 13 (Scopus), 15 (WOS)
18. Rughetti A, Rahimi H, Belleudi F, Napoletano C, Battisti F, **Zizzari IG**, Antonilli M, Bellati F, Wandall HH, Benedetti Panici P, Burchell JM, Torrisi MR, Nuti M. *Microvesicle cargo of tumor-associated MUC1 to dendritic cells allows cross-presentation and specific carbohydrate processing*. Cancer Immunology Research 2014. doi: 10.1158/2326-6066.CIR-13-0112-T. IF (2014): 3.857  
Citations: 15 (Scopus), 15 (WOS)

#### TOTAL NUMBER OF PUBLICATIONS (N°=36):

1. Botticelli A, Cirillo A, Strigari L, Valentini F, Cerbelli B, Scagnoli S, Cerbelli E, **Zizzari IG**, Della Rocca C, D'Amati G, Polimeni A, Nuti M, Merlano MC, Mezi S, Marchetti P. *Anti-PD-1 and Anti-PD-L1 in Head and Neck Cancer: A Network Meta-Analysis*. FRONTIERS IN IMMUNOLOGY 2021. doi: 10.3389/fimmu.2021.705096. IF (2020): 7.561  
Citations: 0 (Scopus), 0 (WOS)
2. **Botticelli A\* & Zizzari IG\***, Scagnoli S, Pomati G, Strigari L, Cirillo A, Cerbelli B, Di Filippo A, Napoletano C, Scirocchi F, Rughetti A, Nuti M, Mezi S, Marchetti P. *The Role of Soluble LAG3 and Soluble Immune Checkpoints Profile in Advanced Head and Neck Cancer: A Pilot Study*. JOURNAL OF PERSONALIZED MEDICINE 2021. doi: 10.3390/jpm11070651. IF (2020): 4.954  
**\*Equal contribution**  
Citations: 0 (Scopus), 0 (WOS)
3. Nevi L, Di Matteo S, Carpino G, **Zizzari IG**, Safarikia S, Ambrosino V, Costantini D, Overi D, Giancotti A, Monti M, Bosco D, De Peppo V, Oddi A, De Rose AM, Melandro F, Bragazzi MC, Faccioli J, Massironi S, Grazi G, Benedetti Panici P, Berloco PB, Giuliante F, Cardinale V, Invernizzi P, Caretti G, Gaudio E, Alvaro D. *DCLK1, a Putative Stem Cell Marker in Human Cholangiocarcinoma*. HEPATOLOGY 2021. doi: 10.1002/hep.31571. IF (2020): 17.425  
Citations: 3 (Scopus), 0 (WOS)
4. Botticelli A, Vernocchi P, Marini F, Quagliariello A, Cerbelli B, Reddel S, Del Chierico F, Di Pietro F, Giusti R, Tomassini A, Giampaoli O, Miccheli A, **Zizzari IG**, Nuti M, Putignani L, Marchetti P. *Gut metabolomics profiling of non-small cell lung cancer (NSCLC) patients under immunotherapy treatment*. JOURNAL OF TRANSLATIONAL MEDICINE 2020. doi: 10.1186/s12967-020-02231-0. IF (2019): 4.124  
Citations: 34 (Scopus), 27 (WOS)
5. Macchia I, La Sorsa V, Ruspantini I, Sanchez M, Tirelli V, Carollo M, Fedele G, Leone P, Schiavoni G, Buccione C, Rizza P, Nisticò P, Palermo B, Morrone S, Stabile H, Rughetti A, Nuti M, **Zizzari IG**, Fionda C, Maggio R, Capuano C, Quintarelli C, Sinibaldi M, Agrati C, Casetti R, Roza Gonzalez A, Iacobone F, Gismondi A, Belardelli F, Biffoni M, Urbani F. *Multicentre Harmonisation of a Six-Colour Flow Cytometry Panel for Naïve/Memory T Cell Immunomonitoring*. JOURNAL OF IMMUNOLOGY RESEARCH 2020. doi: 10.1155/2020/1938704. IF (2019): 3.327  
Citations: 2 (Scopus), 3 (WOS)
6. Botticelli A, Mezi S, Pomati G, Cerbelli B, Cerbelli E, Roberto M, Giusti R, Cortellini A, Lionetto L, Scagnoli S, **Zizzari IG**, Nuti M, Simmaco M, Marchetti P. *Tryptophan Catabolism as Immune Mechanism of Primary Resistance to Anti-PD-1*. FRONTIERS IN IMMUNOLOGY 2020. doi: 10.3389/fimmu.2020.01243. IF (2019): 5.085

Citations: 7 (Scopus), 6 (WOS)

7. **Zizzari IG**, Filippo AD, Scirocchi F, Di Pietro FR, Rahimi H, Ugolini A, Scagnoli S, Vernocchi P, Del Chierico F, Putignani L, Rughetti A, Marchetti P, Nuti M, Botticelli A, Napoletano C. *Soluble Immune Checkpoints, Gut Metabolites and Performance Status as Parameters of Response to Nivolumab Treatment in NSCLC Patients.* JOURNAL OF PERSONALIZED MEDICINE 2020. doi: 10.3390/jpm10040208. IF (2019): 4.433  
Citations: 2 (Scopus), 2 (WOS)
8. Rahimi Koshkaki H, Minasi S, Ugolini A, Trevisi G, Napoletano C, **Zizzari IG**, Gessi M, Giangaspero F, Mangiola A, Nuti M, Buttarelli FR, Rughetti A. *Immunohistochemical Characterization of Immune Infiltrate in Tumor Microenvironment of Glioblastoma.* JOURNAL OF PERSONALIZED MEDICINE 2020. doi: 10.3390/jpm10030112. IF (2019): 4.433  
Citations: 4 (Scopus), 7 (WOS)
9. **Zizzari IG**, Napoletano C, Di Filippo A, Botticelli A, Gelibter A, Calabrò F, Rossi E, Schinzari G, Urbano F, Pomati G, Scagnoli S, Rughetti A, Caponnetto S, Marchetti P, Nuti M. *Exploratory Pilot Study of Circulating Biomarkers in Metastatic Renal Cell Carcinoma.* CANCERS 2020. doi:10.3390/cancers12092620. IF (2019): 6.126  
Citations: 3 (Scopus), 3 (WOS)
10. Ugolini A, **Zizzari IG**, Ceccarelli F, Botticelli A, Colasanti T, Strigari L, Rughetti A, Rahimi H, Conti F, Valesini G, Marchetti P, Nuti M. *IgM-Rheumatoid factor confers primary resistance to anti-PD-1 immunotherapies in NSCLC patients by reducing CD137<sup>+</sup>T-cells.* EBIOMEDICINE 2020. doi: 10.1016/j.ebiom.2020.103098. IF (2019): 5.736  
Citations: 2 (Scopus), 2 (WOS)  
**press release:**  
<https://www.uniroma1.it/en/notizia/immunotherapy-lung-cancer-towards-personalised-medicine>  
<https://www.dottnet.it/articolo/32449/trovato-il-fattore-nemico-dell-immunoterapia-anti-tumorale/>
11. Napoletano C, Steentoff C, Battisti F, Ye Z, Rahimi H, **Zizzari IG**, Dionisi M, Cerbelli B, Tomao F, French D, d'Amati G, Panici PB, Vakhrushev S, Clausen H, Nuti M, Rughetti A. *Investigating Patterns of Immune Interaction in Ovarian Cancer: Probing the O-glycoproteome by the Macrophage Galactose-Like C-type Lectin (MGL).* CANCERS 2020. doi: 10.3390/cancers12102841. IF (2019): 6.126  
Citations: 1 (Scopus), 3 (WOS)
12. Rossi E, Schinzari G, **Zizzari IG**, Maiorano BA, Pagliara MM, Sammarco MG, Fiorentino V, Petrone G, Cassano A, Rindi G, Bria E, Blasi MA, Nuti M, Tortora G. *Immunological Backbone of Uveal Melanoma: Is There a Rationale for Immunotherapy?* CANCERS 2019. doi: 10.3390/cancers11081055. IF (2018): 6.162  
Citations: 14 (Scopus), 15 (WOS)
13. Botticelli A, Salati M, Di Pietro FR, Strigari L, Cerbelli B, **Zizzari IG**, Giusti R, Mazzotta M, Mazzuca F, Roberto M, Vici P, Pizzuti L, Nuti M, Marchetti P. *A nomogram to predict survival in non-small cell lung cancer patients treated with nivolumab.* JOURNAL OF TRANSLATIONAL MEDICINE 2019. doi: 10.1186/s12967-019-1847-x. IF (2018): 4.098  
Citations: 20 (Scopus), 22 (WOS)
14. Napoletano C, Ruscito I, Bellati F, **Zizzari IG**, Rahimi H, Gasparri ML, Antonilli M, Panici PB, Rughetti A, Nuti M. *Bevacizumab-Based Chemotherapy Triggers Immunological Effects in Responding Multi-Treated Recurrent Ovarian Cancer Patients by Favoring the Recruitment of Effector T Cell Subsets.* JOURNAL OF CLINICAL MEDICINE 2019. doi: 10.3390/jcm8030380. IF (2018): 5.688  
Citations: 9 (Scopus), 12 (WOS)



15. Dionisi M, De Archangelis C, Battisti F, Rahimi Koshkaki H, Belleudi F, **Zizzari IG**, Ruscito I, Albano C, Di Filippo A, Torrisi MR, Benedetti Panici P, Napoletano C, Nuti M, Rughetti A. *Tumor-Derived Microvesicles Enhance Cross-Processing Ability of Clinical Grade Dendritic Cells*. FRONTIERS IN IMMUNOLOGY 2018. doi: 10.3389/fimmu.2018.02481. IF (2018): 4.716 Citations: 7 (Scopus), 7 (WOS)
16. **Zizzari IG\***, Napoletano C, Botticelli A, Caponnetto S, Calabrò F, Gelibter A, Rughetti A, Ruscito I, Rahimi H, Rossi E, Schinzari G, Marchetti P, Nuti M. *TK Inhibitor Pazopanib Primes DCs by Downregulation of the  $\beta$ -Catenin Pathway*. CANCER IMMUNOLOGY RESEARCH 2018. doi: 10.1158/2326-6066.CIR-17-0594. IF (2018): 8.619 \***Corresponding** Citations: 26 (Scopus), 26 (WOS)
17. Botticelli A, Cerbelli B, Lionetto L, **Zizzari IG**, Salati M, Pisano A, Federica M, Simmaco M, Nuti M, Marchetti P. *Can IDO activity predict primary resistance to anti-PD-1 treatment in NSCLC?* JOURNAL OF TRANSLATIONAL MEDICINE 2018. doi: 10.1186/s12967-018-1595-3. IF (2018): 4.098 Citations: 48 (Scopus), 45 (WOS)
18. Nuti M, **Zizzari IG**, Botticelli A, Rughetti A, Marchetti P. *The ambitious role of anti angiogenesis molecules: Turning a cold tumor into a hot one*. CANCER TREATMENT REVIEWS 2018. doi: 10.1016/j.ctrv.2018.07.016. IF (2018): 8.332 Citations: 13 (Scopus), 10 (WOS)
19. Ruscito I, Darb-Esfahani S, Kulbe H, Bellati F, **Zizzari IG**, Rahimi Koshkaki H, Napoletano C, Caserta D, Rughetti A, Kessler M, Sehoul J, Nuti M, Braicu EI. *The prognostic impact of cancer stem-like cell biomarker aldehyde dehydrogenase-1(ALDH1) in ovarian cancer: A meta-analysis*. Gynecologic Oncology 2018. doi: 10.1016/j.ygyno.2018.05.006. IF (2018): 4.393 Citations: 7 (Scopus), 9 (WOS)
20. Napoletano C, Mattiucci S, Colantoni A, Battisti F, **Zizzari IG**, Rahimi H, Nuti M, Rughetti A. *Anisakis pegreffii impacts differentiation and function of human dendritic cells*. Parasite Immunology 2018. doi: 10.1111/pim.12527. IF (2018): 2.755 Citations: 11 (Scopus), 10 (WOS)
21. D'Aloia MM, **Zizzari IG**, Sacchetti B, Pierelli L, Alimandi M. *CAR-T cells: the long and winding road to solid tumors*. CELL DEATH AND DISEASE 2018. doi:10.1038/s41419-018-0278-6. IF (2018): 5.959 Citations: 173 (Scopus), 181 (WOS)
22. Botticelli A, Onesti CE, **Zizzari IG**, Cerbelli B, Sciattella P, Occhipinti M, Roberto M, Di Pietro F, Bonifacino A, Ghidini M, Vici P, Pizzuti L, Napoletano C, Strigari L, D'Amati G, Mazzuca F, Nuti M, Marchetti P. *The sexist behaviour of immune checkpoint inhibitors in cancer therapy?* ONCOTARGET 2017. doi: 10.18632/oncotarget.22242. IF (2016): 5.168 Citations: 44 (Scopus), 43 (WOS)
23. Battisti F, Napoletano C, Rahimi Koshkaki H, Belleudi F, **Zizzari IG**, Ruscito I, Palchetti S, Bellati F, Benedetti Panici P, Torrisi MR, Caracciolo G, Altieri F, Nuti M, Rughetti A. *Tumor-Derived Microvesicles Modulate Antigen Cross-Processing via Reactive Oxygen Species-Mediated Alkalinization of Phagosomal Compartment in Dendritic Cells*. FRONTIERS IN IMMUNOLOGY 2017. doi: 10.3389/fimmu.2017.01179. IF (2017): 5.511 Citations: 11 (Scopus), 10 (WOS)
24. **Botticelli A\*& Zizzari IG \***, Mazzuca F, Ascierio PA, Putignani L, Marchetti L, Napoletano C, Nuti M, Marchetti P. *Cross-talk between microbiota and immune fitness to steer and control*

response to anti PD-1/PDL-1 treatment. ONCOTARGET 2017. Doi: 0.18632/oncotarget.12985. IF (2016): 5.168

**\*Equal contribution**

Citations: 34 (Scopus), 29 (WOS)

25. Napoletano C, Bellati F, Ruscito I, Pernice M, **Zizzari IG**, Caponnetto S, Tomao F, Frigerio L, Liberati M, Rughetti A, Caserta D, Panici PB, Nuti M. *Immunological and Clinical Impact of Cancer Stem Cells in Vulvar Cancer: Role of CD133/CD24/ABCG2-Expressing Cells*. ANTICANCER RESEARCH 2016. doi; 10.21873/anticancerres.11080. IF (2016): 1.937  
Citations: 9 (Scopus), 9 (WOS)
26. Iudicone P, Fioravanti D, Cicchetti E, **Zizzari IG**, Pandolfi A, Scocchera R, Fazzina R, Pierelli L. *Interleukin-15 enhances cytokine induced killer (CIK) cytotoxic potential against epithelial cancer cell lines via an innate pathway*. HUMAN IMMUNOLOGY 2016. 10.1016/j.humimm.2016.09.003. IF (2016): 2.311  
Citations: 8 (Scopus), 9 (WOS)
27. Fazzina R, Iudicone P, Fioravanti D, Bonanno G, Totta P, **Zizzari IG**, Pierelli L. *Potency testing of mesenchymal stromal cell growth expanded in human platelet lysate from different human tissues*. Stem Cell Research and Therapy 2016. Doi: 10.1186/s13287-016-0383-3. IF (2016): 4.211  
Citations: 23 (Scopus), 21 (WOS)
28. Antonilli M, Rahimi H, Visconti V, Napoletano C, Ruscito I, **Zizzari IG**, Caponnetto S, Barchiesi G, Iadarola R, Pierelli L, Rughetti A, Bellati F, Panici PB, Nuti M. *Triple peptide vaccination as consolidation treatment in women affected by ovarian and breast cancer: Clinical and immunological data of a phase I/II clinical trial*. International Journal of Oncology 2016. doi: 10.3892/ijo.2016.3386. IF (2016): 3.079  
Citations: 17 (Scopus), 18 (WOS)
29. **Zizzari IG**, Napoletano C, Battisti F, Rahimi H, Caponnetto S, Pierelli L, Nuti M, Rughetti A. *MGL Receptor and Immunity: When the Ligand Can Make the Difference*. Journal of Immunology Research 2015. doi: 10.1155/2015/450695. IF (2015): 2.812  
Citazioni: 31 (Scopus), 27 (WOS)
30. **Zizzari IG**, Martufi P, Battisti F, Rahimi H, Caponnetto S, Bellati F, Nuti M, Rughetti A, Napoletano C. *The Macrophage Galactose-Type C-Type Lectin (MGL) Modulates Regulatory T Cell Functions*. PLoS ONE 2015. doi: 10.1371/journal.pone.0132617. IF (2015): 3.057  
Citations: 13 (Scopus), 15 (WOS)
31. Rughetti A, Rahimi H, Belleudi F, Napoletano C, Battisti F, **Zizzari IG**, Antonilli M, Bellati F, Wandall HH, Benedetti Panici P, Burchell JM, Torrisi MR, Nuti M. *Microvesicle cargo of tumor-associated MUC1 to dendritic cells allows cross-presentation and specific carbohydrate processing*. Cancer Immunology Research 2014. doi: 10.1158/2326-6066.CIR-13-0112-T. IF (2014): 3.857  
Citations: 15 (Scopus), 15 (WOS)
32. Bellati F, Napoletano C, Ruscito I, Visconti V, Antonilli M, Gasparri ML, **Zizzari IG**, Rahimi H, Palaia I, Rughetti A, Benedetti Panici P, Nuti M. *Past, present and future strategies of immunotherapy in gynecological malignancies*. Current Molecular Medicine 2013. doi: 10.2174/1566524011313040014. IF (2013): 3.612  
Citations: 12 (Scopus), 11 (WOS)
33. Napoletano C\*, **Zizzari IG** \*, Rughetti A, Rahimi H, Irimura T, Clausen H, Wandall HH, Belleudi F, Bellati F, Pierelli L, Frati L, Nuti M. *Targeting of macrophage galactose-type C-type lectin (MGL) induces DC signaling and activation*. European Journal of Immunology. 2012. doi:10.1002/eji.201142086. IF (2012): 4.970 **\*Equal contribution**  
Citations: 53 (Scopus), 57 (WOS)

34. Bellati F, Napoletano C, Gasparri ML, Visconti V, **Zizzari IG**, Ruscito I, Caccetta J, Rughetti A, Benedetti-Panici P, Nuti M. *Monoclonal antibodies in gynecological cancer: a critical point of view*. Clinical & Developmental Immunology 2011. doi: 10.1155/2011/890758. IF (2011): 1.838  
Citations: 36 (Scopus), 28 (WOS)
35. **Zizzari IG**, Veglia F, Taurino F, Rahimi H, Quaglino E, Belleudi F, Riccardo F, Antonilli M, Napoletano C, Bellati F, Benedetti-Panici P, Torrisi MR, Frati L, Nuti M, Rughetti A. *HER2-based recombinant immunogen to target DCs through FcγRs for cancer immunotherapy*. Journal of Molecular Medicine 2011. doi: 10.1007/s00109-011-0794-7. IF (2011): 4.668  
Citations: 12 (Scopus), 10 (WOS)
36. Nuti M, Bellati F, Visconti V, Napoletano C, Domenici L, Caccetta J, **Zizzari IG**, Ruscito I, Rahimi H, Benedetti-Panici P, Rughetti A. *Immune effects of trastuzumab*. Journal of Cancer. 2011. doi:10.7150/jca.2.317. IF (2011): -  
Citations: 26 (Scopus), 26 (WOS)

### **Editorials**

1. Nuti M, **Zizzari IG**, Botticelli A, Putignani L, Marchetti P. *The microbiota impact: bacteria shaping immunity, disease and response to therapy*. Translational cancer research 2018. Doi: 10.21037/tcr.2018.05.25
2. Ruscito I, Braicu EI, Gasparri ML, **Zizzari IG**. *Immunobiology of Solid Cancers: Cellular and Molecular Pathways as Potential Diagnostic and Therapeutic Targets*. Biomed Research International 2018. doi: 10.1155/2018/6532019

### **Summary of Scientific Achievements (10y academic seniority)**

Publications: 36

Total number of manuscripts as a first author: 9

Total number of manuscripts as last or corresponding author: 1

H-Index: 14 (Scopus), 15 (Wos)

Normalized H index (*academic seniority, 10y*): 1,4 (Scopus), 1,5 (Wos)

Total Impact Factor: 176,349

Mean Impact Factor: 4,899

Total Citations: 730 (Scopus) 718 (WoS)

Mean Citations: 20,27 (Scopus), 19,94 (WoS)

### **Summary of Scientific Achievements last 7 years (2014-2021)**

Publications: 31

Total number of manuscripts as a first author: 7

Total number of manuscripts as last or corresponding author: 1

H-Index: 13 (Scopus), 13 (Wos)

Total Impact Factor: 161,26

Mean Impact Factor: 5,2 (5,12)

Total Citations: 591 (Scopus), 586 (WoS)

Mean Citations: 19,06 (Scopus), 18,90 (WoS)

## **National Scientific Qualification (ASN) parameters**

**PA:** 06/A2-MED/04

Number of papers (5y): 28 (requested 10)

Number of citations (10y): 730 (718) (requested 323)

H-index (10y): 14 (15 Wos) (requested 10)

**PO:** 06/A2-MED/04

Number of papers (10y): 36 (requested 21)

Number of citations (15y): 730 (requested 743)

H-index (15y): 14 (15 Wos) (requested 14)

## **ORGANIZATION OF SCIENTIFIC MEETINGS**

*2011:* Organization Scientific Simposium BEMM 2011, edition II, Sapienza University Rome

*2016-present:* Coordinator of II level of “Immuno-Oncology” Master (29056), Sapienza University Rome

## **CONTRIBUTES IN SCIENTIFIC MEETING AS INVITED SPEAKER**

- 2° International Congress of Immunology ECI 2009, Berlin, Germany. Talk: “*HER2-based recombinant immunogen for dendritic cells targeting through FcγR*”
- 5th ENII EFIS/EJI Immunology Summer School 2010, Capo Caccia, Italy. Talk “*Mgl engagement modulates Dc phenotype and induces Erk1/2 and Nf-KB signaling pathways.*”
- Educational Course: "Conferenza stampa con l'immunologo", Cattolica University, Rome July 2017. Talk “*Esiste una relazione tra fattori clinici ed eventuali marker di risposta immunitaria?*”
- Educational Course “Share the experience: Immunotherapy”-Rome, 2018. Talk: “*Basic Immunology: cells and molecules*”
- Course “Confronto aperto sulla migliore scelta terapeutica nel paziente con carcinoma polmonare stadio III” Umberto I Hospital, Rome. Talk: “*L'importanza dell'aggiunta dell'immunoterapia*”, 2019
- “WORKSHOP NEOPLASIE RENALI 3.0: FOCUS CLASSI DI RISCHIO”. Talk: “*Le nuove frontiere nell'Immunologia e tumore del rene*”. Novembre 2020 (online meeting)
- Preceptorship “Immunoterapia testa-collo e melanoma”. Talk “*Meccanismi di resistenza all'immunoterapia*”. Umberto I Hospital, Rome, 2021

## **RESEARCH ACTIVITIES**

- Study of the mechanisms of interaction between tumor and immune system
- Monitoring the immune system of cancer patients in order to identify immune parameters as possibile predictors of response to immunotherapy and target therapies such as mechanisms of immune evasion and resistance to immune checkpoints.
- Production of new immunogens for anti-cancer therapy
- Ex vivo isolation of immunogens for tumor vaccination
- Peptide-based tumor vaccination or by administering autologous pulsed dendritic cells (DCs) with recombinant proteins or tumor lysate (GMP)

*Keywords: Cancer Immunology, Immunotherapy, Cancer biology, Clinical cancer research,*

I authorize the processing of my personal data pursuant to Legislative Decree 30 June 2003, n.196

Rome 29.09.2021

Ilaria Grazia Zizzari

A handwritten signature in black ink, appearing to read 'Ilaria Grazia Zizzari', written in a cursive style.