

# Curriculum Vitae

## Renato Ostuni, PhD

### PERSONAL INFORMATION

Name: Renato Ostuni  
Date of birth: 19/04/1983  
Nationality: Italian  
Address: San Raffaele Telethon Institute for Gene Therapy (SR-Tiget)  
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### CURRENT POSITIONS

2015-present **Group Leader**, Genomics of the Innate Immune System Unit  
San Raffaele Telethon Institute for Gene Therapy (SR-Tiget)  
San Raffaele Scientific Institute (SRSI), Milan, Italy  
2019-present **Assistant Professor** of Tissue Biology  
Vita-Salute San Raffaele University, Milan, Italy

### EDUCATION

2008-2010 **Ph.D. in Immunology** - Translational and Molecular Medicine (DIMET)  
Program, University of Milano-Bicocca, Milan, Italy  
2005-2007 **M.Sc. in Industrial Biotechnology** (110/110 cum laude)  
University of Milano-Bicocca, Milan, Italy  
2002-2005 **B.Sc. in Biotechnology** (110/110 cum laude)  
University of Milano-Bicocca, Milan, Italy

### PAST POSITIONS

2011-2015 **Postdoctoral Fellow**, Laboratory of Gioacchino Natoli  
European Institute of Oncology (IEO), Milan, Italy  
06/2012 **Postdoctoral Fellow (visiting)**, Laboratory of Ido Amit  
Weizmann Institute of Science, Rehovot, Israel  
2008-2010 **PhD Student**, Laboratory of Francesca Granucci and Ivan Zanoni  
University of Milano-Bicocca, Milan, Italy.

### HONORS AND AWARDS

2019 Alessandro Moretta Young Investigator Award, Aegean Conferences  
2018 Young Investigator Award, European Macrophage and Dendritic Cell Society  
2017 European Research Council (ERC) Starting Grant (X-TAM, 759532)  
2017 LaboSpace Prize, Italian Society of Immunology and Allergology (SIICA)  
2013 Bioeconomy Rome Award, CNCCS Consortium  
2012 European Molecular Biology Organization (EMBO) Short-Term Fellowship  
2011-2015 European Union FP7<sup>th</sup> Structured International Post Doc (SIPOD) Fellowship  
2008-2010 National PhD Fellowship, Italian Ministry of Health and Research

## TEACHING ACTIVITIES

2019-present	Histology
2015-present	Laboratory course of Histology Lecturer for Cell Therapy course (M.Sc. in Biotechnology) Vita-Salute San Raffaele University, Milan, Italy
2013, 2015	Lecturer for Genomics course (Ph.D. Program in Molecular Oncology) IFOM-IEO Campus, Milan, Italy
2010-2012	Laboratory course of Immunology, (B.Sc. in Biotechnology) Lecturer for Molecular Immunology course (M.Sc. in Biotechnology) University of Milano-Bicocca

## PROFESSIONAL ACTIVITIES AND COMMISSIONS OF TRUST

2020-2018-	Teaching Commission, International MD, Vita-Salute San Raffaele University Scientific and Technical Committee for the Italian MoH - 'Biomedical Research' (Ricerca Sanitaria) and 'Young Researchers' Grants' (Giovani Ricercatori)
2017-	Member ( <u>Coordinator since 2019</u> ) of the Organizing Committee of the Ospedale San Raffaele Retreat
2017-2019	Member of the Organizing Committee of the SR-Tiget Retreat
2015-2018	Associate Editor of Frontiers in Immunology
2014-present	Invited reviewer for Nature Immunology, Science Immunology, Blood, Cell Reports, Journal of Leukocyte Biology, European Journal of Immunology, Nucleic Acid Research, PLOS ONE. Invited reviewer for Grant and Fellowship applications submitted to the Italian Ministry of Health (IT), Wellcome Trust (UK), Swiss Cancer League (CH), European Research Council (ERC)
2015-present	European Society of Gene and Cell Therapy (ESGCT), Italian Society of Immunology and Allergology (SIICA)

## FUNDING

2019-2026	5x1000 Program, <a href="#">AIRC</a> - Partner
2018-2023	Starting Grant #759532, <a href="#">European Research Council (ERC)</a> - PI
2018-2023	My First AIRC Grant (MFAG) #20247, <a href="#">AIRC</a> - PI
2018-2021	'Giovani Ricercatori' Grant #2016-02362156, <a href="#">Italian MoH</a> - PI
2017-2020	Infect-ERA Grant #126, <a href="#">ERA-NET</a> - Partner
2016-2019	SR-Tiget Grant Award F04, <a href="#">Telethon Foundation</a> - PI
2016-2019	'Giovani Ricercatori' Grant #2015-0990, <a href="#">Cariplo Foundation</a> - PI

## PUBLICATIONS (in reverse chronological order)

- 1. Genomic features enabling control of inflammatory gene expression by antagonistic signals**  
Cilenti F, Barbiera G, Caronni N, Iodice D, Montaldo E, Barresi S, Lusito E, Cuzzola V, Vittoria FM, Mezzanzanica L, Miotto P, Di Lucia P, Lazarevic D, Cirillo DM, Iannacone M, Genua M, [Ostuni R.](#)  
**Immunity** (accepted in principle)
- 2. TIM4 expression by dendritic cells mediates uptake of tumor-associated antigens and anti-tumor responses**  
Caronni N, Piperno GM, Simoncello F, Romano O, Vodret S, Yanagihashi Y, Dress R, Dutertre CA, Bugatti M, Bourdeley P, Del Prete A, Schioppa T, Mazza EMC, Collavin L, Zacchigna S, [Ostuni R.](#) Gueronprez P, Vermi W, Ginhoux F, Biccato S, Nagata S, Benvenuti F.  
**Nat Commun.** 2021 Apr 14;12(1):2237. doi: 10.1038/s41467-021-22535-z.
- 3. Determinants, mechanisms, and functional outcomes of myeloid cell diversity in cancer**  
Caronni N, Montaldo E, Mezzanzanica L, Cilenti F, Genua M, [Ostuni R.](#)  
**Immunol Rev.** 2021 Mar;300(1):220-236. doi: 10.1111/imr.12944.
- 4. Co-option of Neutrophil Fates by Tissue Environments**

Ballesteros I, Rubio-Ponce A, Genua M, Lusito E, Kwok I, Fernández-Calvo G, Khoyratty TE, van Grinsven E, González-Hernández S, Nicolás-Ávila JÁ, Vicano T, Maccataio A, Benguría A, Li JL, Adrover JM, Aroca-Crevillen A, Quintana JA, Martín-Salamanca S, Mayo F, Ascher S, Barbiera G, Soehnlein O, Gunzer M, Ginhoux F, Sánchez-Cabo F, Nistal-Villán E, Schulz C, Dopazo A, Reinhardt C, Udalova IA, Ng LG, [Ostuni R](#), Hidalgo A.

**Cell.** 2020 Oct 20;S0092-8674(20)31309-X. doi: 10.1016/j.cell.2020.10.003.

5. Tumor-derived prostaglandin E2 promotes p50 NF-κB-dependent differentiation of monocytic MDSCs.

Porta C, Consonni FM, Morlacchi S, Sangaletti S, Bleve A, Totaro MG, Larghi P, Rimoldi M, Tripodo C, Strauss L, Banfi S, Storto M, Pressiani T, Rimassa L, Tartari S, Ippolito A, Doni A, Soldà G, Duga S, Piccolo V, [Ostuni R](#), Natoli G, Bronte V, Balzac F, Turco E, Hirsch E, Colombo MP, Sica A.

**Cancer Res.** 2020 Jul 1;80(13):2874-2888. doi: 10.1158/0008-5472.CAN-19-2843.

6. Dynamics and genomic landscape of CD8<sup>+</sup> T cells undergoing intrahepatic priming.

Bénéchet AP, De Simone G, Di Lucia P, Cilenti F, Barbiera G, Le Bert N, Fumagalli V, Lusito E, Moalli F, Bianchessi V, Andreatta F, Zordan P, Bono E, Giustini L, Bonilla WV, Bleriot C, Kunasegaran K, Gonzalez-Aseguinolaza G, Pinschewer DD, Kennedy PTF, Naldini L, Kuka M, Ginhoux F, Cantore A, Bertolotti A, [Ostuni R](#), Guidotti LG, Iannacone M. **Co-last author**

**Nature.** 2019 Oct 2. doi: 10.1038/s41586-019-1620-6.

7. Adaptation and memory in immune responses.

Natoli G, [Ostuni R](#). **Co-corresponding author**

**Nat Immunol.** 2019 Jul;20(7):783-792.

8. Immune signature drives leukemia escape and relapse after hematopoietic cell transplantation.

Toffalori C, Zito L, Gambacorta V, Riba M, Oliveira G, Bucci G, Barcella M, Spinelli O, Greco R, Crucitti L, Cieri N, Noviello M, Manfredi F, Montaldo E, [Ostuni R](#), Naldini M, Gentner B, Waterhouse M, Zeiser R, Finke J, Hanoun M, Beelen D, Gojo I, Luznik L, Onozawa M, Teshima T, Devillier R, Blaise D, Halkes C, Griffioen M, Carrabba M, Bernardi M, Peccatori J, Barlassina C, Stupka E, Lazarevic D, Tonon G, Rambaldi F, Cittaro D, Bonini C, Fleischhauer K, Ciceri F, Vago L.

**Nat Med.** 2019 Apr;25(4):603-611.

9. Heterogeneity of neutrophils.

Ng LG, [Ostuni R](#), Hidalgo A. **Co-corresponding author**

**Nat Rev Immunol.** 2019 Apr;19(4):255-265.

10. Interferon gene therapy reprograms the leukemia microenvironment inducing protective immunity to multiple tumor antigens.

Escobar G, Barbarossa L, Barbiera G, Norelli M, Genua M, Ranghetti A, Plati T, Camisa B, Brombin C, Cittaro D, Annoni A, Bondanza A, [Ostuni R](#), Gentner B, Naldini L.

**Nat Commun.** 2018 Jul 24;9(1):2896.

11. Monocyte-derived IL-1 and IL-6 are differentially required for cytokine-release syndrome and neurotoxicity due to CAR T cells.

Norelli M, Camisa B, Barbiera G, Falcone L, Purevdorj A, Genua M, Sanvito F, Ponzoni M, Doglioni C, Cristofori P, Traversari C, Bordignon C, Ciceri F, [Ostuni R](#), Bonini C, Casucci M, Bondanza A.

**Nat Med.** 2018 Jun;24(6):739-748.

12. Opposing macrophage polarization programs show extensive epigenomic and transcriptional cross-talk.

Piccolo V, Curina A, Genua M, Ghisletti S, Simonatto M, Sabò A, Amati B, [Ostuni R](#), Natoli G. **Co-last and co-corresponding author**

**Nat Immunol.** 2017 Mar 13.

13. Inflammatory monocytes hinder antiviral B cell responses.

Sammicheli S, Kuka M, Di Lucia P, de Oya NJ, De Giovanni M, Fioravanti J, Cristofani C, Maganuco CG, Fallet B, Ganzer L, Sironi L, Mainetti M, [Ostuni R](#), Larimore K, Greenberg PD, de la Torre JC, Guidotti LG, Iannacone M.

**Sci Immunol.** 2016 Oct 21;1(4). pii: eaah6789.

14. **Mutual epithelium-macrophage dependency in liver carcinogenesis mediated by ST18.**  
Ravà M, D'Andrea A, Doni M, Kress TR, [Ostuni R](#), Bianchi V, Morelli MJ, Colin A, Ghisletti S, Nicoli P, Recordati C, Iascone M, Sonzogni A, D'Antiga L, Shukla R, Faulkner GJ, Natoli G, Campaner S, Amati B.  
**Hepatology.** 2017 May;65(5):1708-1719.
15. **TNF-Mediated Restriction of Arginase 1 Expression in Myeloid Cells Triggers Type 2 NO Synthase Activity at the Site of Infection.**  
Schleicher U, Paduch K, Debus A, Obermeyer S, König T, Kling JC, Ribechini E, Dudziak D, Mougiakakos D, Murray PJ, [Ostuni R](#), Körner H, Bogdan C.  
**Cell Rep.** 2016 May 3;15(5):1062-75.
16. **Epigenetic regulation of neutrophil development and function.**  
[Ostuni R](#), Natoli G, Cassatella MA, Tamassia N. **Co-corresponding author**  
**Semin Immunol.** 2016 Apr;28(2):83-93.
17. **Macrophages and cancer: from mechanisms to therapeutic implications.**  
[Ostuni R](#), Kratochvill F, Murray PJ, Natoli G. **Co-corresponding author**  
**Trends Immunol.** 2015 Apr;36(4):229-39.
18. **A dual cis-regulatory code links IRF8 to constitutive and inducible gene expression in macrophages.**  
Mancino A, Termanini A, Barozzi I, Ghisletti S, [Ostuni R](#), Prosperini E, Ozato K, Natoli G.  
**Genes Dev.** 2015 Feb 15;29(4):394-408.
19. **Chromatin remodelling and autocrine TNF $\alpha$  are required for optimal interleukin-6 expression in activated human neutrophils.**  
Zimmermann M, Aguilera FB, Castellucci M, Rossato M, Costa S, Lunardi C, [Ostuni R](#), Girolomoni G, Natoli G, Bazzoni F, Tamassia N, Cassatella MA.  
**Nat Commun.** 2015 Jan 23;6:6061.
20. **Lineages, cell types and functional states: a genomic view.**  
[Ostuni R](#), Natoli G. **Co-corresponding author**  
**Curr Opin Cell Biol.** 2013 Dec;25(6):759-64.
21. **Cutting edge: An inactive chromatin configuration at the IL-10 locus in human neutrophils.**  
Tamassia N, Zimmermann M, Castellucci M, [Ostuni R](#), Bruderek K, Schilling B, Brandau S, Bazzoni F, Natoli G, Cassatella MA.  
**J Immunol.** 2013 Mar 1;190(5):1921-5.
22. **Latent enhancers activated by stimulation in differentiated cells.**  
[Ostuni R](#), Piccolo V, Barozzi I, Polletti S, Termanini A, Bonifacio S, Curina A, Prosperini E, Ghisletti S, Natoli G. **Co-corresponding author**  
**Cell.** 2013 Jan 17;152(1-2):157-71.
23. **The histone methyltransferase Wbp7 controls macrophage function through GPI glycolipid anchor synthesis.**  
Austena L, Barozzi I, Chronowska A, Termanini A, [Ostuni R](#), Prosperini E, Stewart AF, Testa G, Natoli G.  
**Immunity.** 2012 Apr 20;36(4):572-85.
24. **CD14 and NFAT mediate lipopolysaccharide-induced skin edema formation in mice.**  
Zanoni I, [Ostuni R](#), Barresi S, Di Gioia M, Broggi A, Costa B, Marzi R, Granucci F. **Co-first author**  
**J Clin Invest.** 2012 May;122(5):1747-57.
25. **Similarities and differences of innate immune responses elicited by smooth and rough LPS.**  
Zanoni I, Bodio C, Broggi A, [Ostuni R](#), Caccia M, Collini M, Venkatesh A, Spreafico R, Capuano G, Granucci F.  
**Immunol Lett.** 2012 Feb 29;142(1-2):41-7.
26. **CD14 controls the LPS-induced endocytosis of Toll-like receptor 4.**  
Zanoni I, [Ostuni R](#), Marek LR, Barresi S, Barbalat R, Barton GM, Granucci F, Kagan JC.

**Cell.** 2011 Nov 11;147(4):868-80.

27. **Transcriptional control of macrophage diversity and specialization.**

[Ostuni R](#), Natoli G.

**Eur J Immunol.** 2011 Sep;41(9):2486-90.

28. **DC-ATLAS: a systems biology resource to dissect receptor specific signal transduction in dendritic cells.**

Cavaliere D, Rivero D, Beltrame L, Buschow SI, Calura E, Rizzetto L, Gessani S, Gauzzi MC, Reith W, Baur A, Bonaiuti R, Brandizi M, De Filippo C, D'Oro U, Draghici S, Dunand-Sauthier I, Gatti E, Granucci F, Gündel M, Kramer M, Kuka M, Lanyi A, Melief CJ, van Montfoort N, [Ostuni R](#), Pierre P, Popovici R, Rajnavolgyi E, Schierer S, Schuler G, Soumelis V, Splendiani A, Stefanini I, Torcia MG, Zanoni I, Zollinger R, Figdor CG, Austyn JM.

**Immunome Res.** 2010 Nov 19;6:10.

29. **Deciphering the complexity of Toll-like receptor signaling.**

[Ostuni R](#), Zanoni I, Granucci F.

**Cell Mol Life Sci.** 2010 Dec;67(24):4109-34.

30. **CD14 regulates the dendritic cell life cycle after LPS exposure through NFAT activation.**

Zanoni I, [Ostuni R](#), Capuano G, Collini M, Caccia M, Ronchi AE, Rocchetti M, Mingozi F, Foti M, Chirico G, Costa B, Zaza A, Ricciardi-Castagnoli P, Granucci F.

**Nature.** 2009 Jul 9;460(7252):264-8.

**BOOK CHAPTERS**

1. [Ostuni R\\*](#), Natoli G\* (2014). The control of gene expression in macrophages. "Macrophages: biology and role in the pathology of diseases", Springer ISBN 978-1-4939-1310-7. \*Co-corresponding author
2. [Ostuni R](#), Zanoni I, Granucci F (2013). Toll-like Receptors: Structure and Ligand Specificities. "Innate Immunity of the Eye", ISBN-10: 935090456X

**INVITED/SELECTED PRESENTATIONS**

2020	XVI Congress of Italian Federation of Life Sciences (FISV), Naples (Italy) 17 <sup>th</sup> International Congress of Immunology (IUIS 2019), Beijing (China) 10X Genomics User Group Meeting, Milan (Italy)
2019	Italian Association of Cell Cultures (AICC) Meeting, Catanzaro (Italy) University of Milano-Bicocca, DIMET PhD Course, Milan (Italy) Aegean Conferences, 16 <sup>th</sup> International Innate Immunity Conference, Rhodes (Greece) Keystone Symp., Transcription and RNA Regulation in Inflammation and Immunity, (USA)
2018	European Institute of Oncology (IEO)-Alumni meeting, Milan (Italy) 10X Genomics User Group Meeting, Milan (Italy) European Macrophage and Dendritic cell Society (EMDS) Meeting, Verona (Italy) International Centre for Genetic Engineering and Biotechnology (ICGEB), Trieste (Italy) National Institute of Molecular Genetics (INGM), Milan (Italy) - host: Sergio Abrignani Singapore Immunology Network (Singapore) - host: Laiguan Ng Milan Meets Immunology Meeting, Milan (Italy)
2017	SR-Tiget Retreat, Camogli (Italy) Italian Network for Cancer Biotherapy (NIBIT) Meeting, Siena (Italy) National Congress of Italian Society of Immunology and Allergology (SIICA), Bari (Italy)
2016	'Infectious Disease Immunology Meets Molecular Microbiology', Erlangen (Germany) SR-Tiget Retreat, Franciacorta (Italy) Ospedale San Raffaele Scientific Retreat, Baveno (Italy)
2015	TRR81 Symposium on "HDACs, HATs & gene regulation", IMT Marburg (Germany) European Society for Clinical Investigation (ESCI) Meeting, Cluj-Napoca (Romania) CeMM Research Center for Molecular Medicine of the Austrian Academy of Sciences,

	Vienna (Austria) – host: Giulio Superti-Furga Humanitas Clinical and Research Center, Milan (Italy) - host: Antonio Sica San Raffaele Telethon Institute for Gene Therapy (SR-TIGET) – host: Luigi Naldini
2013	MiChroNetwork Meeting”, Milan (Italy) IFOM-IEO Campus Departmental Seminar, Milan (Italy)
2012	University of Milano-Bicocca (Italy) - host: Ivan Zanoni European Macrophage and Dendritic cell Society (EMDS) Meeting, Debrecen (Hungary) Weizmann Institute of Science (Israel) - host: Ido Amit Milan Meets Immunology Meeting, Milan (Italy) IFOM-IEO Campus Departmental Seminar, Milan (Italy)
2010	University of California in San Diego (USA) - host: Prof. Michael Karin London Research Institute (UK) - host: Caetano Reis e Sousa University of Lausanne (Switzerland) - host: Jurg Tschopp
2008	Workshop on Pathway Analysis and Representation for Dendritic Cells, Florence (Italy) DC-THERA Graduate School, Celerina-Sankt Moritz (Switzerland) In vivo non-linear microscopy course, Curie Institute, Paris (France)

### **SCIENCE COMMUNICATION and PUBLIC OUTREACH**

2019	Speaker, Associazione ‘La Semina’, Merate (Italy) Speaker, AIRC ‘Incontro con la Ricerca’, “De Nicola” High School, Milan (Italy) Speaker, UniStem Day, University of Milan (Italy)
2018	Guest, Telethon TV show, RAI 1 (Channel 1) Guest, Telethon TV show, RAI 2 (Channel 2) Guest, Radio show ‘Life’, Radio RAI 1 (Channel 1) Speaker, Open Innovation Days ‘Il Sole 24 Ore’ - University of Padua (Italy) Speaker, Telethon Partner Club - Rome (Italy) Speaker, Telethon Public Event, ‘Malattie rare: parliamone’ - Treviso (Italy) Organizer and host, ‘Science and Society Night’ with Elena Grifoni-Winters (European Space Agency, ESA) and Luca Parmitano (Astronaut, ESA) - Baveno (Italy)
2017	Guest, Telethon TV show ‘Il mondo a colori’, RAI 1 (Channel 1) Participant, Workshop on scientific communication and outreach ‘A tu per tu con la ricerca’ - National Museum of Science and Technology, Milan (Italy) Speaker, European Researchers’ Night, ‘Champions league: un campione della ricerca ogni 4 minuti’ - National Museum of Science and Technology, Milan (Italy) Guest, Interactive Lab (i.Lab) - National Museum of Science and Technology, Milan (Italy)