

## Curriculum vitae Mariangela Russo

### Personal details

Born in Italy

Nationality: Italian

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Website: [https://www.oncology.unito.it/do/docenti.pl/Show?\\_id=marrusso#tab-profilo](https://www.oncology.unito.it/do/docenti.pl/Show?_id=marrusso#tab-profilo)

ORCID ID: <https://orcid.org/0000-0003-4625-1449>; Scopus ID: 8502894000; Researcher ID: K-1900-2018

### Educations

- 2018 National scientific qualification as Associate Professor in:  
- SSD BIO/17, sector 5/H2 (Histology, from 24/09/2018)  
- SSD MED/06, sector 06/D3 (Blood diseases, Oncology and Rheumatology, from 31/10/2018)  
- SSD MED/46, sector 06/N1 (Health Sciences and Applied Medical Technologies, from 15/10/2018).
- 2008-2010 PhD in “Complex Systems in post-genomic Biology”  
University of Turin, Italy
- 2007-2007 Master II Level in “Cancer Pharmacy and Pharmacology”  
University of Milan, Italy
- 2000-2005 Joint BSc & MSc in Pharmaceutical Biotechnologies (five-year degree), Mark 110/110 Magna cum Laude.  
University of Naples “Federico II”, Italy

### Professional experiences and current position

- 12/2021 – Today **Assistant Professor - RTDB**  
Dept. of Oncology, University of Turin, Italy, Turin (Italy)
- 11/2019–11/2021 **Assistant Professor - RTDA**  
Dept. of Oncology, University of Turin, Italy, Turin (Italy)
- 07/2019–10/2019 **Research Fellowship**  
"Approfondimenti sull'eterogeneità nell'evoluzione del carcinoma coloretale metastatico: dai meccanismi alle terapie ". Dept. of Oncology, University of Turin, Italy, Turin (Italy)
- 01/2019–06/2019 **Post Doc**  
“Cancer of unknown primary and hypermetastatic disease: from mechanisms to therapeutic applications”. Fondazione del Piemonte per l'Oncologia, Candiolo (Italy).
- 06/2017 – 12/2018 **Post Doc**  
"Sviluppo ed implementazione di una piattaforma genomica per la medicina di precisione in oncologia". Fondazione del Piemonte per l'Oncologia, Candiolo (Italy).
- 07/2015- 05/2017 **Research Fellowship**  
"Modelli di xenotrapianti murini per valutare nuove strategie terapeutiche in pazienti con resistenza acquisita alle terapie molecolari (FP7 MErCuRIC GA 602901)". Dept. of Oncology, University of Turin, Italy, Turin (Italy).
- 01/2015 – 06/2015 **Post Doc**  
" Caratterizzazione della resistenza acquisita alle terapie anti-EGFR ". Fondazione del Piemonte per l'Oncologia, Candiolo (Italy).
- 02/2013-12/2014 **Research Fellowship**  
" COLTHERES: Costruzione di modelli al fine di predire la sensibilità alle terapie mirate nei carcinomi coloretali ". Dept. of Oncology, University of Turin, Italy, Turin (Italy).
- 02/2011- 01/2013 **Post-Doc fellow**  
“Studio dei meccanismi molecolari alla base della resistenza alle terapie anti-EGFR nei tumori coloretali in cui è presente la mutazione dell'oncogene KRAS ". Fondazione del Piemonte per l'Oncologia, Candiolo (Italy).
- 01/2008–12/2010 **PhD course in Complex Systems in post-genomic Biology**  
“Does p53 mutant R273H show dominant negative or gain-of-function activity in mediating sensitivity or resistance to anti-cancer drugs?” Horizon Discovery LTD, Building 7300 IQ Cambridge, Waterbeach, Cambridge, CB25 9TL, UK.

- 2007-2007 **Master “Research stage”**  
 “New cellular models for the identification of genotypes related to responses to antitumor targeted therapies”. Laboratory of Molecular Oncology, Candiolo Cancer Institute, FPO-IRCCS.
- 2005-2007 **Biotechnologist researcher**  
 Department of Research & Development, I.C.I. International Chemical Industry S.p.A. of Celvole (CE), Italy

**Participation to Directive Boards of Scientific Societies and/or Institutions:**

Member of the Early Career Researcher Council of European Association for Cancer Research (EACR)

**Honors**

- 12/12/2020: “Valeria Tabasso Rivolo” Award, Best Scientific work IF.
- 3/11/2020: Award Best Oral Presentation in “Pre-clinical Breakthroughs” session, 5° Annual Meeting Alleanza Contro il Cancro.
- 23/06/2017: **Begnudelli Award**. Best scientific poster awarded at the 29th Pezcoller Symposium, Italy.

**Teaching activity:**

- 2021- today: Lecturer in Histology for the integrated course of Biology, Biochemistry, Anatomy and Histology in the 3-years medical courses in Nursing held in University of Turin Medical School
- 2020 - today: Lecturer in Histology at School of Medicine, University of Torino
- 2020 - today: Lecturer in Histology for the integrated course of Physiology, Anatomy and Histology in the 3-years medical courses in Biomedical laboratory techniques held in University of Turin Medical School
- 2013- 2020: Complementary teaching activity in the course of Functional Histology and the Genetic Basis of cancer in the Molecular Biotechnology School at the University of Turin.

**Research main topics**

**Main projects as PI:**

- **Jan 2022: My First Grant Airc. PI-5 years.** Project Title: Drug induced mutability in cancer cells: from molecular characterization to clinical targets”.
- **Nov 2019: Ricerca finalizzata 2018 Sezione Giovani ricercatori e Starting Grant. PI-3 years.** Project Title: “Targeting oncogene-driven T-cell exclusion in colorectal cancer”.
- **2016: 5x1000 MIUR 2012-FPRC Innovation Grants, Fondazione Piemontese per la Ricerca sul Cancro (FPRC), Candiolo Cancer institute FPO-IRCCS, Candiolo (TO). PI – 3 years.** Project Title: “Targeting the trunk of colorectal cancer evolution”.

**Bibliometry (2008-present)** ([www.scopus.com](http://www.scopus.com))

1. **Russo M**, Pompei S, Sogari A, Corigliano M, Crisafulli G, Puliafito A, Lamba S, Erriquez J, Bertotti A, Gherardi M, Di Nicolantonio F, Bardelli A, Cosentino Lagomarsino M. *A modified fluctuation-test framework characterizes the population dynamics and mutation rate of colorectal cancer persister cells.* **Nat Genet.** **2022 Jul**;54(7):976-984. doi: **10.1038/s41588-022-01105-z**. Epub 2022 Jul 11.
2. **Russo M**, Sogari A, Bardelli A. *Adaptive Evolution: How Bacteria and Cancer Cells Survive Stressful Conditions and Drug Treatment.* **Cancer Discov.** **2021 May 5**. doi: **10.1158/2159-8290.CD-20-1588**.
3. Arena S, Corti G, Durinikova E, Montone M, Reilly NM, **Russo M**, Lorenzato A, Arcella P, Lazzari L, Rospo G, Pagani M, Cancelliere C, Negrino C, Isella C, Bartolini A, Cassingena A, Amatu A, Mauri G, Sartore-Bianchi A, Mittica G, Medico E, Marsoni S, Linnebacher M, Abrignani S, Siena S, Di Nicolantonio F, Bardelli A. *A Subset of Colorectal Cancers with Cross-Sensitivity to Olaparib and Oxaliplatin.* **Clin Cancer Res.** **2020 Mar 15**;26(6):1372-1384.
4. **Russo M**, Crisafulli G, Sogari A, Reilly NM, Arena S, Lamba S, Bartolini A, Amodio V, Magrì A, Novara L, Sarotto I, Nagel ZD, Piett CG, Amatu A, Sartore-Bianchi A, Siena S, Bertotti A, Trusolino L, Corigliano M, Gherardi M, Lagomarsino MC, Di Nicolantonio F, Bardelli A. *Adaptive mutability of colorectal cancers in response to targeted therapies.* **Science.** **2019 Dec 20**;366(6472):1473-1480.
5. Siravegna G, Lazzari L, Crisafulli G, Sartore-Bianchi A, Mussolin B, Cassingena A, Martino C, Lanman RB, Nagy RJ, Fairclough S, Rospo G, Corti G, Bartolini A, Arcella P, Montone M, Lodi F, Lorenzato A, Vanzati

- A, Valtorta E, Cappello G, Bertotti A, Lonardi S, Zagonel V, Leone F, **Russo M**, Balsamo A, Truini M, Di Nicolantonio F, Amatu A, Bonazzina E, Ghezzi S, Regge D, Vanzulli A, Trusolino L, Siena S, Marsoni S, Bardelli A. *Radiologic and Genomic Evolution of Individual Metastases during HER2 Blockade in Colorectal Cancer*. **Cancer Cell**. 2018 Jul 9;34(1):148-162.e7.
6. **Russo M**, Lamba S, Lorenzato A, Sogari A, Corti G, Rospo G, Mussolin B, Montone M, Lazzari L, Arena S, Oddo D, Linnebacher M, Sartore-Bianchi A, Pietrantonio F, Siena S, Di Nicolantonio F, Bardelli A. *Reliance upon ancestral mutations is maintained in colorectal cancers that heterogeneously evolve during targeted therapies*. **Nat Commun**. 2018 Jun 12;9(1):2287.
  7. Germano G, Lamba S, Rospo G, Barault L, Magrì A, Maione F, **Russo M**, Crisafulli G, Bartolini A, Lerda G, Siravegna G, Mussolin B, Frapolli R, Montone M, Morano F, de Braud F, Amirouchene-Angelozzi N, Marsoni S, D'Incalci M, Orlandi A, Giraud E, Sartore-Bianchi A, Siena S, Pietrantonio F, Di Nicolantonio F, Bardelli A. *Inactivation of DNA repair triggers neoantigen generation and impairs tumour growth*. **Nature**. 2017 Dec 7;552(7683):116-120.
  8. **Russo M**, Bardelli A. *Lesion-directed therapies and monitoring tumor evolution using liquid biopsies*. **Cold Spring Harb Perspect Med**. 2017 Feb 1;7(2).
  9. Vecchione L, Gambino V, Raaijmakers J, Schlicker A, Fumagalli A, **Russo M**, Villanueva A, Beerling E, Bartolini A, Mollevi DG, El-Murr N, Chiron M, Calvet L, Nicolazzi C, Combeau C, Henry C, Simon IM, Tian S, In't Veld S, D'ario G, Mainardi S, Beijersbergen RL, Liefink C, Linn S, Rumpf-Kienzl C, Delorenzi M, Wessels L, Salazar R, Di Nicolantonio F., Bardelli A, van Rheenen J, René Medema R, Tejpar S, Bernards R. *A vulnerability of a subset of colon cancers with potential clinical utility*. **Cell**. 2016 Apr 7;165(2):317-30.
  10. **Russo M**, Siravegna G, Blaszkowsky LS, Corti G, Crisafulli G, Ahronian LG, Mussolin B, Kwak EL, Buscarino M, Lazzari L, Valtorta E, Truini M, Jessop NA, Robinson HE, Hong TS, Mino-Kenudson M, Di Nicolantonio F, Thabet A, Sartore-Bianchi A, Siena S, Iafrate AJ, Bardelli A, Corcoran RB. *Tumor heterogeneity and lesion-specific response to targeted therapy in colorectal cancer*. **Cancer Discov**. 2015 Dec 7.
  11. **Russo M**, Misale S, Wei G, Siravegna G, Crisafulli G, Lazzari L, Corti G, Rospo G, Novara L, Mussolin B, Bartolini A, Cam N, Patel R, Yan S, Shoemaker R, Wild R, Di Nicolantonio F, Sartore-Bianchi A, Li G, Siena S, Bardelli A. *Acquired resistance to the TRK inhibitor entrectinib in colorectal cancer*. **Cancer Discov**. 2016 Jan;6(1):36-44.
  12. Medico E\*, **Russo M\***, Picco G\*, Cancelliere C\*, Valtorta E, Corti G, Buscarino M, Isella C, Lamba S, Martinoglio B, Veronese S, Beccuti M, Mottolese M, Linnebacher M, Cordero F, Di Nicolantonio F, Bardelli A. *The molecular landscape of colorectal cancer cell lines unveils clinically actionable targets*. **Nat Commun**. 2015 Apr 30;6:7002. (**\*co-first**)
  13. Arena S, Bellosillo B, Siravegna G, Martinez A, Canadas I, Lazzari L, Ferruz N, **Russo M**, Misale S, Gonzalez I, Iglesias M, Gavilan E, Corti G, Hobor S, Crisafulli G, Salido M, Sanchez J, Dalmases A, Bellmunt J, De Fabritiis G, Rovira A, Di Nicolantonio F, Albanell J, Bardelli A, Montagut C. *Emergence of multiple EGFR extracellular mutations during cetuximab treatment in colorectal cancer*. **Clin Cancer Res**. 2015 Jan 26.
  14. Lamba S\*, **Russo M\***, Sun C, Lazzari L, Cancelliere C, Grenrum W, Liefink C, Bernards R, Di Nicolantonio F, Bardelli A. *RAF suppression synergizes with MEK inhibition in KRAS mutant cancer cells*. **Cell Rep**. 2014 Sep 11;8(5):1475-83. (**\*co-first**)
  15. Misale S, Arena S, Lamba S, Siravegna G, Lallo A, Hobor S, **Russo M**, Buscarino M, Lazzari L, Sartore-Bianchi A, Bencardino K, Amatu A, Lauricella C, Valtorta E, Siena S, Di Nicolantonio F, Bardelli A. *Blockade of EGFR and MEK intercepts heterogeneous mechanisms of acquired re-sistance to anti-EGFR therapies in colorectal cancer*. **Sci Transl Med**. 2014 Feb 19;6(224):224ra26.
  16. **Russo M**, Di Nicolantonio F, Bardelli A. *Climbing RAS, the Everest of Oncogenes*. **Cancer Discov**. 2014 Jan;4(1):19-21.
  17. Martini M\*, **Russo M\***, Lamba S, Vitiello E, Crowley EH, Sassi F, Romanelli D, Frattini M, Marchetti A, Bardelli A. *Mixed lineage kinase MLK4 is activated in colorectal cancers where it synergistically cooperates with activated RAS signaling in driving tumorigenesis*. **Cancer Res**. 2013 Mar 15;73(6):1912-21. (**\*co-first**)
  18. Di Nicolantonio F, Arena S, Taberero J, Grosso S, Molinari F, Macarulla T, **Russo M**, Cancelliere C, Zecchin D, Mazzucchelli L, Sasazuki T, Shirasawa S, Geuna M, Frattini M, Baselga J, Gallicchio M, Biffo S, Bardelli A. *Deregulation of the PIK3CA and KRAS signaling pathways determines cancer cells' response to everolimus*. **J Clin Invest**. 2010 Aug;120(8):2858-66. **Epub 2010 Jul 26**.
  19. Di Nicolantonio F, Arena S, Gallicchio M, Zecchin D, Martini M, Flonta SE, Stella GM, Lamba S, Cancelliere C, **Russo M**, Geuna M, Appendino G, Fantozzi R, Medico E, Bardelli A. *Replacement of normal with mutant alleles in the genome of normal human cells unveils mutation-specific drug responses*. **Proc Natl Acad Sci U S A**. 2008 Dec 30;105(52):20864-9.

## 10 best publications

1. **Russo M**, Pompei S, Sogari A, Corigliano M, Crisafulli G, Puliafito A, Lamba S, Erriquez J, Bertotti A, Gherardi M, Di Nicolantonio F, Bardelli A, Cosentino Lagomarsino M. *A modified fluctuation-test framework characterizes the population dynamics and mutation rate of colorectal cancer persister cells.* **Nat Genet.** 2022 Jul;**54(7):976-984.** doi: 10.1038/s41588-022-01105-z. Epub 2022 Jul 11.
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3. **Russo M**, Crisafulli G, Sogari A, Reilly NM, Arena S, Lamba S, Bartolini A, Amodio V, Magrì A, Novara L, Sarotto I, Nagel ZD, Piatt CG, Amatu A, Sartore-Bianchi A, Siena S, Bertotti A, Trusolino L, Corigliano M, Gherardi M, Lagomarsino MC, Di Nicolantonio F, Bardelli A. *Adaptive mutability of colorectal cancers in response to targeted therapies.* **Science.** 2019 Dec 20;**366(6472):1473-1480.**
4. Siravegna G, Lazzari L, Crisafulli G, Sartore-Bianchi A, Mussolin B, Cassingena A, Martino C, Lanman RB, Nagy RJ, Fairclough S, Rospo G, Corti G, Bartolini A, Arcella P, Montone M, Lodi F, Lorenzato A, Vanzati A, Valtorta E, Cappello G, Bertotti A, Lonardi S, Zagonel V, Leone F, **Russo M**, Balsamo A, Truini M, Di Nicolantonio F, Amatu A, Bonazzina E, Ghezzi S, Regge D, Vanzulli A, Trusolino L, Siena S, Marsoni S, Bardelli A. *Radiologic and Genomic Evolution of Individual Metastases during HER2 Blockade in Colorectal Cancer.* **Cancer Cell.** 2018 Jul 9;**34(1):148-162.e7.**
5. **Russo M**, Lamba S, Lorenzato A, Sogari A, Corti G, Rospo G, Mussolin B, Montone M, Lazzari L, Arena S, Oddo D, Linnebacher M, Sartore-Bianchi A, Pietrantonio F, Siena S, Di Nicolantonio F, Bardelli A. *Reliance upon ancestral mutations is maintained in colorectal cancers that heterogeneously evolve during targeted therapies.* **Nat Commun.** 2018 Jun 12;**9(1):2287.**
6. Germano G, Lamba S, Rospo G, Barault L, Magrì A, Maione F, **Russo M**, Crisafulli G, Bartolini A, Lerda G, Siravegna G, Mussolin B, Frapolli R, Montone M, Morano F, de Braud F, Amirouchene-Angelozzi N, Marsoni S, D'Incalci M, Orlandi A, Giraudo E, Sartore-Bianchi A, Siena S, Pietrantonio F, Di Nicolantonio F, Bardelli A. *Inactivation of DNA repair triggers neoantigen generation and impairs tumour growth.* **Nature.** 2017 Dec 7;**552(7683):116-120.**
7. Vecchione L, Gambino V, Raaijmakers J, Schlicker A, Fumagalli A, **Russo M**, Villanueva A, Beerling E, Bartolini A, Mollevi DG, El-Murr N, Chiron M, Calvet L, Nicolazzi C, Combeau C, Henry C, Simon IM, Tian S, In't Veld S, D'ario G, Mainardi S, Beijersbergen RL, Liefink C, Linn S, Rumpf-Kienzl C, Delorenzi M, Wessels L, Salazar R, Di Nicolantonio F., Bardelli A, van Rheenen J, René Medema R, Tejpar S, Bernards R. *A vulnerability of a subset of colon cancers with potential clinical utility.* **Cell.** 2016 Apr 7;**165(2):317-30.**
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9. **Russo M**, Misale S, Wei G, Siravegna G, Crisafulli G, Lazzari L, Corti G, Rospo G, Novara L, Mussolin B, Bartolini A, Cam N, Patel R, Yan S, Shoemaker R, Wild R, Di Nicolantonio F, Sartore-Bianchi A, Li G, Siena S, Bardelli A. *Acquired resistance to the TRK inhibitor entrectinib in colorectal cancer.* **Cancer Discov.** 2016 Jan;**6(1):36-44.**
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## 15 ore relevant publication in the last 5 yrs (2018-2022)

1. **Russo M**, Pompei S, Sogari A, Corigliano M, Crisafulli G, Puliafito A, Lamba S, Erriquez J, Bertotti A, Gherardi M, Di Nicolantonio F, Bardelli A, Cosentino Lagomarsino M. *A modified fluctuation-test framework characterizes the population dynamics and mutation rate of colorectal cancer persister cells.* **Nat Genet.** 2022 Jul;**54(7):976-984.** doi: 10.1038/s41588-022-01105-z. Epub 2022 Jul 11.
2. **Russo M**, Sogari A, Bardelli A. *Adaptive Evolution: How Bacteria and Cancer Cells Survive Stressful Conditions and Drug Treatment.* **Cancer Discov.** 2021 May 5. doi: 10.1158/2159-8290.CD-20-1588.

3. Arena S, Corti G, Durinikova E, Montone M, Reilly NM, **Russo M**, Lorenzato A, Arcella P, Lazzari L, Rospo G, Pagani M, Cancelliere C, Negrino C, Isella C, Bartolini A, Cassingena A, Amatu A, Mauri G, Sartore-Bianchi A, Mittica G, Medico E, Marsoni S, Linnebacher M, Abrignani S, Siena S, Di Nicolantonio F, Bardelli A. *A Subset of Colorectal Cancers with Cross-Sensitivity to Olaparib and Oxaliplatin*. **Clin Cancer Res.** 2020 Mar 15;26(6):1372-1384.
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5. Siravegna G, Lazzari L, Crisafulli G, Sartore-Bianchi A, Mussolin B, Cassingena A, Martino C, Lanman RB, Nagy RJ, Fairclough S, Rospo G, Corti G, Bartolini A, Arcella P, Montone M, Lodi F, Lorenzato A, Vanzati A, Valtorta E, Cappello G, Bertotti A, Lonardi S, Zagonel V, Leone F, **Russo M**, Balsamo A, Truini M, Di Nicolantonio F, Amatu A, Bonazzina E, Ghezzi S, Regge D, Vanzulli A, Trusolino L, Siena S, Marsoni S, Bardelli A. *Radiologic and Genomic Evolution of Individual Metastases during HER2 Blockade in Colorectal Cancer*. **Cancer Cell.** 2018 Jul 9;34(1):148-162.e7.
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