



## Alberto BARDELLI

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**Nationality:** Italian

[alberto.bardelli@unito.it](mailto:alberto.bardelli@unito.it); [alberto.bardelli@ifom.eu](mailto:alberto.bardelli@ifom.eu) | (+39) 02574303221

**About me:**

I'm a Professor at the Dept. of Oncology at the University of Turin School of Medicine and Scientific Director of IFOM ETS – The AIRC Institute of Molecular Oncology, Milan. I graduated Cum Laude at the University of Turin and held a Ph.D. in Biochemistry and Molecular Biology from the University College London (UCL). As a postdoc at the Johns Hopkins University (USA), in the group of Bert Vogelstein, I performed the first comprehensive mutational profile of protein and lipid kinases in colorectal cancers (CRC). As an independent investigator, I pioneered the combined use of genomics, patients' avatars and liquid biopsies to accurately predict tumor response and resistance to targeted agents. My group showed that the analysis of circulating tumor DNA allows monitoring tumor evolution and resistance to targeted therapies. These discoveries led to the development of innovative diagnostic tests, and therapeutic regimens currently in clinical use for colorectal cancer patients. My HI is more than 100 and I have authored more than 250 scientific articles of which over 100 as an independent investigator.

### SUMMARY OF RESEARCH INTERESTS

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Colorectal cancers; Drug resistance and tumor evolution; Immunogenomics; Mutation-specific pharmacogenomic profiling; Avatars; Early onset colorectal cancer.

### WORK EXPERIENCE

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- 2022-pres. Scientific Director, IFOM ETS – The AIRC Institute of Molecular Oncology, Milan
- 2022-pres. Director, Laboratory of Genomics of Cancer and Targeted Therapies, IFOM ETS, Milan and Molecular Biotechnology Center (MBC2), University of Turin.
- 2016-pres. Full Professor, University of Turin, School of Medicine.

### EDUCATION AND TRAINING

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- 1991-1996 PhD degree in Biochemistry and Molecular Biology, University College London.
- 1991 Master Degree in Biological Sciences, University of Turin, Italy, 110/110 *cum laude*.

### LICENSURE AND CERTIFICATION

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- 1995-1999 Specialization in Clinical Pathology, University of Turin, School of Medicine

### PREVIOUS POSITIONS

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- 2004-2022 Director, Laboratory of Molecular Oncology, Candiolo Cancer Institute IRCCS, Candiolo (To), Italy
- 1999-2004 Postdoctoral fellow, The Johns Hopkins University; Baltimore/MD, USA. Supervisor: Prof. Bert Vogelstein.
- 1996-1999 Postdoctoral Fellow, Candiolo Cancer Institute and the University of Turin, School of Medicine

### FELLOWSHIPS, AWARDS AND ACADEMY MEMBERSHIPS

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- 2024 CORE Oncology Award, Centro Oncoematologico Reggio Emilia, Italy
- 2022 TEFAF Honourable Chair, University of Maastricht, The Netherlands
- 2021 ERC Advanced Grant
- 2021 Officer of the Order of Merit of the Italian Republic
- 2020 Guido Venosta Award, FIRC AIRC, Presidenza della Repubblica Italiana
- 2019 Member of the Johns Hopkins Society of Scholars
- 2018-2024 Highly Cited Researcher, Web of Science, Claryvate

- 2017 European Society for Medical Oncology (ESMO) Translational Research Award
- 2017 Fellow of European Molecular Biology Organization (EMBO)
- 2016 Grant for Oncology Innovation Research Project
- 2015 Fellow of the European Academy of Cancer Sciences
- 2015 Fellow of the Turin Academy of Sciences
- 2014 Thomson Reuters Highly Cited Researcher - Beautiful Minds List
- 2004 The Alfred Blalock Research Award - Johns Hopkins Medical School, Baltimore USA
- 1999-2004 Fellowship, Howard Hughes Medical Institute, Baltimore MD USA
- 1996 Cecilia Cioffrese -Cancer Research Award, Carlo Erba Foundation
- 1994 Francesca e Ferdinando Quartero, Cancer Research Prize, Italian Cancer Association
- 1994 VIII Mascia Brunelli-Award, Italian Cell Culture Association
- 1991 Graduated with Honor and Distinction (*Laude, Menzione d'Onore*), University of Turin

## **SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS**

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- 2004-pres. n. 45 Postdoctoral fellows
- 2003-pres. n. 27 PhD Students
- 2006-pres. n. 50 Graduate Students

## **TEACHING ACTIVITIES**

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- 2016-pres. Full Professor, Histology, University of Turin, Italy
- 2006-2016 Associate Professor, Cell Biology, University of Turin, Italy
- 1998-2005 Assistant Professor, Cell Biology, University of Turin, Italy

## **EDITORIAL BOARDS**

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- 2020-pres. Editorial Board member, *ESMO Journal Immuno-Oncology and Technology*
- 2019-pres. Editorial Board member, *Genome Medicine*
- 2017-pres. Editorial Board member, *Nature Reviews Clinical Oncology*
- 2016-pres. Editorial Board member, *Cancer Discovery*
- 2014-pres. Editorial Board member, *Molecular Oncology*
- 2014-pres. Editorial Board member, *Clinical Cancer Drugs*
- 2013-pres. Editorial Board member, *Cancer Treatment Reviews*
- 2011-pres. Editorial Board member, *BMC Gastroenterology*
- 2010-pres. Executive Editors, *Molecular Cancer*
- 2007-pres. Editorial Board member, *International Journal of Oncology*

## **REVIEWER**

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Science, Nature, Cancer Cell, Cancer Discovery, Cancer Research, Clinical Cancer Research, Science Signaling, Nature Medicine, The EMBO Journal, Proceedings Of The National Academy Of Sciences (PNAS), The Journal of Clinical Investigation, NEJM, Nature Cancer.

## **COMMISSIONS OF TRUST**

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- 2024-pres. Member of the Executive Council of the School of Higher Studies Ferdinando Rossi of the University of Turin
- 2023-pres. Scientific Advisory Board member, Institute of Oncology Research (IOR), Bellinzona (Switzerland)
- 2022 TEFAF Oncology Chair and Visiting Professor in Oncology at the Faculty of Health, Medicine and Life Sciences / GROW school of Oncology and Reproduction, Maastricht (NL)
- 2021-pres. Scientific Advisory Board member, Onco Institute, Utrecht (The Netherlands)
- 2019-pres. The Johns Hopkins Society of Scholars, Baltimore (USA)
- 2018-2024 Scientific Advisory Board member, MD Anderson Moon Shots Program, Houston (USA)
- 2018-pres. Scientific Advisory Board member, Neophore, Cambridge (UK)
- 2018-2020 President, EACR (European Association for Cancer Research)
- 2017-pres. Scientific Advisory Board member, Cancer Research UK Manchester Institute, Manchester (UK)
- 2015-pres. Board Member, European Association for Cancer Research (EACR)
- 2013-pres. Scientific Committee, Pezcoller Foundation

2013-2023 Scientific Committee, AIRC (Italian Association for Cancer Research)  
2012-2022 Director, Basic Research, Candiolo Cancer Institute, Candiolo (To), Italy  
2008-2016 Scientific Advisory Board member, Horizon Discovery, Cambridge (UK)

### **ORGANISATION OF SCIENTIFIC MEETINGS (selected, last 5 years)**

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24-25/06/2024 Pezcoller Symposium, Trento (IT)  
10-13/06/2024 EACR Annual Meeting, Rotterdam (NL)  
19-20/06/2023 Pezcoller Symposium, Trento (IT)  
12-15/06/2023 EACR Annual Meeting, Turin (IT)  
14-19/04/2023 AACR Annual Meeting 2023, Orlando/FL  
15-17/03/2023 EACR-AACR-SIC Conference, Firenze (IT)  
20-23/06/2022 EACR Annual Meeting, Sevilla (SP)  
13-14/06/2022 Pezcoller Symposium, Trento (IT)  
24-26/05/2022 EACR Liquid biopsies, Bergamo (IT)  
08-13/04/2022 AACR Annual Meeting 2022, New Orleans/LA (USA)  
07-08/12/2021 EACR-AstraZeneca 'Drug Tolerant Persister Cells', Virtual  
21-22/06/2021 Pezcoller Symposium, Virtual  
09-12/06/2021 EACR Annual Meeting 2021, Virtual  
09-10/10/2020 MAP: Molecular Analysis for Precision Oncology, Virtual  
19-21/09/2020 ESMO Annual Meeting, Virtual  
18-19/06/2020 EACR Annual Meeting 2020, Virtual  
02-04/03/2020 EACR-AACR Basic and Translational Research Conference, Lisbon (PT)

### **INVITED PRESENTATIONS AT INTERNATIONAL CONFERENCES (selected, last 5 years)**

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2024 Cell Symposium on Hallmarks of Cancer, Guangzhou (CN): Speaker  
2024 Harnessing cancer vulnerabilities in the immunotherapy era, Rehovot (IL): Speaker  
2024 Understanding Cancer Cells Immune Cells Interaction: Concept and Methodology, Trieste (IT): Speaker  
2024 From EMBO to ERC: New Strategies for Research Funding in Europe and Italy, Roma (IT): Speaker  
2024 EACR Annual Meeting, Rotterdam (NL): Speaker  
2024 Early Detection meeting Lustgarten / Mark Foundation, New York/NY (USA): Speaker, Scientific Committee Member  
2024 EMBO WS The many faces of cancer evolution, Rimini (IT): Speaker  
2023 6th ACTC meeting, Skiathos (GR): Speaker  
2023 International Behr Symposium on stem cells and cancer, Heidelberg (DE): Speaker  
2023 IASGO 34th World Congress of the International Association of Surgeons, Gastroenterologists and Oncologists, Verona (IT): Speaker  
2023 Tumor heterogeneity and plasticity, Les Treilles (FR): Speaker  
2023 ISREC-SCCL Symposium 2023: Horizons of Cancer Biology and Precision Oncology, Lausanne (CH): Speaker  
2023 EACR Annual Meeting, Turin (IT): Speaker, Scientific Committee Member  
2023 AACR Annual Meeting 2023, Orlando/FL: Educational Committee Member  
2023 Conference on Colorectal Cancer, Napoli (IT): Speaker  
2023 EACR-AACR-SIC Conference, Firenze (IT): Chairperson, Scientific Committee Member  
2022 ESMO Immuno-Oncology, Barcelona (ES): Speaker  
2022 EORTC-NCI-AACR, Barcelona (ES): Chairperson  
2022 NIBIT Translational Science. Translating knowledge into the clinic, Padova (IT): Speaker  
2022 7th Annual Meeting Alliance Against Cancer, Roma (IT): Speaker  
2022 2nd Oncobell International Symposium, Barcelona (ES): Keynote Lecture  
2022 BioTOMath Conference: Mathematical Challenges in Biology and Medicine, Turin (IT): Speaker  
2022 Early-Onset Colorectal Cancer, Milan (IT): Speaker  
2022 EACR Annual Meeting, Sevilla (SP): Speaker, Chairperson, Scientific Committee Member  
2022 Pezcoller Symposium, Trento (IT): Chairperson, Scientific Committee Member  
2022 EACR Liquid biopsies, Bergamo (IT): Chairperson, Scientific Committee Member  
2022 AIOM Annual Meeting, Napoli (IT): Speaker  
2022 AACR Annual Meeting 2022, New Orleans/LA (USA): Scientific Committee Member  
2022 AACR Evolutionary Dynamics in Carcinogenesis, Tampa/FL (USA): Speaker  
2021 ESMO Immuno-Oncology, Geneva (CH): Speaker

2021 ESMO Immuno-Oncology, Geneva: Speaker  
 2021 3rd ASEICA Educational Symposium, Virtual: Plenary Lecture  
 2021 Cell Symposium: Overcoming Therapy Resistance in Cancer, Virtual: Plenary Lecture  
 2021 Forbeck Forum on Resistance, Virtual: Speaker  
 2021 AIOM Simposio HER2, Virtual: Speaker  
 2021 AACR Colorectal Cancer, Virtual: Keynote Lecture  
 2021 ISLB Annual Meeting, Virtual: Speaker  
 2021 MAP 2021 Congress, Virtual: Speaker  
 2021 Colorectal Cancer Symposium: from bench to bed and back, Virtual: Speaker  
 2021 2nd Oncobell International Symposium, Barcelona (ES): Keynote Lecture  
 2021 Colorectal Cancer Symposium, Virtual: Speaker  
 2021 32nd Pezcoller Symposium, Virtual: Chair  
 2021 Keystone Symposium: Precision Oncology Traslating Discovery to Clinic, Virtual: Speaker  
 2020 EACR Liquid Biopsy, Virtual: Speaker  
 2021 EACR Annual Meeting 2021, Virtual: Speaker, Co-chair and Scientific Committee member  
 2021 AACR 2021, Virtual: Speaker  
 2021 Weizmann Institute of Science, Rehovot (IS): Seminar  
 2020 EACR Liquid Biopsy, Virtual: Speaker  
 2020 Overcoming Therapy Resistance in Cancer, Barcelona (ES): Plenary Lecture  
 2020 Molecular Analysis for Precision Oncology Virtual Congress: Speaker, Chairperson, Scientific C.  
 2020 ASCO Annual Meeting 2020, Virtual: Speaker  
 2020 AACR 2020, Virtual: Speaker  
 2020 EACR-AACR Basic and Translational Research Conference, Lisbon (PT): Speaker, Scientific C.  
 2020 4th Science for Society: Precision medicine in cancer therapy, Virtual: Speaker  
 2020 AACR Liquid Biopsy, Miami/FL (USA): Plenary Lecture

## PUBLICATIONS

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### [Link to PubMed](#)

#### Top 15 Publications:

- Mauri G, Patelli G, Crisafulli G, Siena S, [Bardelli A](#).  
Tumor 'Age' in Early-Onset Colorectal Cancer.  
**Cell**. 2025 [In press]
- Russo M, Chen M, Mariella E, Peng H, Rehman SK, Sancho E, Sogari A, Toh TS, Balaban NQ, Battle E, Bernards R, Garnett MJ, Hangauer M, Leucci E, Marine JC, O'Brien CA, Oren Y, Patton EE, Robert C, Rosenberg SM, Shen S, [Bardelli A](#).  
Cancer drug-tolerant persister cells: from biological questions to clinical opportunities.  
**Nat Rev Cancer**. 2024 Oct;24(10):694-717.
- Sogari A, Rovera E, Grasso G, Mariella E, Reilly NM, Lamba S, Mauri G, Durinikova E, Vitiello PP, Lorenzato A, Avolio M, Piumatti E, Bonoldi E, Aquilano MC, Arena S, Sartore-Bianchi A, Siena S, Trusolino L, Donalizio M, Russo M, Di Nicolantonio F, Lembo D, [Bardelli A](#).  
Tolerance to colibactin correlates with homologous recombination proficiency and resistance to irinotecan in colorectal cancer cells  
**Cell Rep Med**. 2024 Feb 20;5(2):101376
- Di Nicolantonio F, [Bardelli A](#).  
Precision oncology for KRASG12C-mutant colorectal cancer.  
**Nat Rev Clin Oncol**. 2023 Jun;20(6):355-356
- Amodio V, Lamba S, Chilà R, Cattaneo CM, Mussolin B, Corti G, Rospo G, Berrino E, Tripodo C, Pisati F, Bartolini A, Aquilano MC, Marsoni S, Mauri G, Marchiò C, Abrignani S, Di Nicolantonio F, Germano G, [Bardelli A](#).  
Genetic and pharmacological modulation of DNA mismatch repair heterogeneous tumors promotes immune surveillance.  
**Cancer Cell**. 2023 Jan 9;41(1):196-209.
- Sartore-Bianchi A, Pietrantonio F, Lonardi S, Mussolin B, Rua F, Crisafulli G, Bartolini A, Fenocchio E, Amatu A, Manca P, Bergamo F, Tosi F, Mauri G, Ambrosini M, Daniel F, Torri V, Vanzulli A, Regge D, Cappello G, Marchiò C, Berrino E, Sapino A, Marsoni S, Siena S, [Bardelli A](#).  
Circulating tumor DNA to guide rechallenge with panitumumab in metastatic colorectal cancer: the phase 2 CHRONOS trial.  
**Nat Med**. 2022 Aug;28(8):1612-1618.

- Russo M, Pompei S, Sogari A, Corigliano M, Crisafulli G, Puliafito A, Lamba S, Enriquez 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.
- Germano G, Lu S, Rospo G, Lamba S, Rousseau B, Fanelli S, Stenech D, Le DT, Hays J, Totaro MG, Amodio V, Chila R, Mondino A, Diaz LA, Di Nicolantonio F, [Bardelli A](#).  
CD4 T cell dependent rejection of beta 2 microglobulin null mismatch repair deficient tumors.  
**Cancer Discov.** 2021 Jul;11(7):1844-1859.
- Amodio V, Yaeger R, Arcella P, Cancelliere C, Lamba S, Lorenzato A, Arena S, Montone M, Mussolin B, Bian Y, Whaley A, Pinnelli M, Murciano-Goroff YR, Vakiani E, Valeri N, Liao WL, Bhalkikar A, Thyparambil S, Zhao HY, de Stanchina E, Marsoni S, Siena S, Bertotti A, Trusolino L, Li BT, Rosen N, Di Nicolantonio F, [Bardelli A\\*](#), Misale S\* (\* Shared last authorship)  
EGFR blockade reverts resistance to KRAS G12C inhibition in colorectal cancer.  
**Cancer Discov.** 2020 Aug;10(8):1129-1139
- Russo M, Crisafulli G, Sogari A, Reilly NM, Arena S, Lamba S, Bartolini A, Amodio V, Magrì A, Novara L, Sarotto I, Nagel ZD, Pieltz CG, Amatu A, Sartore-Bianchi A, Siena S, Bertotti A, Trusolino L, Corigliano M, Gherardi M, Cosentino Lagomarsino M, Di Nicolantonio F, [Bardelli A](#)  
Adaptive mutability of colorectal cancers in response to targeted therapies  
**Science.** 2019 Dec 20;366(6472):1473-1480
- 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, and [Bardelli A](#)  
Inactivation of DNA repair triggers neoantigen generation and im-pairs tumor growth  
**Nature.** 2017 Dec 7;552(7683):116-120
- Siravegna G, Mussolin B, Buscarino M, Corti G, Cassingena A, Crisafulli G, Ponzetti A, Cremolini C, Amatu A, Lauricella C, Lamba S, Hobor S, Avallone A, Valtorta E, Rospo G, Medico E, Motta V, Antoniotti C, Tatangelo F, Bellosillo B, Veronese S, Budillon A, Montagut C, Racca P, Marsoni S, Falcone A, Corcoran RB, Di Nicolantonio F, Loupakis F, Siena S, Sartore-Bianchi A, [Bardelli A](#)  
Clonal evolution and resistance to EGFR blockade in the blood of colorectal cancer patients  
**Nat Med.** 2015 Jul;21(7):795-801
- Diaz LA Jr, [Bardelli A](#).  
Liquid Biopsies: Genotyping Circulating Tumor DNA  
**J Clin Oncol.** 2014 Feb 20;32(6):579-86
- Misale S, Yaeger R, Hobor S, Scala E, Janakiraman M, Liska D, Valtorta E, Schiavo R, Buscarino M, Siravegna G, Bencardino K, Cercek A, Chen CT, Veronese S, Zanon C, Sartore-Bianchi A, Gambacorta M, Gallicchio M, Vakiani E, Boscaro V, Medico E, Weiser M, Siena S, Di Nicolantonio F, Solit D, [Bardelli A](#)  
Emergence of KRAS mutations and acquired resistance to anti EGFR therapy in colorectal cancer  
**Nature.** 2012 Jun 28;486(7404):532-6
- [Bardelli A](#), Parsons DW, Silliman N, Ptak J, Szabo S, Saha S, Markowitz S, Willson JK, Parmigiani G, Kinzler KW, Vogelstein B, Velculescu VE  
Mutational Analysis of the Tyrosine Kinome in Colorectal Cancers  
**Science.** 2003 May 9;300(5621):949