

Dott. Silvano Ferrini

Born in Genoa July 21, 1955. Married, three daughters.

Education and training

Graduated with honors in Medicine and Surgery on July 25, 1980, at the University of Genoa.

Specialized with honors in Endocrinology on July 21, 1983, the University of Genoa.

In 2010, he completed the Management Training Course for Directors of Complex Structures organized by the Liguria Region and the University of Genoa.

Carreer

In 1983, contract scientist at the National Institute for Cancer Research, Pharmacology Laboratory.

In 1983, E.M.B.O. fellowship at the Ludwig Institute for Cancer Research, Lausanne (CH).

From 1984, Permanent position as Senior Researcher at the IST Pharmacology Laboratory.

In 1986, "Visiting Scientist" at the Ludwig Institute for Cancer Research, Lausanne.

In 1987, "Visiting Scientist" at the NIH, NIAID "Laboratory of Immunogenetics," Bethesda, MD.

Since October 14, 1993, Head of the Immunopharmacology Laboratory at the IST.

Since September 2005, Director of the Immunological Therapy Unit within the Department of Translational Oncology at the national Institute for Cancer Research in Genoa .

From July 2010 to September 2011, Acting Director of the Translational Oncology Department at the IST.

Since 2012, Director of the Biotherapies Unit at the San Martino Polyclinic Hospital-IRCCS.

From December 28, 2017, to June 27, 2019, following retirement, Pro bono external consultant at the Biotherapies Unit at the San Martino Polyclinic Hospital-IRCCS.

SCIENTIFIC ACTIVITY, RESEARCH TOPICS:

Study of the relationships between the host immune system and neoplasms. Study of tumor-associated immunosuppression and preclinical models of immunotherapy using gene transfer of interleukins in tumors and monoclonal antibodies. Role of cytokines and adhesion molecules in human tumors, with particular reference to ovarian cancer.

Author or co-author of over 200 publications in international journals and 22 book chapters or conference proceedings.

H index 67, with a total of 14,159 citations (source: Google Scholar).

He has participated as a speaker or chairman in numerous meetings.

He has been an active member of the following scientific societies: the Italian Society of Immunology (SIICA), the Italian Network for Tumor Biotherapy (NIBIT), and the MITO Group (Multicenter Italian Trials in Ovarian Cancer).

Together with Dr. Paola Queirolo, he coordinated the Melanoma and Skin Cancer Disease Management Team.

PROJECT OWNERSHIP AND FUNDING

He has been the owner and/or coordinator of projects with AIRC, the Ministry of Health, the Neuroblastoma Foundation, the Compagnia di San Paolo, and the Istituto Superiore di Sanità, which involved a Compagnia di San Paolo Foundation project involving external and internal units of the IRCCS, on topics related to Immunology or Tumor Immunotherapy.

TEACHING AND TUTORIAL ACTIVITIES

He has served as an unpaid adjunct professor for the following courses at the Faculty of Medicine and Surgery of the University of Genoa:

- Specialization School in Allergology and Clinical Immunology:

from 1997 to 2008.

- Degree Program in Medical and Pharmaceutical Biotechnology (two-year specialist program taught in English): from 2004 to present (Molecular Oncology and Immunology).

- He has taught and directed numerous courses, many of which accredited for CME.

He has been supervisor of numerous resident students for the preparation of experimental theses.

In 2014, he qualified for the National Scientific Qualification for the competitive sector 06/A2 General and Clinical Pathology, first level.

Between 2018 and 2024, he was winner of the call for the teaching of Molecular Oncology/Immunology within the Master's Degree Course in Medical-Pharmaceutical Biotechnology (LM-9).

SCIENTIFIC ARTICLES LISTED IN PUBMED FROM 2011

1. Canè S, Barouni RM, Fabbi M, Cuozzo J, Fracasso G, Adamo A, Ugel S, Trovato R, De Sanctis F, Giacca M, Lawlor R, Scarpa A, Rusev B, Lionetto G, Paiella S, Salvia R, Bassi C, Mandruzzato S, Ferrini S, Bronte V. Neutralization of NET-associated human ARG1 enhances cancer immunotherapy. *Sci Transl Med*. 2023 Mar 15;15(687):eabq6221. doi: 10.1126/scitranslmed.abq6221. Epub 2023 Mar 15. PMID: 36921034
2. Fabbi M, Costa D, Russo D, Arenare L, Gaggero G, Signoriello S, Scambia G, Pisano C, Colombo N, Losito NS, Filaci G, Spina A, Califano D, Scognamiglio G, Gadducci A, Mezzanzanica D, Bagnoli M, Ferrini S, Canzonieri V, Chiodini P, Perrone F, Pignata S. Analysis of A Disintegrin and Metalloprotease 17 (ADAM17) Expression as a Prognostic Marker in Ovarian Cancer Patients Undergoing First-Line Treatment Plus Bevacizumab. *Diagnostics (Basel)*. 2022 Aug 31;12(9):2118. doi:10.3390/diagnostics12092118. PMID: 36140519
3. Carbotti G, Dozin B, Martini S, Giordano C, Scordamaglia F, Croce M, Filaci G, Ferrini S, Fabbi M. IL-27 Mediates PD-L1 Expression and Release by Human Mesothelioma Cells. *Cancers (Basel)*. 2021 Aug 9;13(16):4011. doi: 10.3390/cancers13164011. PMID: 34439164
4. Dozin B, Carbotti G, Roncella S, Ferro P, Dessanti P, Canessa PA, Ferrini S, Fabbi M. Assessment of interferon- γ in pleural fluid as a prognostic factor of survival in malignant pleural mesothelioma. *Cancer Immunol Immunother*. 2021 May 18. doi: 10.1007/s00262-021-02965-w. Epub ahead of print. PMID: 34003301.
5. Amaro A, Croce M, Ferrini S, Barisione G, Gualco M, Perri P, Pfeffer U, Jager MJ, Coupland SE, Mosci C, Filaci G, Fabbi M, Queirolo P, Gangemi R. Potential Onco-Suppressive Role of miR122 and miR144 in Uveal Melanoma through ADAM10 and C-Met Inhibition. *Cancers (Basel)*. 2020 Jun 4;12(6):E1468. doi: 10.3390/cancers12061468. PMID: 32512881.
6. Carbotti G, Petretto A, Naschberger E, Stürzl M, Martini S, Mingari MC, Filaci G, Ferrini S, Fabbi M. Cytokine-Induced Guanylate Binding Protein 1 (GBP1) Release from Human Ovarian Cancer Cells. *Cancers (Basel)*. 2020 Feb 19;12(2):488. doi: 10.3390/cancers12020488.
7. Croce M, Ferrini S, Pfeffer U, Gangemi R. Targeted Therapy of Uveal Melanoma: Recent Failures and New Perspectives. *Cancers (Basel)*. 2019 Jun 18;11(6). pii:E846. doi: 10.3390/cancers11060846. Review. PubMed PMID: 31216772.
8. Willrodt AH, Salabarria AC, Schineis P, Ignatova D, Hunter MC, Vranova M, Golding-Ochsenbein AM, Sigmund E, Romagna A, Strassberger V, Fabbi M, Ferrini S, Cursiefen C, Neri D, Guenova E, Bock F, Halin C. ALCAM Mediates DC Migration Through Afferent

- Lymphatics and Promotes Allospecific Immune Reactions. *Front Immunol.* 2019 Apr 12;10:759. doi: 10.3389/fimmu.2019.00759. eCollection 2019. PubMed PMID: 31031759; PubMed Central PMCID: PMC6473055.
9. Sidarovich V, De Mariano M, Aveic S, Pancher M, Adami V, Gatto P, Pizzini S, Pasini L, Croce M, Parodi F, Cimmino F, Avitabile M, Emionite L, Cilli M, Ferrini S, Pagano A, Capasso M, Quattrone A, Tonini GP, Longo L. A High-Content Screening of Anticancer Compounds Suggests the Multiple Tyrosine Kinase Inhibitor Ponatinib for Repurposing in Neuroblastoma Therapy. *Mol Cancer Ther.* 2018 Apr 25. doi: 10.1158/1535-7163.MCT-17-0841.
 10. Cutrona G, Tripodo C, Matis S, Recchia AG, Massucco C, Fabbi M, Colombo M, Emionite L, Sangaletti S, Gulino A, Reverberi D, Massara R, Boccardo S, de Toter D, Salvi S, Cilli M, Pellicanò M, Manzoni M, Fabris S, Airolidi I, Valdora F, Ferrini S, Gentile M, Vigna E, Bossio S, De Stefano L, Palummo A, Iaquina G, Cardillo M, Zupo S, Cerruti G, Ibatici A, Neri A, Fais F, Ferrarini M, Morabito F. Microenvironmental regulation of the IL-23R/IL-23 axis overrides chronic lymphocytic leukemia indolence. *Sci Transl Med.* 2018 Feb 14;10(428). pii: eaal1571. doi: 10.1126/scitranslmed.aal1571.
 11. Rigo V, Emionite L, Daga A, Astigiano S, Corrias MV, Quintarelli C, Locatelli F, Ferrini S, Croce M. Combined immunotherapy with anti-PDL-1/PD-1 and anti-CD4 antibodies cures syngeneic disseminated neuroblastoma. *Sci Rep.* 2017 Oct 25;7(1):14049. doi: 10.1038/s41598-017-14417-6.
 12. Carbotti G, Nikpoor AR, Vacca P, Gangemi R, Giordano C, Campelli F, Ferrini S, Fabbi M. IL-27 mediates HLA class I up-regulation, which can be inhibited by the IL-6 pathway, in HLA-deficient Small Cell Lung Cancer cells. *J Exp Clin Cancer Res.* 2017 Oct 11;36(1):140.
 13. Petretto A, Carbotti G, Inglese E, Lavarello C, Pistillo MP, Rigo V, Croce M, Longo L, Martini S, Vacca P, Ferrini S, Fabbi M. Proteomic analysis uncovers common effects of IFN- γ and IL-27 on the HLA class I antigen presentation machinery in human cancer cells. *Oncotarget.* 2016 Nov 8;7(45):72518-72536. doi: 10.18632/oncotarget.12235.
 14. De Mariano M, Stigliani S, Moretti S, Parodi F, Croce M, Bernardi C, Pagano A, Tonini GP, Ferrini S, Longo L. A genome-wide microRNA profiling indicates miR-424-5p and miR-503-5p as regulators of ALK expression in neuroblastoma. *Oncotarget.* 2017 Apr 11;8(34):56518-56532. doi: 10.18632/oncotarget.
 15. Fabbi M, Carbotti G, Ferrini S. Dual Roles of IL-27 in Cancer Biology and Immunotherapy. *Mediators Inflamm.* 2017;2017:3958069. doi: 10.1155/2017/3958069.. Review
 16. Amaro A, Gangemi R, Piaggio F, Angelini G, Barisione G, Ferrini S, Pfeffer U. The biology of uveal melanoma. *Cancer Metastasis Rev.* 2017 Mar;36(1):109-140. doi: 10.1007/s10555-017-9663-3. Review.
 17. Barisione G, Fabbi M, Cutrona G, De Cecco L, Zupo S, Leitinger B, Gentile M, Manzoni M, Neri A, Morabito F, Ferrarini M, Ferrini S. Heterogeneous expression of the collagen receptor DDR1 in chronic lymphocytic leukaemia and correlation with progression. *Blood Cancer J.* 2017 Jan 6;6(1):e513.
 18. Nuti E, Cuffaro D, D'Andrea F, Rosalia L, Tepshi L, Fabbi M, Carbotti G, Ferrini S, Santamaria S, Camodeca C, Ciccone L, Orlandini E, Nencetti S, Stura EA, Dive V, Rossello A. Sugar-Based Arylsulfonamide Carboxylates as Selective and Water-Soluble Matrix Metalloproteinase-12 Inhibitors. *ChemMedChem.* 2016 Aug 5;11(15):1626-37. doi: 10.1002/cmde.201600235.
 19. Rossello A, Nuti E, Ferrini S, Fabbi M. Targeting ADAM17 Sheddase Activity in Cancer. *Curr Drug Targets.* 2016;17(16):1908-1927.
 20. Carbotti G, Barisione G, Airolidi I, Mezzanzanica D, Bagnoli M, Ferrero S, Petretto A, Fabbi M, Ferrini S. IL-27 induces the expression of IDO and PD-L1 in human cancer cells. *Oncotarget.* 2015 Dec 22;6(41):43267-80. doi: 10.18632/oncotarget.6530.
 21. De Mariano M, Gallesio R, Chierici M, Furlanello C, Conte M, Garaventa A, Croce M, Ferrini

- S, Tonini GP, Longo L. Identification of GALNT14 as a novel neuroblastoma predisposition gene. *Oncotarget*. 2015 Sep 22;6(28):26335-46. doi: 10.18632/oncotarget.4501.
22. Azzi S, Gallerne C, Romei C, Le Coz V, Gangemi R, Khawam K, Devocelle A, Gu Y, Bruno S, Ferrini S, Chouaib S, Eid P, Azzarone B, Giron-Michel J. Human Renal Normal, Tumoral, and Cancer Stem Cells Express Membrane-Bound Interleukin-15 Isoforms Displaying Different Functions. *Neoplasia*. 2015 Jun;17(6):509-17.
23. Barisone G, Fabbi M, Gino A, Queirolo P, Orgiano L, Spano L, Picasso V, Pfeffer U, Mosci C, Jager MJ, Ferrini S, Gangemi R. Potential Role of Soluble c-Met as a New Candidate Biomarker of Metastatic Uveal Melanoma. *JAMA Ophthalmol*. 2015 Jun 11. doi: 10.1001/jamaophthalmol.2015.1766.
24. Croce M, Rigo V, Ferrini S. IL-21: a pleiotropic cytokine with potential applications in oncology. *J Immunol Res*. 2015;2015:696578.
25. Croce M, Corrias MV, Rigo V, Ferrini S. New immunotherapeutic strategies for the treatment of neuroblastoma. *Immunotherapy*. 2015;7(3):285-300.
26. Alama A, Gangemi R, Ferrini S, Barisone G, Orengo AM, Truini M, Bello MG, Grossi F. CD133-Positive Cells from Non-Small Cell Lung Cancer Show Distinct Sensitivity to Cisplatin and Afatinib. *Arch Immunol Ther Exp (Warsz)*. 2015 Jun;63(3):207-14
27. Fabbi M, Carbotti G, Ferrini S. Context-dependent role of IL-18 in cancer biology and counter-regulation by IL-18BP. *J Leukoc Biol*. 2015 Apr;97(4):665-75.
28. Rigo V, Corrias MV, Orengo AM, Brizzolara A, Emionite L, Fenoglio D, Filaci G, Croce M, Ferrini S. Recombinant IL-21 and anti-CD4 antibodies cooperate in syngeneic neuroblastoma immunotherapy and mediate long-lasting immunity. *Cancer Immunol Immunother*. 2014 May;63(5):501-11.
29. Gangemi R, Amaro A, Gino A, Barisone G, Fabbi M, Pfeffer U, Brizzolara A, Queirolo P, Salvi S, Boccardo S, Gualco M, Spagnolo F, Jager MJ, Mosci C, Rossello A, Ferrini S. ADAM10 correlates with uveal melanoma metastasis and promotes in vitro invasion. *Pigment Cell Melanoma Res*. 2014 Nov;27(6):1138-48.
30. Nuti E, Casalini F, Santamaria S, Fabbi M, Carbotti G, Ferrini S, Marinelli L, La Pietra V, Novellino E, Camodeca C, Orlandini E, Nencetti S, Rossello A. Selective Arylsulfonamide Inhibitors of ADAM-17: Hit Optimization and Activity in Ovarian Cancer Cell Models *J. Med. Chem*. 2013 Oct 24;56(20):8089-103.
31. Cafeo G, Carbotti G, Cuzzola A, Fabbi M, Ferrini S, Kohnke FH, Papanikolaou G, Plutino MR, Rosano C, White AJ. Drug delivery with a calixpyrrole--trans-Pt(II) complex. *J Am Chem Soc*. 2013 Feb 20;135(7):2544-51. IF 10.8
32. Carbotti G, Barisone G, Orengo AM, Brizzolara A, Airolidi I, Bagnoli M, Pincioli P, Mezzanzanica D, Centurioni MG, Fabbi M, Ferrini S. The IL-18 Antagonist IL-18-Binding Protein Is Produced in the Human Ovarian Cancer Microenvironment. *Clin Cancer Res*. 2013 Sep 1;19(17):4611-20. IF 7.8
33. Carbotti G, Orengo AM, Mezzanzanica D, Bagnoli M, Brizzolara A, Emionite L, Puppo A, Centurioni MG, Bruzzzone M, Marroni P, Rossello A, Canevari S, Ferrini S, Fabbi M. Activated leukocyte cell adhesion molecule soluble form: a potential biomarker of epithelial ovarian cancer is increased in type II tumors. *Int J Cancer*. 2013 Jun 1;132(11):2597-605. IF 6.2
34. Croce M, Orengo AM, Azzarone B, Ferrini S. Immunotherapeutic applications of IL-15. *Immunotherapy*. 2012 Sep;4(9):957-69. doi: 10.2217/imt.12.92. IF 2.4
35. Giron-Michel J, Azzi S, Ferrini S, Chouaib S, Camussi G, Eid P, Azzarone B. Interleukin-15 is a major regulator of the cell-microenvironment interactions in human renal homeostasis. *Cytokine Growth Factor Rev*. 2013 Feb;24(1):13-22. doi: 10.1016/j.cytogfr.2012.08.006. Epub 2012 Sep 13. IF 8.8
36. Giron-Michel J, Azzi S, Khawam K, Mortier E, Caignard A, Devocelle A, Ferrini S, Croce M, François H, Lecru L, Charpentier B, Chouaib S, Azzarone B, Eid P. Interleukin-15 plays a

- central role in human kidney physiology and cancer through the γ c signaling pathway. PLoS One. 2012;7(2):e31624. Epub 2012 Feb 21 IF 3.73
37. Gangemi R, Mirisola V, Barisione G, Fabbi M., Brizzolara M., Francesco Lanza F, Mosci C, Salvi S, Gualco M, Truini M, Angelini A, Boccardo S, Cilli M, Airolidi I, Queirolo P, Jager MJ, Daga A, Pfeffer U, and Ferrini S. Mda-9/syntenin is expressed in uveal melanoma and correlates with metastatic progression. PLoS One. PLoS One. 2012;7(1):e29989. IF 3.73
 38. Azzi S, Bruno S, Giron-Michel J, Clay D, Devocelle A, Croce M, Ferrini S, Chouaib S, Vazquez A, Charpentier B, Camussi G, Azzarone B, Eid P. Differentiation Therapy: Targeting Human Renal Cancer Stem Cells with Interleukin 15. J Natl Cancer Inst. 2011 Dec 21;103(24):1884-98. IF 14.34
 39. Daga A, Bottino C, Castriconi R, Gangemi R, Ferrini S New Perspectives in Glioma Immunotherapy.Curr Pharm Des. 2011 Curr Pharm Des. 2011;17(23):2439-67. Review. IF 3.31
 40. Del Grosso F, Coco S, Scaruffi P, Stigliani S, Valdora F, Benelli R, Salvi S, Boccardo S, Truini M, Croce M, Ferrini S, Longo L, Tonini GP. Role of CXCL13-CXCR5 crosstalk between malignant neuroblastoma cells and Schwannian stromal cells in neuroblastic tumors Mol. Cancer Res. 2011 Jul;9(7):815-23. IF 4.35
 41. Meazza R, Orengo AM, Azzarone B, Ferrini S. Role of common-gamma chain cytokines in NK cell development and function: perspectives for immunotherapy. J Biomed Biotechnol. 2011;2011:861920. IF 2.4
 42. Giannoni P, Scaglione S, Quarto R, Narcisi R, Parodi M, Balleari E, Barbieri F, Pattarozzi A, Florio T, Ferrini S, Corte G, de Totero D. HGF-c-MET interaction prolongs chronic lymphocytic leukemic cells survival through STAT3 phosphorylation: potential role of mesenchymal cells in the disease. Haematologica. 2011 Jul;96(7):1015-23. IF 6.53
 43. Miccichè F, Da Riva L, Fabbi M, Pilotti S, Mondellini P, Ferrini S, Canevari S, Pierotti MA, Bongarzone I Activated leukocyte cell adhesion molecule expression and shedding in thyroid tumors.. PLoS One. 2011 Feb 22;6(2):e17141. IF: 4.41
 44. Barone MV, Zanzi D, Maglio M, Nanayakkara M, Santagata S, Lania G, Miele E, Ribecco MT, Maurano F, Auricchio R, Gianfrani C, Ferrini S, Troncone R, Auricchio S. Gliadin-mediated proliferation and innate immune activation in celiac disease are due to alterations in vesicular trafficking. PLoS One. 2011 Feb 25;6(2):e17039 IF: 4.41
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 46. Alama A, Orengo AM, Ferrini S, Gangemi R. Targeting cancer-initiating cell drug-resistance: a roadmap to a new-generation of cancer therapies? Drug Discov Today. 2011 Feb 21. [Epub ahead of print] IF: 6.42
 47. Orengo AM, Fabbi M, Miglietta L, Andreani C, Bruzzone M, Puppo A, Cristoforoni P, Centurioni MG, Gualco M, Salvi S, Boccardo S, Truini M, Piazza T, Canevari S, Mezzanzanica D, Ferrini S Interleukin (IL)-18, a biomarker of human ovarian carcinoma, is predominantly released as biologically inactive precursor. Int J Cancer. 2011 Sep 1;129(5):1116-25IF: 4.72

