

Curriculum Vitae

PIGNOCHINO Ymera



Personal data

Name: Ymera Pignochino
Date and place of birth: 25/10/1977, Ivrea, Italy
Address: Torino, via Oslavia 16, 10153
Citizenship: Italian
Work address:
University of Torino Medical School,
Department of Clinical and Biological Science
c/o SanLuigi Gonzaga Hospital
10143 Orbassano (TO), Italy
And Candiolo Cancer Institute, FPO- IRCCS .
Strada Provinciale 142, km 3.95 - 10060 Candiolo (TO), Italy
E-mail: ymera.pignochino@ircc.it ; ymera.pignochino@unito.it
Phone number: [+393403929618](tel:+393403929618)

Education

2011 Specialization Degree (4 years) in Clinical Biochemistry, University of Torino Medical School, grade: 70/70 cum laude
2006 Ph.D in Human Oncology (4 years), University of Torino Medical School
2001 Medical Biotechnology Master's Degree (5 years), grade: 110/110 cum laude, University of Torino Medical School

Positions

2021 to date: Assistant Professor of Molecular Biology (BIO/11) –University of Torino Medical School,
2011-to date: coordinator of the Preclinical and Translational Sarcoma Research Unit: targeted therapy approaches for mesenchymal tumors in a preclinical setting – Candiolo Cancer Institute, FPO-IRCCS
2006-April 2011: post –doctoral researcher- Molecular targeting in osteosarcoma “Assegni di Ricerca” granted by MIUR and University of Torino
2006- 2008: research associate involved in development of novel molecular target therapies
2001-2005: Ph.D student fellowship hematopoietic stem cells and mutational studies in cholangiocarcinoma

Skills and competence

Research project design and development. Coordination of research team. Molecular and cellular biology; histology and immunohistochemistry; next-generation-sequencing and mutational analysis, biochemistry techniques, flow cytometry, mice and rat manipulation, transplantation and pharmacological treatment, in vivo imaging; stem cell isolation, characterization, cultures, and expansion.
IATA and CGP certification

Teaching

- from 2021 to date: Assistant Professor of Molecular Biology (BIO/11) –University of Torino Medical School, International School of Medicine and Surgery (LM-41), Orbassano, TO, Italy, Advanced Molecular Biology Course, Master Degree in Physics, University of Torino
- from 2007to 2010: Teaching assistant, practicing and problem solving “Molecular Biology” Master degree in Biological Sciences, University of Turin
- from 2002 to 2010 Teaching assistant in Human Anatomy –“Rosmini” Institute-Course for Radiobiology and Radiotherapy technician –, ASO San Giovanni Battista, Torino
- 5 th Advanced Course “Hematopoietic Stem cell expansion: hopes and realities”.5 th Advanced Course “Progress in Biology and Medicine”. Communication and Research Center “Collegio Ghisleri” February 12-16, 2007, Pavia-

Invited speaking engagement and selected oral presentation during International meeting

2018: Selected oral presentation, Alliance against Cancer Annual meeting
2014: Chairman and selected oral presentation during Annual meeting of Italian Society of Cancerology
2014: Invited Speaker, Workshop Materials for Health: a Value Chain in the frame of H2020. Politecnico di Torino
2013: Selected oral presentation, CTOS Annual Meeting, New York
2010: Invited Speaker, Rete Oncologica del Piemonte e della Valle d’Aosta: biennial meeting, Torino
2010: Invited Speaker, Italian Sarcoma Group Annual Meeting: Preclinical Studies, Pordonone
2009: Invited Speaker, Italian Sarcoma Group Annual Meeting: Preclinical Studies, Torino

2005: Invited Speaker, SIAPEC-IAP Annual Congress: “Stem cells-an overview”, Pescara

Awards

2012: SIC-AACR Scholar-in-training award, AACR 2012 Annual meeting Chicago, IL (March 31- April 14)
2010: Award for the best translational research of 2008-2009, Piemonte and Valle D’Aosta Oncological Network
2008: Poster prize sponsored by Cell journal at EMBO Meeting, Dubrovnik, Croatia
2006: Travel grant -XLVIII Annual meeting of Italian Society of Cancerology (SIC), Bari, Italy (October, 1-4, 2006)
2005: Pezcoller foundation Prize for poster presentation during the SIC XLVII Annual meeting, Padua, Italy (2-5 October, 2005)

Networking collaboration:

Alliance Against Cancer- Working group sarcoma
Alliance Against Cancer- Working group musculoskeletal tumors

Granted research projects

“Systematic assessment of stromal contribution to progression and response to treatment in colorectal cancers and mesenchymal tumors” granted for 3 years as co-PI (responsible of Unit 2) by Italian Ministry of Health (Ricerca finalizzata- Giovani Ricercatori 2016)

Editorial Board membership

Journal of Bone Biology and Osteoporosis (GSOA, Wilmington, DE, USA)
Molecular Medicine Reports (Spandidos Publications, Ltd. Athens, Greece)

Scientific Society membership

Società Italiana di Cancerologia (SIC)
Italian Sarcoma Group (ISG)
American Association for Cancer Research (AACR)
European Association for Cancer Research (EACR)
Associazione italiana Colture Cellulari (AICC)

Publications

1. Iuliano I, Drioli S, **Pignochino Y**, Cafiero CM, Minisini M, D’Este F, Picco R, Dalla E, Giordano G, Grignani G, Di Giorgio E, Benedetti F, Felluga F, Brancolini C. Enhancing proteotoxic stress in leiomyosarcoma cells triggers mitochondrial dysfunctions, cell death and anti-tumor activity in vivo. **Mol Canc Ther** **2021** (accepted for publication)
2. Palmerini E, Setola E, Grignani G, D’Ambrosio L, Comandone A, Righi A, Longhi A, Cesari M, Paioli A, Hakim R, Pierini M, Marchesi E, Vanel D, **Pignochino Y**, Donati DM, Picci P, Ferrari S. High Dose Ifosfamide in Relapsed and Unresectable High-Grade Osteosarcoma Patients: A Retrospective Series. **Cells**. **2020**
3. Racanelli D, Brenca M, Baldazzi D, Goeman F, Casini B, De Angelis B, Guercio M, Milano GM, Tamborini E, Busico A, Dagrada G, Garofalo C, Caruso C, Brunello A, **Pignochino Y**, Berrino E, Grignani G, Scotlandi K, Parra A, Hattinger CM, Ibrahim T, Mercatali L, De Vita A, Carriero MV, Pallocca M, Loria R, Covello R, Sbaraglia M, Dei Tos AP, Falcioni R, Maestro R. Next-Generation Sequencing Approaches for the Identification of Pathognomonic Fusion Transcripts in Sarcomas: The Experience of the Italian ACC Sarcoma Working Group. **Front Oncol**. **2020**
4. Chiabotto G, Grignani G, Todorovic M, Martin V, Centomo ML, Prola E, Merlini A, Miglio U, Berrino E, Napione L, Isella C, Capozzi F, Marsero C, Gerardi I, Venesio T, Sangiolo D, Aglietta M, D’Ambrosio L, **Pignochino Y**. Pazopanib and trametinib as synergistic strategy against osteosarcoma: preclinical activity and molecular insights. **Cancers (Basel)**. **2020**
5. Leuci V, Donini C, Grignani G, Rotolo R, Mesiano G, Fiorino E, Gammaitoni L, D’Ambrosio L, Merlini A, Medico E, Capellero S, Giraud L, Cattaneo G, Iaia I, **Pignochino Y**, Basiricò M, Vigna E, Pisacane A, Ferrone S, Aglietta M, Dotti G, Sangiolo D. Anti-CSPG4 CAR.CIK lymphocytes as innovative treatment against multiple histotypes of soft tissue sarcomas. **Clin Cancer res** **2020**
6. Goracci M, **Pignochino Y**, Marchiò S. Phage display-based nanotechnology applications in cancer immunotherapy. **Molecules** **2020**
7. Grignani G, Merlini A, Sangiolo D, D’Ambrosio L, **Pignochino Y**. Delving into PARP inhibition from bench to bedside and back. **Pharmacology & Therapeutics** **2020**
8. Dumontel B, Susa F, Limongi T, Canta M, Racca L, Chiodoni A, Garino N, Chiabotto G, Centomo ML, **Pignochino Y**, Cauda V. ZnO nanocrystals shuttled by extracellular vesicles as effective Trojan nano-horses against cancer cells. **Nanomedicine** **2019**

9. Scotlandi K, De Feo A, Sciandra M, Ferracin M, Felicetti F, Astolfi A, **Pignochino Y**, Picci P, Carè A. Exosomes from CD99-deprived Ewing sarcoma cells reverse tumor malignancy by inhibiting cell migration and promoting neural differentiation. **Cell Death & Disease** 2019
10. Cova E, Pandolfi L, Colombo M, Frangipane V, Inghilleri S, Morosini M, Mrakic-Sposta S, Moretti S, Monti M, **Pignochino Y**, Benvenuti S, Prosperi D, Stella G, Morbini P, Meloni F. Pemetrexed-loaded nanoparticles targeted to malignant pleural mesothelioma cells: an in vitro study. **Int J Nanomedicine** 2019.
11. Grignani G, D'Ambrosio L, **Pignochino Y**, Palmerini E, Zucchetti M, Boccone P, Aliberti S, Stacchiotti S, Bertulli R, Piana R, Miano S, Tolomeo F, Chiabotto G; Sangiolo D, Pisacane A, Dei Tos AP, Novara L, Bartolini A, Marchesi E, D'Incalci M, Bardelli A, Picci P, Ferrari S, Aglietta M. Trabectedin and olaparib in patients with advanced and non-resectable bone and soft tissue sarcomas (TOMAS trial): a phase 1b study from the Italian Sarcoma Group. **Lancet Oncol**
12. Mesiano G, Grignani G, Fiorino E, Leucia V, Rotolo R, D'Ambrosio L, Salfi C, Gammaitoni L, Giraudo L, Pisacane A; Butera S, **Pignochino Y**, Basiricó M, Capozzi F, Sapino A, Aglietta M Sangiolo D Cytokine Induced Killer cells are effective against sarcoma cancer stem cells spared by chemotherapy and target therapy. **Oncoimmunology** 2018 Peraldo-Neia C, Ostano P, Cavalloni G, **Pignochino Y**, Sangiolo D, De Cecco L, Marchesi E, Ribero D, Scarpa A, De Rose AM, Giuliani A, Calise F, Raggi C, Invernizzi P, Aglietta M, Chiorino G, Leone F. Transcriptomic analysis and mutational status of IDH1 in paired primary-recurrent intrahepatic cholangiocarcinoma. **BMC Genomics**. 2018
13. Leuci V, Casucci GM, Grignani G, Rotolo R, Rossotti U, Vigna E, Gammaitoni L, Mesiano G, Fiorino E, Donini C, Pisacane A, Ambrosio LD, Pignochino Y, Aglietta M, Bondanza A, Sangiolo D. CD44v6 as innovative sarcoma target for CAR-redirectioned CIK cells. **Oncoimmunology** 2018
14. Fioramonti M, Fausti V, Pantano F, Iuliani M, Ribelli G, Lotti F, **Pignochino Y**, Grignani G, Santini D, Tonini G, Vincenzi B. Cabozantinib Affects Osteosarcoma Growth Through A Direct Effect On Tumor Cells and Modifications In Bone Microenvironment. **Sci Rep**. 2018
15. **Pignochino Y**, Capozzi F, D'Ambrosio L, Dell'Aglio C, Basiricò M, Canta M, Lorenzato A, Vignolo Lutati F, Aliberti S, Palesandro E, Boccone P, Galizia D, Miano S, Chiabotto G, Napione L, Gammaitoni L, Sangiolo D, Benassi MS, Pasini B, Chiorino G, Aglietta M, Grignani G. PARP1 expression drives the synergistic antitumor activity of trabectedin and PARP1 inhibitors in sarcoma preclinical models. **Mol Cancer**. 2017 D'Ambrosio L, Palesandro E, Boccone P, Tolomeo F, Miano S, Galizia D, Manca A, Chiara G, Bertotto I, Russo F, Campanella D, Venesio T, Sangiolo D, **Pignochino Y**, Siatis D, De Simone M, Ferrero A, Pisacane A, Dei Tos AP, Aliberti S, Aglietta M, Grignani G. Impact of a risk-based follow-up in patients affected by gastrointestinal stromal tumour. **Eur J Cancer**. 2017
16. Gammaitoni L, Giraudo L, Macagno M, Leuci V, Mesiano G, Rotolo R, Sassi F, Sanlorenzo M, Zaccagna A, Pisacane A, Senetta R, Cangemi M, Cattaneo G, Martin V, Cocha V, Gallo S, **Pignochino Y**, Sapino A, Grignani G, Carnevale-Schianca F, Aglietta M, Sangiolo D. Cytokine-Induced Killer Cells Kill Chemo-surviving Melanoma Cancer Stem Cells. **Clin Cancer Res**. 2017
17. **Pignochino Y**, Dell'Aglio C, Inghilleri S, Zorzetto M, Basiricò M, Capozzi F, Canta M, Piloni D, Cemmi F, Sangiolo D, Gammaitoni L, Soster M, Marchiò S, Pozzi E, Morbini P, Luisetti M, Aglietta M, Grignani G, Stella GM. The combination of sorafenib and everolimus shows antitumor activity in preclinical models of malignant pleural mesothelioma. **BMC Cancer**. 2015
18. Mesiano G, Leuci V, Giraudo L, Gammaitoni L, Carnevale Schianca F, Cangemi M, Rotolo R, Capellero S, **Pignochino Y**, Grignani G, Aglietta M, Sangiolo D. Adoptive immunotherapy against sarcomas. **Expert Opin Biol Ther**. 2015
19. Grignani G, Palmerini E, Ferraresi V, D'Ambrosio L, Bertulli R, Asaftei SD, Tamburini A, **Pignochino Y**, Sangiolo D, Marchesi E, Capozzi F, Biagini R, Gambarotti M, Fagioli F, Casali PG, Picci P, Ferrari S, Aglietta M; Italian Sarcoma Group. Sorafenib and everolimus for patients with unresectable high-grade osteosarcoma progressing after standard treatment: a non-randomised phase 2 clinical trial. **Lancet Oncol**. 2015
20. Stella GM, Inghilleri S, **Pignochino Y**, Zorzetto M, Oggioni T, Morbini P, Luisetti M. Activation of oncogenic pathways in idiopathic pulmonary fibrosis. **Transl Oncol**. 2014
21. Sangiolo D, Mesiano G, Gammaitoni L, Leuci V, Todorovic M, Giraudo L, Cammarata C, Dell'Aglio C, D'Ambrosio L, Pisacane A, Sarotto I, Miano S, Ferrero I, Carnevale-Schianca F, **Pignochino Y**, Sassi F, Bertotti A, Piacibello W, Fagioli F, Aglietta M, Grignani G. Cytokine-induced killer cells eradicate bone and soft-tissue sarcomas. **Cancer Res**. 2014
22. Gammaitoni L, Giraudo L, Leuci V, Todorovic M, Mesiano G, Picciotto F, Pisacane A, Zaccagna A, Volpe MG, Gallo S, Caravelli D, Giaccone E, Venesio T, Balsamo A, **Pignochino Y**, Grignani G, Carnevale-Schianca F, Aglietta M, Sangiolo D. Effective activity of cytokine-induced killer cells against autologous metastatic melanoma including cells with stemness features. **Clin Cancer Res**. 2013
23. Galizia D, Palesandro E, Nuzzo AM, **Pignochino Y**, Aliberti S, Aglietta M, Grignani G. Prolonged disease stability with trabectedin in a heavily pretreated elderly patient with metastatic leiomyosarcoma of the thigh and renal failure: a case report and review of the literature. **Oncol Res**. 2013;20(10):483-90.
24. **Pignochino Y**, Dell'Aglio C, Basiricò M, Capozzi F, Soster M, Marchiò S, Bruno S, Gammaitoni L, Sangiolo D, Torchiario E, D'Ambrosio L, Fagioli F, Ferrari S, Alberghini M, Picci P, Aglietta M, Grignani G. The Combination

of Sorafenib and Everolimus Abrogates mTORC1 and mTORC2 upregulation in osteosarcoma preclinical models. **Clin Cancer Res.** 2013 Apr 15;19(8):2117-31.

25. Todorovic M, Mesiano G, Gammaitoni L, Leuci V, Giraudo Diego L, Cammarata C, Jordaney N, Carnevale-Schianca F, Gallo S, Fagioli F, Piacibello W, Elia AR, **Pignochino Y**, Dell'aglio C, Grignani G, Cignetti A, Aglietta M, Sangiolo D. Ex vivo allogeneic stimulation significantly improves expansion of cytokine-induced killer cells without increasing their alloreactivity across HLA barriers. **J Immunother.** 2012
26. Grignani G, Palmerini E, Dileo P, Asaftei SD, D'Ambrosio L, **Pignochino Y**, Mercuri M, Picci P, Fagioli F, Casali PG, Ferrari S, Aglietta M. A phase II trial of sorafenib in relapsed and unresectable high-grade osteosarcoma after failure of standard multimodal therapy: an Italian Sarcoma Group study. **Ann Oncol.** 2012
27. Peraldo-Neia C, Migliardi G, Mello-Grand M, Montemurro F, Segir R, **Pignochino Y**, Cavalloni G, Torchio B, Mosso L, Chiorino G, Aglietta M Epidermal Growth Factor Receptor (EGFR) mutation analysis, gene expression profiling and EGFR protein expression in primary prostate cancer. **BMC Cancer** 2011
28. **Pignochino Y**, Sarotto I, Peraldo-Neia C, Penachioni JY, Cavalloni G, Migliardi G, Casorzo L, Chiorino G, Risio M, Bardelli A, Aglietta M, Leone F. Targeting EGFR/HER2 pathways enhances the antiproliferative effect of gemcitabine in biliary tract and gallbladder carcinomas. **BMC Cancer** 2010
29. **Pignochino Y**, Grignani G, Cavalloni G, Motta M, Tapparo M, Bruno S, Bottos A, Gammaitoni L, Migliardi G, Camussi G, Alberghini M, Torchio B, Ferrari S, Bussolino F, Fagioli F, Picci P, Aglietta M Sorafenib blocks tumour growth, angiogenesis and metastatic potential in preclinical models of osteosarcoma through a mechanism potentially involving the inhibition of ERK1/2, MCL-1 and ezrin pathways. **Mol Cancer** 2009
30. Inghilleri S, Zorzetto M, Morbini P, **Pignochino Y**, Stella G, Pozzi E. Valutazione dell'espressione della cinasi mtor e della proteina ERCC1 nella determinazione di una signature predittiva di risposta alla terapia nel mesotelioma pleurico maligno. in **Medicina Toracica** anno XXIV. 23 settembre 2009 EDIMES Edizioni Medico Scientifiche Internazionali –Pavia
31. Cavalloni G, Sarotto I, **Pignochino Y**, Gammaitoni L, Migliardi G, Sgro L, Piacibello W, Risio M, Aglietta M, Leone F. Granulocyte-colony stimulating factor upregulates ErbB2 expression on breast cancer cell lines and converts primary resistance to trastuzumab. **Anticancer Drugs** 2008
32. Tesio M, Gammaitoni L, Gunetti M, Leuci V, **Pignochino Y**, Jordaney N, Capellero S, Cammarata C, Caione L, Migliaretti G, Fagioli F, Tabilio A, Aglietta M, Piacibello W. Sustained Long Term Engraftment and Transgene Expression of Peripheral Blood CD34+ Cells Transduced with Third-Generation Lentiviral Vectors. **Stem Cells** 2008
33. Leone F, **Pignochino Y**, et al. Targeting of epidermal growth factor receptor in patients affected by biliary tract carcinoma. **J Clin Oncol** 2007
34. Leone F, Cavalloni G, **Pignochino Y**, Sarotto I, Ferraris R, Piacibello W, Venesio T, Capussotti L, Risio M, Aglietta M. Somatic mutations of epidermal growth factor receptor in bile duct and gallbladder carcinoma. **Clin Cancer Res** 2006
35. Timeus F, Crescenzo N, Sanavio F, Fazio L, Doria A, Foglia L, **Pignochino Y**, Berger M, Piacibello W, Madon E, Cordero di Montezemolo L, Fagioli F. Multilineage engraftment of refrozen cord blood hematopoietic progenitors in NOD/SCID mice. **Haematologica** 2006
36. Gammaitoni L, Lucchi S, Bruno S, Tesio M, Gunetti M, **Pignochino Y**, Migliardi G, Lazzari L, Aglietta M, Rebulli P, Piacibello W. Serial transplantations in nonobese diabetic/severe combined immunodeficiency mice of transduced human CD34+ cord blood cells: efficient oncoretroviral genetransfer and ex vivo expansion under serum-free conditions. **Stem Cells** 2006
37. Leone F, Cavalloni G, Gunetti M, **Pignochino Y**, Piacibello W, Aglietta M. Tumor cell purging by ex vivo expansion of hemopoietic stem cells from breast cancer patients combined with targeting ErbB receptors. **Biol Blood Marrow Transplant** 2006
38. Piacibello W, **Pignochino Y**. Stem cells: an overview **Pathologica** 2005
39. Piacibello W, Gammaitoni L, **Pignochino Y**. Proliferative senescence in hematopoietic stem cells during ex-vivo expansion. **Folia Histochem Cytobio.** 2005; Berger M, Frairia R, Piacibello W, Sanavio F, Palmero A, Venturi C, **Pignochino Y**, Berta L, Madon E, Aglietta M, Fagioli F. Feasibility of cord blood stem cell manipulation with high-energy shock waves: an in vitro and in vivo study. **Exp Hematol** 2005

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