

Salvatore Pece M.D. Ph.D.

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Education

1982 – 1989	M.D., <i>summa cum laude</i> , University of Bari Medical School, Bari, Italy.
1989 – 1993	Ph.D., Infectious Diseases, University of Bari, Bari, Italy.
1993 – 1998	Board Specialty – Microbiology and Virology, University of Bari Medical School, Bari, Italy.

Employment

1989 – 1993	Ph.D., Infectious Diseases, University of Bari, Bari, Italy.
1993 – 1998	Postdoctoral Fellow, University of Bari Medical School, Bari, Italy.
1998 – 2001	Visiting Associate, Oral and Pharyngeal Cancer Branch, NIDCR, National Institutes of Health, Bethesda, USA.
2001 – 2006	Research Assistant, European Institute of Oncology, Milan, Italy.
2006 – present	Senior Staff Scientist, European Institute of Oncology, Milan, Italy.
2016 – 2018	Deputy Director, Program of Molecular Medicine, European Institute of Oncology, Milan, Italy.
2018 – present	Deputy Director, Novel Diagnostics Program, European Institute of Oncology, Milan, Italy.

Academic Positions

1996 – 2001	University Researcher, Department of General Pathology, Faculty of Medicine and Surgery, University of Bari, Bari, Italy.
2001 – 2006	Assistant Professor, University of Milan, Medical School, Milan, Italy.
2006 – present	Associate Professor in General Pathology, University of Milan, Medical School, Milan, Italy.

Honors and Awards

1998 – 2000	Fogarty fellowship from the Fogarty International Center of National Institutes of Health (NIH), Bethesda, USA.
2000	Special achievement award at National Institute of Dental and Craniofacial Research (NIDCR), NIH, USA.
2005	‘Giancarla Vollaro’ Foundation award for the startup of a Stem Cell Biology Unit at the European Institute of Oncology in Milan, Italy.

Committees

2008 – present	Scientific Committee, Biological Protocol Working Group (BPWG), International Breast Cancer Study Group, Switzerland
2009 – present	Scientific Committee, Fondazione Umberto Veronesi Foundation (FUV), Italy

2012 – present	Scientific and Technical Review Board of the IEO Biobank, Italy
2013 – present	Scientific Fellowship Committee, Italian Association for Cancer Research, Italy
2013 – present	Scientific Committee, Agence Nationale de la Recherche, France
2014 – present	Scientific Committee, EU-LIFE Translational Working Group

Patents and Biotechnological Activities

- Cancer Biomarker Patent US 7901876 (B2)/WO2006037462 (A3)/EP1802971 “Methods of diagnosis and prognosis, including E1A-induced genes and Numb”. Released by USA Patent and Trademark Office
- Patent EP/20.06.16/EPA16175354 “Methods and Kits comprising gene signatures for stratifying breast cancer patients”. Released by European Patent Office
- Co-founder of the University spin-off “OncoMark” s.r.l.

Memberships

Italian Association for Cell Biology and Differentiation (ABCD)
Italian Federation of Life Sciences (FISV)
The Italian Cancer Society (SIC)

Selected Publications (last 10 years)

1. Zobel M, Disanza A, Senic-Matuglia F, Franco M, Colaluca IN, Confalonieri S, Bisi S, Barbieri E, Caldieri G, Sigismund S, **Pece S**, Chavrier P, Di Fiore PP, Scita G. A NUMB-EFA6B-ARF6 recycling route controls apically restricted cell protrusions and mesenchymal motility. *J Cell Biol.* 2018 Sep 3;217(9):3161-3182. doi: 10.1083/jcb.201802023.
2. Corallino S, Malinverno C, Neumann B, Tischler C, Palamidessi A, Frittoli E, Panagiotakopoulou M, Disanza A, Malet-Engra G, Nastaly P, Galli C, Luise C, Bertalot G, **Pece S**, Di Fiore PP, Gauthier N, Ferrari A, Maiuri P, Scita G. Author Correction: A RAB35-p85/PI3K axis controls oscillatory apical protrusions required for efficient chemotactic migration. *Nat Commun.* 2018 May 22;9(1):2085. doi: 10.1038/s41467-018-04515-y.
3. Avanzato D, Pupo E, Ducano N, Isella C, Bertalot G, Luise C, **Pece S**, Bruna A, Rueda OM, Caldas C, Di Fiore PP, Sapino A, Lanzetti L. High USP6NL Levels in Breast Cancer Sustain Chronic AKT Phosphorylation and GLUT1 Stability Fueling Aerobic Glycolysis. *Cancer Res.* 2018 Jul 1;78(13):3432-3444. doi: 10.1158/0008-5472.CAN-17-3018.
4. Grasso S, Chapelle J, Salemme V, Aramu S, Russo I, Vitale N, di Cantogno LV, Dallaglio K, Castellano I, Amici A, Centonze G, Sharma N, Lunardi S, Cabodi S, Cavallo F, Lamolinara A, Stramucci L, Moiso E, Provero P, Albini A, Sapino A, Staaf J, Di Fiore PP, Bertalot G, **Pece S**, Tosoni D, Confalonieri S, Iezzi M, Di Stefano P, Turco E, Defilippi P. Author Correction: The scaffold protein p140Cap limits ERBB2-mediated breast cancer progression interfering with Rac GTPase-controlled circuitries. *Nat Commun.* 2018 Mar 30;9:16203. doi: 10.1038/ncomms16203.
5. Colaluca IN, Basile A, Freiburger L, D'Uva V, Disalvatore D, Vecchi M, Confalonieri S, Tosoni D, Cecatiello V, Malabarba MG, Yang CJ, Kainosho M, Sattler M, Mapelli M, **Pece S**, Di Fiore PP. A Numb-Mdm2 fuzzy complex reveals an isoform-specific involvement of Numb in breast cancer. *J Cell Biol.* 2018 Feb 5;217(2):745-762. doi: 10.1083/jcb.201709092.
6. Gulluni F, Martini M, De Santis MC, Campa CC, Ghigo A, Margaria JP, Ciraolo E, Franco I, Ala U, Annaratone L, Disalvatore D, Bertalot G, Viale G, Noatynska A, Compagno M, Sigismund S, Montemurro F, Thelen M, Fan F, Meraldi P, Marchiò C, **Pece S**, Sapino A,

- Chiarle R, Di Fiore PP, Hirsch E. Mitotic Spindle Assembly and Genomic Stability in Breast Cancer Require PI3K-C2 α Scaffolding Function. *Cancer Cell*. 2017 Oct 9;32(4):444-459.e7. doi: 10.1016/j.ccell.2017.09.002.
7. Tosoni D, Pambianco S, Ekalle Soppo B, Zecchini S, Bertalot G, Pruneri G, Viale G, Di Fiore PP, **Pece S**. Pre-clinical validation of a selective anti-cancer stem cell therapy for Numb-deficient human breast cancers. *EMBO Mol Med*. 2017 May;9(5):655-671. doi: 10.15252/emmm.201606940.
8. Calcagni A, Kors L, Verschuren E, De Cegli R, Zampelli N, Nusco E, Confalonieri S, Bertalot G, **Pece S**, Settembre C, Malouf GG, Leemans JC, de Heer E, Salvatore M, Peters DJ, Di Fiore PP, Ballabio A. Modelling TFE renal cell carcinoma in mice reveals a critical role of WNT signaling. *Elife*. 2016 Sep 26;5. pii: e17047. doi: 10.7554/eLife.17047.
9. Dama E, Tillhon M, Bertalot G, de Santis F, Troglia F, Pessina S, Passaro A, **Pece S**, de Marinis F, Dell'Orto P, Viale G, Spaggiari L, Di Fiore PP, Bianchi F, Barberis M, Vecchi M. Sensitive and affordable diagnostic assay for the quantitative detection of anaplastic lymphoma kinase (ALK) alterations in patients with non-small cell lung cancer. *Oncotarget*. 2016 Jun 14;7(24):37160-37176. doi: 10.18632/oncotarget.9471.
10. Tosoni D, Zecchini S, Coazzoli M, Colaluca I, Mazzarol G, Rubio A, Caccia M, Villa E, Zilian O, Di Fiore PP, **Pece S**. The Numb/p53 circuitry couples replicative self-renewal and tumor suppression in mammary epithelial cells. *J Cell Biol*. 2015 Nov 23;211(4):845-62. doi: 10.1083/jcb.201505037.
11. Sanchini V, Bonizzi G, Disalvatore D, Monturano M, **Pece S**, Viale G, Di Fiore PP, Boniolo G. A Trust-Based Pact in Research Biobanks. From Theory to Practice. *Bioethics*. 2016 May;30(4):260-71. doi: 10.1111/bioe.12184.
12. Chiaradonna F, Barozzi I, Miccolo C, Bucci G, Palorini R, Fornasari L, Botrugno OA, Pruneri G, Masullo M, Passafaro A, Galimberti VE, Fantin VR, Richon VM, **Pece S**, Viale G, Di Fiore PP, Draetta G, Pelicci PG, Minucci S, Chiocca S. Redox-Mediated Suberoylanilide Hydroxamic Acid Sensitivity in Breast Cancer. *Antioxid Redox Signal*. 2015 Jul 1;23(1):15-29. doi: 10.1089/ars.2014.6189.
13. Belloni E, Veronesi G, Rotta L, Volorio S, Sardella D, Bernard L, **Pece S**, Di Fiore PP, Fumagalli C, Barberis M, Spaggiari L, Pelicci PG, Riva L. Whole exome sequencing identifies driver mutations in asymptomatic computed tomography-detected lung cancers with normal karyotype. *Cancer Genet*. 2015 Apr;208(4):152-5. doi: 10.1016/j.cancergen.2015.02.004.
14. Puca F, Colamaio M, Federico A, Gemei M, Tosti N, Bastos AU, Del Vecchio L, **Pece S**, Battista S, Fusco A. HMGA1 silencing restores normal stem cell characteristics in colon cancer stem cells by increasing p53 levels. *Oncotarget*. 2014 May 30;5(10):3234-45.
15. Rambaldi D, **Pece S**, Di Fiore PP. flowFit: a Bioconductor package to estimate proliferation in cell-tracking dye studies. *Bioinformatics*. 2014 Jul 15;30(14):2060-5. doi: 10.1093/bioinformatics/btu127.
16. Amson R, **Pece S**, Marine JC, Di Fiore PP, Telerman A. TPT1/ TCTP-regulated pathways in phenotypic reprogramming. *Trends Cell Biol*. 2013 Jan;23(1):37-46. doi: 10.1016/j.tcb.2012.10.002.
17. Tosoni D, Di Fiore PP, **Pece S**. Functional purification of human and mouse mammary stem cells. *Methods Mol Biol*. 2012;916:59-79. doi: 10.1007/978-1-61779-980-8_6.
18. Amson R, **Pece S**, Lespagnol A, Vyas R, Mazzarol G, Tosoni D, Colaluca I, Viale G, Rodrigues-Ferreira S, Wynendaele J, Chaloin O, Hoebeke J, Marine JC, Di Fiore PP, Telerman A. Reciprocal repression between P53 and TCTP. *Nat Med*. 2011 Dec 11;18(1):91-9. doi: 10.1038/nm.2546.

19. Mutti E, Magnaghi V, Veber D, Faroni A, **Pece S**, Di Fiore PP, Scalabrino G. Cobalamin deficiency-induced changes of epidermal growth factor (EGF)-receptor expression and EGF levels in rat spinal cord. *Brain Res.* 2011 Feb 28;1376:23-30. doi: 10.1016/j.brainres.2010.12.056.
20. Belloni E, Veronesi G, Micucci C, Javan S, Minardi SP, Venturini E, Maisonneuve P, Volorio S, Riboni M, Bellomi M, Scanagatta P, Taliento G, Pelosi G, **Pece S**, Spaggiari L, Pelicci PG. Genomic characterization of asymptomatic CT-detected lung cancers. *Oncogene.* 2011 Mar 3;30(9):1117-26. doi: 10.1038/onc.2010.478.
21. **Pece S**, Confalonieri S, R Romano P, Di Fiore PP. NUMB-ing down cancer by more than just a NOTCH. *Biochim Biophys Acta.* 2011 Jan;1815(1):26-43. doi: 10.1016/j.bbcan.2010.10.001.
22. Boniolo G, Di Fiore PP, **Pece S**. Trusted consent and research biobanks: towards a 'new alliance' between researchers and donors. *Bioethics.* 2012 Feb;26(2):93-100. doi: 10.1111/j.1467-8519.2010.01823.x.
23. **Pece S**, Tosoni D, Confalonieri S, Mazzarol G, Vecchi M, Ronzoni S, Bernard L, Viale G, Pelicci PG, Di Fiore PP. Biological and molecular heterogeneity of breast cancers correlates with their cancer stem cell content. *Cell.* 2010 Jan 8;140(1):62-73. doi: 10.1016/j.cell.2009.12.007.
24. Westhoff B, Colaluca IN, D'Ario G, Donzelli M, Tosoni D, Volorio S, Pelosi G, Spaggiari L, Mazzarol G, Viale G, **Pece S**, Di Fiore PP. Alterations of the Notch pathway in lung cancer. *Proc Natl Acad Sci U S A.* 2009 Dec 29;106(52):22293-8. doi: 10.1073/pnas.0907781106.
25. Confalonieri S, Quarto M, Goisis G, Nuciforo P, Donzelli M, Jodice G, Pelosi G, Viale G, **Pece S**, Di Fiore PP. Alterations of ubiquitin ligases in human cancer and their association with the natural history of the tumor. *Oncogene.* 2009 Aug 20;28(33):2959-68. doi: 10.1038/onc.2009.156.
26. Rustighi A, Tiberi L, Soldano A, Napoli M, Nuciforo P, Rosato A, Kaplan F, Capobianco A, **Pece S**, Di Fiore PP, Del Sal G. The prolyl-isomerase Pin1 is a Notch1 target that enhances Notch1 activation in cancer. *Nat Cell Biol.* 2009 Feb;11(2):133-42. doi: 10.1038/ncb1822.
27. Colaluca IN, Tosoni D, Nuciforo P, Senic-Matuglia F, Galimberti V, Viale G, **Pece S**, Di Fiore PP. NUMB controls p53 tumour suppressor activity. *Nature.* 2008 Jan 3;451(7174):76-80. doi: 10.1038/nature06412.
28. Vecchi M, Confalonieri S, Nuciforo P, Viganò MA, Capra M, Bianchi M, Nicosia D, Bianchi F, Galimberti V, Viale G, Palermo G, Riccardi A, Campanini R, Daidone MG, Pierotti MA, **Pece S**, Di Fiore PP. Breast cancer metastases are molecularly distinct from their primary tumors. *Oncogene.* 2008 Apr 3;27(15):2148-58.