

# VERNIERI CLAUDIO

Address:

Telephone:

E-mail:

Date/place of birth: July 28, 1984, Naples, Italy

Fondazione IRCCS  
Istituto Nazionale dei Tumori  
Prof. Filippo de Braud  
Direttore SC Medicina Oncologica 1

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## EDUCATION AND TRAINING

- December 2014 – December 2019: Resident in Medical Oncology at Fondazione IRCCS Istituto Nazionale dei Tumori di Milano (Milan, Italy)
- December 2014 – December 2019: Joint Post-Doc at Fondazione IRCCS Istituto Nazionale dei Tumori di Milano (Milan, Italy) and IFOM, the FIRC Institute of Molecular Oncology (Milan, Italy)
- April 2014 – November 2014: post-doc fellow at IFOM (Milan, Italy)
- January 2010 – March 2014: PhD in Molecular Medicine at the SEMM (European School of Molecular Oncology) in IFOM (Milan, Italy)
- July 2009 – December 2009: Resident in Clinical Radiotherapy at Policlinico Universitario “Federico II” (Naples, Italy)
- September 2002 – July 2008: M.D. degree received from the University Federico II of Naples, Italy, the final mark of 110/110 cum laude and mention by the Degree Committee (Naples, Italy)

## RESEARCH AND PROFESSIONAL EXPERIENCE

### January 2019 – present

Member of the Scientific Directorate of Fondazione IRCCS Istituto Nazionale dei Tumori di Milano.

### February 2018 – present

Member of the Cancer Core Europe Network and local responsible of the Basket of Basket (BoB) Trial.

### December 2014 – December 2019

Resident in Medical Oncology at the Medical Oncology Department of Fondazione IRCCS Istituto Nazionale Tumori di Milano under the supervision of Prof. Filippo de Braud. I was involved in: 1) designing and conducting independent clinical trials to target cancer metabolism, including prospective studies on calorie restriction and metformin (NCT03340935, NCT03454282, NCT03709147); 2) clinical management of patients with limited-stage and advanced breast cancer, including treatment with chemotherapy, endocrine therapy and molecular targeted treatments; 3) participation in sponsored clinical trials in breast cancer patients, including studies with immunotherapy, cyclin-dependent kinase 4/6 inhibitors, PI3K inhibitors and new immune conjugates; 4) supervision, with the role of mentor and thesis co-advisor, of students in Medicine in projects focused on the study of lipid metabolism in HER2+ BC and pancreatic neuroendocrine tumors (pNETs); 5) coordination of clinical and translational research activities of residents in Medical Oncology at Fondazione IRCCS Istituto Nazionale dei Tumori di Milano; 6) collaboration or conduction of translational research project focused on breast cancer, lung cancer, renal cancer and pNETs.

### April 2014 – November 2014

Post-doctoral fellowship in the “Quantitative Biology of Cell Division” Laboratory directed by Dr. Andrea Ciliberto.

### January 2010 – March 2014

PhD student at the SEMM (European School of Molecular Medicine) at the F.I.R.C. Institute of Molecular Oncology (IFOM) in Milan, under the supervision of Dr. Andrea Ciliberto.

Main project: The balance between APC subunit phosphorylation by Cdk1/CycB, and dephosphorylation by PP2A<sup>Cdc55</sup> in the adaptation to the spindle assembly checkpoint (SAC) in budding yeast cells. Secondary projects: collaborations with Prof. Andrea Musacchio’s group (IEO, Milan) to study the role of Aurora B in the SAC of mammalian cells and with Prof. Ruggero Pardi in San Raffaele (Milan, Italy) on models of cellular migration in the Medaka fish model.

### September 2006 – July 2008

Experimental Master degree thesis on the synergistic effects of the Farnesyl-transferase inhibitor Tipifarnib and ionizing radiations on head and neck cancer cell lines.

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## TECHNICAL SKILLS AND COMPETENCES

- Molecular Biology (DNA, RNA and protein techniques; biochemical assays), Yeast Genetics, Cell Biology (Cell culture, viability assays), Microscopy (Bright field, IF/ICC, live cell microscopy on yeast and mammalian cells), Softwares (Programming in Python and MATLAB; automated image analysis (vHCS Scan, CellProfiler)
- Statistics, biostatistics, survival analysis, multivariable analysis, propensity score analysis (R, MATLAB); image processing (Adobe Photoshop, ImageJ)
- Computational approaches to biological problems through mathematical modeling and analysis (ordinary differential equations; MATLAB and XPP/XPPAUT)
- Clinical independence in assisting cancer patients in their global cure process (5-year clinical experience as a Resident in Medical Oncology)
- Clinical independence as a general doctor (2-year experience as a medical volunteer assisting immigrants with basic medical needs at Naga, Milan, Italy)
- Experience in designing, leading and conducting clinical trials in patients with limited-stage and advanced cancers
- Mentorship experience: Mentor of students in Biology (Dr. Valentina Francia) and Medicine (Dr. Pietro Indelicato, Dr. Marta Rossi, Dr. Luca Zambelli); Mentor of PhD students in Nutrition Sciences (Dr. Marzia Sucameli)

## GRANTS AND AWARDS

- **November 2019: My First AIRC Grant (MFAG)** for a project entitled “Exploiting inducible metabolic vulnerabilities to improve chemotherapy efficacy in triple negative breast cancer”. *Project Code: 22977* (500.000 euros for 5 years).
- **June 2019:** internal grant of the Scientific Directorate of Fondazione IRCCS Istituto Nazionale dei Tumori for studies focused on triple-negative breast cancer metabolism (75.000 euros).
- **May 2019:** 2018 Young Researcher Award of the Fondazione IRCCS Istituto Nazionale dei Tumori for results obtained in the field of Translational Cancer Research.
- **February 2018:** Conquer Cancer Foundation Merit Award for a work entitled: “*Prognostic and predictive role of Fumarate Hydratase in metastatic clear cell Renal Cell Carcinoma*” presented at the 2018 Genitourinary Cancers Symposium (ASCO GU 2018).
- **November 2014:** one-year AIRC post-doctoral fellowship. Title of the project: “*Uncovering the role of Cdc20 levels in the heterogeneity of times of adaptation to the Spindle Assembly Checkpoint*”.
- **December 2014:** five-year fellowship from the University of Milan as a resident in Medical Oncology.
- **January 2010:** full Doctorial Scholarship Awarded by the University of Milan through competitive admission to the research doctorate course denominated “PhD in Molecular Medicine”.
- **July 2009:** five-year fellowship from the University Federico II of Naples as a resident in Radiotherapy.

## REVIEWER FOR THE FOLLOWING SCIENTIFIC JOURNALS:

- Journal of Thoracic Oncology
- The Lancet Oncology
- Aging Cell
- International Journal of Cancer
- Trends in Endocrinology and Metabolism
- Cancer Treatment Reviews
- Scientific Report
- The Breast

## PUBLICATIONS

- 1 **Vernieri C**, Pusceddu S, de Braud F. Impact of Metformin on Systemic Metabolism and Survival of Patients With Advanced Pancreatic Neuroendocrine Tumors. *Front Oncol* 2019;9:902
- 2 Fucà G, Mariani L, Lo Vullo S, Galli G, Berardi R, Di Nicola M, **Vernieri C** et al. Weighing the prognostic role of hyponatremia in hospitalized patients with metastatic solid tumors: the HYPNOSIS study. *Sci Rep* 2019;9(1):12993. PMID: 31506579
- 3 Koschorke A, Faraci S, Giani D, Chiodoni C, Iorio E, Canese R, Colombo MP, Lamolinara A, Iezzi M, Lodomery M, **Vernieri C**, et al. Phenethyl isothiocyanate hampers growth and progression of HER2-positive breast and ovarian carcinoma by targeting their stem cell compartment. *Cell Oncol (Dordr)* 2019. PMID: 31376137
- 4 Rivoltini L, **Vernieri C**, Huber V. The *AURORA* of a New Way to Value Myeloid Immunosuppression in Cancer. *Cancer Res.* 2019;79(13):3169-3171. PMID: 31262832
- 5 **Vernieri C**, Milano M, Brambilla M, et al. Resistance mechanisms to anti-HER2 therapies in HER2-positive breast cancer: current knowledge, new research directions and therapeutic perspectives. *Critical Reviews in Oncology/Hematology* 2019;139:53-66. PMID: 31112882
- 6 Corno A, Chiroli E, Gross F, **Vernieri C**, et al. Cellular response upon proliferation in the presence of an active mitotic checkpoint. *Life Science Alliance* 2019;2(3). PMID: 31068378
- 7 Fucà G, Galli G, Poggi M, Lo Russo G, Proto C, Imbimbo M, Ferrara R, Zilembo N, Ganzinelli M, Sica A, Torri V, Colombo MP, **Vernieri C**, et al. Modulation of peripheral blood immune cells by early use of steroids and its association with clinical outcomes in patients with metastatic non-small cell lung cancer treated with immune checkpoint inhibitors. *ESMO Open* 2019;4(1). PMID: 30964126
- 8 Cona MS, Lecchi M, Cresta S, Damian S, Del Vecchio M, Necchi A, Poggi MM, Raggi D, Randon G, Ratta R, Signorelli D, **Vernieri C**, et al. Combination of Baseline LDH, Performance Status and Age as Integrated Algorithm to Identify Solid Tumor Patients with Higher Probability of Response to Anti PD-1 and PD-L1 Monoclonal Antibodies. *Cancers (Basel)* 2019 Feb 14;1(2). PMID: 30769874
- 9 **Vernieri C**, Prisciandaro M, Milano M, et al. Single-Agent Gemcitabine vs. Carboplatin-Gemcitabine in Advanced Breast Cancer: A Retrospective Comparison of Efficacy and Safety Profiles. *Clin Breast Cancer* 2019;19(2):e306-e318. PMID: 30635175
- 10 **Vernieri C**, Signorelli D, Galli G, et al. Exploiting Fasting-mimicking Diet and Metformin to Improve the Efficacy of Platinum-pemetrexed Chemotherapy in Advanced LKB1-inactivated Lung Adenocarcinoma: The FAME Trial. *Clin Lung Cancer* 2019;20(3):e413-e417. PMID 30617039
- 11 **Vernieri C**, Galli F, Ferrari L, et al. Impact of Metformin Use and Diabetic Status During Adjuvant Fluoropyrimidine-Oxaliplatin Chemotherapy on the Outcome of Patients with Resected Colon Cancer: A TOSCA Study Subanalysis. *Oncologist* 2019;24(3):385-393. PMID: 30606884
- 12 **Vernieri C**, Pusceddu S, Fucà G, et al. Impact of systemic and tumor lipid metabolism on everolimus efficacy in advanced pancreatic neuroendocrine tumors (pNETs). *Int J Cancer* 2019;144(7):1704-1712. PMID: 30520016
- 13 De Santis F, Del Vecchio M, Castagnoli L, De Braud F, Di Cosimo S, Franceschini D, Fucà G, Hiscott J, Malmberg KJ, McGranahan N, Pietrantonio F, Rivoltini L, Sangaletti S, Tagliabue E, Tripodo C, **Vernieri C**, Zitvogel L, Pupa SM, Di Nicola M. Innovative therapy, monoclonal antibodies, and beyond: Highlights from the eight annual meeting. *Cytokine Growth Factor Rev* 2018;44:1-10
- 14 Moro M, Caiola E, Ganzinelli M, Zulato E, Rulli E, Marabese M, Centonze G, Busico A, Pastorino U, de Braud FG, **Vernieri C**, et al. Metformin Enhances Cisplatin-Induced Apoptosis and Prevents Resistance to Cisplatin in Co-mutated KRAS/LKB1 NSCLC. *J Thorac Oncol* 2018;13(11):1692-1704. PMID: 30149143
- 15 Castagnoli L, Iorio E, Dugo M, Koschorke A, Faraci S, Canese R, Casalini P, Nanni P, **Vernieri C**, et al. Intratumor lactate levels reflect HER2 addiction status in HER2-positive breast cancer. *J Cell Physiol* 2019; 234(2):1768-1779. PMID: 30132876
- 16 Brighi N, La Rosa S, Rossi G, Grillo F, Pusceddu S, Rinzivillo M, Spada F, Tafuto S, Massironi S, Faggiano A, Antonuzzo L, Santini D, Sessa F, Maragliano R, Gelsomino F, Albertelli M, **Vernieri C**, Panzuto F, Fazio N, De Divitiis C, Lamberti G, Colao A, Fave GD, Campana D. Morphological

Factors Related to Nodal Metastases in Neuroendocrine Tumors of the Appendix: A Multicentric Retrospective Study. *Ann Surg.* 2018 Jul 10. PMID: 29995678

- 17 **Vernieri C**, Mennitto A, Prisciandaro M. The neutrophil-to-lymphocyte and platelet-to-lymphocyte ratios predict efficacy of platinum-based chemotherapy in patients with metastatic triple negative breast cancer. *Sci Rep.* 2018 Jun 7;8(1):8703. PMID: 29880896
- 18 Procopio G, Prisciandaro M, Iacovelli R, Cortesi E, Fornarini G, Facchini G, Carteni G, Sabbatini R, Del Bene G, Galli L, Caserta C, Multari AG, Bregni M, Massari F, Buti S, De Giorgi U, Zustovich F, Milella M, Calabrò F, Mancini ML, Tortora G, **Vernieri C** et al. Safety and Efficacy of Cabozantinib in Metastatic Renal-Cell Carcinoma: Real-World Data From an Italian Managed Access Program. *Clin Genitourin Cancer.* 2018 Apr 19. pii: S1558-7673(18)30084-3. PMID: 29753637
- 19 Pusceddu S, **Vernieri C** et al. Metformin Use Associates With Longer Progression-free Survival of Patients With Diabetes and Pancreatic Neuroendocrine Tumors Receiving Everolimus and/or Somatostatin Analogues. *Gastroenterology* 2018;155(2):479-489. PMID: 29655834
- 20 Pusceddu S, Barretta F, Trama A, Botta L, Milione M et al. A classification prognostic score to predict OS in stage IV well-differentiated neuroendocrine tumors. *Endocr Relat Cancer.* 2018 Jun;25(6):607-618. PMID: 29559553
- 21 **Vernieri C**, Nichetti F et al. Diet and supplements in cancer prevention and treatment: Clinical evidences and future perspectives. *Crit Rev Oncol Hematol.* 2018 Mar;123:57-73. PMID: 29482780
- 22 Bonaiuti P, Chiroli E, Gross F, Corno A, **Vernieri C** et al. Cells Escape an Operational Mitotic Checkpoint through a Stochastic Process. *Curr Biol.* 2018 Jan 8;28(1):28-37.e7. PMID: 29249657
- 23 Oddo D, Siravegna G, Gloghini A, **Vernieri C** et al. Emergence of MET hyper-amplification at progression to MET and BRAF inhibition in colorectal cancer. *Br J Cancer.* 2017 Jul 25;117(3):347-352. PMID: 28654634
- 24 **Vernieri C**, Milano M, Mennitto A et al. Antitumor activity and safety profile of weekly carboplatin plus paclitaxel in metastatic breast cancer: a ten-year, monocentric, retrospective study. *Breast Cancer Res Treat.* 2017 Sep;165(2):365-373. PMID: 28616768
- 25 Pusceddu S, Prinzi N, Lo Russo G, Femia D, Milione M, Perrone F, Tamborini E, Concas L, Pulice I, **Vernieri C**, Corti F, Buzzoni R, de Braud F. Rationale and protocol of MetNET-2 trial: Lanreotide Autogel plus metformin in advanced gastrointestinal or lung neuroendocrine tumors. *Future Oncol.* 2017 Aug;13(19):1677-1683. PMID: 28580793
- 26 Pusceddu S, Verzoni E, Prinzi N, Mennitto A, Femia D, Grassi P, Concas L, **Vernieri C**, Lo Russo G, Procopio G. Everolimus treatment for neuroendocrine tumors: latest results and clinical potential. *Ther Adv Med Oncol.* 2017 Mar;9(3):183-188. PMID: 28344663
- 27 **Vernieri C**, Casola S, Foiani M, et al: Targeting Cancer Metabolism: Dietary and Pharmacologic Interventions. *Cancer Discovery* 2016;6(12):1315-1333. PMID: 27872127
- 28 Mennitto A, **Vernieri C** and Procopio G. Urachal carcinoma: towards a precision medicine. *Translational Cancer research* 2016; Vol 5, Supplement 7.
- 29 Pietrantonio F, **Vernieri C**, Siravegna G, et al: Heterogeneity of acquired resistance to anti-EGFR monoclonal antibodies in patients with metastatic colorectal cancer. *Clin Cancer Res* 2017;23(10):2414-2422. PMID: 27780856
- 30 **Vernieri C**, Femia D, Pusceddu S, et al: Primary Cerebellar Neuroendocrine Tumors: Chimeras or Real Entities? A Case Report with a 6-Year Follow-Up. *Case reports in oncology* 9:432-439, (2016). PMID: 27721764
- 31 Pusceddu S, Femia D, Lo Russo G, Ortolani S, Milione M, Maccauro M, **Vernieri C** et al: Update on medical treatment of small intestinal neuroendocrine tumors. *Expert review of anticancer therapy* 2016;16:969-76. PMID: 27353232
- 32 Pusceddu, S., De Braud, F., Lo Russo, G., Concas, L., Femia, D., **Vernieri, C.** et al. How do results of the RADIANT trials impact on the management of NET patients? A systematic review of published studies. *Oncotarget* 2016;7(28):44841-44847. PMID: 27057638
- 33 Pusceddu, S., Buzzoni, R., **Vernieri, C.** et al. Metformin with everolimus and octreotide in pancreatic neuroendocrine tumor patients with diabetes. *Future Oncol* 2016;12(10):1251-60. PMID: 26890290.

- 34 Crespo, C. L., **Vernieri, C.** et al. The PAR complex controls the spatiotemporal dynamics of F-actin and the MTOC in directionally migrating leukocytes. J Cell Sci 2014;127:4381-4395. PMID: 25179599.
- 35 **Vernieri, C.**, Chirolì, E., Francia, V., Gross, F. & Ciliberto, A. Adaptation to the spindle checkpoint is regulated by the interplay between Cdc28/Clbs and PP2A<sup>Cdc55</sup>. J Cell Biol 2013;202, 765-778. PMID: 23999167
- 36 Santaguida S, **Vernieri C**, Villa F, Ciliberto A, Musacchio A. Evidence that Aurora B is implicated in spindle checkpoint signaling independently or error correction. EMBO J. 2011 Apr 20;30(8):1508-19. PMID: 21407176

**H-index (Scopus): 9**

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## ORAL COMMUNICATIONS AT CONFERENCES

- 16.12.2019:** Invited Speaker for a seminar entitled “*Targeting metabolic reprogramming in human cancers: from bench to clinic*” (IFOM, Milan, Italy).
- 28.11.2019:** “Learning at the Leaning Tower 2019: GONO Congress on Colorectal Cancer” (Scuola Superiore S. Anna, Pisa, Italy). Invited Speaker. Title of the Presentation: *Discovering tumor cells’ metabolism: a new-old hallmark of cancer.*
- 15.11.2019:** “Updates on the medical treatment of advanced breast cancer” (Montelupo Albese, Italy). Invited Speaker. Title of the Presentation: *Therapeutic algorytms for the treatment of metastatic HER2+ breast cancer.*
- 15.11.2019:** “Breaking Boundaries Metabolism at the Cross-Roads” Conference (IFOM, Milan, Italy). Invited Speaker. Title of the Presentation: *Targeting cancer metabolism: facts, controversies and therapeutic perspectives.*
- 07.10.2019:** Cancer Core Europe Summer School in translational Cancer Research (Albufeira, Portugal). Invited Speaker. Title of the Presentation: *Reprogramming cancer metabolism: current research and potential therapeutic implications.*
- 27.6.2019:** MASTERLUNG (Fondazione IRCCS Istituto Nazionale dei Tumori di Milano, Milan, Italy). Invited Speaker. Title of the Presentation: *Cellular Metabolism: vulnerabilities and potentially novel combinations.*
- 17.11.2018:** Annual Meeting of the “Associazione Italiana di Oncologia Medica” (AIOM, Rome, Italy). Invited Speaker in the Educational Session. Title of the Presentation: *Metabolic disruption: a new hallmark of cancer.*
- 9.11.2018:** 1<sup>st</sup> International Conference on Fasting, Dietary Restriction, Longevity and Disease (Los Angeles, USA). Invited Speaker. Title of the Presentation: *Periodic Fasting and Fasting-Mimicking Diet tin Chemotherapy of Cancers.*
- 12.10.2018:** Conference on “Treatment of metastatic HER2-negative breast cancer” (Rezzato, Italy). Invited speaker. Title of the presentation: *Metabolism and Breast Cancer: Myth or Reality?*
- 7.10.2018:** Cancer Core Europe Summer School in translational Cancer Research (Albufeira, Portugal). Invited Speaker. Title of the Presentation: *Metabolic reprogramming in cancer: current knowledge and potential therapeutic implications.*
- 25.5.2018:** ANDID National Congress (Turin, Italy). Invited Speaker. Title of the Presentation: *Fasting in Oncology.*
- 26.01.2018:** Congress on “Innovative therapy, Monoclonal Antibodies and beyond” (Milan, Italy). Invited speaker. Title of the presentation: *Impact of cyclic fasting mimicking diet (FMD) on cancer patient metabolism.*
- 17.01.2018:** Workshop on Molecular Diagnostics and Innovative Drugs (Trieste, Italy). Invited Speaker. Title of the presentation: *Immunity in Oncology: targets, therapy and nutritional aspects.*
- 27.05.2017:** Nutrition and Longevity Workshop (Genova, Italy). Invited Speaker. Title of the presentation: *The Fasting Mimicking Diet in Cancer Patients: Preliminary Results of the INT 10/17 “Basket” Study.*
- 26.05.2017:** Supportive Care in Oncology: “Systemic Strategy at the Patient Service” (Milan, Italy). Invited

Speaker. Title of the Presentation: *Complementary Therapies in Oncology: when and why.*

**24.05.2016:** 2<sup>nd</sup> Milan NET Conference. A meeting among active Italian Neuroendocrine Tumor Boards. Presentation of a Clinical Case.

**26.6.2013:** CHROMO2013: EMBO workshop on Chromosome Segregation and Aneuploidy (Breukelen, The Netherlands). Title of the presentation: *Adaptation to the mitotic checkpoint in budding yeast requires APC/C<sup>Cdc20</sup> activity and is regulated by the interplay between Cdc28/Clbs and PP2A<sup>Cdc55</sup>.*

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*I authorise the use of my personal data in compliance with Legislative Decree 196/03.*

Date: December 20<sup>th</sup> 2019

Signature  
