

CURRICULUM VITAE

Francesca Demichelis, PhD

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EDUCATION

2005 PhD, University of Trento, Italy (UNITN), International Doctoral School in Information and Telecommunication.

1996 MSc, Physics Department, UNITN.

CURRENT and PREVIOUS POSITION

2018 Jan–present Professor, Head of the Laboratory of Computational and Functional Oncology, Department of Cellular, Computational and Integrative Biology, UNITN.

2014 Oct –2017 Dec Associate Professor (BIO11) with tenure, Head of the Laboratory of Computational Oncology, Centre for Integrative Biology, UNITN.

2011 Feb–2014 Sept Assistant Professor in Computational Biology, Head of the Laboratory of Computational and Functional Oncology, Centre for Integrative Biology, UNITN.

2008 July–2011 Jan Assistant Professor in Pathology and Laboratory Medicine, and in Computational Biomedicine, Weill Cornell Medical College, New York, NY.

2007 Oct–2008 June Instructor in Pathology and Laboratory Medicine, and Institute Fellow at Institute for Computational Biomedicine, Weill Cornell Medical College, New York, NY.

2005 Feb–2007 Sep Post-doctoral Fellow at the Department of Pathology, Brigham and Women's Hospital, Harvard Medical School, Boston, MA.

Research Activity: Dr. Demichelis initial work (1998-2004) developed in the field of Digital Pathology and Tissue Microarray platforms, exploiting robotized microscopes and data mining approaches. She then transitioned to the study of cancer genomics, concentrating on prostate cancer as a complex cancer model with extensive heterogeneity and long periods of disease progression from time of diagnosis to development of lethal disease. Since 2011, Dr. Demichelis is the head of the Laboratory of Computational and Functional Oncology at the University of Trento, Italy, as part of the Department of Cellular, Computational and Integrative Biology. Her research interest focuses on the characterization of tumor evolution and progression mainly in the setting of GU cancers. Through the integration of computational and analytical approaches and in vitro studies, her laboratory works on the characterization of diagnostic and prognostic biomarkers. Ongoing work includes i) the study of genomic and DNA methylation intra- and inter-tumor heterogeneity from patients' tissue biopsies and plasma circulating material to inform on tumor dynamics and treatment response and ii) the study of synthetic lethal combinations originally nominated through allele-specific analyses on multi-layer human data. Her research group is/has been involved in consortia studies including MAQC-II, The Cancer Genome Atlas (TCGA-PRAD) and Stand Up 2 Cancer International-PCF Dream Team.

Dr. Demichelis is currently leading an Accelerator Award multi-institutional international project funded by CR-UK and Fondazione AIRC for *Multi-modal clinical testing of prostate cancer patient plasma*; in 2015 she was awarded an ERC Consolidator grant (European Research Council), titled *Synthetic Lethal Phenotype Identification through Cancer Evolution Analysis (SPICE)*. Funding agencies of the Demichelis laboratory also include the US National Cancer Institute (NCI-NIH, through the WCM Specialized Program for Research Excellence in Prostate Cancer), the Prostate Cancer Foundation (PCF)/Movember, the Italian Ministry of University and Research (MIUR), the Fondazione Trentina per la Ricerca sui Tumori (FTRT), and the Fondazione Caritro.

Co-author of more than 120 manuscripts including in: *Cancer Biology, Cancer Research, Cell, Cancer Cell, JCI, Nature, Nature Biotechnology, Nature Communications, Nature Genetics, Nature Medicine, Oncogene, PNAS, Science, Science Translational Medicine.*