PERSONAL INFORMATION

Massimo Zollo

Viale Colli Aminei 279, Naples, 80131 Italy

081-3737875 3384410761

massimo.zollo@unina.it

https://www.ceinge.unina.it/en/massimo-zollo

Male | *Date of birth* 08/10/1963 | *Italian*

Enterprise	University	EPR
☒ Management Level	☒Full professor	☒Research Director and 1st level Technologist / First Researcher and 2nd level Technologist

WORK EXPERIENCE

September 2018 since now	Full Professor of Genetics: Federico II, University Federico II of Naples, Department of Molecular Medicine and Medical Biotechnology, Naples. Italy
January 2016 since now	Director Central Nervous System laboratory (CNS-Lab) CEINGE, Naples, Italy: 1) Diagnostics, Basic and Translational Research of Paediatric Brain tumours, 2) Diagnostics, Basic and Translational Research of Genetics of Neurodevelopmental diseases related to Brain disorders
January 2018 since now	Director "Genetics of the Rare blood groups and its bio-bank" Regione Campania- AOU Federico II, Naples, Italy
January 2014 since now	Dirigente Biologo -Professor of Genetics Assistent to the Department of Azienda Ospedaliera Universitaria AOU Federico II (DAI) Medicina di Laboratorio e Trasfusionale. Diagnostic and Clinical activity
January 2006 since now	Principal Investigator CEINGE, Group Leader in NeuroOncology, Neuroscience, Genetics and Functional Genomics Massimo Zollo | Ceinge (unina.it)
January 2004- September 2006	Researcher, in a training program for Group Leader (MIUR) at CEINGE, Naples, Italy
January 1994-January 2004	Staff Scientist and researcher at TIGEM, Telethon Institute of Genetics and Medicine, Milan, San Raffaele Science Park DIBIT, Italy Coordinator TIGEM-IIGB Sequencing Core, TIGEM, Telethon Institute of Genetics and Medicine, Naples, Italy.
March 1990-March 1994	Postdoctoral Fellow (Research Associate) at the Washington University, St. Louis, Missouri, USA. Visiting Scientist Genentech Inc., South San Francisco, CA, USA. Associate Scientist at the Department of Advanced Center for Genetic and Technology, Applied Biosystems, Foster City, CA, USA.
March 1989 - February 1990	Postdoctoral Fellow at the International Institute of Genetics and Biophysics (IIGB), CNR, Naples, Italy. Visiting Student at the National Institute of Health, NIDDK Department, Bethesda (National Institute of Health.), MD. USA. Research Fellow at the International Institute of Genetics and Biophysics (IIGB), CNR, Naples, Italy.

EDUCATION AND TRAINING

Laurea Magistrale in Life Science-Biology – Genetics (October 1985 – to February 1989)	University "Federico II" Naples, Italy Degree in Biological Sciences "Cum Laude". Field of study: Biological Sciences "Genetics. Experimental Thesis "Identification of the gene responsible for the Icthiosis X- linked in man" Director of the studies Prof. dr. Maria Graziella Persico.
October 1986- February 1989	Residency- International Institute of Genetic and Biophysical CNR , Naples, Italy - Field of study: Human Genetics

PERSONAL SKILLS

Mother tongue(s)	Italian
Other language(s)	English C1

Job-related skills

Human Genetics, Functional Genomics and Biotechnology. Molecular Biology and Oncology, Tumor Microenvironment –Metastasis and metastatic niche. Paediatric Brain Tumors; Cell immunology. "My research interest is within the field of basic and translational research applied to Genetics and Cancer Genetics studying the tumor microenvironment and the epithelial-mesenchymal transitions (EMTs). I am further investigating how the Central Nervous System (CNS) is driven to develop neurodevelopment inherited genetic disorders and how paediatric brain tumors are originated in cerebellum by Genetics and Functional genomics methodologies. Recently my team is involved additionally on Research on Sars-Cov-2 diagnostics, genetics and therapeutics on interaction of host and virus communication with focus on brain".

Technology Transfer skills

International Patents:
1- PCT/IT2010/000125/27860 "Use of microRNA 199b-5P in medical and diagnostic fields" Proprietario ed Inventore Massimo Zollo (10-09-2010). Sviluppo pre-Industriale presso "Advanced Accelerator Applications (AAA) (www.adacap.com).
2- PCT/IT2012/000289/28627 "Pyrimido[5,4-d]Pyrimidine or pyrimidine derivates compounds and uses there of in the treatment of cancer. Inventori Prof. Zollo M., Prof. Galeone A., Dr. Virgilio A., Dr. Spano D., Dr. De Antonellis P. (19-09-2012).
3-PCT/IT2010/000125/27860 "Use of microRNA 199b-5P in medical and diagnostic fields" Inventor and owner Massimo Zollo (10-09-2010). Developing a pre-Industrial program at "Advanced Accelerator Applications (AAA) (www.adacap.com).
4-European Patent "Methods and kits for detection of circulating tumor cells biomarker's. Inventor and owner Massimo Zollo (25/03/2011).
5-PCT/IT2012/000289/28627 "Pyrimido[5,4-d]Pyrimidine or pyrimidine derivates compounds and uses there of in the treatment of cancer. Inventor and owner Prof. Zollo M., Prof. Galeone A. , Dr. Virgilio A., Dr. Spano D., Dr. De Antonellis P. (19-09-2012)
6-PDPB204009&PDPB204009K01"Composition for treating Coronavirus infection or disease caused by Coronavirus infection comprising polyphosphate".
7- PDPB204052: "Composition for preventing or disinfecting coronavirus infection or disease caused by coronavirus infection comprising polyphosphate" .
8- PDPB204106"Composition for treating coronavirus infection or disease caused by coronavirus infection comprising PMCA inhibitor" .
9-PDPB204055: "Composition for preventing or disinfecting coronavirus infection or disease caused by coronavirus infection comprising PMCA inhibitor".
10- Italian IP 11735M (102020000028628/ 26-11-2020): "Metodo per prevedere la formazione di metastasi in pazienti tumorali.
11-European IP 28/1/2022 n. EP22154018 title " Antisense compounds for the treatment of coronavirus infection.
12-PCT /EP2021/087512 Method for determining active sars-cov-2 infections
13-European IP EP21164306.9 Human neutralizing antigen specific proteins for Spike-RBD of SARS-CoV-2
14- European IP EP22204452.1 (28 Ottobre 2022)- "Prune_1 inhibitors and therapeutic use thereof "

Higher Education & Training skills

Project evaluator MIUR: R. Levi Montalcini Bando (2013-2014) Giovani ricercatori- Progetti SIR (Bando 2014) Joint Commission of Futuro in Ricerca (2012-2013)
Doctorate School International Program- SEMM Medicina dei Sistemi – UNIMI-Milan -Italy
Doctorate School Italian Program "Molecular Medicine- UNINA Federico II of Naples.

Project Management skills

President of the Commission on Evaluation of the Research (2012-2017) HECRES di Parigi Saint-Antoine Research Centre (CRSA) Institute Saint-Antoine Research Centre (CRSA) director Prof. Bruno Feve. Commmission research Committee 12 Scientist. Evaluation of 14 teams leaders (HCERES -14 January , Paris, France, 2018).
Rapporteur" European Projects "Horizon 2020 COST"

Other skills

MEMBER OF INTERNATIONAL SOCIETIES OF:
American Association for Cancer Research (AACR)
American Association of Human Genetics (AAHG)
Società Italiana di Cancerologia (SIC)
American Association of Cellular Biology (AACB)
Associazione di Genetica Italiana (AGI)

ADDITIONAL INFORMATION

Projects

CEO Elysium Cell Bio Ita. Spin-off of University Federico II of Naples

Scientific Director PNRR- Gene therapy and drug based on RNA technology - Spoke 1-task 1.6.8

Scientific Director PNRR Multiscale Integrated approach to the study of Nervous System in Heath and Disease Mnesys- Spoke 3

Scientific Director: The Task-Force Covid19 Project for CEINGE,2021-2023 Regione Campania, Leading 18 Research Units.

Scientific Director: PRIN MIUR 2017 NATIONAL CALL, 2017FNZRN "Microtubule and centrosome dynamics, from Omics to neurodevelopmental disorders of Central Nervous System". Leading n. 4 Research Units

Scientific Director PRIN 2023-25: Translation Reaserach to tacle tumour immune microenvironment for recurrent and metastatic Medulloblastoma Leading Leading n.2 Research Units

Principal Investigator AIRC "Studies on metastatic medulloblastoma, brain tumor microenvironment and epigenetics" 2018-2022.

Principal Investigator Fondazione Celeghin- A novel pyrimido-pirimidine compounds to treat recurrence of metastatic Medulloblastoma (Group 3), a preclinical study. 2018-2020

Principal Investigator PRIN-MIUR NATIONAL CALL 2008-2010-2008E5AZ5F-02."NDPK and h-prune complex as a mediator of the metastatic potential of CK2". 2011-2013:

Principal Investigator AIRC . "H-Prune as a target to impair tumor propagating cells in paediatric tumors". 2011-2013

Principal Investigator European Proteomics infrastructure Prime XS-FP7 Contract no. 262067-PRIME-XS Progetto Project n. PRIME-XS-0000025 titolo "miR34a functional regulation within the control of neuroblastoma tumor growth: a proteome analysis."

Principal Investigator ThromboGenics (TG) Leuven BG Unraveling of the effect of PlGF blockade inpediatric medulloblastoma"2013-2014

Principal Investigator Professor UNINA, PON01_02388 (2011-2015) "Heading towards personalizedmedicine: new molecular systems for the diagnosis and therapy of socially important oncological pathologies.

Principal Investigator AIRC Experts in "Pediatric Brain cancer" 2009-2010: A multitasking molecular approach to identify new therapies for treatment of Medulloblastoma".

Principal Investigator GRANT EU-FP7 E.E.T.pipeline (2007-2009): European Embryonal Tumor Pipeline

Principal Investigator GRANT EU- FP7- TuMIC. (2008-2012) An integrated concept of tumormetastasis: implications for therapy"

Principal Investigator GRANT EUFP6 BRECOSM (2004-2007) Molecular mechanisms involved inorgan-specific metastatic growth processes in breast cancer.

Scientific Coordinator: FIRB-MIUR- RBAU01RW82 (2003-2006). Identification of forebrain murine specific genes: a candidate resource of gene potentially involved with neuro-psichiatric disorders. Leading 3 research Units

Publication Track record

Num. publication:143
SCOPUS h index = 43
Google Scholar: H index:46
Citations: 12.476
ORCID: orcid.org/0000-0002-0970-7243

Publications

Functional Genomics of PRUNE1 in Neurodevelopmental Disorders (NDDs) Tied to Medulloblastoma (MB) and Other Tumors. ***Frontiers in Oncology*** ,2021, 11, 758146
Long-chain polyphosphates impair SARS-CoV-2 infection and replication
Science Signaling 2021, 14(690), eabe5040.
Metastatic group 3 medulloblastoma is driven by PRUNE1 targeting NME1-TGF-β-OTX2-SNAIL via PTEN inhibition. **Brain**. 2017 141(5), pp. 1300-1319.
PRUNE is crucial for normal brain development and mutated in microcephaly with neurodevelopmental impairment. **Brain**.2017. 140(4), pp. 940-952
Gene Heterogeneity within Medulloblastoma Subgroups from author profile **Cancer Cell**. 31(6), pp. 737-754.e6 2017.
PRUNE1 and NME/NDPK family proteins influence energy metabolism and signaling in cancer metastases. **Cancer Metastasis Rev**. 2024 Jun;43(2):755-775
Targeting ATP2B1 impairs PI3K/Akt/FOXO signaling and reduces SARS-COV-2 infection and replication. **EMBO** Rep. 2024 May 30.

Collaborations

University of Heidelberg and Mannheim (Germany) Prof. Dr. Thomas Wieland and Prof. Dr. Jonathan Sleeman “studies related to NDPKA-B and Prune1 and Studies and mechanisms related to metastatic Brain and TNBC cancer.
University of Mainz (Germany). Prof. Dr. Werner Muller: PolyPhosphate research within Neurodegenerative disorders, Sars-Cov-2 therapies and clinical treatments of chronic wounds.
University of Yonsei, Seul, (Korea) “Studies related to PolyPhosphates “ Prof. Dr. Hong Yeoul Kim.
Sick Kidds Hospital Toronto, Canada Prof. Michael Taylor. Studies related to Brain Paediatric Tumors
UCL Institute of Neurology,London (England). Prof. Henry Houlden. Studies related to Genetics of Brain neurodevelopmental disorders.

Naples 7-01-2025

FIRMA  MASSIMO ZOLLO