

Pietro Paolo Valeria Antonietta, Born in Naples (Italy), July 18th 1961.

PROFESSIONAL ACTIVITY:

From 01/09/2020: Appointment as full professor of II band SSD MED / 07 at the Department of Public Health and Infectious Diseases - Faculty of Pharmacy and Medicine.

From 01/01/2005 to today: Appointed as Adjunct Assistant Professor at Temple University's Department of Microbiology, Immunology and Inflammation, Center for Neurovirology and Gene Editing, Philadelphia, USA.

17/12/2023: ASN 2021/2023 - National Scientific Qualification for the functions of First Level University Professor in the Competition Sector 06/A3 - MICROBIOLOGY AND CLINICAL MICROBIOLOGY.

DIDACTIC ACTIVITY:

from 2011 to date: teaching assignment of Microbiology Techniques in the Integrated Course of Basic Techniques and Instrumentation in the Laboratory, 2nd year, 1st semester, for the Degree Course in Biomedical Laboratory Techniques "A" Faculty of Medicine and Dentistry, at the University of Rome "La Sapienza".

from 2011 to today: teaching assignment of Clinical Microbiology in the CLM "D" degree course in Medicine and Dentistry, at the University of Rome "La Sapienza", as part of the Integrated Course of "Laboratory Medicine I and II", II semester, 3rd year and the Integrated Course of "Integrated Pathology V", I semester, 5th year.

since 2016 "REFERENCE TEACHER" of the Degree Course in Biomedical Laboratory Techniques "A" Faculty of Medicine and Dentistry, at the University of Rome "La Sapienza".

2014 - to date: teaching assignment of Special Bacteriology I - for the Postgraduate School of Microbiology and Virology, Faculty of Pharmacy and Medicine, at the University of Rome "La Sapienza".

Academic year 2020-2021: teaching assignment of Microbiology and Clinical Microbiology in the CLM "D" degree course in Medicine and Dentistry, at the University of Rome "La Sapienza", as part of the Integrated Course of "Microbiology", II semester, 2nd year.

a.a. 2020-2021: Assignment for teaching activities in the context of the II level Master in: MOLECULAR VIROLOGY, Sapienza University of Rome.

a.a. 2020-2021: Assignment for teaching activities in the context of the PhD in: "Molecular Design and Characterization for the Promotion of Health and Well-Being: from Drug to Food", Sapienza University of Rome, 1st semester, 3rd year.

a.a. 2023-2024: teaching assignment of MICROBIOLOGY AND CLINICAL MICROBIOLOGY I and II as part of the degree course in Dentistry and Dental Prosthodontics - Dentistry and Dental Prosthetics LM-46, I and II semester, 1st year.

ASSISTANCE ACTIVITY:

From 1991 to today: assistance activity with the qualification of Level I Manager at the UOC of Microbiology and Virology - SSDC01 (Director Prof. Guido Antonelli) in the framework of the Hospital Agreement (Policlinico Umberto I).

GRANTS:

Since 2001 he has been **Principal Investigator of the following research programs:**

2001-2003: Sapienza University, Faculty Grant "Haemorrhagic cystitis related to BKV infection after allogeneic stem cell transplantation" -Italy.

2004-2005: Sapienza University, Faculty Grant "Possible role of viral infections in aetiopathogenesis of multiple sclerosis (MS)" -Italy.

2006-2009: Sapienza University, Faculty Grant "Viruses and tumors: Possible role of human polyomavirus BK in the aetiopathogenesis of prostatic carcinoma" -Italy.

2010: Sapienza University, MIUR Grant "Adenocarcinoma of the prostate: pathogenetic role of BK virus infection and associated inflammatory processes and development of innovative diagnostic systems" -Italy.

2013: Sapienza University Research Program "Study on Polyomavirus JC reactivation in autoimmune diseases treated with biologics and role of cellular factor SPI-B as possible early biomarker of PML onset".

2014: Sapienza University, Research Program "Risk of PML onset in patients with multiple sclerosis treated with natalizumab: identification of functional rearrangements of transcriptional control region of JC virus and study of viral gene expression in different lymphocyte clusters and in cell culture".

2015: Sapienza University, Research Program "In vitro Polyomavirus DNA replication-driven recombination events: non-coding control region rearrangements as viral markers for an early PML diagnosis?".

2017: Sapienza University, Research Program "Development of in vitro model for the human Polyomavirus JC replication: analysis of rearrangements within NCCR structural organization during infection".

2017: FFABR 2017 (Annual funding of basic research activities):

2018: Sapienza University, Research Program "A more accurate risk biomarkers recognition for Progressive Multifocal Leukoencephalopathy (PML) caused by JC virus in patients with multiple sclerosis during treatment with disease-modifying therapies (DMTs): an ongoing clinical challenge" (protocol n° RP118163D5757CA6).

2019: Sapienza University, Research Program "In vivo study of Merkel cell Polyomavirus as a trigger of exacerbation in cystic fibrosis patients and development of an in vitro culture model based on primary bronchial/tracheal epithelial cells" (protocol n° RM11916B1DFD19A1).

2020: Sapienza University, Research Program: "Development of in vitro lung cells and organoid cultures to offer remarkable new model systems to study Merkel Cell Polyomavirus molecular biology and oncogenic mechanisms involved in malignancies other than Merkel Cell Carcinoma" (protocol number RP12017260562B5E).

2021: Research Projects - Small Projects": Title of the research: Study of the Polyomavirus JC microRNAs circulating in biological fluids during viral persistence among relapsing-remitting multiple sclerosis patients treated with Disease Modifying Therapies. – (protocol no. RP12117A0F451274).

2022: Research Projects - Small Projects": Title of the research: JC polyomavirus in the aetiology of glial tumors: reality or random association? – (protocol no. RP12218149017F23).

SCIENTIFIC ACTIVITY:

Prof. Pietropaolo coordinates and conducts research at the Laboratory of Virology, Microbiology Section, Department of Public Health and Infectious Diseases, "Sapienza" University of Rome.

The current research activity focuses on:

- 1) Molecular diagnosis of JCPyV in patients with Multiple Sclerosis treated with DMTs and in HIV+ patients due to the risk of possible reactivation of this virus and consequent development of PML.
- 2) In vitro studies of the replicative capacity of JCPyV and possible rearrangements in the NCCR in cellular models of latent and productive infection.
- 3) Epidemiological studies of MCPyV in HIV+ patients and in patients with dermatological diseases to evaluate its prevalence in these populations.
- 4) In vitro studies to identify cell types or cell lines, other than dermal fibroblasts, that support MCPyV infection and replication.
- 5) Study of human polyomaviruses (KI and WU) in respiratory samples from patients with different pulmonary morbidity (CF, COVID-19) to understand their role as respiratory pathogens.
- 6) Study of Adenovirus 36 (Adv36) in plasma and urine samples of obese and normal weight young adults, in order to understand the role of this virus in adipogenesis.
- 7) Study of the human polyomavirus JC in a series of pediatric brain tumors to determine whether JCPyV is indeed involved in pediatric tumorigenesis.

8) Study of the involvement of cutaneous polyomaviruses (MCPyV, HPyV6, HPyV7 and TSPyV) in actinic keratosis, psoriasis and alopecia.

9) Research and characterization of MCPyV DNA in tissue samples of patients with suspected diagnosis of MCC and characterization of miRNA expression in MCPyV+ and MCPyV- MCC tumors, potential biomarkers for diagnosis, progression, prognosis, and potential therapeutic targets of MCCs.

She has participated in numerous National and International Congresses and is the Author of numerous articles in indexed journals and book chapters.

Bibliometric indexes:

Total H-index (Scopus) = 25

Total H-index (Web of Science) = 25

Rome, 29/04/2024