

## Vito Michele Fazio

Born in Rome, September 26, 1959

Resident in Rome

Married (widower), four children

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### CURRENT POSITIONS:

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|------------------|--|
| Since Sept. 2020 | Director, Institute of Translational Pharmacology, National Research Council (CNR), Rome (headquarter), L'Aquila, Cagliari, Italy.                                     |
| Since Sept. 2020 | On live of absence ( <i>aspettativa</i> <sup>1</sup> ) from University Campus Bio-Medico of Rome, Rome, Italy  |
| Since 2015       | Full Professor of General and Clinical Pathology, University Campus Bio-Medico of Rome   |
| Since 1993       | Coordinator Laboratory of Oncology, Scientific Institute (IRCCS) Hospital "Casa Sollievo della Sofferenza", Opera di San Pio da Pietrelcina, San Giovanni Rotondo (FG) |
| Since 2000       | Coordinator of the Research Unit in Molecular Medicine and Biotechnology, University Campus Bio-Medico of Rome   |

### PREVIOUS POSITIONS AND PROFESSIONAL EXPERIENCES:

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|------------------|---|
| 2014-2020        | Director UOS Hematological Molecular Diagnostics, Campus Bio-Medico University Hospital, Rome, Italy  |
| 2012-2018        | Board of Directors (CdA), Distretto H-Bio Puglia S.c.r.l. (Scientific Districts for Health and Biotechnology). The District gathers almost all the biotechnology and pharmaceutical companies, public and private research centers (Universities, National Research Council Institutes - CNR, Scientific Institutes and Hospitals - IRCCS, Foundations) operating in the Apulia Region in the pharmaceutical (i.e. Merck-Serono SpA, Sanofi-Aventis SpA) – biomedical (i.e. Masmec biomed SpA, Exprivia S.p.A., AB Analitica Srl) – biotechnology (i.e. StemGen Spa, NANOMED 3D Srl) sectors. |
| July 2011 - 2013 | Appointed in the Bioethics Committee of the Scientific Institute and Hospital (IRCCS) "Casa Sollievo della Sofferenza", San Giovanni Rotondo (FG), Italy  |

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<sup>1</sup> "Ai professori collocati in aspettativa è garantita, con le modalità di cui al 5° comma del successivo art. 13, la possibilità di svolgere, presso l'Università in cui sono titolari, cicli di conferenze, attività seminariali e attività di ricerca, anche applicativa. Si applica nei loro confronti, per la partecipazione agli organi universitari cui hanno titolo, la previsione di cui ai commi terzo e quarto dell'art. 14 della legge 18 marzo 1958, n. 311 (9)." (Art. 12 Decreto Presidente Repubblica 11 luglio 1980, n. 382 Riordinamento Docenza Universitaria, citato nel Bando per Direttore istituto CNR n. 364.330 IFT),

- 2011 - 2015 Deputy Scientific Director, Scientific Institute (IRCCS) for “Genetics, Innovative Therapies and Regenerative Medicine” Hospital “Casa Sollievo della Sofferenza”, Opera di San Pio da Pietrelcina, San Giovanni Rotondo (FG)
- 2011-2013 Technical and Scientific Committee of the “Colosseum Combinatorial Chemistry Centre for Technology S.C.a r.l. (C4T)”, spin-off of the University of Rome “Tor Vergata”.
- 2009 Appointed by the Austrian Science Fund (FWF) as reviewer within the framework of the FWF’s Translational Research Programme, which supports research that extends and adapts results from the applicant’s own basic research to potential applications (“oriented” research).
- 2008-2010 Appointed by the Dean of the Medical School (Facoltà di Medicina e Chirurgia) and by the Executive Committee of the University Campus Bio-Medico of Rome, as delegate in the “Nucleo di Valutazione di Ateneo” (Core Evaluation Committee of the University).
- 2006 - 2020 Director, Residency in Clinical Pathology and Clinical Biochemistry (*Scuola di Specializzazione in Patologia Clinica e Biochimica Clinica*), University Campus Bio-Medico of Rome
- 2006 - 2015 Full Professor of Laboratory Medicine, University Campus Bio-Medico of Rome
- 2006-2011 Appointed member of the Technical and Scientific Committee (Comitato Tecnico Scientifico [DPR 31 luglio 1980, n.617]) of the Scientific Institute for Genetics and Hereditary Familial Diseases (IRCCS) Hospital “Casa Sollievo della Sofferenza”, Opera di San Pio da Pietrelcina, San Giovanni Rotondo (Fg).
- 2006-2009 Appointed by the Executive Committee of the University Campus Bio-Medico of Rome among the five Members of the Directive Board (Giunta della Ricerca) of the Center for Integrated Research (CIR - Centro Integrato per la Ricerca).
- 2006 Delegate of the University Campus Bio-Medico Rector in the Panel 5, Biological Sciences, in the working-group of the “Conferenza dei Rettori delle Università Italiane – CRUI” (Conference of Italian University Rectors) and the “Comitato di Indirizzo per la Valutazione della Ricerca C.I.V.R.” (Directive Committee for the Evaluation of the Scientific Research of the Italian Ministry of the University and Research).
- 2005-2017 Professor of Applied Immunology, University of Bari, Italy, Master Degree (Corso di Laurea Specialistica) in Medical Biotechnology and Molecular Medicine, Degrees in Biotechnologies.
- 2004-2006 Director, Residency (Specializzazione) in Microbiology and Virology, University Campus Bio-Medico of Rome, Rome, Italy.
- 1998-2001 Member of the Advice Technical Committee of Tecnofarmaci S.C.p.A. for Oncology and Biotechnology.
- 1997 - 2006 Associate Professor of General Pathology, Faculty of Medicine and Surgery, University Campus Bio-Medico of Rome
- 1994 - 1997 Acting Professor of General Pathology, Faculty of Medicine and Surgery, University Campus Bio-Medico of Rome, Rome, Italy

1992 - 1997 Associate Professor of General Pathology, Molecular Pathology, Faculty of Medicine and Surgery, Catholic University S.C., Rome

1987 - 1992 Researcher, National Research Council (CNR), Institute of Experimental Medicine, Rome

### **GOVERNMENTAL TASKS:**

2017 Ministry of the University and Research (MIUR) FARE Commission (Framework per l'Attrazione e il Rafforzamento delle Eccellenze per la Ricerca in Italia - Framework for Attraction and Strengthening of Excellence for Research in Italy) 2016, ERC sector – LS – Life Sciences (MIUR.AOODPFSR. REGISTRO DECRETI. 0000478.06-03-2017)

2015-17 "Commission for the National Scientific Qualification (abilitazione) (ASN2012) in the Academic Sector 06 / A3-Microbiology and Clinical Microbiology in Execution of Jurisdictional Provisions (Decreto Direttoriale MIUR 0003225.11-12-2015).

2011 - 2013 Appointed by the ANVUR (National Agency for the Evaluation of Universities and Research Institutes) in the Group of Expert in Evaluation (GEV) for the sector 06 - Medicine, VQR2004-2010.

Since 2009 Appointed by the Italian Ministry of Economical Development (MiSE) in the "Albo degli Esperti" (Register of Experts) for the evaluation of competitive industrial biotechnological, pharmaceutical and biomedical projects of R&D.  
(Expert in the Calls: PIA Innovation, FIT, ETBS, Regional Governments, etc.)

2007-2011 Appointed by the Italian Ministry of Economical Development - Unicredit MedioCredito Centrale as expert for the technological evaluation of the innovation and high technological impact of the multiannual development programs for venture capital investment ex lege 388/00 art. 103&106 of the Italian government.  
(Evaluation of six different projects)

2006-2014 Appointed by the Italian Ministry of University and Research (MIUR) in the Panel of 5 Experts, FAR, Major Strategic Projects - Executive Decree n.449 / Ric of 10/03/2006, Strategic Program n.2: "Relaunch of the pharmaceutical industry also through the fine chemistry of natural compounds for new diagnostic applications and new active principles", art. 5 of DM 593/00 of 08/08/2000.

2006 Appointed by Italian Ministry of University and Research (MIUR) as biotechnology expert for the evaluation of the research results involving Universities, national research institutions, private research structures, among the C.I.V.R. (Comitato di Indirizzo per la Valutazione della Ricerca; Directive Committee for the Evaluation of the Scientific Research) (Ministerial Order n° 2206 on December 16th, first Exercise of Evaluation of Italian Research for the years 2001-2003, VTR).

Since 2002 Appointed by the Italian Ministry of University and Research (MIUR) in the "Albo degli Esperti" (Register of Experts) (since 2016 REPRISE) for the evaluation of competitive industrial biotechnological and pharmaceutical projects of R&D.  
(evaluation of numerous industrial projects in the biomedical, pharmaceutical and biotechnological fields, in the context of the DM593/00, Calls: FAR, Regional Governments, PON, POR, art.11 Spin-Off, etc.)

1998 Appointed by the Italian Government in the "Working Group on Animal Cloning and

Nuclear Transfer” for the development of the Italian guidelines, on behalf of the National Committee on Biosafety and Biotechnologies (CNBB).

### **GRANT REVIEWER:**

- 2018-19, 2009 and 2008 Italian Ministry of University and Research (MIUR), PRIN Evaluation Committees
- 2009 Appointed by the Austrian Science Fund (FWF) as reviewer within the framework of the FWF’s Translational Research Programme, which supports research that extends and adapts results from the applicant’s own basic research to potential applications ("oriented" research).
- 2008 Italian Ministry of University and Research (MIUR), “Valutazione Progetti Rientro dei Cervelli”

### **MAJOR ACADEMIC TASKS AND TEACHING RESPONSABILITIES:**

(short outline)

- 1994-2020 University Campus Bio-Medico of Rome, coordinator of the academic sector of General and Clinical Pathology. Courses of General Pathology (06/A2-MED/04 and MED/46)) in several degree courses of Medicine, Physiotherapy, Technician of Radiology and Radiotherapy, Nurses, Nutrition Sciences, Schools of Specialization (Residencies).
- 2011 Appointed by the Rector of the University of Navarra (Sp), President of the Commission for the evaluation of European doctoral theses in Oncology, within the Faculty of Medicine of Pamplona (Na, Sp).
- 2006 - 2020 Director, Residency in Clinical Pathology (Scuola di Specializzazione in Patologia Clinica e Biochimica Clinica), University Campus Bio-Medico of Rome
- 2005-2017 University of Bari, Italy, Degrees in Biotechnologies, courses of Applied Immunology and General Pathology (Master Degrees and BA – “lauree triennali”)(MED/04).
- 2004-2006 Director, Residency (Specializzazione) in Microbiology and Virology, University Campus Bio-Medico of Rome, Rome, Italy.
- 1992-2007 Catholic University SC, Faculty of Medicine, Rome, Italy, Courses of Molecular Pathology, Genetic Pathology, General Pathology, in the Master’s Degree Program in Medicine and Surgery and various Schools of Specialization (Residencies).
- Since 2001 Member of various Research Doctorate programs (PhD) (Collegio dei Docenti della Scuola di Dottorato) of the University Campus Bio-Medico of Rome (“Integrated Biomedical Science and Bioethics”); University of Foggia (“Experimental and Regenerative Medicine”, “Experimental Oncology”, “Experimental Oncology and Molecular Pathology of Development Age”); University of Padua (“Developmental Medicine” "Curriculum in Biochemical and Molecular Genetics”)

Member of several oversight committees for the final doctorate dissertation

Lecturer in various postgraduate courses on biotechnology, oncology, molecular and clinical pathology.

Appointed in several university "commissioni di concorso" (committee for selective academic procedures) for university researcher (assistant professor), associate professor, full professor, academic sector MED/04 – General and Clinical Pathology, Macrosector 06/A – Pathology and Laboratory Diagnostics – 06/A2 General and Clinical Pathology

### **PRIZES AND AWARDS:**

- 2013 Cover page, Human Gene Therapy, Volume 24, number 4.
- 2012 Cover page, Current Molecular Medicine, Volume 12, number 5.
- Since 2010 Member "Honoris Causa", Nobile Collegio Chimico Farmaceutico – Universitas Aromatariorum Urbis (<https://nobilecollegio.it/il-nobile-collegio/>).
- 1989 Editorial, Cell, 2<sup>nd</sup> of June 1989, Volume 57, Issue 5. Max L. Birnstiel, Meinrad Busslinger "Dangerous liaisons: Spermatozoa as natural vectors for foreign DNA?", p701.

### **INTERNATIONAL WORKING EXPERIENCES:**

- 1990 "invited visiting scientist", University of California San Francisco, Gladstone Foundation Laboratories, San Francisco, CA, USA
- 1989 "invited visiting scientist", Prof. C.G. Hutchison, Department of Microbiology and Immunology, Curriculum in Genetics, University of North Carolina at Chapel Hill, Chapel Hill, NC, USA
- 1981 "guest worker", "Laboratory of Molecular Biology" directed by I.H. Pastan, "Gene Regulation Section" directed by B. deChrombrugge, NCI, NIH, Bethesda, Md, USA
- 1980; 1982 "summer student", "Laboratory of Tumor Cell Biology". Director dr R.C. Gallo, National Cancer Institute, NIH, Bethesda, Md, USA

### **EDUCATION AND TRAINING:**

- 1985-1987 Post-doc Fellowship, National Research Council Special Project Oncology, "Molecular Biology", Institute of General Pathology, "La Sapienza" University of Rome, Rome, Italy
- 1984 "Course on the Molecular Genetics of Tumors: Viral and Cellular Oncogenes", Scuola Superiore di Oncologia e Scienze Biomediche, S.Margherita Ligure, Italy
- 1982 "Course of Genetic Engineering and its Applications in Medicine and Industry", International Institute of Genetics and Biophysics, CNR, Naples, Italy.

## **CERTIFICATIONS:**

- 1989 Italian Board of Oncology
- 1985 Italian Board of Medicine

## **ACADEMIC DEGREES:**

- 1985 - 1989 Residency (specialist) in Oncology, Catholic University S.C. of Rome
- 1985 M.D. (Degree in Medicine and Surgery) Catholic University S.C. of Rome

## **RESEARCH PROJECTS COORDINATED:**

(selection)

- 2019-2021 INSTAMED "Integrated hardware and software platform for standardization and advanced automation (IOT: Internet of Things / CPS: Cyber-Physical System) of processes for the diagnosis, therapy and surgical treatment, in the field of personalized medicine." PON Imprese e competitività 2014/2020 FESR MiSE.
- 2015-2018 R.U.<sup>2</sup> P.I.<sup>3</sup> DICLIMAX Project "Instrumentation for Clinical Diagnostics Based on Next Generation Sequencing of Nucleic Acids" Regione Puglia (BURP n.138 del 02/10/2014)
- 2014-2019 P.I. NIH Collaboration Agreement, Project "Genetic EPIdemiology of KIDney cancer (GEPIKID)", Genetic Epidemiology Branch, Division of Cancer Epidemiology & Genetics, National Cancer Institute, USA.
- 2013-2016 R.U. P.I. AMIDERHA "Advanced Mini-invasive Systems for Radiotherapy and Diagnosis" PON REC 2007-2013 District MEDIS.
- 2011-2015 R.U. P.I. PON1\_01602 "Research and development of innovative drugs in oncology: Production of PEGylated monoclonal antibody fragments and miRNAs for therapeutic and/or diagnostic applications".
- 2011-2015 R.U. P.I. PON1\_01297 MIUR-VIRTUALAB: "Advanced Systems of Biomedical Mechatronics for Diagnosis and Medical Therapy based on Virtual and Augmented Reality, Microelectronics and Robotic laboratories with high throughput"
- 2012-2014 R.U. P.I. Itineris 2 – "Development of a translational preclinical model of colorectal carcinogenesis for testing innovative drugs" FILAS, art. 182 comma 4 letter c of Regional Law 04/06 – PST, ITINERIS2
- 2009-2012 P.I. "Innovative Formulations of Silybin for prevention and therapy of Colorectal Cancer" Filas S.p.A. Regione Lazio industrial research project.
- 2009-2011 R.U. P.I. "Innovative active immunization and immunomodulation strategies for combined therapy protocols for tumors". MiUR art. 9 DM 593/00, 10484/03

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<sup>2</sup> R.U.: Research Unit

<sup>3</sup> P.I.: Principal Investigator

- 2009-2011 R.U. P.I. "Intracellular Protein-Protein Interactions regulating viral replication as targets for novel antiviral strategies", Bando Fondazione Roma 2008
- 2007-2011 R.U. P.I. MIUR, FIRB "Major Strategic Projects "2007-2011 - RBIP0695BB\_001" "Research and development of new agents for cancer immunotherapy through the study of genomics, proteomics and immunoproteomics" # 27394B5
- 2002-2005 R.U. P.I. "Post-genomic preventive and therapeutic vaccines against infectious agents and tumors with a great impact on public health", Cod. Prog. RBNE01N9EE\_008, MIUR Project FIRB 2001
- 2002-2004 National P.I. "Development of preclinical protocols for anti-tumor DNA vaccination and immunomodulation oriented to clinical transfer", Italian Ministry of Health Strategic Research Project 2002.
- 1988 -2008 P.I. in more than 23 other research projects funded by public and private bodies (CNR, MIUR, Biotech Companies, Biomed Companies, Ministry of Health)

## MAIN SCIENTIFIC AND TECHNOLOGICAL RESEARCH LINES

- Molecular Pathology; Genetic Pathology; Molecular Diagnostics.
- Oncology; Molecular Oncology; Precision Medicine; Targeted Therapies; Immunotherapies; Vaccines; Predictive and Prognostic Molecular Biomarkers; Development of Diagnostic Tests, Devices, Automation.
- Gene Transfer; Naked Gene Transfer; Genetic Vaccination; Immunotherapies; Monoclonal Antibody Technology.

## MAIN SCIENTIFIC SOCIETIES MEMBERSHIPS:

Italian Society of Pathology and Translational Medicine (SIPMET); American Society for Investigative Pathology (ASIP); Italian Society of Cancerology (SIC); European Association for Cancer Research (EACR); American Association for Cancer Research (AACR).

## SCIENTIFIC PUBLICATIONS

**Peer reviewed research articles:** More than 145 scientific and technological articles (PubMed January 2021 - Scopus H-Index 39; citations 5992)

PubMed: <https://pubmed.ncbi.nlm.nih.gov/?term=fazio+vm&sort=date&size=200>

### Patents:

- Anti-Tumoral Immunogenic Peptides and Vaccine Thereof [US 2009232837A1, issued: US 9,150,627 (B2) October 6, 2015; WO2006070432 (B1)];
- DNA Vaccines Expressing Hypervariable VH-CDR3 Idiomatic Determinants [US 2004109849A1, issued: US 7,354,759 (B2) April 8, 2008; DE60124313 T2; WO2002/055559A1; EP 1355946 A1; PCT/IT2001/000014].
- Immunogenic Peptides, Nucleic Acids Encoding the Same and Use thereof in Cancer Treatment and Diagnosis. (WO/2006/008078 A1; PCT/EP2005/007709; US 20080107662 A1; EP1769076A1).
- Multi-cistronic vectors for gene transfer protocols (WO 2003031630 A1; PCT/IT2002/000646; US 2006263882)

**Chapters on Books:** more than 24 publications on biotechnology, molecular genetics, gene therapy,

genetic vaccination, molecular diagnostics, molecular oncology.

## SCIENTIFIC DISSEMINATION (selection)

- 2017 “Dal Metodo Scientifico alla Medicina di Precisione” “From the scientific method to the precision medicine”  
UCBM Biomedical Students’ Conference 2017  
“Future is now: Precision Medicine”,  
University Campus Bio-Medico of Rome, 23-26 March
- 2016 “Integrare ricerca e alta formazione per sostenere lo sviluppo del Paese: esperienze e proposte” “Integrating research and advanced training to support the development of the country: experiences and proposals”  
CRUI (The Conference of Italian University Rectors) – Primavera delle Università: la conoscenza libera il futuro del paese (iniziativa nazionale) [Spring of Universities: knowledge frees the country's future (national initiative)]  
March 21<sup>st</sup>, University Campus Bio-Medico of Rome
- 2015 MEDICINA E INFORMAZIONE “Simposio Internazionale dei Docenti Universitari La Medicina, la Tecnologia e l'Etica per migliorare la salute dei pazienti”: Interazione fra Genetica ed Ambiente. Lo studio genetico per terapie personalizzate. La medicina rigenerativa e le cellule staminali il futuro della medicina.  
<http://www.medicinaeinformazione.com/simposio-internazionale-dei-docenti-universitari---la-medicina-la-tecnologia-e-letica-per-migliorare-la-salute-dei-pazienti.html>
- 2013 Advancement in biotechnological research in oncology.  
III SESSION: Biotechnology in oncology  
VI Foresight Training Course, “Biotech and Innovative Science to meet Patient Needs”  
Gianni Benzi Foundation for Pharmacological Research  
September 30<sup>th</sup>
- 2011 From invention to patent  
TRAINING ACTIVITY ON PATENT MATTER IN THE BIOTECHNOLOGICAL FIELD  
Gianni Benzi Foundation for Pharmacological Research.  
Bari, February 14<sup>th</sup>
- 2003 RAI Educational – Programma Televisivo: La TV sulle Scienze.  
“*Explora*” condotto da Luciano Onder:
- Nov. 7<sup>th</sup> Genomica e PostGenomica, with prof. E. Boncinelli, prof. A. Piazza, Prof. O. Rickards, dr.ssa R. Castelnuovo, Prof. VM Fazio.
- Nov. 13<sup>th</sup> Genetica, with prof. B. Dallapiccola, dr.ssa M. Frontali, dr. Dionisi Vici, prof. G. Andria, prof. VM Fazio.

Prof. VM Fazio

