

## **CURRICULUM VITAE**

Name: Rosario Caltabiano

Date of birth: October 01, 1973

Place of birth: Catania

CLTRSR73R01C351O

Married

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## **CURRENT ACADEMIC POSITION**

From 10.16.2015 to present: Associate Professor for the sector Pathological Anatomy (06/A4), SSD Pathological Anatomy (MED/08) at the Department of Medical, Surgical Sciences and Advanced Technologies “G.F. Ingrassia”, University of Catania.

## **PREVIOUS ACADEMIC POSITIONS**

From 29.12.2008 to 15.10.2015: University researcher with an open-ended contract for the Pathological Anatomy sector (06/A4), SSD Pathological Anatomy (MED/08) at the Faculty of Medicine and Surgery, Department of Medical, Surgical and Advanced Technologies “G.F. Ingrassia”, University of Catania.

2012: Confirmed in the role of permanent researcher for the sector Pathological Anatomy (06/A4), SSD Pathological Anatomy (MED/08) at the Faculty of Medicine and Surgery, Department of Medical, Surgical and Advanced Technologies Sciences "G.F. Ingrassia", University of Catania.

## **TRAINING**

1998 - Degree in Medicine and Surgery (110/110 cum laude), discussing the thesis entitled "Aphthosis: immunohistochemical study of the cell adhesion molecule CD44" University of Catania.

1999 - Qualification to practice as a surgeon (registration of the Order of Doctors of Catania 09/16/1999 under No. 11760)

2002 - Specialization in Dermatology and Venereology (70/70 cum laude), discussing the thesis of Specialization entitled "HPV genital infections: diagnostic and histopathological aspects" University of Catania.

2007 - Specialization in Pathological Anatomy (70/70 cum laude), discussing the thesis of Specialization entitled "Overexpression and gene amplification of the Epidermal Growth Factor Receptor in primary malignant tumors of the Central Nervous System" University of Catania.

### **Participation in national and international courses and seminars**

2000 - Course "Immunohistochemistry from A to Z" held at the University of Rome "La Sapienza".

2001 - Course of "Inflammatory pathology of the skin: clinical and biological basis" - Montecatini Terme (PT).

2002 - Specialization course in Immunocytochemistry, established pursuant to art. 1 of the Presidential Decree 162/82 - at the Institute of Normal Human Anatomy of the University of Naples "Federico II" Faculty of Medicine and Surgery.

2002 - Refresher course "Genodermatosis and skin neoplasms: from genetics to clinics" Monsummano Terme (PT).

2005 – “Eleventh dermatopathology self-assessment workshop” Catholic University of the Sacred Heart Faculty of Medicine and Surgery “A. Twins”.

2007 – National Course of Surgical Pathology “Breast pathology, oral and salivary gland pathology” University of Bologna

2019-2020 - Staff Development path for senior teachers, selected on the basis of the CV, for teaching in support of innovation processes and improvement of the teaching-learning practice of the University of Catania with peer-mentoring activities, University of Catania .

### **SCIENTIFIC RESEARCH ACTIVITIES**

#### **Professional experiences**

1992-1998/2004-2005 Internal student at the Institute of Human Anatomy of the University of Catania.

2005 – Visiting student at the Dermatopathology Division of the Dermatology Department of the Medical University of Graz

2019 - Visiting Professor in 2019 at the invitation of Prof. Maija Eglite Director of the Department of Occupational and Environmental Medicine, Faculty of Medicine, at Riga Stradins University, Riga, Latvia

2019 – Teaching of dermatopathology in the first and second year of the Medicine and Surgery Degree Course for the Academic Year 2018/2019 (6 months) at the Faculty of Medicine and Surgery, University of Malta.

2019 – Teaching Pathological Anatomy in the third year of the Medicine and Surgery Degree Course for the Academic Year 2018/2019 (28 hours) at the International University of Goradze, Sarajevo.

### **Research activities and scientific collaborations**

He is responsible for the diagnostics of dermatopathology at the U.O.C. of Pathological Anatomy of the G. Rodolico Unit of the "Policlinico-San Marco" University Hospital of Catania

His research activity began in 1995 and has involved numerous areas of Pathological Anatomy, focusing on the identification of new prognostic and predictive factors in neoplasms. These scientific interests led him to establish fruitful collaborations, still active, with colleagues from the Urological, Dentistry, Dermatological, Otorhinolaryngological, Neurosurgical Clinics of the same University. Thanks to specialist studies in Dermatology, he further expands his scientific skills. Subsequently, as a visiting scientist, he carried out internships at the Dermatological Clinic of the University of Graz.

On these bases, Prof. Caltabiano has developed important research activities which are summarized below:

- As part of the research aimed at the craniofacial district, the studies were conducted using immunohistochemical techniques, cell cultures and molecular biology, in search of the expression of molecules involved in embryological development and in pathological conditions affecting the joint temporomandibular and masticatory organs, in order to identify the pathogenetic mechanisms underlying organ-specific pathologies. These researches were conducted both in vivo and in vitro.
- As part of the collaboration with Dermatology colleagues at the University of Catania, he was involved in the study of the correlations between non-invasive diagnostic methods (dermatoscopy,

confocal microscopy and line-field confocal optical coherence tomography) and histopathological aspects.

- In collaboration with the Pharmacology Sections of the Department of Biomedical and Biotechnological Sciences of the University of Catania, Prof. Caltabiano carried out studies of microscopic, immunohistochemical and molecular anatomy on mouse models of neurotoxicity and inflammation, demonstrating that the role of TRAIL and its potential role as a target in mice with Alzheimer's disease
- Participated in the international research group on soft tissue tumors of Pilsen University (Prof. M. Michal) on "Stromal tumors of the lower female genital tract, soft tissue tumors and benign fibro-epithelial and stromal tumors of the breast"
- Participated in the research group on brain tumors in collaboration with the University of Turin (Prof.ssa P. Cassoni), with particular attention to the study of the role of EGFR in atypical and anaplastic meningiomas and the role of EGFR and caveolin 1 in ependymomas.
- Participated in the research group on brain tumors in collaboration with the University of Rome "La Sapienza" (Prof. F. Giangaspero), with particular attention to molecular biology investigations in PNET/Ewing sarcomas.

Participated in the research group on laryngeal neoplasms in collaboration with the "Magna Grecia" University of Catanzaro (Prof. E. Allegra), with particular attention to the study of new prognostic and predictive immunohistochemical markers.

- With regard to the collaboration involving some colleagues of the Urological Clinic of the University of Belgrade, of the Department of Urology of the Tor Vergata University of Rome, of the University College London Hospitals and of Cranfield University, England, through aspects of surgical anatomy and organ, studied the "Peyronie's disease", an organ-specific pathology object of considerable scientific interest in the current urological surgery as the etiopathogenetic mechanisms are still poorly understood. The present studies were conducted in order to clarify the bio-molecular mechanisms underlying this pathology and to search for possible alternative surgical and/or medical therapies to the current palliative treatments. To this end, Prof. Caltabiano carried out in vivo studies on explants of tunica albuginea from donor patients, to evaluate the possible establishment of an organ bank, and on rats in order to evaluate the future applicability of allogeneic transplantation on humans and conducted research on primary cultures of fibroblasts from fibrotic plaque, in order to identify possible experimental drugs such as TRAIL receptor agonists.
- Participated in the international research group of dermatopathology of the University of Graz (Austria) on "Pityriasis lichenoides et varioliformis acuta (PLEVA), atypical PLEVA, and PLEVA-like mycosis fungoides".

### **Scientific participation in research projects in which Prof. Caltabiano is PI and/or collaborator**

2005 Member of the research group coordinated by Prof. G. Cordasco of the University of Messina participation in the funded project PRIN 2005 "Anatomic-topographical instrumental evaluation of the splanchnocranium following rapid or slow expansion of the maxilla: randomized multicenter clinical trial".

2012 Scientific Responsible for Pathological Anatomy of the University of Catania of the international research group of Marquette University Milwaukee, Wisconsin (Prof. L. E. Almeida) on "Immunohistochemical expression studies in the discs of patients with alteration of the temporomandibular joint".

2014 Scientific Responsible for Pathological Anatomy of the University of Catania of the international research group of neuropathology of the University of Bonn (Prof. M. Gessi) on "TERT mutations in primary melanocytic tumors of the Central Nervous System".

2017 Member of the research group coordinated by Prof. R. Bernardini of the University of Catania participation in the funded project PRIN 2017 "Bioenergetics and inflammation: novel insights for new therapeutic approaches in Alzheimer's Disease"

### **Other research projects funded by the University**

2003-2004 As a member of the research group coordinated by Prof. S. Lanzafame of the University of Catania, participation in the ex 60% University project "Immunohistochemical determination of p63 in precancerosis and carcinoma of the oral cavity".

2004 As a member of the research group coordinated by Prof. S. Lanzafame of the University of Catania, participation in the ex 60% University project "Immunohistochemical evaluation of laminin 5 and p63 in precancerosis and squamous cell carcinoma of the oral cavity".

2005-2006 As a member of the research group coordinated by Prof. S. Lanzafame of the University of Catania, participation in the ex 60% University project "Immunohistochemical evaluation of Thyroid Transcription Factor 1 (TTF-1) and p63 in papillary thyroid carcinomas primary and secondary branchial cysts".

2006 As a member of the research group coordinated by Prof. S. Lanzafame of the University of Catania, participation in the ex 60% University project "Immunohistochemical evaluation of Thyroid Transcription Factor 1 (TTF-1) and p63 in primary papillary thyroid carcinomas and branches of branchial cysts and in extrathyroid sites".

2008 As a member of the research group coordinated by Prof. S. Lanzafame of the University of Catania, participation in the ex 60% University project "Prognostic significance of EGFR and caveolin 1 expression in adult intracranial ependymomas".

2015 Participation in a national research group for the FIR 2014 research project on "Determination of the Expression Profile of Long non Coding RNAs in cells and exosomes of patients with colon and rectal cancer: molecular data and translational implications, D.R. 341 of 4 February 2015.

2017 Scientific coordinator of the research project of the Department of Medical, Surgical Sciences and Advanced Technologies "G.F. Ingrassia, Research Plan 2016/2018 Line of intervention 2 (funding number 5C722012114, 2018) University of Catania, "MacroH2A immunoexpression in uveal melanoma correlates with patient survival and disease progression".

2020 Scientific coordinator of the interdepartmental research project of the Department of Medical, Surgical and Advanced Technologies "G.F. Ingrassia and of the Department of Biomedical and Biotechnological Sciences "Biometec", Progetto Piaceri (funding number 5C722012127, 2020) University of Catania, "Inflammation in myelofibrosis microenvironment transformation: the role of immune checkpoints, oxidative stress and metabolic rewiring".

### **Participation in the activities of a research group**

From 2014 to today Lecturer at the Interdisciplinary Research Center on the Diagnosis and Therapy of Brain Tumors, University of Catania.

From 2016 to today Lecturer of the Research Center for the Study of Prevention, Diagnosis and Treatment of Tumors (C.R.S. Pre.Di.C.T).

From 2019 to today Scientific Responsible Framework Agreement between the University of Catania and the University of Naples "Federico II" for collaboration on topics of mutual interest in the field of primary intraocular melanocytic neoplastic pathology.

From 2019-present Lecturer at the Center for Research in Motor Activities - CRAM (Research Center on Motor Activities), Department of Biomedical and Biotechnological Sciences, University of Catania.

From 2019-present Lecturer at the Research Center for Molecular, Preclinical and Translational Imaging, University of Catania.

From 2020-present Lecturer at the Multidisciplinary Research Center for the Diagnosis and Therapy of Fabry Disease and for Organ Transplants, University of Catania.

### **Awards and/or acknowledgments including affiliation to academies of recognized prestige in the sector**

1998 Achievement of an award for the best poster on the topic of Oral Pathology, presented on the occasion of the Fifth National Congress of the "Collegio dei Docenti di Odontoiatria", held in Rome on April 25, 1998.

2004 Achievement of a certificate of merit in the poster session on the theme of Oral Pathology, presented on the occasion of the 11th National Congress of the "Collegio dei Docenti di Odontoiatria", held in Rome on April 24, 2004

2008-present Ordinary Member of the Society of Pathological Anatomy and Diagnostic Cytology - Italian Division of the International Academy of Pathology (SIAPEC - IAP)

2009-today Member of the Italian Society of Medical and Surgical, Aesthetic Dermatology and Sexually Transmitted Diseases (SIDeMaST)

2019 Achievement of the Ferring Research Innovation Grant 2019 title "Association between protein expression and oncological outcomes in bladder cancer patients receiving radical cystectomy after BCG failure".

2019 Award for the presentation of the best poster at the First GIPaTeC National Congress (Italian Head and Neck Pathology Group), held in Naples on 7 and 8 March 2019.

2019-present Member of the European Society of Pathology (ESP).

2021-today Member of the Italian Melanoma Intergroup (IMI).

2022-today Member of the Association of Italian Hospital Dermatologists-Venereologists and Public Health (ADOI).

### **Participation in international boards of scientific journals**

2019-today Participation in the Editorial Committee of the International Scientific Journal "Biomed Research International", in the "Pathology" section, published by Hindawi Publishing Corporation, also indexed by Scopus and Medline.

2019-present Participation in the Editorial Committee of the International Scientific Journal "Experimental and Therapeutic Medicine", published by Spandidos Publication, also indexed by Scopus and Medline.

2019-present Participation as member of the Editorial Board of the International Scientific Journal "Applied Sciences", published by MDPI, also indexed by Scopus

2019 Guest Editor of the Special Issue "Immunohistochemical expression" published in the International Scientific Journal Applied Sciences edited by MDPI

2020-2021 Guest Editor of the Special Issue "Ocular Melanoma: Current Concepts" published in the International Scientific Journal Applied Sciences edited by MDPI

2021-2022 Guest Editor of the Special Issue "The Role and Regulation of Autophagy in Cancer Cells" on the International Scientific Journal Applied Sciences edited by MDPI

2021-2022 Guest Editor of the Special Issue "Current topics in the diagnostic approach to skin diseases" on the International Scientific Review Applied Sciences published by MDPI

2021-2022 Guest Editor of the Special Issue "Immunohistochemical Expression Volume II" on the International Scientific Journal Applied Sciences edited by MDPI

2022-present Associate Editor of the International Scientific Journal Frontiers in Oncology section Skin Cancer published by Frontiers Media

### **Reviewer activity in the following international journals:**

Scientific Reviewer for peer-reviewed scientific journals with impact factor: 1) Aging and Disease 2) Biomed Research International 3) Eye and Vision 4) International Journal of Dermatology 5) Journal of the European Academy of Dermatology and Venereology 6) Journal der Deutschen Dermatologischen Gesellschaft 7) Pathology Research and Practice 8) Clinical Epidemiology 9) Experimental and Therapeutic Medicine 10) Molecular Medicine Reports 11) OncoTargets and Therapy 12) Cancers 13) British Journal of Ophthalmology 14) Biomolecules 15) Histopathology 16) International Journal of Surgical Pathology 17) APMIS 18) International Journal of Environmental Research and Public Health 19) Diagnostics 20) International Journal of Molecular Sciences 21) Molecular Human Reproduction 22) Pigment Cell & Melanoma Research

### **INSTITUTIONAL ACTIVITIES**

2004-2010 ANVUR reviewer VQR 2004-2010

2010-today Member of the classroom commissions, for the competitions with programmed number in the Medicine and Surgery and Health Professions degree courses at the University of Catania.

2022-today Elected member of the board of the Department of Medical, Surgical and Advanced Technologies "G.F. Ingrassia", University of Catania, as Associate Professor.

2021 Member of the Quality Commission of the Degree Course in Medicine and Surgery, University of Catania.

2022-today Member of the Technical-Pedagogical Commission of the Degree Course in Medicine and Surgery, University of Catania.

### **TEACHING ACTIVITY**

Didactic activity in Degree Courses

He holds numerous teaching positions, including frontal and supplementary teaching (lessons, exercises, laboratories) as well as activities of coordinator of the exam commissions, supervisor and

degree thesis co-supervisor. The teaching positions at the following Degree Courses are listed below:

In the A.Y. 2007-2008 Contract professor of Pathological Anatomy Integrated Course of Laboratory Diagnostics 2nd year at the Faculty of Medicine and Surgery Degree Course in Dentistry and Dental Prosthesis, University of Catania;

in the A.Y. 2009-2010, 2010-2011, 2014-2015 the teaching of the C.I. Laboratory Medicine and Integrated Diagnostics - Pathological Anatomy, 2 CFU, in the Medicine and Surgery Degree Course, University of Catania;

from the A.Y. 2015-2016 to date the teaching of Pathological Anatomy, 10 credits, in the degree course of Medicine and Surgery, University of Catania;

in the A.Y. 2009-2010 and 2010-2011 the teaching of the C.I. of General Pathology, Microbiological Clinic, Pathological Anatomy, 2 CFU, in the Nursing Degree course, University of Catania;

in the A.Y. 2009-2010 and 2010-2011 the teaching of the C.I. of Cytopathological Diagnostic Techniques and Molecular Biology, 2 CFU, in the Biomedical Laboratory Techniques Degree course, University of Catania;

in the A.Y. 2008-2009 and 2009-2010 the teaching of Laboratory Diagnostics - Pathological Anatomy, 4 CFU, in the Degree course in Dentistry and Dental Prosthesis, University of Catania;

from the A.Y. 2011-2012 to date the teaching of Pathological Anatomy, 6 CFU, in the Degree course in Dentistry and Dental Prosthesis, University of Catania.

in the A.Y. 2012-2013 the teaching of Technical Sciences of Medicine and Laboratory, 6 CFU, in the Degree course in Diagnostic Technical Health Professions Sciences, University of Catania;

from the A.Y. 2021-2022 to date the teaching of Institutions of Pathological Anatomy, 2 credits, in the degree course in Biomedical Laboratory Techniques, University of Catania.

from the A.Y. 2021-2022 to date the teaching of Pathological Anatomy, 2 CFU, in the Degree course in Nursing, University of Catania.

### **Teaching activity in PhD courses**

From the A.Y. 2009-2010 at the Academic Year 2012-2013 he is an internal professor at the PhD in Biology, Human Genetics and Bioinformatics: Cellular and Molecular Bases of the Phenotype, University of Catania;

From the A.Y. 2013-2014 to date he is a professor at the PhD in Translational Biomedicine, University of Catania.

### **Didactic activity at Specialization School Courses in the medical area**

from the A.Y. 2013-2014 to date the teaching of Pathological Anatomy, 1 CFU, at the School of Specialization in Dermatology and Venereology, University of Catania;

from the A.Y. 2014-2015 to date the teaching of Pathological Anatomy, 1 CFU, at the School of Specialization in Urology, University of Catania;

from the A.Y. 2016-2017 at the Academic Year 2017-2018 the teaching of Pathological Anatomy, 2 credits, at the School of Specialization in Neurosurgery, University of Catania;

from the A.Y. 2017-2018 to date the teaching of Molecular Biology Techniques 2 CFU, Diagnostic Cytopathology 3 CFU, Hepatic and Pancreatic Pathology 2 CFU, Cardiovascular and Respiratory Pathology 3 CFU, Neuropathology 3 CFU, at the School of Specialization in Pathological Anatomy, University of Catania;

from the A.Y. 2020-2021 the teaching of Pathological Anatomy, 1 CFU, at the School of Specialization in Diseases of the Respiratory Apparatus, University of Catania

### **Elective teaching activity**

2022 ADE organizer and speaker (elective teaching activity) on subjects of Pathological Anatomy, Master's Degree in Dentistry and Dental Prosthetics, University of Catania.

### **Teaching activity carried out abroad**

2019 – Teaching of dermatopathology in the first and second year of the Medicine and Surgery Degree Course for the Academic Year 2018/2019 (6 months) at the Faculty of Medicine and Surgery, University of Malta.

2019 – Teaching Pathological Anatomy in the third year of the Medicine and Surgery Degree Course for the Academic Year 2018/2019 (28 hours) at the International University of Goradze, Sarajevo.

### **Other Educational Activities**

2020-2021 Tutor of Dr. Giuseppe Broggi in the context of the PhD in Translational Biomedicine – XXXVI cycle, University of Catania.

## **PERSONAL SKILLS AND COMPETENCES**

### **LANGUAGE SKILLS**

MOTHER TONGUE: ITALIAN

OTHER LANGUAGES: ENGLISH

- Reading skills: excellent
- Writing skills: excellent
- Oral expression skills: excellent

## **SCIENTIFIC PUBLICATIONS**

### **BIBLIOMETRIC INDICATORS**

- Articles in Peer-Reviewed International Journals (Scopus): 252
- total h index: 34
- Total number of citations (Scopus): 3974

Catania, 19/01/2023