

## CURRICULUM VITÆ EMANUELA SIGNORI

### PERSONAL DETAILS

<i>Name</i>	<b>Emanuela</b>
<i>Surname</i>	<b>Signori</b>
<i>Nationality</i>	<b>Italian</b>
<i>Birthplace</i>	<b>Roma</b>
<i>Birthdate</i>	<b>25th January 1961</b>
<i>Phone</i>	<b>+39 06 45488 232</b>
<i>Fax</i>	<b>+39 06 45488 257</b>
<i>URL</i>	<b><u><a href="http://lapmos.ift.cnr.it">http://lapmos.ift.cnr.it</a></u></b>

### CURRENT POSITION

**Primo Ricercatore and Laboratory Head** at  
CONSIGLIO NAZIONALE DELLE RICERCHE  
Department of Biomedical Sciences

INSTITUTE OF TRANSLATIONAL PHARMACOLOGY  
Laboratory of Molecular Pathology and Experimental Oncology  
Area Ricerca Tor Vergata  
Via Fosso del Cavaliere 100, 00133 Roma  
Telephone: +39 06 45488 232  
[emanuela.signori@cnr.it](mailto:emanuela.signori@cnr.it)

**Acting Professor** of General Pathology at  
CAMPUS BIO-MEDICO UNIVERSITY of ROME  
Departmental Faculty of MEDICINE and SURGERY  
Departmental Faculty of Science and Technology for Human and Environment  
Via A. del Portillo 21, 00128 Roma  
[e.signori@unicampus.it](mailto:e.signori@unicampus.it)

### DEGREES

2013	Diploma Family Counsellor at Scuola Italiana Consulenti Familiari, Roma, Italy
2006	Phd in Experimental Oncology and Molecular Pathology (MED04), School of Medicine, University of Foggia, Italy
1992	MSc Degree, University "La Sapienza", Roma, Italy

### TRAINING COURSES

2020	CNR-Formazione PA LUISS: "Management of EU Funds"
2019	CNR-Formazione PA LUISS: Public Speaking, level 2 – Technical and Practical Skills for successful communications – CFU 7

2018	CNR-Formazione PA LUISS: Team Building, level 2 - Creativity and Problem solving
2017	CNR-Formazione PA UNITELMA: Team Building and Groups Management, level 1 -Emotivity, Psychology and Relationships – CFU 5 ITER-Milano: Time Management
2011	CNR-CoMeVa: Research Management and Improvement CNR-CoMeVa: Motivation, Team Building and Scientific Communication Scuola di Roma di Fundraising: Fundraising

## PROFESSIONAL QUALIFICATIONS

### NATIONAL QUALIFICATIONS

2020	Primo Ricercatore CNR
2018	Eligibility-Primo Ricercatore CNR II liv. Bando 367.171 – Biomolecules and Biomaterials for Health
2015	Eligibility-Associated Professor 05E2 – Biologia Molecolare - Molecular Biology
2014	Eligibility-Associated Professor 06N1 – Scienze delle professioni sanitarie e delle tecnologie mediche applicate - MED/46 (Scienze tecniche di medicina e di laboratorio)
from 2009	Researcher and Laboratory Head at CNR (permanent position), Institute of Translational Pharmacology
2001-2009	Researcher at CNR (Laboratory Head from 2006), Institute of Neurobiology and Molecular Medicine, Rome, Italy
1993-2000	Research fellowships and Professional training in Molecular Biology and in Molecular Medicine at: CNR Institute of Experimental Medicine, Rome, Italy IRCCS Hospital “Casa Sollievo Sofferenza”, S Giovanni Rotondo, Foggia, Italy University of Rome Tor Vergata”, Department of Biology, Rome, Italy

### RESEARCH AND ACADEMIC ACTIVITY ABROAD

2018-2022	PhD thesis Director at: University of Buenos Aires (Argentina), Faculty of Veterinary Sciences
2013-2019	Visiting Scientist at: CONICET and University of Buenos Aires (Argentina), Faculty of Computational Engineering, Complex System Laboratory, Prof G. Marshall
2009-2018	Visiting Professor-Erasmus Programme for Teaching Mobility at: Medical University of Plovdiv (Bulgaria), Prof V. Sarafian
2017-2018	Visiting Professor at: Medical University of Plovdiv (Bulgaria), for DOCTORANT–2 “Doctoral Training at Medical University–Plovdiv for Competency, Creativity, Originality, Accomplishment and Academic Excellence in Science and Technologies. European Union Structural and Investment Funds and Science and Education for Smart Growth
2017	Visiting Professor at: Institut de Mathématiques de Bordeaux (France) for soutenance de these, Prof C. Poignard

2013	Visiting Scientist at CNRS-IPBS and Visiting Professor at University Paul Sabatier, Toulouse (France), Prof J. Teissié
2008 – 2011	Visiting Professor-Erasmus Programme for Teaching Mobility at: Catholic University of Leuven, Developmental and Molecular Genetics Section (VIB11), Leuven (BE), Prof C. Bagni
2000	Visiting Scientist, Gene Targeting Unit, Department of Neuromuscular Disease, Division of Neuroscience and Psychological Medicine, Imperial College School of Medicine, London, Prof D.J. Wells

#### ACADEMIC ACTIVITY - ITALY

From AY 2006-2007	<b>Acting Professor</b> of General Pathology at Campus Bio-Medico University of Rome, Departmental Faculty of Medicine and Surgery, Courses: Medicine, Nursing; Departmental Faculty of Science and Technology for Human and Environment, Course: Food Science and Human Nutrition <a href="http://didattica.unicampus.it/didattica/Guide/PaginaDocente.do;jsessionid=A509CBC1E5DF043A83E831728D466592.ivm1a?docente_id=247&amp;ANNO_ACCADEMICO=2020">http://didattica.unicampus.it/didattica/Guide/PaginaDocente.do;jsessionid=A509CBC1E5DF043A83E831728D466592.ivm1a?docente_id=247&amp;ANNO_ACCADEMICO=2020</a>
2007-2016	Professor in charge for the Biology admission tests, Faculty of Medicine, Campus Bio-Medico University of Rome
From AY 2005-2006	<b>Tutor and trainer</b> for PhD Program in Experimental Oncology and for undergraduate students of scientific departments: Biology (University of Rome "Tor Vergata", University of Rome "Roma Tre"); Medicine and SANU (University Campus Bio-Medico of Rome); Biotechnology (University of Bari); Bio-Medical Engineering (University of Rome "Tor Vergata"), Italy

#### PROFESSIONAL SKILLS AND QUALIFICATIONS

From 2000	<b>Research Field:</b> Laboratory Medicine, Translational Medicine - Innovative methods in Molecular Medicine and Bioelectrochemistry. Genetic Immunization protocols in models of cancer diseases by gene therapy electrotransfer and electrochemotherapy delivery <i>in vitro</i> and <i>in vivo</i> ; Development and delivery of engineered plasmid vectors; Antigen and immunomodulatory nucleic acid sequences selection for <i>in vivo</i> vaccination/immunization protocols; Studies of prognostic cancer biomarkers in a translational mouse model of Colon Cancer; Development of diagnostic electrochemical biosensors. Key words: Molecular Medicine; Bioelectrochemistry; Cancer Immunotherapy; Cancer Vaccinology; Gene Therapy; Gene Electrotransfer; Plasmid vectors; Drug Delivery; Electrochemotherapy; Biomarkers; Biosensors; <i>In vivo</i> studies.
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#### LABORATORY HEAD

2016-2022	<b>Coordinator</b> of CNR Project DSB.AD007.072: Anti tumoral pre-clinical protocols of drug delivery by electroporation
2016-2017	<b>Coordinator</b> of CNR Project DSB.AD007.047: Development of electrochemical biosensors to reveal biomarkers of ophtalmic diseases
2012-2016	<b>Coordinator</b> of CNR Project ME.P06.031.002 Development of therapeutic molecules <i>in vitro</i> e <i>in vivo</i> and delivery by electroporation Coordinator of CNR Project ME P06. 012. 002: Combined protocols of electric, magnetic and electromagnetic fields for <i>in vitro</i> and <i>in vivo</i> transfer of therapeutic molecules
2006-2012	Collaboration in CNR Projects: ME P03.006, Molecular Targets, Preclinical Models and Immunotherapy; and ME P04. 005, Infectious, Inflammatory and Degenerative Diseases
From 2006	<b>Leadership:</b> students, post docs and research fellows working in the lab

From 2006	<b>Mentorship:</b> Scientific training to Italian and foreigner undergraduate and PhD visiting students (France, Slovenia, Germany, Argentina)
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#### REVIEWER ACTIVITY FOR RESEARCH PROJECTS AND ISI IF JOURNALS

2020	<b>Reviewer Cancer-INSERM PCSI</b> "Interdisciplinary approaches to oncogenic processes and therapeutic perspectives: Contributions to oncology of physics, chemistry and engineering sciences."
From 2017	<b>Referee MiSE</b> (Italian Ministero dello Sviluppo Economico)-Fondo Crescita Sostenibile <b>Reviewer MIUR REPRISE</b> (Italian Ministero Istruzione, Università e Ricerca)
2017	<b>Reviewer Ateneo Projects</b> (Grandi Progetti e H2020) Sapienza University, Faculty of Medicine, Roma, Italy
2016	<b>Reviewer FWO</b> (Fonds Wetenschappelijk Onderzoek – Flanders, Belgium) <b>Reviewer</b> for Molecular Biology Comics edited by Le Scienze and L'Espresso Editorial Groups
2015-2017	<b>Reviewer MIUR CINECA VQR 2011-2014</b> (Italian Ministero Istruzione, Università e Ricerca)
From 2009	<b>Reviewer MIUR</b> (Italian Ministero Istruzione, Università e Ricerca) for FIRB PRIN projects
2009	<b>Referee NWO</b> Projects (The Netherland Organisation for Scientific Research); <b>Referee EMBL</b> fellowships (European Molecular Biology Laboratory)
2008-2012	<b>Invited Member</b> of Nature's Reader Panel
From 2007	<b>Reviewer</b> for scientific journals (see profile in Publons): BMC-Biotechnology; Bioelectrochemistry; J Membrane Biol; Cancers; Vaccines; Int. J. Molec Sci; Vaccine; Cancer Immunology Immunotherapy; Molecular Therapy; Gene Therapy; Oncotarget; Clinical Lipidology; Breast cancer: Targets and Therapy; Journal Pathology and Laboratory Medicine; International Journal Cancer Management and Research; Cellular and Molecular Life Sciences; American Journal of Medical Genetics; Archives of Medical Research; Genetic Testing; Molecular Biology Reports; Journal of Toxicology and Environmental Health Science

#### EDITORIAL BOARD MEMBERSHIPS

From 2019	Vaccines-MDPI (IF 4.086); Folia Medica
2009-2018	Folia Medica; J Clinical Cell Immunology; World J Experimental Medicine; World J Medical Genetics

#### SCIENTIFIC SOCIETY MEMBERSHIPS

	International Society of Electroporation Based Technologies and Treatments (ISEBTT); Bioelectrics Consortium; European Association for Cancer Research (EACR); American Association for Cancer Research (AACR); Centro Nazionale di Ricerca Interuniversitario sulla Interazioni fra Campi Elettromagnetici e Biosistemi; Società Italiana di Cancerologia (SIC)
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#### SPECIAL APPOINTMENTS

From 2020	Representative Member for CNR-IFT at Bioelectrics Consortium Representative Member for CNR-IFT at Centro Nazionale di Ricerca Interuniversitario sulla Interazioni fra Campi Elettromagnetici e Biosistemi (ICEmB.org)
From 2019	Member of the Nominations Committee of International Society of Electroporation Based Technologies and Treatments (ISEBTT)

From 2016	Member of the Academic Committee of Cluster of Health Innovation and Community (CHICO)
From 2015	Ambassador of the European Association for Cancer Research Member of the Work group for Technology Transfer-CNR Tor Vergata and PMI Scientific Expert of REPRISE (MIUR- Italian Ministero Istruzione, Università e Ricerca): Ricerca di base e Ricerca industriale competitiva e per lo sviluppo sociale
2014-2017	Advisory Board Member of Halifax Project <a href="http://www.gettingtoknowcancer.org/board.php">http://www.gettingtoknowcancer.org/board.php</a>
From 2008	Contact person for ERASMUS Agreement between Campus Bio-Medico University of Rome and Medical University of Plovdiv, Bulgaria

#### AWARDS

2017	Paul Harris Fellow, Rotary International Foundation
2006	Meritorious Service rendered in a Public Institution (CNR). Prot N°: CNR-INMM 0001317, 04 December 2006
2004	Letter from the President of the National Research Council (CNR) for the special scientific contribution given for the development of the Institution. Prot N°: CNR-FP/n571, 19 October 2004

#### SCIENTIFIC COLLABORATIONS

CONICET and University of Buenos Aires, Faculty of Exact and Natural Sciences, Complex System Laboratory, Buenos Aires (Argentina); CNRS-Institute of Pharmacology and Structural Biology, Toulouse (FR); Dept of Medical Biology and Immunology; Institute of Oncology, Ljubljana (SLO); INRIA-Team MONC, INRIA Bordeaux-Sud-Ouest, Bordeaux (France); Medical University of Plovdiv (BG), Univ Campus Bio-Medico di Roma, Faculty of Medicine, General Pathology Area; University of Turin, School of Medicine, Molecular Biotechnol Center, Torino (Italy); CNR-Istituto Applicazioni Calcolo Picone, Roma (Italy); CNR-Istituto Struttura della Materia, Roma (Italy); Univ of Padova, Dept. Industrial Engineering, Padova (Italy); Univ of Insubria, Dept. Theoretical and Applied Sciences – DiSTA, Varese (Italy); Fidia Farmaceutici SpA, Siracusa (Italy)

#### CONFERENCES AND SEMINARS

2021-2009	<b>Member of the Scientific Committee and Chair of the Oncoimmunology Session</b> at "4th World Congress on Electroporation", Copenhagen 2021; <b>Member of International Academic Committee and Chair of session</b> "Nanomedicine and Nanotherapeutics" at International Conference on Nanotechnology and Nanosciences, October 12-14, 2020, Frascati, Roma (IT); <b>Chair of the session:</b> "Gene Therapy by Electroporation" at 8th European Medical and Biological Engineering Conference, Nov29-Dec3, 2020, Portoroz, (Slo); <b>Member of International Academic Committee and Chair of the session</b> "Nanomedicine and Nanotherapeutics" at International Conference on Nanotechnology and Nanosciences, October 15-18, 2019, Frascati, Roma (IT); <b>Member of the Scientific Committee and Chair of the Oncoimmunology Session</b> at "3rd World Congress on Electroporation", September 2-6, 2019, Toulouse, France; <b>Member of International Academic Committee</b> of International Conference on Nanotechnology and Nanosciences, December 18-20, 2018, Frascati, Roma (IT); <b>Member of the Scientific Committee and Chair of the Oncoimmunology Session</b> of "2nd World Congress on Electroporation", 2017 Norfolk, Virginia-USA; <b>Member of International Academic Committee</b> of International Conference on Nanotechnology and Nanosciences, October 16-18, 2017, Frascati, Roma (IT); <b>Member of the Scientific Committee</b> of International Conference on "Biomaterials For Healthcare", October 17-20, 2016 Rome, Italy; <b>Member of International Academic Committee and Chair of session:</b> "Nanomedicine and Nanotherapies", at International Conference on Nanotechnology and Nanosciences, September
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26-29, 2016, Frascati, Roma (IT), **Member of International Academic Committee and Chair of session:** "Nanomedicine and Nanotherapies", at International Conference on Nanotechnology and Nanosciences, 29 September-2 October 2015, Frascati, Roma (IT); **Chair of session:** "Predictable animal models for cancer research by electroporation" at 1<sup>st</sup> **World congress on electroporation**, 2015 Portoroz (SLO), 6-10 September; **Chair of International Conference** Progress In Vaccination Against Cancer (PIVAC14), 2014-Roma, 24-26 September; **Member of the Scientific Committee** for the Symposium: "Beyond the genome...Where?", 2<sup>nd</sup> April 2011 Roma (IT); **Member of the Scientific Committee** International Symposium "Genome, Life, Human Being", 22<sup>nd</sup> June 2007, Roma (IT)

**Keynote speaker:** "Electroporation as new tool in cancer immunotherapy", First Latin American Workshop on Electroporation and its Applications, October 8-9, 2018, Buenos Aires, Argentina.

**Invited Speaker:** "MU-Plovdiv and University Campus Bio-Medico of Rome + CNR-Institute of Translational Pharmacology: a story of friendship and fruitful scientific collaboration", 75<sup>th</sup> Anniversary MU-Plovdiv, October 30<sup>th</sup>, 2020, Plovdiv (BG); "DNA immunization by Electroporation", EBTT workshop, 15-22 Nov. 2020, Ljubljana (SLO); "Strategies and multidisciplinary approaches to improve cancer immunotherapy by electrotransfer", Jornada de Actividades in VetOncologia-Electroporation days: December 11<sup>th</sup> 2019, Buenos Aires (AG); "Immunological principles of combined treatments with electrochemotherapy", International School on Bioelectromagnetism Alessandro Chiabrera, 9<sup>th</sup> Course: "Possible Biomedical applications of EMFs to cancer: from Biology and in silico to clinical perspectives", Majorana Foundation and Centre for Scientific Culture in Erice (Sicily), 2019; "Immunotherapy: the new revolution in cancer treatment", Medical University- Plovdiv (BG), 2018; "Electroporation in the Oncoimmunology era", "2nd World Congress on Electroporation", 2017 Norfolk, Virginia-USA 2017; "Novel Insight from a Colorectal Cancer Mouse Model: Notum and Glypicans as Possible Target for Gene Therapy Protocols", 8th Conference on Experimental and Translational Oncology-CETO 2017, Portoroz (SLO) 2017; "Biology and Mathematics: a strategic alliance against cancer through new anti-tumoral therapies", University of Coimbra (PT) 2016; "Gene Therapy and DNA Vaccination Protocols", Rotary Club Roma EUR, 2015; "Novel Insight from a Colorectal Cancer Mouse Model: Notum and Glypicans as Possible Target for Gene Therapy Protocols", Medical University-Plovdiv, Bulgaria, 2015; "Gene Therapy and DNA Vaccination Protocols", University of Bari, Department of Biotechnology, 2015; "DNA Vaccination protocols against cancer assisted by electrotransfer", International Scientific Workshop and Postgraduate course "Electroporation Based Technologies and Treatments, University of Ljubljana, Slovenia, 2013; "Optimization of electrogene transfer protocols against cancer", Second International Conference on Gene Vaccination In Cancer, Ascoli Piceno, Italy, 2014; "Delivery of therapeutic molecules in animal models of human diseases", Workshop: The future of micro and nanosystems, Camera Deputati, Palazzo San Macuto, Roma, 2014; "DNA vaccination in oncology: Why What When", Institut de Recherche Pierre Fabre, Toulouse, France, 2013; "DNA vaccination in oncology: Why What When", Institut Claudius Regaud, Toulouse, France, 2013; "Optimization of DNA vaccination protocols against cancer", CNRS-IPBS, Toulouse, France, 2013; "DNA Vaccination protocols against cancer: Strategies and Perspectives", Laboratory for Complex Systems, University of Buenos Aires, Argentina, 2013; "The important role of electroporation in DNA vaccination protocols", Gordon Conference on Bioelectrochemistry, Lucca, Italy, 2012; "Early cellular events after electroporation", International Conference on Gene Vaccination In Cancer, Ascoli Piceno, Italy, 2011; "Application of Electroporation in DNA vaccination protocols", Workshop on Electrogenettransfer, INSERM-CNRS, Toulouse, France, 2011; "Nuove frontiere nelle Biotecnologie: I vaccini a DNA dalla progettazione ai trials clinici sul paziente", Attività formativa sulla materia brevettuale in campo biotecnologico, Dipart Biotecnologie-Università Di Bari, Bari 2011; "DNA vaccination strategies in animal models of cancer", PIVAC 9, Sofia, Bulgaria, 2009; "Tumorigenesis models and development of DNA vaccination protocols", Bulgarian Society of Pathology Conference, Stara Zagora, Bulgaria, 2009.