

## PERSONAL INFORMATION

### Francesca Colciaghi

 Fondazione IRCCS Istituto Neurologico Carlo Besta  
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Address

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## WORK EXPERIENCE

January 2020-today

### **Italian NHS researcher (Biomedical)Fondazione IRCCS Istituto Neurologico Carlo Besta, Milano**

1. PI of the project 'Neurodegeneration and immunological mechanisms underlying epileptogenesis: in vivo and in vitro approaches for the identification of possible therapeutic targets. Funded by the Italian MoH (RC2022-2024)

2. PI of the project 'Mechanisms of epileptogenesis in animal models of cortical dysplasia and temporal lobe epilepsy: role of neurodegeneration and inflammation and identification of possible therapeutic targets. (RC 2019-2021) Funded by MoH and Novartis Pharma.

3. Collaborator of the following projects funded by the Italian MoH (RC 2019-2021): a) Role of inflammatory processes in the pathogenesis of an epileptic seizure: the synthesis of pro-inflammatory molecules and barrier permeability as therapeutic targets (PI Laura Librizzi, Epilepsy Unit Besta); b) Study of diagnostic molecular biomarkers and ictogenesis in post-surgical tissue obtained from patients operated on for drug-resistant epilepsy secondary to focal cortical dysplasias (PI Rita Garbelli, Epilepsy Unit Besta)

4. Collaborator for the Research Grant 2019 /R-single/065 - AISM-FISM, Italian Association Multiple Sclerosis and its Foundation. Title 'The role of T-helper-released extracellular DNAs (THREDS) in autoimmune inflammation and neurodegeneration of the central nervous system'. PI: Massimo Costanza, Neurooncology Unit, Besta

Jan 2008-Dec 2022

### **Senior scientist- Fondazione IRCCS Istituto Neurologico Carlo Besta, Milano**

- Project manager: Neurobiology of epilepsy in malformation of cortical development
- Research assistant for the project: Functional role of a-SMN in the Spinal Muscular Atrophy
- Project/lab management
- Supervisor PhD student

2006-2007

### **FREELANCE MEDICAL WRITER (EDRA SPA Milano; Mondottica Srl -gruppo Oerre Edizioni- Milano; Eurologos Milano Srl)**

Scientific web-editor

Scientific literature review

Writing distance learning courses (Continuing Education Program for Pharmacists)

2004-2005

### **POST-DOC FELLOW – SANOFI-AVENTIS SPA, LAB OF BIOCHEMISTRY, EXPLORATIVE RESEARCH CENTER, Milano Italy**

- Cellular and molecular biology/Biochemistry/ in-vitro cell technique and cell death signaling assays
- Statistical data analysis
- Technician supervisor
- Scientific Literature update

Oct 1999-dec 2001

### **PhD FELLOW IN BIOTECHNOLOGIES APPLIED TO PHARMACOLOGY AND TOXICOLOGY – DEPT. of PHARMACOLOGICAL SCIENCES, SCHOOL OF PHARMACY, University of Milano**

- PhD project: Alteration of APP, ADAM10 and BACE in platelets and CSF of Alzheimer Disease patients
- Teacher assistant of Neuropsychopharmacology, Applied Pharmacology and Biochemical techniques and trainer for graduate students, School of Pharmacy, University of Milano
- Assistant of Scientific Secretary of ITINAD (Italian Interdisciplinary Network on Alzheimer Disease)

March 1998- oct 1999

**JUNIOR RESEARCH FELLOW – DEPT. OF PHARMACOLOGICAL SCIENCES, SCHOOL OF PHARMACY, UNIVERSITY OF MILANO**

- Fellowship project: Peripheral biomarkers in Alzheimer Disease patients

**EDUCATION AND TRAINING**

[Add separate entries for each course. Start from the most recent. Delete after completion]

2003	<p><b>PhD in Biotechnologies Applied to Pharmacology and Toxicology</b></p> <ul style="list-style-type: none"> <li>• University of Milano</li> </ul>	excellent
1998	<p><b>Degree in Pharmaceutical Chemistry and Technology</b></p> <ul style="list-style-type: none"> <li>• University of Milano, Italy</li> </ul>	110/110 laude
1991	<p><b>Scientific Studies Diploma</b></p> <ul style="list-style-type: none"> <li>• Liceo B. Russell, Milano, Italy</li> </ul>	54/60

**GRANTS AND AWARD**

<b>Awards</b>	<p>2010: abstract #3015 (Colciaghi et al.) selected for the Investigator Workshop session at the American Epilepsy Society Congress, San Antonio Texas, December 2-7;</p> <p>1999: Study Award from Confalonieri Foundation- Milano (12 millions IT lira)</p> <p>1998: Award for the Best Poster at the VI Congress “Giovani Cultori delle Neuroscienze” (Young Neuroscientist) - Pisa, Italy- December 14-17;</p> <p>1998: Study Award from Nutrition Foundation of Italy (NFI; 4 millions IT lira)</p>
<b>Editorial activity</b>	<p>Peer-Reviewer for several high-ranked international scientific journal. Medical writer as reported above.</p>
<b>Grants</b>	<p>2020-2021: Research Grant 2019 /R-single/065 (AISM-FISM, Italian Association Multiple Sclerosis and its Foundation). Title: The role of T-helper-released extracellular DNAs (THREDs) in autoimmune inflammation and neurodegeneration of the central nervous system. Amount funded: 75,000 euros. <i>Role: Collaborator</i></p> <p>2016: Research FIRE –AICE grant 2016: Targeting neuroprotection to stop epileptogenesis? An explorative study in a rat model of epileptogenic cortical dysplasia". Amount funded: 20,000 euros. <i>Role: PI</i></p> <p>2007: Research Grant #A0000843 from ‘Sovvenzione Globale Ingenio’ of Regione Lombardia and European Social Fund; Amount funded: 53,225 euros. <i>Role: coPI.</i></p>

**TEACHING ACTIVITY**

1999-2003

Teacher assistant and trainer for graduate students at the School of Pharmacy, University of Milano for the following courses:

- Neuropsychopharmacology (Master degree in Pharmaceutical Chemistry and Technology)
- Applied Pharmacology (Master degree in Pharmacy)
- Biochemical techniques (Degree in Environmental Toxicology, Lodi)

## TECHNICAL SKILLS

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During my research activity, I have developed the following skills:

Animals and surgical procedures: drug administration, aortic perfusion and dissection of rat tissues (cerebral and spinal areas), EEG implantation. Biochemistry/cell-molecular biology: subcellular fractionation, synaptosomal and PSD purification. 1D-/2D-PAGE, WB analysis.

Immunoprecipitation/co-immunoprecipitation; Protein-protein interaction study and cross-linking experiment; IgG-immunocomplex isolation. ELISA, RNA extraction. Cloning and DNA sequencing. In vitro transcription/translation experiments. Culture cell maintenance, stimulation, transfection; Histology/neuroanatomy: IHC/IF and Golgi impregnation, 3D-reconstruction of dendrites and axons.

Competent with programs for: Image analysis, NeuroLucida/Stereoinvestigator, stat analysis (Stat-view, Systat, MedCalc), protein analysis (swiss-Prot, ExPASy).

Project/lab management; training, teaching and supervision of undergraduated and PhD students.

I'm author or co-author of 41 papers in international indexed journals (H index, 21; 1532 citations).

I've been member of Italian society of Neuroscience, Society for Neuroscience and Federation of European Neuroscience Societies since 2000.