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Cristina Bertollini

Place of birth: Roma, Italy | **Nationality:** Italian | **Email address:** c_bertollini@pec.libero.it |

Address: Roma, Italy (Work)

ABOUT ME

I am a neurophysiologist with over twenty years of experience in neuroscientific research, with a strong interest in brain physiology and in the role of nutrition in the prevention and modulation of pathological processes. Throughout my research career, conducted mainly in Italy and Switzerland, I have focused on the study of synaptic function, inflammatory mechanisms, and neuronal physiological dysfunctions associated with various neurological and neurodevelopmental disorders, including epilepsy, amyotrophic lateral sclerosis (ALS), glioma, and schizophrenia. Training periods and scientific collaborations in France, Mexico, and Ireland have further allowed me to acquire specific technical expertise, enriching my scientific profile.
Since 2017, I have expanded my research interests by investigating the relationship between nutrition and the regulation of brain physiological processes, with a focus on the gut–brain axis and integrative approaches aimed at maintaining the functional balance of the organism. Since 2019, I have been involved in teaching activities at a nutrition school in Geneva, where I have delivered courses on neurodegenerative diseases. Since this year, I have held the position of adjunct lecturer in Physiology within the Bachelor's degree programs in Nursing and Physiotherapy at Link Campus University.
After returning to Italy, I joined the Santa Lucia Foundation, where I continued my research activity in the field of neurophysiology, investigating cumulative genotype–environment effects in a mouse model of autism. From July 2026, I will take up the position of tenure-track researcher (RTT) at UniCamillus International Medical University, where I will continue to pursue my research activities in neuroscience and neurophysiology.

WORK EXPERIENCE

TENURE-TRACK RESEARCHER (RTT) – SAINT CAMILLUS INTERNATIONAL UNIVERSITY OF HEALTH SCIENCES – UNICAMILLUS – 07/2026 – Current – ROME, ITALY

ASSISTANT LECTURER – LINK CAMPUS UNIVERSITY – 01/11/2025 – Current – CITTÀ DI CASTELLO, ITALY

RESERCH FELLOW – FONDAZIONE SANTA LUCIA (FSL). PROF. DAVIDE RAGOZZINO – 2025 – Current – ROME, ITALY

NUTRITIONIST – FORUM SPORT CENTER – 01/02/2025 – Current – ROME, ITALY

NUTRITIONIST – FEEDMENTIS – 01/02/2025 – Current – ROME, ITALY

MASTER'S STUDENT – ÉCOLE DE NUTRITION HOLISTIQUE (ENH). PROF. DANIEL DULAC – 2017 – 2019 – GENEVA, SWITZERLAND

SENIOR RESEARCHER – CENTRE MÉDICAL UNIVERSITAIRE (CMU). PROF. ALAN CARLTON – 2015 – 2017 – GENEVA, SWITZERLAND

SENIOR RESEARCHER – CENTRE MÉDICAL UNIVERSITAIRE (CMU). PROF. DOMINIQUE MULLER – 2013 – 2015 – GENEVA, SWITZERLAND

POST-DOC – SAPIENZA UNIVERSITY OF ROME. PROF. ELEONORA PALMA – 2012 – 2013 – ROME, ITALY

POST-DOC – ROYAL COLLEGE OF SURGEONS IN IRELAND (RCSI). PROF. DAVID HENSHALL – 2012 – 2012 – DUBLIN, IRELAND

POST-DOC – SAPIENZA UNIVERSITY OF ROME. PROF. DAVIDE RAGOZZINO – 2008 – 2011 – ROME, ITALY

VISITING PHD STUDENT – CENTRO DE INVESTIGACIÓN Y DE ESTUDIOS AVANZADOS (CINVESTAV). PROF. RAFAEL GUTIERREZ – 2005 – 2005 – MEXICO CITY, MEXICO

PHD STUDENT IN NEUROPHYSIOLOGY – SAPIENZA UNIVERSITY OF ROME. PROF. FABRIZIO EUSEBI – 2004 – 2008 – ROME, ITALY

PRE-DOCTORAL FELLOW – INSERM U29-INMED. PROF. PIOTR BREGESTOVSKI – 2004 – 2004 – MARSIGLIA, FRANCE

PRE-DOCTORAL FELLOW – SAPIENZA UNIVERSITY OF ROME. PROF. FABRIZIO EUSEBI – 2003 – 2004 – ROME, ITALY

EDUCATION AND TRAINING

31/01/2025 Rome, Italy
REGISTRATION WITH THE PROFESSIONAL REGISTER OF BIOLOGISTS National Order of Biologists

11/2021 Geneve, Switzerland
TRAINING COURSE ON THE GUT–BRAIN AXIS École de Nutrition Holistique (ENH)

10/2021 Geneva, Switzerland
TRAINING COURSE ON HYPOTHYROIDISM École de Nutrition Holistique (ENH)

10/2021 Geneva, Switzerland
TRAINING COURSE ON DEPRESSION ACROSS THE LIFESPAN École de Nutrition Holistique (ENH)

12/2019 Geneva, Switzerland
TRAINING COURSE ON THE GUT MICROBIOTA École de Nutrition Holistique (ENH)

16/07/2019 Geneva, Switzerland
THIRD-LEVEL MASTER'S DEGREE IN NUTRITION École de Nutrition Holistique (ENH)

06/2019 Geneva, Switzerland
TRAINING COURSE IN PROFESSIONAL OFFICE MANAGEMENT École de Nutrition Holistique (ENH)

04/2019 Geneva, Switzerland
TRAINING COURSE IN MICROIMMUNOTHERAPY École de Nutrition Holistique (ENH)

11/2018 Geneva, Switzerland
TRAINING COURSE ON PEDIATRIC NEUROLOGICAL DISORDERS École de Nutrition Holistique (ENH)

18/07/2018 Geneva, Switzerland
SECOND-LEVEL MASTER'S DEGREE IN NUTRITION École de Nutrition Holistique (ENH)

11/2017 Geneva, Switzerland
TRAINING COURSE ON NEURODEGENERATIVE DISEASES École de Nutrition Holistique (ENH)

01/02/2008 Rome, Italy
PHD IN NEUROPHYSIOLOGY Università di Roma Sapienza

2004 Rome, Italy
PRE-DOCTORAL RESEARCH INTERNSHIP Università di Roma Sapienza

2004 Marseille, France
PRE-DOCTORAL RESEARCH INTERNSHIP INSERM U29-INMED

18/12/2003 Rome, Italy
MASTER'S DEGREE IN BIOLOGICAL SCIENCES Università di Roma Sapienza

LANGUAGE SKILLS

Mother tongue(s): **ITALIAN**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	B2	C1	C1	B2	B2
FRENCH	C2	C2	C1	C1	C1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

PUBLICATIONS

2026
Environmental levels of manganese drive functional alteration and early cortical vulnerability in human iPSC-derived cortical cultures

In Preparation

Authors: Debbi E, D'Antoni C, Dell'Armi A, Mautone L, Ghirga S, Sanchini C, Cordella F, D'Alessandro L, Alimandi G, Bertollini C, Nistri F, Basilico B, Di Angelantonio S

2026
Mutant Huntingtin disrupts neurogenic and astroglial programs via the EZH2–Let-7g–LIN28 axis with rescue by epigenetic modulators

doi: 10.1038/s41418-026-01812-8

Cell Death & Differentiation

Authors: Rosati JD, Casamassa A, Ruotolo G, Giovenale AMG, D'Andrea D, Rotundo G, D'Anzi A, Turco EM, Bergonzoni G, Visioli A, Lombardi I, Carletti RM, Cappucci U, Casale AM, Migazzi A, Ciavarella M, Rinaldi A, Bertollini C, Giambra V, De Luca A et al. | **Volume, Issue and Pages**: Online ahead of print

2018
Restoring wild type-like CA1 network dynamics and behaviour during adulthood in a mouse model of schizophrenia

doi: 10.1038/s41593-018-0225-y. *equal contribution

Nature Neuroscience

Authors: Marrisal T*, Salazar R*, Bertollini C* Mutel S, De Roo M, Rodriguez I, Müller D and Carleton A | **Volume, Issue and Pages**: Oct;21(10):1412-1420

2016
Acetylcholine receptors from human muscle as pharmacological targets for ALS therapy

doi: 10.1073/pnas.1600251113.

Proc Natl Acad Sci U S A

Authors: Palma E, Reyes-Ruiz JM, Lopergolo D, Roseti C, Bertollini C, Ruffolo G, Cifelli P, Onesti E, Limatola C, Miledi R, Inghilleri M | **Volume, Issue and Pages**: Mar 15;113(11):3060-5

2016

Hippocampal Somatostatin Interneurons Control the Size of Neuronal Memory Ensembles

doi: 10.1016/j.neuron.2016.01.024.

Neuron.

Authors: Stefanelli T, Bertollini C, Lüscher C, Muller D, Mendez P. | **Volume, Issue and Pages**: Mar 2;89(5):1074-85

2015

Basal adenosine modulates the functional properties of AMPA receptors in mouse hippocampal neurons through the activation of A1R A2AR and A3R

doi: 10.3389/fncel.2015.00409..*equal contribution

Front Cell Neurosci

Authors: Di Angelantonio S*, Bertollini C*, Piccinin S, Rosito M, Trettel F, Pagani F, Limatola C, Ragozzino D. | **Volume, Issue and Pages**: Oct 12;9:409.

2015

GABAA currents are decreased by IL-1β in epileptogenic tissue of patients with temporal lobe epilepsy: implications for ictogenesis

doi: 10.1016/j.nbd.2015.07.003

Neurobiol Dis

Authors: Roseti C, van Vliet EA, Cifelli P, Ruffolo G, Baayen JC, Di Castro MA, Bertollini C, Limatola C, Aronica E, Vezzani A, Palma E | **Volume, Issue and Pages**: Oct;82:311-320

2014

A role for intracellular zinc in glioma alteration of neuronal chloride equilibrium.

Cell Death Dis

Authors: Di Angelantonio S, Murana E, Cocco S, Scala F, Bertollini C, Molinari MG, Lauro C, Bregestovski P, Limatola C, Ragozzino D. | **Volume, Issue and Pages**: 5:e1501

2013

Fractalkine/CX3CL1 modulates GABAA currents in human temporal lobe epilepsy

doi: 10.1111/epi.12354.

Epilepsia

Authors: Roseti C, Fucile S, Lauro C, Martinello K, Bertollini C, Esposito V, Mascia A, Catalano M, Aronica E, Limatola C, Palma E. | **Volume, Issue and Pages**: Oct;54(10):1834-44

2012

Transient increase in neuronal chloride concentration by neuroactive aminoacids released from glioma cells

doi: 10.3389/fnmol.2012.00100

Front Mol Neurosci

Authors: Bertollini C, Murana E, Mosca L, D'Erme M, Scala F, Francioso A, Catalano M, Limatola C, Bregestovski P, Di Angelantonio S, Ragozzino D. | **Volume, Issue and Pages**: Nov 26;5:100

2010

A neural switch for active and passive fear

doi: 10.1016/j.neuron.2010.07.008.

Neuron

Authors: Gozzi A, Jain A, Giovannelli A, Bertollini C, Crestan V, Schwarz AJ, Tsetsenis T, Ragozzino D, Gross CT, Bifone A | **Volume, Issue and Pages**: Aug 26;67(4):656-66.

2010

CXCL12-induced glioblastoma cell migration requires intermediate conductance Ca2+-activated. K+ channel activity

Am J Physiol Cell Physiol.

Authors: Sciaccaluga M, Fioretti B, Catacuzzeno L, Pagani F, Bertollini C, Rosito M, Catalano M, D'Alessandro G, Santoro A, Cantore G, Ragozzino D, Castigli E, Franciolini F, Limatola C. | **Volume, Issue and Pages**: 299(1):C175-84

2009

LTP impairment by fractalkine/CX3CL1 in mouse hippocampus is mediated through the activity of adenosine receptor type 3 (A3R)

doi: 10.1016/j.jneuroim.2009.07.016.

J Neuroimmunol.

Authors: Maggi L, Trettel F, Scianni M, Bertollini C, Eusebi F, Fredholm BB, Limatola C. | **Volume, Issue and Pages**: Oct 30;215(1-2): 36-42

2006

Chemokine fractalkine/CX3CL1 negatively modulates active glutamatergic synapses in rat hippocampal neurons

doi: 10.1523/JNEUROSCI.3192-06.2006.

J Neurosci.

Authors: Ragozzino D, Di Angelantonio S, Trettel F, Bertollini C, Maggi L, Gross C, Charo IF, Limatola C, Eusebi F. | **Volume, Issue and Pages**: Oct 11;26(41):10488-98

2006

Fractalkine/CX3CL1 depresses central synaptic transmission in mouse hippocampal slices

doi: 10.1016/j.neuropharm.2006.05.027

Neuropharmacology

Authors: Bertollini C, Ragozzino D, Gross C, Limatola C, Eusebi F. | **Volume, Issue and Pages**: Sep;51(4):816-21

2005

Chemokine CX3CL1 protects rat hippocampal neurons against glutamate-mediated excitotoxicity

doi: 10.1016/j.jneuroim.2005.03.023.

J Neuroimmunol.

Authors: Limatola C, Lauro C, Catalano M, Ciotti MT, Bertollini C, Di Angelantonio S, Ragozzino D, Eusebi F. | **Volume, Issue and Pages**: Sep;166(1-2):19-28.

CONFERENCES AND SEMINARS

05/2016 Losanna, Svizzera

Restoring impaired CA1 network properties in an animal model of 22q11 deletion syndrome

11/2010 Scripps Research Institute - La Jolla - San Diego

Chemokine fractalkine CX3CL1 as a neuromodulator of hippocampal synaptic plasticity

VOLUNTEERING

2023 – 2024 Rome
AMKA

I worked as a volunteer nutrition specialist within the malnutrition management program implemented by AMKA in the Katanga region, southern Democratic Republic of the Congo. My activities included the development of tailored nutritional interventions aimed at promoting recovery in patients suffering from chronic and acute malnutrition enrolled in the AMKA program.

CAREER BREAK

10/04/2008 – 11/10/2008
Maternity Leave

01/04/2006 – 30/09/2006
Maternity Leave

APPOINTMENTS

2025 – CURRENT
Nutritionist at Forum Sport Center – Rome, Italy

2019 – CURRENT
Founder and Owner of Feedmentis

2019 – 2022
Nutritionist at Service Médical Jonction – Geneva, Switzerland

2014 – 2018
Member of NCCR-SYNAPSY

TEACHING ACTIVITIES

01/11/2025 – CURRENT
Adjunct Lecturer for Undergraduate Degree Programs (L/NST1) at Link Campus University, Città di Castello, Italy

Course: Physiology and Food Sciences (SSD BIO/09) – 3 ECTS credits

01/11/2025 – CURRENT
Adjunct Lecturer for Undergraduate Degree Programs (L/NST2) at Link Campus University, Città di Castello, Italy

Course: Physiology and Food Sciences (SSD BIO/09) – 3 ECTS credits

CURRENT
Teaching Assistant and Subject Matter Expert for Undergraduate and Graduate Degree Programs (L/NST1, L/NST2, LM-41) at Link Campus University, Rome, Italy

Courses: Morphological and Functional Foundations of the Human Organism; Anatomical and Physiological Bases of the Human Body; Human Physiology I–II–III

2019 – 2024
Lecturer for Courses on Nutrition-Related Diseases – Geneva, Switzerland.

MENTORING ACTIVITIES

2025 – CURRENT
Supervision and Mentoring of Undergraduate Students and PhD Students

Rome, Italy

2013 – 2015
Supervision and Mentoring of PhD Students and Postdoctoral Researchers

Geneva, Switzerland

2008 – 2012
Supervision and Mentoring of Master's Students

Rome, Italy

ORGANIZATION AND COORDINATION OF SCIENTIFIC CONFERENCES AND TRAINING SCHOOLS

25/10/2013 – 27/10/2013
Member of the Local Organizing Committee of the Symposium "Chemokines and Chemokine Receptors in Brain Homeostasis"

24/10/2009 – 25/10/2009
Member of the Local Organizing Committee of the Symposium "Chemokines and Chemokine Receptors in the Nervous System"

02/12/2008 – 06/12/2008
Member of the Local Organizing Committee of the SIF Physiology School "60 Years After Hodgkin & Huxley through Katz & Miledi: Combined Electrophysiological and Molecular Biology Techniques for the Study of Membrane Ion Channels"

27/10/2007 – 28/10/2007
Member of the Local Organizing Committee of the Symposium "Chemokines and Chemokine Receptors in the Nervous System"

15/09/2007 – 16/09/2007
Member of the Local Organizing Committee of the Symposium "From Turtles, Frogs and Squids to the Human Brain"

28/10/2006 – 29/10/2006
Member of the Local Organizing Committee of the Symposium "Focus on Epileptogenesis"

SCIENTIFIC SOCIETY MEMBERSHIPS

31/01/2025 – CURRENT
Professional Qualification and Registration with the National Order of Biologists (No. AA101000)

2021 – CURRENT
Member of the Samaé Professional Network (Switzerland)

2014 – 2018
Member of NCCR-SYNAPSY

RESEARCH FUNDING AND PROJECTS

2021 – CURRENT
ERA-NET NEURON - Role I

Astrocytes dysfunctions in Phelan Mc Dermid Syndrome: from mechanisms towards new therapeutic strategies - **Grant value 1,295,258 €**

2012 – 2016
FNS - Project funding - Role coPI

Molecular control of spine dynamics in hippocampal organotypic cultures. **Grant value 1,022,829 CHF**

2009 – 2013
SNSF Professorships - Role I

Molecular Controls Over the Development and Plasticity of Sensory Topographic Maps in the Neocortex - **Grant value 1,542,583 CHF**

2014 – 2018
FNS - NCCR SYNAPSY - Role I

The synaptic bases of mental diseases (phase II) - **Grant value 17,574,634 CHF**

2010 – 2014
FNS - SINERGIA - Role I

Molecular mechanisms of GABAergic synapse plasticity - **Grant value 1,000,000 CHF**

2010 – 2014
FNS - NCCR SYNAPSY - Role I

The synaptic bases of mental diseases (phase I) - **Grant value 17,480,000 CHF**

2009 – 2010
Viva la vita Onlus; Fondazione Milan 2009 - Role I

Studio funzionale di mutazioni che aumentano la suscettibilità alla sclerosi laterale amiotrofica su calciatori amatoriali o professionisti - **Grant value 50.000 €**

2007 – 2010
Italian Ministry of Education, Universities and Research (MIUR) – Progetti di Rilevante Interesse Nazionale (PRIN) 2007 - Role I

Recettori colinergici nicotinici come principali attori della plasticità sinaptica ippocampale in ambiente modificato. Prot. 20072BTSR2_004 - **Grant value 42.500 €**

2008 – 2010
Mariani Foundation of Milan 2008

A novel strategy against pediatric drug-resistant epilepsy. Electrophysiology and Pharmacology of GABAA Receptors from Brain tissue resected at surgery - **Grant value 145.000 €**

2008 – 2010
Istituto Pasteur Cenci-Bolognetti 2008 - Role I

Molecular and functional approaches to investigate the physiopathological role of the chemokines and their receptors in the central nervous system - **Grant value 45.000 €**

2006 – 2009
Italian Ministry of Education, Universities and Research (MIUR) – Progetti di Rilevante Interesse Nazionale (PRIN) 2006 - Role I

Meccanismi molecolari delle epilessie farmacoresistenti - **Grant value 51.550 €**

2007 – 2009
Ministero della Sanità, Antidoping - Role I

Ministero della Salute. Progetto Antidoping: Influenza sulle funzioni cellulari nervose e muscolari di dosi dopanti di EPO nell'uomo - **Grant value 50.000 €**

2004 – 2007
Istituto Pasteur Cenci-Bolognetti 2004 - Role I

Molecular and functional approaches to investigate the physiopathological role of the chemokines and their receptors in the central nervous system - **Grant value 45.000 €**

SUMMARY OF RESEARCH ACTIVITIES

2005 – 2025
Bibliometric Indicators – Scopus Database

Number of Publications	**14**
Total Impact factor	**102.719**
Total Citations	**1199**
Average Citations per Product	**85.6**
Hirsch (H) index	**13**
Normalized H index*	**0.76**

RESEARCHER IDENTIFICATION CODES

ORCID

ID: 0009-0002-0469-6845

Scopus

ID: 8901150400

LABORATORY TECHNICAL SKILLS

Conventional and multiphoton confocal microscopy applied to live and fixed brain tissues, including time-lapse imaging and photoactivation techniques

Advanced expertise in digital imaging microscopy, including the use of dedicated software for biological image acquisition, analysis, and quantitative assessment (ImageJ, Till Vision, Fluoview).

Conventional and fluorescence immunohistochemistry for the analysis of tissues and cell cultures

Preparation of acute brain slices (hippocampus, cerebellum, amygdala, retina) and primary cultures of neurons, astrocytes, and microglia

Expertise in animal models and dissection techniques, including the preparation of acutely dissociated cells from mouse and rat dorsal root ganglia (DRG) and hippocampus

Integrated electrophysiological and imaging approaches, including patch-clamp electrophysiology in multiple configurations (cell-attached, whole-cell, and perforated patch) performed on cultured cells and acute tissue slices

Genetic manipulation using viral vectors (AAV and lentiviral vectors), optogenetics, and chemogenetics

Advanced expertise in data analysis and imaging software, including ImageJ, Fluoview, Till Vision, Clampfit, Origin, Prism, and SigmaPlot

Expertise in the management and maintenance of laboratory equipment and advanced imaging platforms