

Maria Carmela Cerra, PhD

Full Professor of Physiology

Coordinator of the PhD in Life Science and Technology

Delegate of the Dean for PhD programs

MARIA CARMELA CERRA, PhD

Cosenza (CS) Italy, 25/11/1963

Italian Citizen

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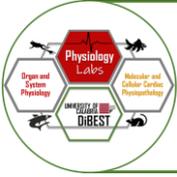
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- **Full Professor of Physiology** at University of Calabria (Italy), Department of Biology, Ecology and Earth Sciences;
- **Delegate of the Dean** of the University of Calabria for the Doctorate of Research;
- **Scientific director of the Research Group in Organ and System Physiology** (Department of Department of Biology, Ecology and Earth Sciences, University of Calabria, Italy);
- **Coordinator of the Doctorate** in Life Science and Technology at University of Calabria
- **Member of the "Giunta di Dipartimento"** at the Department of Biology, Ecology and Earth Science, at University of Calabria.
- **Member of the Scientific Board** of the Italian Society of Physiology
- Member of the **"Collegio dei Revisori dei Conti"** of the Italian Society for Cardiovascular Research.
- Member of the Society for Experimental Biology
- Member of the Research Group at University of Calabria of the Italian Institute for Cardiovascular Research;
- Professor of Molecular Physiology for Master students in Biotechnology for the Human Health and of Cell and System Physiology at the Faculty of Pharmacy, Nutritional and Health Sciences, University of Calabria;
- Past Coordinator of the Doctorate Fellowship in Life Sciences at University of Calabria
- Past member of the Scientific Board of the High School in Clinical Pathology, at University of Calabria;
- Past vice Director of the Department of Pharmaco-Biology (University of Calabria, Italy);
- Director of Master in "Applicative aspects in clinical nutrition", Faculty of Pharmacy, Nutritional and Health Sciences, University of Calabria;
- Component of the Italian National Board for Professor position (ASN parallel board).

Membership

Società Italiana di Fisiologia (Scientific Board), Società Italiana di Ricerche Cardiovascolari (Colelgio dei Revisori dei Conti), Society for Experimental Biology, International Society for Heart Research.



Editorial activity

Referee for many national projects, PhD thesis from non-Italian Universities, and for international journals, including

Journal of Experimental Biology, General and Comparative Endocrinology, Cell and Tissue Research, Journal Pharmacology and Experimental Therapeutics, Circulation Research, Gene, American Journal Physiology, Acta Physiologica, Cardiovascular Diabetology, Cancer therapy, Peptides, Endocrine, PLOSONe, Molecules.

Guest Editor for BBA Bioenergetics Special Issue "Radical Species, Mitochondria and Cardiac Function" (2009).

Co-Editor of the volume "Chromogranins: from Cell Biology to Physiology and Biomedicine". (Springer Verlag) 2017.

Co-Editor of the Special Issue "Mechanisms, and pathophysiology of obesity: upgrading a complex scenario". CMC, In preparation.

Guest Editor for Antioxidants Special Issue "NOS/NO system and the heart". In preparation.

Research interest

- Autocrine-paracrine modulation of the cardiac performance in vertebrates (fish, amphibians, rat): Natriuretic Peptides (NP), Angiotensin II (AngII), and the NOS/NO system.
- Morpho-functional plasticity of the fish heart in relation to ontogenetic development and environmental influences (e.g. hypoxia, thermal stress).
- 3.NO-dependent cardiac modulation in vertebrates adapted to extreme environments: ventricular NOS system in antarctic teleosts and tropical lungfish.
- 4.Neuroendocrine modulation of vertebrate cardiac performance: Chromogranin A-derived peptides, Glucagon-like peptide-2, Selenoprotein-T.

For the Society for Experimental Biology, has organized the session "Radical Species, Mitochondria and Cardiac Function" for the Annual Main Meeting 2008, (http://www.sebiology.org/meetings/Marseille/Programme_by_day.html).

Editor of the volume "Chromogranins: from Cell Biology to Physiology and Biomedicine" (UNIPA Springer Series, Springer Verlag, 2017)

Research programs

1991-2007 National Program for Antarctic Research (PNRA) (O.U. University of Calabria, coordinator: Prof. B. Tota): "Adattamento di teleostei alle basse temperature: caratteristiche adattative e non adattative dei Nototenioidi Antartici e Sub-Antartici".

1992-1996 Research Program CEE n. AIR1-CT920186 "Improvement of the nutritional value, growth and resistance to stress of eels and sturgeon by controlled dietary lipids and conditions during intensive aquaculture" in cooperation with the Universities of Birmingham, Copenhagen, Milano, University of Calabria, Prof. B. Tota.



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1994-1995 Research Program CEE n. C11-CT93-0050 “Environmental influences on the ecology and physiology of sub-Antarctic fish” in cooperation with Università di St. Andrews, Scotland, Marine Research Centre, Ushuaia, Argentina.

1998-2000 Research Project CNR n. CNR 98.00.104.PF31 “Sviluppo di nuove specie e tecnologie per l’acquacoltura. Tematica 4. Biotecnologie industriali e metodologie innovative. Sottotematica 4F. Biotecnologie marine ed ambientali” in cooperation with University of Lecce and University of Palermo.

2003-2004 “Progetto di Rilevante Interesse Nazionale (PRIN)” “Le vasostatine nuovi peptidi regolatori della funzione cardiaca e della muscolatura liscia”, coordinator Prof. Bruno Tota, in cooperation with University of Palermo.

2005-2007 Member of the Operative Unit of the “Istituto Italiano di Ricerche Cardiovascolari” at University of Calabria.

2008 Responsible of the OU at UNICAL of "Progetto di Rilevante Interesse Nazionale (PRIN)" "Peptidi oressigeni ed anoressigeni: elementi di un sistema integrato che regola la motilità gastrointestinale e l'attività cardiaca.", PI: Prof. Flavia Mule', University of Palermo.

2008 Scientific coordinator of the Progetto Fondazione Cassa di Risparmio di Calabria e Lucania, entitled: “Cuore-cervello: nuovi orizzonti biomedici nello studio di neuropeptidi ad azione cardiovascolare” (Responsible B. Tota).

2005-present: member of the OU of the Italian Institute for Cardiovascular Research.

2011 Research project PON01_00293: “Spread Bio Oil: valutazione dell’impatto nella dieta e suscettibilità all’infarto del miocardio”.

2015-present: project in in collaboration with University of Rouen (France), DC2N, Inserm U982 su “Regulation of the heart function: a role for selenoproteins?” including a Italy-France PhD co-tutorship program.

PI for the PRIN project: 20158JNY2H: “Cardiovascular adaptation to hypoxia: a microfluidic approach on natural animal models”, selected for founding by the University of Calabria for its high evaluation.

Present: POR_CUP J88CI7000370006 Healthy Whey.

Present: PON DEMETRA, AES01_00401; DEvelopment of MatERial and TRacking technologies for the safety of food.

Responsible for CONISMA of the Laboratory of Organ and System Physiology, DiBEST, UNICAL

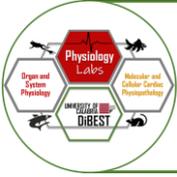
Referee for projects (e.g.. 2013 - prot. INAJ135039, Università dell’Insubria), and for national and international PhD thesis (e.g. Univeristy of Bologna-Ravenna; University of Singapore, Dr. Ong Li Ying Jasmine).

Member of examining board for doctorate fellowship.

Responsible for research fellowships in Physiology at the University of Calabria.

Collaborations

Research activity on NP carried out in collaboration with Prof. Yoshio Takei, Ocean Research Institute, University of Tokyo (Tokyo, Japan), while those on neuropeptides in collaboration with San Raffaele Scientific Institute (DIBIT), Milan (Dott. Angelo Corti), University of California, San Diego (Prof. Sushil Mahata), Section on Cellular Neurobiology, Eunice Kennedy Shriver National Institute of Child Health



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and Human Development, National Institutes of Health, Bethesda, USA (Dr. Peng Loh), and INSERM, Strasbourg (France) (Prof. Marie Helene Betz-Boutigue), INSERM, Rouen, France (Prof. Youssef Anouar). Part of this research was carried out in the context of the Doctorate in Animal Biology, and in Life Science within the Italy-France co-tutorship.

Research on neuropeptides in cardioprotection in collaboration with University of Turin (Prof. Pasquale Pagliaro, prof. Giuseppe Alloatti).

Researches on morpho-functional aspects (structural, ultrastructural, molecular and hemodynamics) of cardiac rearrangement in relation to both the development and adaptation to extreme environmental conditions are in collaboration with University of Palermo, Italy (Prof. G. Zummo) and University of Cantabria, Santander, Spain (Prof. J. M. Icardo).