

# Buonocore Giuseppe

## PERSONAL INFORMATION

Date of birth: 7 March 1951

Place of birth: Amalfi (SA), Italy

Home phone: (39) 0577-333892 Office phone: (39) 0577-586523 Fax number: (39) 0577-586182

Current rank: Professor

Citizenship: Italian

Languages: Italian, English, French

## STUDIES

Year	School	Title
1975	Faculty of Medicine and Surgery, Siena University	Degree in Medicine and Surgery (cum laude)
1975	Faculty of Medicine and Surgery, Siena University	Medical profession
1969-1971	Intern, Institute of Human Anatomy, Faculty of Medicine and Surgery, Siena University, Director: Prof. Leonetto Comparini	
1971-1973	Intern, Institute of Semiotics, Faculty of Medicine and Surgery, Siena University, Director: Prof. Angelo Caniggia	
1973-1974	Intern, Institute of Anatomy and Histopathology, Faculty of Medicine and Surgery, Siena University, Director: Prof. Giorgio Weber	
1974-1975	Intern, Institute of Nervous and Mental Diseases, Faculty of Medicine and Surgery, Siena University, Director: Prof. Cesare Fieschi	

## Postgraduate training

Year	School	Title
1978	Pediatrics Clinic, Faculty of Medicine and Surgery, Siena University	Specialist in Pediatrics (cum laude)
1981	Institute of Childhood and neonatal medicine, Faculty of Medicine and Surgery, Parma University	Diploma in Neonatology (cum laude)
1987	Ministry for Health, Hospital Direction, Rome	Pediatrics Department Head Ability
1987	Institute of Anaesthesia and Intensive Care Faculty of Medicine and Surgery, Siena University	Specialist in Anaesthesia and Intensive Care (cum laude)
January 01/June, 1976	Resident in Pediatrics, Institute of Infectious Childhood Diseases, Faculty of Medicine and Surgery, Siena University. Director: Prof. Aldo Rossolini	
1976-1977	Resident in Pediatrics, Institute of Pediatrics, Faculty of Medicine and Surgery, Siena University. Director: Prof. Alberto Fois	
1977-1978	A.I.L. (Associazione Italiana contro le Leucemie) Scholarship at Institute of Pediatrics, Faculty of Medicine and Surgery, Siena University. Director: Prof. Alberto Fois	
1978-1979	Pediatric Assistant, Institute of Puericulture, Siena University, Childhood Endocrine and Metabolic Disorders Section, Director: Prof. Manlio Dettori	
1979-1987	Pediatric Assistant, Neonatology Section, Neonatology Chair, Director: Prof. Rodolfo Bracci	
1979-1990	Chief of Neonatal Hematology Lab, Chair of Neonatology, Siena University	
1981-1987	Study period at Service de Médecine Néonatale de l'Hopital Port-Royal, Université René Descartes, Paris V, Director: Prof. Jean Pierre Relier	
1987-1994	Pediatrician Second-in-charge of Neonatal Unit, full time, Local Health Unit 30 Siena Area and Chair of Neonatology, Siena University, director Prof. Rodolfo Bracci	
1994-2001	Associate Professor of Pediatrics, Faculty of Medicine, University of Siena, Italy.	
1990-1997	Doctor in charge of Hematology Lab, Institute of Preventive Pediatrics and Neonatology, Siena University	
April 6/May 1994	Visiting Scholar, Department of Physiology, University of Pennsylvania, School of Medicine, Chairman: Prof. Paul De Weer	
1994-April 2001	Lecturer in Pediatrics (raggruppamento F19A) Faculty of Medicine and Surgery, Siena University	
since April 2001	Lecturer in Pediatrics (MED38) Faculty of Medicine and Surgery, Siena University	
1998- April 1999	Doctor in charge of Paraintensive Neonatal Therapy, Institute of Preventive Pediatrics and Neonatology, Siena University	
Since April 2001	Full Professor of Pediatrics, Medical Faculty, University of Siena, Italy	

April 1999/October 2001	Director of Neonatal Pathology Unit, Siena Hospital
Since November 2001	Director of Pediatrics II-Neonatology Unit, University Polyclinic, Siena Hospital

### Visiting Professor

1994-1999	Visiting Professor for various periods, Division of Neonatal-Perinatal Medicine, Dept. Physiology, University of Pennsylvania, School of Medicine, Chief: Prof. Maria Delivoria-Papadopoulos
May 2000	“The 2000 Donald V. Eitzman Visiting Professor” University of Florida College of Medicine (Guest Lecture: Iron homeostasis, metabolism, and toxicity)
August 2001	Visiting Professor at the Department of Pediatrics, University of Oulu, Finland (Guest Lecture: Mechanisms of oxidative injury in the newborn and strategies for prevention)
November 2002	Visiting Professor at the Department of Pediatrics, College of Medicine, Drexel University, Philadelphia, PA (Guest Lecture: New biomarkers of fetal-neonatal hypoxic stress)
May 2004	Visiting Professor at the Division of Neonatology, College of Physicians & Surgeons, The University Hospitals of Columbia and Cornell, New York, NY (Guest Lecture: New biomarkers of perinatal hypoxic brain damage)
2009	Visiting Professor at Rainbow Babies & Children’s Hospital, University Hospitals Case Medical Center, Case Western Reserve, University school of Medicine, Cleveland, Ohio, USA (Guest Lecture: Pathophysiology of Neonatal Oxygen Injury)
March 2012	Visiting Professor at Taipei Medical University, Taiwan (Guest Lecture: New pharmacological approaches in infants with ipoxic-ischemic encephalopathy)
March 2012	Visiting Professor at Chang Gung Memorial Hospital at Linkou, Taiwan (Guest Lecture: Biomarker of oxidative stress in foetus and newborn)

### University directorships, memberships etc.

Director of School of specialization in Neonatology and Pediatrics  
Teaching College Member of Research Doctorate in Growth Factors, Siena  
Teaching College Member of Research Doctorate in Physiopathology and Cell Pathology, Siena

### Supervision of diploma, undergraduate and postgraduate theses

Dr. Buonocore has supervised more than 30 MD/PhD students (1994/2012) in Medicine and Surgery, Pediatrics, Diagnostic Biochemistry and research doctorate topics.

### Teaching method seminars attended

Workshop “Seminar on Changing Medical Education” Siena March 1997, organized by Profs. Jacques E. Des Marcheés and Bertran J. Dumais, Université de Sherbrooke, Québec, Canada.

### Invited lectures

Dr. Buonocore has been invited more than 100 times as guest speaker to international meetings/institutions in Europe, Asia, South America, Canada and the USA.

### Member of editorial boards of medical journals

He is/were an editor of the following journals:

Neonatology,  
Pediatric Research (from 2007)  
Anales de Pediatria.  
Italian Journal of Paediatrics  
Current Pediatric Reviews

### Editorial boards

*“Il Neonato di Basso Peso” H.C.S. Editrice, Milano, 1989.*

Proceedings of 3th Updating in Neonatology for Central Italy”, Siena 21-22 april 1990, Tipografia Senese, 1990.

Proceedings of “International Congress of Neonatal Hematology and Immunology” Siena 22-24 april 1990, Tipografia Senese, 1990.

The scientific review ‘*Biology of the Neonate*’.

Ad hoc Reviewer of abstracts for *Journées Francophones de Recherche en Neonatologie*, 1999-2001

Reviewer of International Programme ‘*Biomedicine and health research BIOMED2*’, 1998.

Co-author of special number of *Seminars in Neonatology* (Volume 3, August 1998) dedicated to ‘Free Radical disease in Neonatology’ (Guest Editor: Prof. Ola Didrick Saugstad)

Co-author of special number of *Seminars in Neonatology* (2007) dedicated to 'Neuroprotection' (Guest Editor: Prof. Pierre Gressens)

Guest Editor of no. 79/3-4/2001 of *Biology of the Neonate* on 'The newborn at high risk of brain damage' EURAIBI International Workshop, Siena, April 5-7, 2001

"Neonatal Pain: Suffering, Pain, and Risk of Brain Damage in the Fetus and Newborn" Springer-Verlag, (Giuseppe Buonocore & Carlo V. Bellieni eds) Italy 2008

Seminars in Fetal and Neonatal Medicine "Oxygen as a Therapeutic Agent" Elsevier, 2010

Coeditor "NEONATOLOGY: A Practical Approach to Neonatal Diseases" Springer-Verlag, (Giuseppe Buonocore, Rodolfo Bracci & Michel Weindling eds) Italy 2012

Rewriter for Proceedings of Annual Meeting of Pediatric Academic Societies (PAS).

### **Member in Organizing Committees**

President and Coordinator of network Ricerca Scientifica Europea EURAIBI (EUROpe Against Infant Brain Injury).

Council member of European Society for Pediatric Research (2002-2005)

European Society for Pediatric Research (President in 2005)

Academia Senensis Physiocraticorum (2010-to date)

European Commission Research Expert

Collaborative European Multicenter Study Group for Surfactant Replacement

European Neonatal Brain Club

International Perinatal Collegium

Secretary of neonatal hematology study group of the Società Italiana di Neonatologia (1996-2006)

Council member of Italian Society of Neonatology (Tuscany Region)

Scientific committee member of Journées Franchophone de Recherche en Neonatologie (1995-98)

Regional delegate of Italian Society of Perinatal Medicine (1995-98)

Gerson Lehrman Group's Council of Healthcare Advisors.

Chairman of sector Children Health Medicine (CHM), *World Academy of Biomedical Technologies* (WABT) Board and Administrative Council UNESCO, Paris, (2006).

Chairman of Union of European Neonatal and Perinatal Society (UENPS), Rome 2008

Vicepresident of UENPS (2008-09)

President of Union of UENPS (2010-to date)

Coordinator of the Neonatology Committee of the Italian Society for Paediatric Research (SIRPed) (2012-to date)

Peer reviewer of National Agency for Evaluation of Universities and Research Institutes (ANVUR) (2012-to date)

### **President/Chairman of the following meetings:**

- EURAIBI International Workshop on "The Newborn at High Risk of Brain Damage", Siena 2001.
- II EURAIBI International Workshop on "Pain and Brain Damage in Fetus and Newborn", Siena 2003.
- 3rd EURAIBI International Workshop on "Pathogenesis and treatment of brain injury" Siena 2005.
- Annual Meeting of European Society for Pediatric Research, Siena 2005.
- 4th EURAIBI International Meeting on "Neonatal Brain Injury: Identification and Prevention in the Foetus and Newborn", Siena 2008.
- 1<sup>st</sup> International Congress of UENPS, Union of European Neonatal and Perinatal Societies, Global Neonatology Perinatology, Roma, November 17-19, 2008.
- 2nd International Congress of UENPS Union of European Neonatal and Perinatal Societies Global Neonatology Perinatology, Istanbul November 15-17, 2010, Turkey.
- International Perinatal Collegiums. XXII biennial meeting, Amalfi 2011.
- 5<sup>th</sup> International EURAIBI meeting. "Europe against infant brain injury. Brain injury and neonatal disease: early diagnosis and therapeutic strategies", Siena 2012.
- 3<sup>rd</sup> International Congress of UENPS, Union of European Neonatal and Perinatal Societies. Global Neonatology Perinatology. Porto November 14-17, 2012.

### **Member of the following societies**

Italian Society of Pediatrics (S.I.P)

Italian Society of Neonatology (S.I.N.)

Italian Society of Sperimental Biology (S.I.B.S.)

Italian Society of Perinatal Medicine (S.I.M.P.)

Italian Society of Endocrinology and Diabetologia Pediatrica (S.I.E.D.P)

Eritrocite study group

European Society for Paediatric Research (E.S.P.R.)

European Society for Pediatric Haematology and Immunology (E.S.P.H.I.)

American Pediatric Society and Society for Pediatric Research (APS/SPR).

American Academy of Pediatrics

### **Patent of scientific inventions**

Bellieni CV, Pinto I, Stacchini N, Bagnoli F. Phonoabsorbing panels for neonatal incubators (RM2003U000174) 4 th November 2003.

### **Awards**

**The Seventh annual Dr Donald V Eitzman** lectures. May 5, 2000. "Iron homeostasis metabolism and toxicity". University of Florida College of Medicine.

**"Goccia d'oro"** at the Foundation EURAIBI for efforts and results in Prenatal, Perinatal and Neonatal brain research. 2010.

### **Publications**

Published 768 publications: 2 book and 19 book chapters; 229 articles in journals and 518 presentations within of International Conferences (248) and in the field of National Meetings (270).

**H-index: 30**

### **Scientific Reviewer for Refereed journals**

1. Neonatology (Biology of the Neonate)
2. Pediatric Research
3. Acta Paediatrica
4. European Journal of Obstetrics & Gynaecology and Reproductive Biology
5. Italian Journal of Pediatrics
6. Archives of Diseases in Childhood
7. European Journal of Endocrinology
8. Free Radical Biology & Medicine
9. Clinical Chemistry
10. Critical Care Medicine
11. Pediatric Critical Care Medicine
12. European Journal of Neuroscience
13. BMC Pediatrics
14. Current Pediatric Reviews
15. Experimental Brain Research
16. Nutritional Neuroscience
17. Journal of Neuroimmunology
18. Prostaglandins, Leukotrienes & Essential Fatty Acids
19. Clinical Chemistry and Laboratory Medicine
20. Neuroscience Letters
21. Nutrition
22. Journal of Clinical Anesthesia.
23. Anales de Pediatria
24. Early Human Development
25. Journal of Pediatric Gastroenterology & Nutrition
26. Brain & Development
27. Transfusion

28. Journal of Pediatric Infectious Diseases
29. Frontiers in Biosciences
30. The American Journal of Obstetrics & Gynecology
31. The Journal of Maternal-Fetal & Neonatal Medicine
32. Neuropsychiatric Disease and Treatment
33. Fertility & Sterility
34. Brain
35. Neuropediatrics
36. Journal of Pediatrics
37. Ophthalmology
38. Lancet
39. Mediators of Inflammation
40. Neurological Sciences
41. Critical care Research and Practice
42. BMC Pediatrics
- 43 Cytokine
44. European Journal of Medical Genetics

#### **Conferences and congresses organized**

- "Problemi di assistenza al neonato di peso molto basso", Siena, 20-21 Feb 1987
- "International Congress on Neonatal Hematology and Immunology", Siena, 22-24 April 1990
- EURAIBI International Workshop on "The Newborn at High Risk of Brain Damage", Siena 5-7 April 2001
- II EURAIBI International Workshop on "Pain and Brain Damage in Fetus and Newborn", Siena 5<sup>th</sup> –7<sup>th</sup> June 2003
- I Congresso Nazionale del Gruppo di Lavoro di Ematologia Neonatale, Amalfi 3-4 Dicembre 2004
- Orphan Europe Academy Course: Who's Teaching Who in Paediatrics? Siena, August 29 and 30, 2005
- ESN Training Course in Neonatal Medicine - August 30 and 31, 2005
- Annual Meeting of European Society for Pediatric Research, Siena August 31– September , 2005.
- EPEN annual meeting: The European Perinatal Epidemiology Network Siena, August 31, 2005.
- 46<sup>th</sup> Annual Meeting of European Society for Pediatric Research Siena August 31-September 3, 2005
- 3rd EURAIBI International Workshop on "Pathogenesis and treatment of brain injury" Siena September 3, 2005
- 3rd International Workshop on Neonatology, Cagliari October 27-28, 2006
- 2<sup>nd</sup> National Congress of Gruppo di Lavoro di Ematologia Neonatale, Cagliari 28 Ottobre, 2006
- 4th EURAIBI International Meeting on "Neonatal Brain Injury: Identification and Prevention in the Foetus and Newborn", Siena, April 3-5, 2008.
- 1st International Congress of UENPS, Union of European Neonatal and Perinatal Societies, "Global Neonatology and Perinatology", Roma, November 17-19, 2008
- "Incontri con l'esperto" University of Siena, School of Specialization in Pediatrics 2003/2012
- Chairman of Topic Symposium: "Oxidative Stress in the Fetus and Newborn: Where Are We Now?" at Pediatric Academic Societies' Annual Meeting, Vancouver, BC, Canada, May 1-4, 2010.
- 2nd International Congress of UENPS Union of European Neonatal and Perinatal Societies Istanbul November 15-17, 2010, Istanbul, Turkey
- International Perinatal Collegiums. XXII biennial meeting, Amalfi, June 25-29 2011.
- 5<sup>th</sup> International EURAIBI meeting. "Europe against infant brain injury. Brain injury and neonatal disease:early diagnosis and therapeutic strategies", Siena April 19-21 2012.
- 3<sup>rd</sup> International Congress of UENPS, Union of European Neonatal and Perinatal Societies. Global Neonatology & Perinatology. Porto November 14-17, 2012.

### International Trials

Coordinator of the European scientific network EURAIBI (EUROpe Against Infant Brain Injury) which brings together the experience of the main international neonatology centres. Its task is to favour multicentric studies to lay the foundations for early recognition of factors implicated in brain damage. Its aim is to find new methods of prevention, early diagnosis and therapy of brain damage in high risk newborns.

### Grants obtained as scientific coordinator or participant of projects

Year	Project	Finance (Italian liras if not differently indicated)
1995	Prevention of anemia of prematurity by administration of human recombinant erythropoietin	3.5 million
1996	Prevention of anemia of prematurity by administration of human recombinant erythropoietin	3 million
1997	Identification of global protein composition of fetal and neonatal brain cortex synaptosomes and changes induced by development and hypoxia	10 million Siena University (Ex-60%)
1997	Identification of risk factors for brain damage and prevention of sequelae of neurological damage in high risk preterm neonates	256 million Ministry of University and Scientific Research Cofinance for research projects of national interest
1998	Identification of global protein composition of fetal and neonatal brain cortex synaptosomes and changes induced by development and hypoxia	12 million Siena University (Ex-60%)
1998	Serum concentrations of cytokines in neonates on different dietary regimens - role in food allergy	30 million Nestlé Spa Milan
1999	Service Quota	3.3 million Siena University (Ex-60%)
1999	Multicentrico multidisciplinary university project on Free radical pathologies - biological aspects and clinical applications	110 million Siena University
1999	Oxygen and retinopathy of prematurity. Evaluation of tissue lipid peroxidation.	35 million Humana Italia SpA Milan
1999	High risk neonates: identification of factors implicated in brain damage and prevention of neurological handicaps - a clinico-experimental study	500 million Ministry of University and Scientific Research Cofinance for research projects of national interest
2000	Service Quota	3.3 million Siena University (Ex-60%)
2001	Service Quota	3.3 million Siena University (Ex-60%)
2001	Identification of etiopathogenetic factors characteristics of newborn at high risk of brain damage in perinatal period. Clinical and experimental study.	592 million Ministry of University and Scientific Research Cofinance for research projects of national interest
2002	Service Quota	€ 1704 Siena University
2003	Service Quota	€ 1704 Siena University
2003	Early neonatal markers of hypoxic-ischemic brain damage in the perinatal period.	€ 28500 Siena University (PAR)
2004	Service Quota	€ 1704 Siena University
2005	Biomarkers, gene expression and drug therapy in models of hypoxia-ischemia and infection in vitro and in vivo.	€ 119000 Siena University (PAR)
2006	Service Quota	€ 3500 Siena University
2007	Neonatal Estimation Of Brain Damage Risk And Identification of Neuroprotectants (NEOBRAIN)	€ 195120 (EU project - FP6-2005-LIFESCIHEALTH)
2007	Service Quota	€ 3500 Siena University

2010	Clinical protocol for the early identification of perinatal oxidative stress-induced brain injury and prediction of neurodevelopmental outcome through validation of biomarkers profile and magnetic resonance imaging patterns.	€ 195.000 GRANT-R-10-81 Fondazione Mariani
2011	Early identification of newborn at high risk of brain injury through a validated biomarkers profile and specific neuro-imaging patterns. A follow up study of clinical and neurodevelopmental outcome in a large cohort study. RF-2009-1499651	€ 550.000 Ministero della Salute – Direzione Generale della Ricerca Scientifica e Tecnologica