

# Eugenio Barone

## Curriculum vitae

### CONTACTS

Work Phone: +39 06 49910935

Email address: eugenio.barone@uniroma1.it

### EDUCATION (academic degrees)

Date:           Type of degree, place

**2011:** PhD in Neuroscience, Inst. of Pharmacology, Catholic University School of Medicine, Rome

**2006:** Master Degree in Pharmaceutical Chemistry and Technology (summa cum laude), Department of Pharmacy, Health and Nutritional Sciences, University of Calabria, Arcavacata di Rende (CS)

### CAREER

Date:           Position, place

**2016-present:** Assistant Professor of Biochemistry, Department of Biochemical Sciences “A. Rossi-Fanelli”, Sapienza University of Rome, Piazzale Aldo Moro 5, 00185, Rome, IT

**2015-2018:** Associate Researcher, Faculty of Health Sciences, Universidad Autonoma de Chile, Providencia, Santiago, CL

**2014-2016:** PostDoc Researcher under the People Programme (Marie Curie Actions) of the European Union's Seventh Framework Programme (FP7/2007-2013), Department of Biochemical Sciences “A. Rossi-Fanelli”, Sapienza University of Rome, Rome, IT

**2012-2014:** PostDoc Researcher, Brain Mind Institute, Swiss Federal Institute of Technology (EPFL), Lausanne, CH

**2010-2011:** Research Fellow, Institute of Pharmacology, Catholic University School of Medicine, Rome, IT

**2010:** Ph.D. visiting student, (a) Department of Molecular and Biomedical Pharmacology in the Sanders-Brown Center on Aging and (b) Department of Chemistry, Laboratory of Neurochemistry University of Kentucky, Lexington, (KY), USA

**2007-2010:** PhD Candidate, PhD in Neuroscience program, Institute of Pharmacology, Catholic University School of Medicine, Rome, IT

**2006-2007:** Research fellow, Institute of Pharmacology, Catholic University School of Medicine, Rome, IT

**2005-2006:** Visiting Student, Institute of General Pathology, Catholic University School of Medicine, Rome, IT

**2004:** Visiting Student, ERASMUS project, Faculté de Pharmacie, Université, Paris Descartes (Paris V), Paris, FR

**2000-2006:** Master Student, Department of Pharmacy, Health and Nutritional Sciences, University of Calabria, Arcavacata di Rende (CS), IT

### CURRENT TEACHING ACTIVITY (year 2018/19)

Teaching course, faculty, place.

**Biochemistry:** Degree in Medicine, Faculty of Pharmacy and Medicine, Sapienza University of Rome (Corso di Laurea A, LM-41) – 3 CFU BIO/10

**Biochemistry:** Residency in Neurology, Faculty of Pharmacy and Medicine, Sapienza University of Rome – 1 CFU BIO/10

**Biochemistry:** Bachelor Programme in Nursing, Faculty of Medicine, Sapienza University of Rome (Corso di laurea L- Az. S. Giovanni Addolorata L/SNT1) – 2 CFU BIO/10

**Biochemistry:** Bachelor Programme in Nursing, Faculty of Medicine, Sapienza University of Rome (Corso di laurea G - ASL Roma 5 - Colferro (RM) L/SNT1) – 2 CFU BIO/10

**Chemistry and fundamentals of Biochemistry:** Bachelor Programme in Audiometric Techniques, Faculty of Medicine, Sapienza University of Rome (Umberto I Hospital, L/SNT3) – 2 CFU BIO/10

**Chemistry and fundamentals of Biochemistry:** Bachelor Programme in Audioprothetic Techniques, Faculty of Medicine, Sapienza University of Rome (Umberto I Hospital, L/SNT3) – 2 CFU BIO/10

#### **HONORS, AWARDS AND FELLOWSHIPS** (maximum 5 best)

Date:           Type, place

**2017:** Trisomy 21 Research Society (T21RS) Travel Award, Biennial Conference held in Chicago (IL), USA

**2017:** Alzheimer Association International Conference (AAIC) Travel Fellowship, Annual meeting held in London, UK

**2015 and 2016:** Society for Free Radical Biology and Medicine (SFRBM) Travel Awards, Annual International Conference held in Boston (2015) and San Francisco (2016)

**2013:** Federation of the European Pharmacological Society (EPHAR) Fellowship Award, 11<sup>th</sup> Summer School of Neuroscience, Catania, IT

**2010:** Society for Free Radical Biology and Medicine (SFRBM) Fellowship Awards, Department of Chemistry, Laboratory of Neurochemistry (directed by Prof. D. Allan Butterfield), University of Kentucky, Lexington (KY), USA

#### **FUNDINGS** (maximum 5 best)

Date:           Type, title of the project, funding agency

**2017 (PI):** Grant, “Nuove strategie terapeutiche per la prevenzione della malattia di Alzheimer”, Banca d’Italia n. 12868/17 del 5.1.2017 – **50.000,00 Euro**

**2017 (PI):** Grant (Progetti Medi), Biliverdin reductase-A impairment mediates the development of insulin resistance in obesity and T2DM: a novel mechanism of action, Sapienza Univ. of Rome, Project ID RM11715C77336E99 – 12.000,00 Euros

**2015 (Co-PI):** Grant, Cross-talk between insulin signalling and oxidative stress in Alzheimer disease: A new paradigm, Italian Ministry of Education, Project ID RBSI144MTL – **170.000,00 Euro**

**2014 (PI):** Grant, Biliverdin reductase-a in brain insulin signaling and oxidative stress- mediated neurodegeneration, European Union's Seventh Framework Programme (FP7/2007-2013) Project ID 624341 – **180.000,00 Euro**

**2014 (PI):** Grant (Progetti Avvio alla Ricerca), The Heme Oxygenase-1/Biliverdin reductase-A system as novel therapeutic target for simvastatin treatment in Alzheimer Disease, Sapienza Univ. of Rome, Project ID C26N1448XN – 3.000,00 Euros

#### **PROFESSIONAL MEMBERSHIPS AND OTHER ACTIVITIES** (maximum 100 words)

Date:           Type, etc..

**2019:** Symposium Chair, T21RS International Conference, Barcelona

**2018-2019:** Topic Editor, Frontiers in Neuroscience

**2014:** Guest Editor, Current Alzheimer Research

**Since 2010:** Member of the European Association for the Study of Diabetes, European Society for Neurochemistry, International Society to Advance Alzheimer's Research and Treatment, Trisomy

21 Research Society, Italian Society of Biochemistry and Molecular Biology, Society for Redox Biology and Medicine.

**Since 2009:** Invited speaker at 14 International Conferences among which SFRBM (2015 and 2016), T21RS (2018), EASD (2018) and AD/PD (2019) meetings.

**Since 2008:** Reviewer for International peer-review Journals i.e., Brain, FRBM, Neurobiology of Disease, BBA-Molecular Basis of Disease, etc.

### **5 BEST PUBLICATIONS** (since 2009):

**Eugenio Barone**, Fabio Di Domenico, Rukhsana Sultana, Raffaella Coccia, Cesare Mancuso, Marzia Perluigi, D. Allan Butterfield. Heme Oxygenase-1 Post-translational Modifications in the Brain of Subjects with Alzheimer Disease and Mild Cognitive Impairment. *Free Radical Biol Med*, 52:2292-2301, 2012.

**Eugenio Barone**, Fabio Di Domenico, Tommaso Cassano, Andrea Arena, Antonella Tramutola, Michele Angelo Lavecchia, Raffaella Coccia, D. Allan Butterfield, Marzia Perluigi. Impairment of biliverdin reductase-A promotes brain insulin resistance in Alzheimer disease: A new paradigm. *Free Rad Biol Med*, 91: 127-142, 2016.

**Eugenio Barone**, Antonella Tramutola, Francesca Triani, Silvio Calcagnini, Fabio Di Domenico, Cristian Ripoli, Silvana Gaetani, Claudio Grassi, D. Allan Butterfield, Tommaso Cassano and Marzia Perluigi. Biliverdin reductase-A mediates the beneficial effects of intranasal insulin administration in Alzheimer disease. *Molecular Neurobiology*, in press, 2018.

Nidhi Sharma, Antonella Tramutola, Chiara Lanzillotta, Andrea Arena, Carla Blarzino, Tommaso Cassano, D. Allan, Butterfield, Fabio Di Domenico, Marzia Perluigi, **Eugenio Barone**. Loss of biliverdin reductase-A favors Tau hyper-phosphorylation in Alzheimer's disease. *Neurobiol Dis*, 125:176-189, 2019.

Flavia Agata Cimini, Andrea Arena, Ilaria Barchetta, Antonella Tramutola, Valentina Ceccarelli, Chiara Lanzillotta, Mario Fontana, Laura Bertocchini, Frida Leonetti, Danila Capoccia, Gianfranco Silecchia, Claudio DiCristofano, Caterina Chiappetta, Fabio Di Domenico, Marco Giorgio Baroni, Marzia Perluigi, Maria Gisella Cavallo, **Eugenio Barone**. Reduced biliverdin reductase-A are associated with early alterations of insulin signalling in obesity. *BBA Mol Bas Dis*, in press, 2019.

### **BIBLIOMETRIC DATA**

ORCID ID: 0000-0002-7028-4251

*(SCOPUS database)*

Total publications: 64

Total citations: 2014

H-index: 26

## **Eugenio Barone** **Curriculum vitae**

### **CONTATTI**

Telefono studio: +39 06 49910935

Indirizzo email: [eugenio.barone@uniroma1.it](mailto:eugenio.barone@uniroma1.it)

### **TITOLI DI STUDIO** (laurea e post-laurea)

Data:           Tipo, sede

**2011:** Dottorato di Ricerca in Neuroscienze, Istituto Di Farmacologia, Università Cattolica del Sacro Cuore, Roma

**2006:** Laurea Magistrale in Chimica e Tecnologia Farmaceutiche (summa cum laude), Dipartimento di Farmacia Scienze della Salute e della Nutrizione, Università della Calabria, Arcavacata di Rende (CS)

### **CARRIERA PROFESSIONALE**

Data:           Posizione, sede

**2016-presente:** Ricercatore RTD-b, Dipartimento di Scienze Biochimiche “A. Rossi-Fanelli”, Sapienza Università di Roma, Roma, IT

**2015-2018:** Ricercatore Associato, Facoltà di Medicina, Università Autonoma del Cile, Providencia, Santiago, CL

**2014-2016:** Ricercatore PostDoc all'interno del Settimo Programma Quadro (FP7/2007-2013) della Comunità Europea “People Programme (Marie Curie Actions)”, Dipartimento di Scienze Biochimiche “A. Rossi-Fanelli”, Sapienza Università di Roma, Roma, IT

**2012-2014:** Ricercatore PostDoc, Brain Mind Institute, Swiss Federal Institute of Technology (EPFL), Losanna, CH

**2010-2011:** Borsista, Istituto Di Farmacologia, Università Cattolica del Sacro Cuore, Roma, IT

**2010:** Studente Visitatore nell'ambito del programma di Dottorato in Neuroscienze presso (a) Department of Molecular and Biomedical Pharmacology in the Sanders-Brown Center on Aging and (b) Department of Chemistry, Laboratory of Neurochemistry University of Kentucky, Lexington, (KY), USA

**2007-2010:** Studente del Dottorato in Neuroscienze, Istituto Di Farmacologia, Università Cattolica del Sacro Cuore, Roma, IT

**2006-2007:** Borsista, Istituto Di Farmacologia, Università Cattolica del Sacro Cuore, Roma, IT

**2005-2006:** Studente Visitatore, Istituto di Patologia Generale, Università Cattolica del Sacro Cuore, Roma, IT

**2004:** Studente Visitatore nell'ambito del progetto ERASMUS, Faculté de Pharmacie, Université, Paris Descartes (Paris V), Paris, FR

**2000-2006:** Studente del Corso di Laurea Magistrale in Chimica e Tecnologia Farmaceutiche, Dipartimento di Farmacia Scienze della Salute e della Nutrizione, Università della Calabria, Arcavacata di Rende (CS)

### **ATTIVITA' DIDATTICA ATTUALE** (anno 2018/19)

Corso, facoltà, sede.

**Biochimica:** Corso di Laurea in Medicina e Chirurgia “A” – 3 CFU SSD BIO/10.

**Biochimica:** Scuola di Specializzazione in Neurologia (Policlinico Umberto I) - 1 CFU SSD BIO/10.

**Biochimica:** Corso di Laurea in Infermieristica (Corso di laurea G - ASL Roma 5 - Colferro (RM) L/SNT1) - 2 CFU SSD BIO/10.

**Biochimica:** Corso di Laurea in Infermieristica (Corso di laurea L – Az. San Giovanni Addolorata L/SNT1) - 2 CFU SSD BIO/10.

**Chimica e propedeutica Biochimica:** Corso di Laurea in Tecniche Audiometriche (Roma Azienda Policlinico Umberto I L/SNT3) - 2 CFU SSD BIO/10.

**Chimica e propedeutica Biochimica:** Corso di Laurea in Tecniche Audioprotesiche (Roma Azienda Policlinico Umberto I L/SNT3) - 2 CFU SSD BIO/10.

#### **RICONOSCIMENTI, PREMI E BORSE DI STUDIO** (massimo 5 migliori)

Data:           Tipo, sede

**2017:** Trisomy 21 Research Society (T21RS) Travel Award, Conferenza Biennale, Chicago (IL), USA

**2017:** Alzheimer Association International Conference (AAIC) Travel Fellowship, Conferenza Annuale, London, UK

**2015 and 2016:** Society for Free Radical Biology and Medicine (SFRBM) Travel Awards, Conferenza Annuale tenuta a Boston (2015) e San Francisco (2016)

**2013:** Federation of the European Pharmacological Society (EPHAR) Fellowship Award, 11<sup>th</sup> Summer School of Neuroscience, Catania, IT

**2010:** Society for Free Radical Biology and Medicine (SFRBM) Fellowship Awards, Department of Chemistry, Laboratory of Neurochemistry (directed by Prof. D. Allan Butterfield), University of Kentucky, Lexington (KY), USA

#### **FINANZIAMENTI** (massimo 5 migliori)

Data:           Tipo di finanziamento, titolo del progetto, ente finanziatore

**2017 (PI):** Finanziamento, “Nuove strategie terapeutiche per la prevenzione della malattia di Alzheimer”, Banca d’Italia n. 12868/17 del 5.1.2017 – **50.000,00 Euro**

**2017 (PI):** Progetti Medi, Biliverdin reductase-A impairment mediates the development of insulin resistance in obesity and T2DM: a novel mechanism of action, Università Sapienza di Roma, Progetto n. RM11715C77336E99 – 12.000,00 Euro

**2015 (Co-PI):** Finanziamento, Cross-talk between insulin signalling and oxidative stress in Alzheimer disease: A new paradigm, Ministero dell’Istruzione, dell’ Università e della Ricerca, Progetto n. RBSI144MTL – **170.000,00 Euro**

**2014 (PI):** Finanziamento, Biliverdin reductase-a in brain insulin signaling and oxidative stress-mediated neurodegeneration, Settimo Programma Quadro della Comunità Europea (FP7/2007-2013) Progetto n. 624341 – **180.000,00 Euro**

**2014 (PI):** Progetti Avvio alla Ricerca, The Heme Oxygenase-1/Biliverdin reductase-A system as novel therapeutic target for simvastatin treatment in Alzheimer Disease, Università Sapienza di Roma, Progetto n. C26N1448XN – 3.000,00 Euro

#### **ISCRIZIONI PROFESSIONALI E ALTRE ATTIVITA’** (massimo 100 parole)

Data:           Tipo, etc..

**2019:** Presidente di un Simposio, T21RS International Conference, Barcelona

**2018-2019:** Topic Editor, Frontiers in Neuroscience

**2014:** Guest Editor, Current Alzheimer Research

**Since 2010:** Membro di European Association for the Study of Diabetes, European Society for Neurochemistry, International Society to Advance Alzheimer's Research and Treatment, Trisomy

21 Research Society, Italian Society of Biochemistry and Molecular Biology, Society for Redox Biology and Medicine.

**Since 2009:** Relatore su invito a 14 Conferenze internazionali tra cui SFRBM (2015 and 2016), T21RS (2018), EASD (2018) and AD/PD (2019) meetings.

**Since 2008:** Revisore per riviste internazionali peer-review tra cui, Brain, FRBM, Neurobiology of Disease, BBA-Molecular Basis of Disease, etc.

### **5 MIGLIORI PUBBLICAZIONI** (dal 2009):

**Eugenio Barone**, Fabio Di Domenico, Rukhsana Sultana, Raffaella Coccia, Cesare Mancuso, Marzia Perluigi, D. Allan Butterfield. Heme Oxygenase-1 Post-translational Modifications in the Brain of Subjects with Alzheimer Disease and Mild Cognitive Impairment. *Free Radical Biol Med*, 52:2292-2301, 2012.

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Nidhi Sharma, Antonella Tramutola, Chiara Lanzillotta, Andrea Arena, Carla Blarzino, Tommaso Cassano, D. Allan, Butterfield, Fabio Di Domenico, Marzia Perluigi, **Eugenio Barone**. Loss of biliverdin reductase-A favors Tau hyper-phosphorylation in Alzheimer's disease. *Neurobiol Dis*, 125:176-189, 2019.

Flavia Agata Cimini, Andrea Arena, Ilaria Barchetta, Antonella Tramutola, Valentina Ceccarelli, Chiara Lanzillotta, Mario Fontana, Laura Bertocchini, Frida Leonetti, Danila Capoccia, Gianfranco Silecchia, Claudio DiCristofano, Caterina Chiappetta, Fabio Di Domenico, Marco Giorgio Baroni, Marzia Perluigi, Maria Gisella Cavallo, **Eugenio Barone**. Reduced biliverdin reductase-A are associated with early alterations of insulin signalling in obesity. *BBA Mol Bas Dis*, in press, 2019.

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