

Riccardo Pierantoni
CURRICULUM VITAE

Personal data

Name: Pierantoni

Surname: Riccardo

**Professional Address: Department of Experimental Medicine
Università della Campania "Luigi Vanvitelli"
Via Costantinopoli 16, 80138
NAPOLI, ITALIA**

Nationality: Italian

Date and place of birth: November 24, 1951 - Napoli, ITALIA

University degrees

1975: Doctor in Biological Sciences

1979: Professore Incaricato

1985: Associate Professor

1989: Full Professor

Professional Experience

**1978-1979: Instituut voor Veetelkundig Onderzoek "Schoonoord", Zeist, THE
NETHERLANDS (Dr.D.F.M.van de Wiel)**

1983: MRC Reproductive Biology Unit, Edinburgh, UK (Dr.R.M. Sharpe)

**1990: Department of Zoology, University of Alberta, Edmonton, CANADA (Prof.
R.E. Peter)**

**Department of Zoology, University of Alberta, Calgary, CANADA (Prof. H.
Habibi)**

**Department of Integrative Biology, University of California, Berkeley, USA
(Prof. P. Licht)**

2006: University of Washington, Seattle (USA, Prof K. Mackie)

Research Service

**1992-2000: Chairman of the Department "Fisiologia Umana e Funzioni Biologiche
Integrate "F. Bottazzi"**

1994 - 1998: Councillor of the European Society for Comparative Endocrinology

1998-2008 Councillor of the Istituto Nazionale Biostrutture e Biosistemi

2001-2004 : Chairman of the Department of Experimental Medicine

2006-2010: Research Delegate (on behalf of The Rector)

2010-2014: Pro-Rector (Research)

2017 to date: President of the Italian Association for Biology and General and Molecular Genetics (AIBG)

Referee for International Journals

General and Comparative Endocrinology

Ann. NY Acad Sci

Endocrinology

J. Neuroendocrinology

J. Endocrinology

J.Clin. Endocrinol. Metab.

J. Comparative Physiology

Gene

Comparative Biochemistry and Physiology

J. Experimental Zoology

Biology of Reproduction

Molecular and Cellular Endocrinology

Reproductive Biology and Endocrinology

Asian Journal of Andrology

International Journal of Andrology

Developmental Biology

Pharmacological Research

British Journal of Pharmacology

FEBS Journal

Cannabinoids

International Journal of Biomedical Science

J.Physiol.

Cellular and Molecular Life Sciences

European Journal Obstetrics and Gynecology and Reproductive Biology

Pharmaceuticals

Frontiers Endocrinology

Reproductive BioMedicine Online

Reproductive Toxicology

Theriogenology

Clinical Nutrition

International Journal of Molecular Sciences

PNAS

FASEB

Plos ONE

Reproduction

Placenta

Electronic Journal of Biotechnology

Nature Reviews Urology

Andrologia

The Science of Nature (Naturwissenschaften)

Biochimie

Cell and Tissue Research

Scientific Reports

Molecular Human Reproduction

Human Reproduction

Histochemistry and Cell Biology

Editor of International Journals

General and Comparative Endocrinology (Associate Editor)

Molecular and Cellular Endocrinology (Guest Editor)

Frontiers in Experimental Endocrinology (Review Editor and Associate Editor)

Frontiers in Cancer Endocrinology (Review Editor)

Frontiers in Systems and Translational Endocrinology (Review Editor),

Research Journal of Endocrinology and Metabolism (Senior Editor)

Editorial Board

Reproductive Biology and Endocrinology (2003-2012)

Research Journal of Endocrinology and Metabolism

Referee of Research Institutions

Italian Space Agency (ASI)

Regione Lazio

Regione Emilia-Romagna

Wellcome trust

National Research Council (CNR)

Italian Ministry of Research and Education (MIUR-CIVR-VQR)

UE (Health; People: Life)

**National Centre for Research and Development, National Science Centre
(Narodowe Centrum Nauki – NCN) (Poland)**

Austrian Science Fund (FWF)

The National Centre for Research and Development (NCBR, Poland)

Academy membership

- **The New York Academy of Sciences**
- **European Society for Comparative Endocrinology (1994-1998 Councillor)**
- **Unione Zoologica Italiana**
- **Associazione Italiana di Biologia e Genetica**

Awards

- 1986 from Società Italiana di Scienze Lettere ed Arti**
- 2009 General and Comparative Endocrinology: Top Reviewer**
- 2011: nomination at 12th Royan International Research Award**
- 2013: Theriogenology “Certificate of Reviewing” awarded in November**
- 2014: nomination at 15th Royan International Research Award**
- 2015: Reproductive Toxicology and General and Comparative Endocrinology, “Certificate of Reviewing” awarded in January and July**

Chairman at international meetings

- **Symposium “Basic and Pharmacological Aspects of Cannabinoid Activity in Nervous and Reproductive Systems” Napoli, 14-15 giugno 2007.**
- **XIV International Congress of Comparative Endocrinology, Sorrento, Italy, 2001**
- **Cellular Signalling in Reproduction, Camerino, Italy 1992, with F.Facchinetti, W Henderson and A.M. Polzonetti-Magni**

Research Grants

- 1988-1992: Principal Investigator bilateral CNR projects**
- 1990-1992: Research Unit Coordinator project 40%MURST “Physiopatology of Reproduction”**
- 1997-2000: Research Unit Coordinator CNR finalized project “Biotechnology”**
- 1998-2002: Research Unit Coordinator “PRIN” (Principal Investigator Prof Raffaele Geremia)**
- 2003-2011/2019: Principal Investigator “PRIN”**
- 2004-2015: Principal Investigator L5 “Regione Campania”**

Main Research Accomplishment

- **Comparative studies on the hypohalamus-pituitary-gonadal axis activity**
- **Local regulation of testicular activity in vertebrates**
- **Gene activation during spermatogenesis in Vertebrates**

Publications

- # 180 in international journals**
- # 160 abstracts in National and International Meetings**

9 books

Main Publications

R.Pierantoni, L.Iela, M.D'Istria, S.Fasano, R.K.Ra-stogi, G.Delrio (1984). Seasonal testosterone profile and testicular responsiveness to pituitary factors and gonadotropin releasing hormone during two different phases of the sexual cycle of the frog (Rana esculenta). *J.Endocrinol.* 102: 387-392.

R.Pierantoni, S.Fasano, L.Di Matteo, S.Minucci, B.Varriale, G.Chieffi (1984) Stimulatory effect of a GnRH agonist (buserelin) in in vitro and in vivo testosterone production by the frog (Rana esculenta) testis. *Mol.Cell. Endocrinol.* 38: 215-219.

S.Minucci, L.Di Matteo, R.Pierantoni*, B.Varriale, R.K. Rastogi and G.Chieffi (1986). In vivo and in vitro stimulatory effect of gonadotropin-releasing-hormone analog (HOE766) on spermatogonial multiplication in the frog, Rana esculenta. *Endocrinology* 119:731- 736.

L.Di Matteo, S.Minucci, S.Fasano, R.Pierantoni*, B.Varriale, G.Chieffi (1988). GnRH antagonist decreases androgen production and spermatogonial multiplication in frog (Rana esculenta): indirect evidence for the existence of GnRH or GnRH-like material receptors in the hypophysis and testis. *Endocrinology* 122: 62- 67.

S.Minucci, L.Di Matteo, G.Chieffi-Baccari and R.Pierantoni (1989). A gonadotropin-releasing hormone analog induces spermiation in intact and hypophysectomized frogs, Rana esculenta. *Experientia* 45: 1118-1121.

G.Chieffi, R.Pierantoni and S.Fasano (1991). Immunoreactive GnRH in hypothalamic areas. *Int.Rev.Cytol.* 127: 1-55.

S.Minucci,S. Fasano, M.D'Antonio and R. Pierantoni (1993). Dopamine regulation of testicular activity in intact and hypophysectomized frogs, Rana esculenta. *Experientia* 49: 65-67.

F.Facchinetti,A.R.Genazzani,M.Vallarino,M.Pestarino,A.PolzonettiMagni,O. Carnevali,G.Ciarcia,S.Fasano,M.D'Antonio and R.Pierantoni (1993). Opioids and testicular activity in the frog, Rana esculenta. *J. Endocrinol.* 137: 49-57.

G.Ciarcia, F. Facchinetti, M. Vallarino, M. Pestarino, M. Paolucci, A.Cardone,S.Fasano,R.Pierantoni and A.R.Genazzani (1994). Opioid peptides and testicular activity in the lizard Podarcis s. sicula Raf. *J.Endocrinol.* 143:565-571

G.Cobellis, R.Pierantoni*, S.Minucci, R.Peranas-Alonso, R.Meccariello and S.Fasano (1999). c-fos Activity in Rana esculenta testis: seasonal and estradiol-induced changes. *Endocrinology*, 140: 3238-3244.

R. Pierantoni (1999). Male reproductive system, amphibians. Eds E. Knobil and J. D. Neil. In: "Encyclopedia of Reproduction". Academic Press, San Diego, 3: 10 - 15.

Cobellis G., Meccariello R., Fienga G., Pierantoni R.* and Fasano S. (2002). Cytoplasmic and nuclear Fos protein forms regulate resumption of spermatogenesis in the frog, Rana esculenta. *Endocrinology* 143: 163-170.

Pierantoni R, Cobellis G, Meccariello R and Fasano S (2002). Evolutionary aspects of cellular communication in the vertebrate hypothalamo-hypophysio-gonadal axis. *Int.Rev.Cytol.* . 218: 69-141

Meccariello R., Cobellis G., Junier MP., Ceriani M., Boilée S., Pierantoni R.*, and Fasano S (2002). MSJ-1: an evolutionarily conserved protein for spermiogenesis. *Biol.Reprod.* 66: 1328-1335

Boilleé S., Berruti G., Meccariello R., Grannec G., Razan F., Pierantoni R., Fasano S. and Junier M.P. (2002). Early defect in the expression of a HSP40/DNAJ chaperon protein, mouse sperm DNAJ (MSJ-1), in the spinal cord of the murine model of motoneuronal degeneration wobbler. *Neuroscience* 113: 825-835.

Cobellis G, Meccariello R, Minucci S, Palmiero C, Pierantoni R*, Fasano S.(2003). Cytoplasmic vs nuclear localization of Fos related proteins in the, Rana esculenta, testis: in vivo and direct in vitro effect of a GnRH agonist. *Biol.Reprod.* 68: 954-960.

Ferrara D., Palmiero C., Branno M., Pierantoni R.* and Minucci S. (2004). Testicular activity of Mos in the frog, Rana esculenta: a new role in spermatogonial proliferation. *Biol. Reprod.* 70: 1782-1789.

Cobellis G., Lombardi M., Scarpa D., Izzo G., Fienga G., Meccariello R., Pierantoni R.* and Fasano S. (2005) Fra-1 activity in the frog, Rana esculenta, testis: a new role in sperm release regulation. *Biol Reprod* 72: 1101-1108.

Cobellis G., Cacciola G., Scarpa D., Meccariello R., Chianese R., Franzoni M.F., Mackie K., Pierantoni R.* and Fasano S. (2006). Endocannabinoid system in frog and rodent testis: type-1 cannabinoid receptor and fatty acid amide hydrolase activity in male germ cells. *Biol Reprod* 75: 82-89.

Meccariello R., Franzoni M.F., Chianese R., Cottone E., Scarpa D., Donna D., Cobellis G., Guastalla A., Pierantoni R.* and Fasano S. (2008). Interplay between the endocannabinoid system and GnRH-I in the forebrain of the anuran amphibian *Rana esculenta*. *Endocrinology* 149: 2149-2158.

Pierantoni R., Rossi F., Maione S and Fasano S. (2008). Basic and pharmacological aspects of cannabinoid activity in nervous and

reproductive systems. *Molecular and Cellular Endocrinology*, Elsevier Ireland Ltd.

Cacciola G., Chioccarelli T., Mackie K., Meccariello R., Ledent C., Fasano S., Pierantoni R* and Cobellis G. (2008). Expression of type 1 cannabinoid receptor during rat postnatal testicular development: possible involvement in adult Leydig cell proliferation. *Biol. Reprod.* 79: 758-765

Acone G., Trabucco E., Cacciola G., Chioccarelli T., Colacurci N., Cobellis L., Mackie K., Meccariello R., Fasano S., R. Pierantoni R.* and Cobellis G. (2009). Low type 1 cannabinoid receptor levels characterize placental villous in labouring delivery. *Placenta* 30:203-205

Pierantoni R., Cobellis G., Meccariello R., Cacciola G., Chianese R., Chioccarelli T and Fasano S (2009) . CB1 activity in amale reproduction: mammalian and non-mammalian animal models. In "Vitamins and Hormones" (G. Litwack Ed.) vol. 81, pp. 367-387, Elsevier (Amsterdam, London, New York)

Trabucco E., Acone G., Marenga AM., Pierantoni R*, Cacciola G., Chioccarelli T., Mackie K., Fasano S., Colacurci N., Meccariello R., Cobellis G., Cobellis L. (2009). Endocannabinoid system in first trimestre placenta: low FAAH and high CB1 expression characterize spontaneous miscarriage. *Placenta* 30:516-522

Crispi S., Calogero R.A., Santini M., Mellone P., Vincenti B., Citro G., Vicidomini G., Fasano S., Meccariello R., Cobellis G., Menegozzo S., Pierantoni R., Facciolo F., Baldi S., Menegozzo (2009). Global gene expression profilino of human pleural mesotheliomas: identification of matrix metalloproteinase 14 (MMP-14) as potential tumor target. *PLoS ONE* 4:1-13

Cobellis G., Ricci G., Cacciola G., Orlando P., Petrosino S., Cascio M.G., Bisogno T., De Petrocellis L., Chioccarelli T., Altucci L., Fasano S., Meccariello R., Pierantoni R*, Ledent C., Di Marzo V. (2010). A gradient of 2-arachidonoylglycerol regulates epididymal sperm cell start-up. *Biol. Reprod.* 82: 451-459

Cobellis G., Ricci G., Cacciola G., Orlando P., Petrosino S., Cascio M.G., Bisogno T., De Petrocellis L., Chioccarelli T., Altucci L., Fasano S., Meccariello R., Pierantoni R*, Ledent C., Di Marzo V. (2010). A gradient of 2-arachidonoylglycerol regulates epididymal sperm cell start-up. *Biol. Reprod.* 82: 451-458

Chioccarelli T., Cacciola G., Altucci L., Lewis S.E.M., Simon L., Ricci G., Ledent C., Meccariello R., Fasano S., Pierantoni R*, Cobellis G. (2010) Cannabinoid receptor 1 influences chromatin remodeling in mouse spermatids by affecting content of transition protein 2 mRNA and histone displacement. *Endocrinology*: 151:517-529

N. Battista, Meccariello R., Cobellis G., Fasano S., Di Tommaso M., Pirazzi V., Konje J.C., Pierantoni R.**, Maccarone M. (2012). The role of endocannabinoids in gonadal function and fertility along the evolutionary axis. *Mol. Cell. Endocrinol.* 355:1-14

R. Chianese, V. Ciaramella, D. Scarpa, S. Fasano, R. Pierantoni*, R. Meccariello (2012) Anandamide regulates the expression of *GnRH1*, *GnRH2* and *GnRHs* in frog testis. *Am. J. Physiol.* 303:E475-E487

R. Chianese, V. Ciaramella, S. Fasano, R. Pierantoni*, R. Meccariello (2013) Kisspeptin receptor, GPR54, as a candidate for the regulation of testicular activity in the frog, *Rana esculenta*. *Biol Reprod.* 88:1-11

G. Cacciola, T. Chioccarelli, L. Altucci, C. Ledent, J.I. Mason, S. Fasano, R. Pierantoni*, G. Cobellis (2013). Low 17beta-estradiol levels in *Cnr1* knock-out male mice affect spermatid chromatin remodeling by interfering with chromatin reorganization. *Biol Reprod* 152:1-12

V. Ciaramella, R. Meccariello, T. Chioccarelli, M. Sirleto, S. Fasano, R. Pierantoni and R. Chianese (2016). Anandamide acts via kisspeptin in the regulation of testicular activity of the frog, *Pelophylax esculentus*. *Molecular and Cellular Endocrinology* 224:75-84

A. Suglia, R. Chianese, M. Migliaccio, C. Ambrosino, S. Fasano, R. Pierantoni*, G. Cobellis, T. Chioccarelli (2016). Bisphenol A induces hypothalamic down-regulation of CB1 and anorexic effects in male mice. *Pharmacological Research* 113:376-383

R. Chianese, A. Viggiano, K. Urbanek, D. Cappetta, J. Troisi, M. Scafuro, M. Guida, G. Esposito, L.P. Ciuffreda, F. Rossi, L. Berrino, S. Fasano, R. Pierantoni, A. De Angelis, R. Meccariello (2018). Chronic exposure to low dose of bisphenol A impacts on the first round of spermatogenesis via SIRT1 modulation. *Scientific Reports* 8: 2961

Marco Ragusa, Davide Barbagallo, Teresa Chioccarelli, Francesco Manfredola, Gilda Cobellis, Cinzia Di Pietro, Duilia Brex, Rosalia Battaglia, Silvia Fasano, Bruno Ferraro, Carolina Sellitto, Concetta Ambrosino, Luca Roberto, Michele Purrello, Riccardo Pierantoni*, Rosanna Chianese (2019). CircNAPEPLD is expressed in human and murine spermatozoa and physically interacts with oocyte miRNAs. *RNA Biology* in press

- *Corresponding Author
- ** Equally Senior Author

Books

- 1) Chieffi G, Dolfini S, Malcovati M, Pierantoni R., Tenchini ML 1990. *Biologia e Genetica*, Edises

- 2) **F. Facchinetti, I. W. Henderson, R. Pierantoni and A. Polzonetti-Magni (1993). Cellular Communication in Reproduction. J. Endocrinology Ltd, Bristol, pp. 1-228.**
- 3) **Chieffi G, Dolfini S, Malcovati M, Pierantoni R., Poli M, Tenchini ML 2000. Biologia, Genetica Generale e del Comportamento, Edises**
- 4) **Goos H.J.Th, Rastogi R.K., Vaudry H. and Pierantoni R (2001). Perspective in Comparative Endocrinology: Unity and Diversity. Monduzzi (Bologna) pp. 1-1291**
- 5) **Pierantoni R., Rossi F., Maione S., Fasano S., 2008. Basic and Pharmacological Aspects of Cannabinoid Activity in Nervous and Reproductive system. Molecular and Cellular Endocrinology Elsevier Ireland Ltd.**
- 6) **Pierantoni R 2008 Biologia e Genetica (De Leo G., Ginelli E., Fasano S. Eds). Edises**
- 7) **Meccariello R, Chianese R, Fasano S, Pierantoni R (2013) Endocannabinoids and kisspeptins: two modulators in fight for the regulation of GnRH activity. In "Gonadotropin" J. Vizcarra Ed. Intech, pp57-88**
- 8) **Bonaldo P., Duga S., Pierantoni R., Riva P., Romanelli M.G. (2013). Biologia e Genetica Edises**
- 9) **R. Meccariello, S. Fasano, R. Pierantoni and G. Cobellis (2014). Modulators of hypothalamic-pituitary-gonadal axis for the control of spermatogenesis and sperm quality in vertebrates. E-book Frontiers in Endocrinology pp 1-159**