



Pavia, 24 Maggio 2024

Oggetto:

Indizione elezioni per il rinnovo delle rappresentanze del personale docente e del personale tecnico-amministrativo nel Senato Accademico – triennio accademico 2024-2027

Con la presente invio la mia candidatura quale rappresentante del personale docente (professori associati) della macroarea di Scienze della Vita per le elezioni in oggetto.
Allego il mio *curriculum vitae*.

Cordiali saluti,
Manuela Monti

Manuela Monti, PhD
Professore associato di istologia e embriologia
Unità di Istologia e Embriologia
Dipartimento di Sanità Pubblica, Medicina sperimentale e forense
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Personal information

Name	Manuela Monti
E-mail	manuela.monti@unipv.it m.monti@smatteo.pv.it
Nationality	
Date of birth	

Work experience

- Dates April 2023- present
- Name and address of employer University of Pavia, corso strada nuova, 27100 Pavia, Italy
- Type of business or sector Department of Public Health, Experimental and Forensic Medicine, Histology and Embryology Unit, viale Forlanini 8, 27100 Pavia, Italy
- Occupation or position held Associate Professor (SSD BIO-17)
- Main activities and responsibilities Teaching:
 - Cytology (1CFU), histology (1CFU) and embryology (1CFU; SSD BIO-17). Harvey medical course, Faculty of medicine, University of Pavia
 - Embryology (1CFU; SSD BIO-17). Golgi medical course, Faculty of medicine, University of Pavia
 - Anatomy and histology (6CFU; SSD BIO-17). Bachelor degree in Biotechnology, Biology and Biotechnology Department, University of Pavia
 - Histology (3CFU; SSD BIO-17). Bachelor degree in Biomedical laboratory technician, Molecular Medicine Department, University of Pavia
 - Experimental and applied histology: tissue engineering and regenerative medicine (3 CFU). Lifelong well-being and healthy aging master course, Clinical-surgical, Diagnostic, and Pediatric Sciences, University of Pavia
 - Socio genomics: how daily life affects (epigenetically) our DNA (3CFU). Public health and lifestyle PhD course, Department of public health, forensic and experimental medicine, University of Pavia
 - Miniature istologiche: dall'ingegneria tissutale agli organoidi, (3CFU). IUSS (University Institute of Advanced Studies), Pavia, Italy

- Research:
Principal investigator (PI) of the “Research Center for Regenerative Medicine” laboratory, Fondazione IRCCS Policlinico San Matteo, Pavia (piattaforma congiunta per la programmazione integrata e lo svolgimento sinergico di progetti o programmi di ricerca comuni tra Università di Pavia e Fondazione IRCCS Policlinico San Matteo).
Projects: differentiation of pluripotent stem cells isolated from human cord blood; differentiation of mesenchymal stem cells from human follicular fluids; the role of endocytosis during female gametogenesis and embryo development
- Dates March 2020- April 2023
 - Name and address of employer University of Pavia, corso strada nuova, 27100 Pavia, Italy
 - Type of business or sector Department of Public Health, Experimental Medicine and Forensic, histology and embryology unit, viale Forlanini 8, 27100 Pavia, Italy
 - Occupation or position held Assistant Professor (RTD-B; BIO-17)
 - Main activities and responsibilities

Teaching:
- Cytology (1CFU), histology (1CFU) and embryology (1CFU; SSD BIO-17). Harvey medical course, Faculty of medicine, University of Pavia
- Embryology (1CFU; SSD BIO-17). Golgi medical course, Faculty of medicine, University of Pavia
- Anatomy and histology (6CFU; SSD BIO-17). Bachelor degree in Biotechnology, Biology and Biotechnology Department, University of Pavia

Research:
Principal Investigator (PI) of the “Research Center for Regenerative Medicine” laboratory, Fondazione IRCCS Policlinico San Matteo, Pavia (piattaforma congiunta per la programmazione integrata e lo svolgimento sinergico di progetti o programmi di ricerca comuni tra Università di Pavia e Fondazione IRCCS Policlinico San Matteo).
Projects: differentiation of pluripotent stem cells isolated from human cord bloods; role of endocytosis in female gametogenesis
- Dates March 2011- February 2020
 - Name and address of employer Fondazione IRCCS Policlinico San Matteo, viale Camillo Golgi 19, 27100 Pavia, Italy
 - Type of business or sector Biotechnology laboratories, Research Center for Regenerative Medicine laboratory
 - Occupation or position held Research Scientist
 - Main activities and responsibilities

Principal Investigator (PI) of the “Research Center for Regenerative Medicine” laboratory, Fondazione IRCCS Policlinico San Matteo, Pavia.

Projects:
Identification, characterization and isolation of female germ line stem cells in mouse and human post-natal ovaries; identification and characterization of pluripotent stem cells from human cord blood; characterization and analysis of very small embryonic like stem cells to promote kidney regeneration and differentiation;

analysis of the in vitro activity of mesenchymal stem cells for the growth of the jaw bone in dentistry

- Dates September 2015- October 2015
 - Name and address of employer Fondazione IRCCS Policlinico San Matteo, viale Camillo Golgi 19, 27100 Pavia, Italy
 - Type of business or sector Keio University School of Medicine, 35 Shinanomachi, Shinjuku-ku, Tokyo 160-8582, Japan
 - Occupation or position held Visiting Scientist c/o Systems Medicine, Minoru Ko lab
 - Main activities and responsibilities Zscan4 analysis on mouse GV oocytes, adult and post-implanted embryo gonads
-
- Dates June 2012- September 2012
 - Name and address of employer Fondazione IRCCS Policlinico San Matteo, viale Camillo Golgi 19, 27100 Pavia, Italy
 - Type of business or sector Institute for stem cells biology and regenerative medicine, Stanford School of Medicine, Stanford, CA, USA
 - Occupation or position held Visiting scientist c/o Renee Reijo Pera lab
 - Main activities and responsibilities Analysis of human immature oocytes donated to research to investigate the causes leading to female infertility
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- Dates March 2010- March 2011
 - Name and address of employer Gurdon Institute, University of Cambridge, Tennis Court Road, Cambridge, CB2 1QN, United Kingdom
 - Type of business or sector Laboratory of Genetics
 - Occupation or position held Visiting scientist c/o prof. D. Glover and M. Zernicka-Goetz labs
 - Main activities and responsibilities Analysis of proteins involved in spindle formation of mouse preimplantation embryos
-
- Dates May 2007 - March 2010
 - Name and address of employer National Institute on Aging, National Institutes of Health, 251 Bayview Blvd 21224 Baltimore, MD, USA
 - Type of business or sector Laboratory of genetics. Supervisor: Dr. Minoru Ko
 - Occupation or position held Post-doc
 - Main activities and responsibilities Analysis of gene expression with microarrays technology and q-real time PCR on mouse preimplantation embryos for the identification of the factor(s) involved during ZGA regulation
Analysis of germ cells specific genes in adult mouse ovary, testis and in fetal gonads
Analysis of gene expression in antral SN and NSN oocytes with microarray technology, immunohistochemistry, and FT-IR (Fourier Transform Infrared Spectroscopy) techniques
-
- Dates October 2005- April 2007
 - Name and address of employer University of Pavia, corso strada nuova, 27100 Pavia, Italy
 - Type of business or Laboratory of Developmental Biology, Department of Animal

- sector Biology, piazza Botta n.9, 27100 Pavia, Italy
- Occupation or position held Post-doc (fellowship from Department of Animal Biology, Laboratory of Developmental Biology, University of Pavia)
 - Main activities and responsibilities Analysis of gene expression on reprogrammed fibroblasts, reprogrammed stem cells and embryoid bodies
- Dates October 2002- September 2005
- Name and address of employer University of Pavia, corso strada nuova, 27100 Pavia, Italy
 - Type of business or sector Laboratory of Developmental Biology, Department of Animal Biology, piazza Botta n.9, 27100 Pavia, Italy
- Occupation or position held PhD student
 - Main activities and responsibilities Analysis of gene expression and protein localization during mouse folliculogenesis
- Dates December 2001- September 2002
- Name and address of employer University of Pavia, corso strada nuova, 27100 Pavia, Italy
 - Type of business or sector Laboratory of Developmental Biology, Department of Animal Biology, piazza Botta n.9, 27100 Pavia, Italy
- Occupation or position held Post-bac (fellowship from Department of Animal Biology, Laboratory of Developmental Biology, University of Pavia)
 - Main activities and responsibilities Analysis of the dioxin effects on preimplantation mouse embryos with molecular and biochemical methods

Education and training

- Dates October 2002 – October 2005
- Name and type of organization providing education and training University of Pavia, Department of Engineering, PhD study in Bioengineering and Bioinformatics. Final score “Excellent”
 - Principal subjects/occupational skills covered PhD thesis: Quantitative analysis of gene expression during oogenesis in fetal and adult mice: gonadotropins affect the level of gene transcription in oocytes
Tutor: prof. CarloAlberto Redi, University of Pavia
- Title of qualification awarded Doctor of Philosophy in Bioengineering and Bioinformatics
- Dates November 2001
- Name and type of organization providing education and training University of Pavia, Bachelor course in Biological Sciences, Faculty of Mathematical, Physical and Natural Sciences, Department of Animal Biology, Laboratory of Developmental Biology
 - Principal subjects/occupational skills covered Thesis in Molecular Biology: Gli effetti della 2,3,7,8, tetraclorodibenzo-para-diossina sullo sviluppo embrionale di topo.
Tutor: Prof. Silvia Garagna, University of Pavia
- Title of qualification awarded Bachelor’s degree in Biology
- Dates 1995
- Name and type of organization providing Liceo Scientifico “Nicolo’ Copernico” – Pavia, Italy

education and training

- Title of qualification awarded High School Degree

Personal skills and competences

Mother tongue Italian

Other languages

English

- Reading skills Excellent (C2 level)
- Writing skills Excellent (C1 level)
- Verbal skills Excellent (C2 level)

Japanese

- Reading skills Beginner (A1 level)
- Writing skills Beginner (A1 level)
- Verbal skills Beginner (A1 level)

Academic and scientific career

From 2023- present: member of the Consiglio Scientifico Bibliotecario 3, area Medica, University of Pavia

From 2023- present: member of the Public health and lifestyle PHD “collegio docenti”, University of Pavia

From 2023- present: member of the Society for the Study of Reproduction (SSR), USA

From September 2023- present: member of the Società Italiana di Anatomia e Istologia (SIAI)

From 31-01-2022: National abilitation to Professore di II fascia (associate professor) for the teaching of histology (settore concorsuale 05/H2);

2022-present: Lecturer of “Miniature istologiche: dall'ingegneria tissutale agli organoidi”, IUSS (University Institute of Advanced Studies), Pavia, Italy;

2021-2022: Lecturer of “Evoluzione e biodiversità”, IUSS (University Institute of Advanced Studies), Pavia, Italy;

2018-2021: Lecturer in Histology-Embryology-Cytology (3 CFU, SSD BIO-17) Harvey medical course, University of Pavia, Italy

From July 2020- present: member of the collegio docenti di Istologia e embriologia umana

From 24-07-2017: National abilitation to Professore di II fascia (associate professor) for the teaching of comparative anatomy and cytology (settore concorsuale 05/B2)

2016-present. Scientific committee member of “Mecrì, laboratory of philosophy and culture”, Milan, Italy.

2016-2021. Lecturer of “Stem cells and regenerative medicine”, IUSS (University Institute of Advanced Studies), University of Pavia, Italy

2016-2020. Academic tutoring activities in Zoology (BIO/05, LT Scienze Biologiche), University of Pavia, Italy

2016-2020. Academic tutoring activities in Developmental Biology

(BIO/06, LM Molecular Biology and Genetics), University of Pavia, Italy

2016-2020. Member of the committee panel for student examinations in Zoology and Developmental Biology (BIO/05, LT Scienze Biologiche and BIO/06, LM Molecular Biology and Genetics) Department of Biology and Biotechnology, University of Pavia, Italy

2016-2020. Member of the committee panel for student examinations in Stem Cell Biology, Environmental Biotechnology, Reproduction Biotechnology. Bachelor course in Bioengineering, Engineering department, University of Pavia, Italy

2007. Academic tutoring activities in Stem cells and regenerative medicine, IUSS (University Institute of Advanced Studies), University of Pavia, Italy

2006. Academic tutoring activities in Stem cells and regenerative medicine, IUSS (University Institute of Advanced Studies), University of Pavia, Italy

2006. Academic tutoring activities in Reproduction Biotechnology, University of Pavia, Italy

2005. Academic tutoring activities in Developmental Biology, University of Pavia, Italy

2005. Member of the committee panel for student examinations in Zoology and Developmental Biology. Course of Biological Science, Faculty of Mathematical, Physical and Natural Sciences, University of Pavia, Italy

2005. Member of the committee panel for student examinations in Stem Cell Biology, Environmental Biotechnology, Reproduction Biotechnology. Course of Bioengineering, Faculty of Engineering, University of Pavia, Italy

2004. Academic tutoring activities in Histology and Embryology. Faculty of Medicine, University of Parma, Italy

Organizational skills and competences

Excellent skills in teaching and tutoring young students (both undergraduate and graduate), lab experiments planning, grant writing and thesis preparation (supervisor of several bachelor and master thesis degrees).

Technical skills and competences

Histology and Immunohistochemistry: basic techniques of cytology, histology and immunohistochemistry.

DNA/RNA: nucleic acid extraction.

Embryo culture: In Vitro Maturation (IVM), In Vitro Fertilization (IVF), preimplantation embryo culture, isolation of single blastomere from mouse embryos.

Micromanipulation: isolation of single blastomere from mouse embryos.

Microinjections: injection of mRNA, dsRNA, siRNA in zygotes, 2-cell and 4-cell stage mouse embryos.

Molecular techniques: PCR, Single cell Retro Transcriptase PCR, Real Time PCR, IVT (In vitro Transcription), ISH (In situ Hybridization), Western Blotting, DNA cloning, analysis of DNA Methylation, Microarray technology and bioinformatics analysis

Biophysics techniques: FT-IR (Fourier Transform Infrared

Spectroscopy) on mouse oocytes and embryos.

Cell culture: embryonic and pluripotent stem cells, mesenchymal stem cells, very small embryonic-like stem cells culture and differentiation, embryoid bodies formation and differentiation in ectoderm, mesoderm and endoderm cell types.

Good knowledge of Microsoft Windows and Microsoft Word.

Excellent ability with bioinformatics tools.

- Grants
- 2024: "Development of a predictive model based on Artificial Intelligence to improve the reproductive outcome of Complex Patients undergoing in vitro fertilization treatments". Funding Institution: Fondazione Umberto Veronesi per il progresso delle scienze (20000€). Role: Principal investigator (PI)
2023. "Research of predictive factors of in vitro fertilization (IVF) outcome in women affected by autoimmune disorders: from biological markers to artificial intelligence". Funding Institution: Fondazione IRCCS Policlinico San Matteo, Pavia, Italy (100000€). Role: Principal Investigator (PI)
2021. "Potenziamento della resa di zigoti vitali nelle tecniche di riproduzione assistita". Funding Institution: Fondazione Umberto Veronesi per il progresso delle scienze (25000€). Role: Principal investigator (PI)
2019. "Oomedicine: biomarkers and molecular imaging for good quality oocytes isolation". Funding Institution: Fondazione Umberto Veronesi per il progresso delle scienze (20000€). Role: Principal investigator (PI)
- 2015-present. "Neo-oogenesis: caratterizzazione e isolamento di cellule germinali staminali da ovari umani e murini". Funding Institution: Fondazione IRCCS Policlinico San Matteo, Pavia, Italy (75000€). Role: Principal investigator (PI)
- 2012-2015. "Renal-Committed Embryonic Stem Cells to Promote Kidney Regeneration". Funding Institution: Italian Ministry of Health, Ricerca Finalizzata giovani ricercatori GR-2009-1553664. (80000€). Role: Principal Investigator (PI) of Unit 3

- Scientific publications
- 1- Veiga M, Camia B, Diepenbrock S, Redi CA, Casasco A, **Monti M***. Artificial intelligence selection of viable oocytes from phase contrast images for in vitro maturation and fertilization. *BOR*, 109:386-389 (2023)
 - 2- Pisani S, Chiesa E, Dorati R, Gregorini M, Grignano MA, Ramus M, Ceccarelli G, Croce S, Valsecchi C, **Monti M**, Conti B. Liposome formulation and in vitro testing in non physiological conditions addressed to ex vivo kidney perfusion. *Int J Mol Sci*, 23 (2022)
 - 3- Rodriguez y Baena A, Casasco A, **Monti M***. Hypes and hopes of stem cells in dentistry: a review. *Stem cell Rev Rep*, 18:1294-1308 (2022)
 - 4- **Monti M***, Redi CA, Capanna E. Genome size evaluations in cockroaches: new entries. *European J Histochemistry*, 25:3400 (2022)
 - 5- Pandolfi L, Frangipane V, Bocca C, Marengo A, Tarro Genta E, Bozzini S, Morosini M, D'Amato M, Vitulo S, **Monti M**, Comolli G, Scupoli MT, Fattal E, Arpicco S, Meloni F. Hyaluronic Acid-Decorated Liposomes as Innovative Targeted Delivery System

- for Lung Fibrotic Cells. *Molecules*, 24:3291 (2019)
- 6- Cova E, Pandolfi L, Colombo M, Frangipane V, Inghilleri S, Morosini M, Mrakic-Sposta S, Moretti S, **Monti M**, Pignochino Y, Benvenuti S, Prospero D, Stella G, Morbini P, Meloni F. Pemetrexed-loaded nanoparticles targeted to malignant pleural mesothelioma cells: an in vitro study. *International Journal of Nanomedicine*, 14:773-785 (2019)
- 7- Longo M, Boiani M, Redi CA, **Monti M***. Cytoplasmic lattices are not linked to mouse 2-cell embryos developmental arrest. *European J Histochemistry*, 62:2972 (2018)
- 8- Bianchi N, Longo M, Redi CA, **Monti M***. Mammalian blastocyst mimicry. *Molecular Reproduction and Development* 85:6 (2018)
- 9- **Monti M***, Imberti B, Bianchi N, Pezzotta A, Morigi M, Del Fante C, Redi CA, Perotti C. A novel method for the isolation of pluripotent stem cells from human umbilical cord blood. *Stem cells and development*, 26: 1258-1270 (2017)
- 10- **Monti M***, Calligaro A, Behr B, Reijo-Pera A, Redi CA, Woosidlo M. Functional topography of the human fully grown oocyte. *European J Histochemistry* 61:2769 (2017)
- 11- Ishiguro K, **Monti M**, Akiyama T, Kimura H, N Chikazawa-Nohtomi, Sakota M, Sato S, Redi CA, Ko S, Ko MSH. Zscan4 is expressed specifically during late meiotic prophase in both spermatogenesis and oogenesis. *In vitro cellular & developmental biology-animal*, 53(2):167-168 (2017)
- 12- **Monti M***, Graziano A, Rizzo S, Perotti C, Del Fante C, d'Aquino A, Redi CA, Rodriguez y Baena R. In vitro and in vivo differentiation of progenitor stem cells obtained after mechanical digestion of human dental pulp. *Journal of Cellular Physiology* 232:548-555 (2017)
- 13- **Monti M***, Redi CA. Isolation and characterization of mouse antral oocytes based on nucleolar chromatin organization. *JOVE*, (107), e53616, doi:10.3791/53616 (2016)
- 14- Ciccocioppo R, Cangemi GC, Kruzliak P, Gallia A, Betti E, Badulli C, Martinetti M, Cervio M, Pecci A, Bozzi V, Dionigi P, Visai L, Gurrado A, Alvisi C, Picone C, **Monti M**, Bernardo ME, Gobbi P, Corazza GR. Ex vivo immunosuppressive effects of mesenchymal stem cells on Crohn's disease mucosal T cells are largely dependent on indoleamine 2,3-dioxygenase activity and cell-cell contact. *Stem Cell Research & Therapy*, 6(1): 137 (2015)
- 15- **Monti M***, Del Fante C, Perotti C, Redi CA. Stem cells and the side population theory: a critical review, *Current Tissue Engineering*, 4:4-10 (2015)
- 16- Del Fante C, **Monti M**, Redi CA, Cervio M, Scudeller L, Perotti C. Stem cells and translational medicine: from research to clinical procedures. *Current Tissue Engineering*, 4:11-19 (2015)
- 17- Trovato L, **Monti M**, Del Fante C, Rodriguez y baena R, Lampinen M, Ambrosio L, Redi CA, Perotti C, Kankuri E, Ambrosio G, Graziano A. A new medical device, called Rigeneracons, allows to obtain viable micro-grafts from mechanical disaggregation of human tissues. *Journal of Cellular Physiology*, 230(10):2299-2303 (2015)
- 18- Casiraghi B, **Monti M**, Imberti B. Pluripotent stem cells and tolerance induction in organ transplantation. *Current Opinion In*

- Organ Transplantation, 20(1):86-93 (2015)
- 19- **Monti M***. Comet, stickman or heterochromatic DNA. *Molecular Reproduction and Development*, 81(8):677 (2014)
- 20- Cervio M, Scudeller L, Viarengo G, **Monti M**, DelFante C, Arici V, Perotti C. Conditioned medium from γ -irradiated umbilical cord mononuclear cells: different pro-angiogenic effects on mature and progenitor endothelial cells. *Microvascular Research*, 94:9-16 (2014)
- 21- **Monti M***, Redi CA. The egg, The inside story of a cell. *Molecular Reproduction and Development*, 80:691-697 (2013)
- 22- **Monti M***, Redi CA. Quid hic? Intueri Naturam. Quo munere? Curiosum esse. *Molecular Reproduction and Development*, 79:503 (2013)
- 23- Amano T, Hirata T, Falco G, **Monti M**, Sharova L, Amano M, Sheer S, Hoang H, Piao Y, Stagg C, Yamamizu K, Akiyama T, Ko MSH. Zscan4 restores the developmental potency of embryonic stem cells. *Nature Communications*, 4:1966 (2013)
- 24- **Monti M***, Zanoni M, Calligaro A, Ko M, Mauri PL and Redi CA. Developmental arrest and mouse antral not-surrounded nucleolus oocytes. *Biology of Reproduction* 88:1-7 (2013)
- 25- **Monti M***, Perotti C, DelFante C, Cervio M and Redi CA. Stem cells: sources and therapies. *Biological Research* 45:7-14 (2012)
- 26- **Monti M*** and Redi CA. The biopolitics of frozen embryos. *International Journal of Developmental Biology* 55:243-247 (2011)
- 27- Ami D, Mereghetti P, Natalello A, Doglia SM, Zanoni M, Redi CA and **Monti M**. FT-IR spectral signatures of mouse antral oocytes: molecular markers of oocyte maturation and developmental competence. *BBA Molecular Cell* 1813:1220-1229 (2011)
- 28- Ami D, Natalello A, Mereghetti P, Neri T, Zanoni M, **Monti M**, Doglia SM and Redi CA. FT-IR spectroscopy supported by PCA LDA analysis for the study of embryonic stem cell differentiation. *Spectroscopy* 24(1-2):89-97 (2010)
- 29- Stanghellini I, Falco G, Lee SL, **Monti M**, Ko M. Trim43a, Trim43b and Trim43c: novel mouse genes expressed specifically in mouse preimplantation embryos. *Gene Expression Pattern* 9(8):595-602 (2009)
- 30- Nishiyama A, Xin L, Sharov A, Thomas M, Mowrer G, Meyers E, Piao Y, Mehta S, Yee S, Nakatake Y, Stagg C, Sharova L, Correa-Cerro L, Bassey U, Hoang H, Kim E, Tapnio R, Qian Y, Dudekula D, Zalzman M, Li M, Falco G, Yang H, Lee S, **Monti M**, Stanghellini I, Islam N, Nagaraja R, Goldberg I, Wang W, Longo D, Schlessinger D, and Ko M. Uncovering early response of gene regulatory networks in ES cells by systematic induction of transcription factors. *Cell stem cell* 5:420-33 (2009)
- 31- **Monti M***, Redi CA. Oogenesis specific genes (Nobox, Oct-4, Gdf9, Bmp15, Oogenesis1 and Oogenesis2) are differentially expressed during natural and gonadotropin-induced mouse follicular development. *Molecular Reproduction and Development* 76:994-1003 (2009)
- 32- Redi CA, **Monti M**, Merico V, Neri T, Zanoni M, Zuccotti M, Garagna S. Stem cells. *Endocrine Development* 11:145-51

(2007)

33- Neri T, **Monti M**, Rebuzzini P, Merico V, Garagna S, Redi CA, Zuccotti M. Mouse fibroblasts are reprogrammed to Oct4 gene expression and alkaline phosphatase activity by embryonic stem cell extract. *Cloning and Stem cells*. 9(3):394-406 (2007)

34- **Monti M**, Garagna S, Redi CA, Zuccotti M. Gonadotropins affect Oct4 gene expression during mouse oocyte growth. *Molecular Reproduction and Development* 73(6):685-691 (2006)

35- Zuccotti M, Garagna S, Merico V, **Monti M**, Redi CA. Chromatin organization and nuclear architecture in growing mouse oocytes. *Molecular and Cellular Endocrinology*. 234:11-17 (2005)

36- Garagna S, Merico V, Sebastiano V, **Monti M**, Orlandini G, Gatti R, Scandroglio R, Redi CA, Zuccotti M. Three-dimensional localization of centromeres in mouse oocytes during folliculogenesis. *Journal of Molecular Histology* 35(6):631-638 (2004)

37- Gentile L, **Monti M**, Sebastiano V, Merico V, Garagna S, Redi CA, Zuccotti M. Single-cell quantitative RT-PCR analysis of Cpt-1b and Cpt-2 gene expression in mouse antral oocytes and in preimplantation embryos. *Cytogenetic and Genome Research*. 105:215-21 (2004)

38- Merico V, **Monti M**, Sebastiano V, Gentile L, Zuccotti M, Garagna S, Redi CA. Centromere localization changes in oocytes nuclei during folliculogenesis. *Rend Fis Acc Lincei* 14:109-115 (2003)

39- Sebastiano V, Gentile L, Merico V, **Monti M**, Zuccotti M, Garagna S, Redi CA. A single cell sensitive RT-PCR for the study of gene expression in mouse preimplantation development. *Rend Fis Acc Lincei*, 14:117-126 (2003)

40- Gentile L, Sebastiano V, Merico V, **Monti M**, Zuccotti M, Garagna S, Redi CA. Expression of Carnitine Palmitoyl-Transferase 1 and 2 during mouse preimplantation development. *Rend Fis Acc Lincei*, 14:217-229 (2003)

*corresponding author

Editorial activities

Monti M, Redi CA. Non torneremo alla normalità perché quella normalità che vivevamo era il problema. In: "In difesa dell'umano, problemi e prospettive". *Vivarium novum* ed. (2022)

Monti M, Redi CA. Desiderare di cambiare rotta, in "Noema, rivista di filosofia" (2021)

Monti M, Redi CA. Dove sta l'individuo, in "Le parti, il tutto" (Percorsi Mechri)", Jaca Book, Milano (2021)

Monti M, Redi CA. Non siamo (ancora) dei buoni antenati: la questione ecologica in "Etica dei vaccini", Donzelli ed. (2021)

Monti M*. Perinatal stem cells. *EJ Histochem* 65 (2021)

Monti M*. Essential current concepts in stem cell biology. *EJ Histochem* 64 (2020)

Monti M*. Cell biology and translational medicine. *EJ Histochem* 64 (2020)

Monti M, Redi CA. Biologia e filosofia, in "Dal ritmo alla legge (Percorsi Mechri)", Jaca Book, Milano (2019)

Monti M*. Clathrin mediated endocytosis. *Methods and protocols EJ Histochem* 63 (2019)

Monti M*. Cell migration. *EJ Histochem* 63 (2019)

Monti M*. Mouse oocyte development. *EJ Histochem* 62 (2018)

Monti M, Redi CA. Bisogno (necessità) del dialogo tra Biologi e Filosofi, in “Vita e conoscenza (Percorsi Mechri)”, Jaca Book, Milano (2018)

Monti M*. Oocytes. Maternal information and functions. *EJ Histochem* 63 (2017)

Monti M*. Gamete and embryo fetal origins of adult diseases. *EJ Histochem* 60 (2016)

Redi CA, **Monti M**. Gameti Artificiali. *Le Scienze*, vol. 562 (2015)

Monti M*. Bioprinting in regenerative medicine. *EJ Histochem* 60 (2015)

Monti M*. Mistletoe. From mythology to evidence-based medicine. *EJ Histochem* 59(4) (2015)

Monti M*. Aging and Health - A system biology perspective. *EJ Histochem* 59(1) (2015)

Monti M*. Mouse development- from oocytes to stem cells. *EJ Histochem* 58(1) (2014)

Monti M, Redi CA. Il futuro prossimo della vita sintetica. *Le Scienze*, vol. 537 (2013)

Monti M*. Oogenesis. *EJ Histochem* 57(1) (2013)

Monti M*. Visualization techniques. From Immunohistochemistry to magnetic resonance imaging. *EJ Histochem* 57 (2013)

Monti M, Redi CA. “Dalla descrizione alla sintesi del vivente (clonazione, embrioni, cellule staminali, biologia sintetica: biopolitica e cittadinanza scientifica)” In: “Paradosso, rivista di filosofia” 2: 21-43 (2012)

Monti M, Redi CA. Uovo, storia di una cellula. *Le Scienze*, vol. 524 (2012)

Redi CA, **Monti M**. Biologia sintetica, dalla descrizione del vivente alla sintesi del vivente In: “Area Pediatrica” 13: 79-82 (2012)

Monti M*. In vivo cellular imaging using fluorescent proteins – methods and protocols. *EJ Histochem* 56(4) (2012)

Monti M*. Gene expression profiling. *Methods and Protocols. EJ Histochem*. 56(3) (2012)

Monti M*. Epigenetics Protocol. *EJ Histochem*. 56(2) (2012)

Monti M*. Argonaute Proteins. *EJ Histochem*. 56(1) (2012)

Monti M*. Microtubule dynamics. *EJ Histochem*. 56(1) (2012)

Monti M*. Basic confocal microscopy. *EJ Histochem*. 56(1) (2012)

Monti M*. microRNAs in development. *EJ Histochem* 55(4) (2011)

Monti M*. RT-PCR protocols: methods in molecular biology. *EJ Histochem* 55(1) (2011)

Monti M, Redi CA. “Stem cells” In *Biotechnology in Surgery*. Alfonso Barbarisi Ed. Springer (2010)

Redi CA, **Monti M**. Clonazione e cellule staminali in “Polis genetica e salute del futuro” *Salute e Società Franco Angeli Ed* (2010)

*corresponding author

Tot H index (2003-2024): 19
Tot H index (2011-2024): 14
Tot n. of citations (2003-2021): 1332
Tot n. of citations (2019-2024): 620

Academic Editor of Peer J

Ad hoc reviewer for Development, JARG, Cytotherapy, PlosOne, BMC genomics, Molecular Reproduction and Development, European Journal of Histochemistry, Human Molecular Reproduction, Journal of Immunological Method.

Other publications

Supporting editing of the book: "Visual Zoology", by C.A. Redi, M. Zuccotti, S. Garagna; Ibis ed., Como-Pavia (2002)
Supporting editing of the book: "Imago Animalium", by C.A. Redi, M. Zuccotti, S. Garagna; Ibis ed., Como-Pavia (2000)

Books

- 1- SOS Terra. Emergenze planetarie e negazionismo ambientale. Monti M, Redi CA. Carocci ed. (2024)
- 2- Prepararsi al futuro. Cronache dalle scienze della vita. Monti M, Redi CA. Il Mulino ed. (2022)
Che cosa sono le cellule staminali. M. Monti, C.A. Redi. Carocci ed. (2021)
- 3- La vita dopo il/la COVID-19, edited by M. Monti, C.A. Redi. Collegio Ghislieri, Ibis ed. (2020)
- 4- DNA. La vita in tre miliardi di lettere. M. Monti, C.A. Redi. Carocci ed. (2019)
- 5- Con-dividuo. Cellule e genomi XVII corso, edited by M. Monti, C.A. Redi, Collegio Ghislieri, Ibis ed. (2019)
- 6- Migrazioni. Cellule e genomi XVI corso, edited by M. Monti, C.A. Redi, Collegio Ghislieri, Ibis ed. (2018)
- 7- Genomica sociale. Come la vita quotidiana può modificare il nostro DNA. M Monti, CA Redi. Carocci ed. (2018)
- 8- A stroll through a scientific city. Pavia scientific bookguide. M Monti, R Cockerham, CA Redi. Ibis ed. (2017)
- 9- No razza. Si cittadinanza. Cellule e genomi XV corso, Collegio Ghislieri, Ibis ed. (2017)
- 10- Uguaglianza-disuguaglianza. Equità = salute. Cellule e genomi XIV corso, edited by M. Monti, C.A. Redi, Collegio Ghislieri, Ibis ed. (2016)
- 11- Storia di una cellula fantastica. Scienza, natura, cultura dell'uovo. CA Redi, M. Monti. Sironi ed. (2016)
- 12- Staminali. Dai cloni alla medicina rigenerativa, by M. Monti, E Battifoglia, CA Redi. Carocci ed. (2015)
- 13- Pavia. A spasso nella città della Scienza. C.A. Redi, M. Monti. Pavia Scientific guide. Ibis ed. (2013)

Selected scientific meetings

2023. "Sviluppo di un software di intelligenza artificiale per la selezione di oociti competenti allo sviluppo embrionale" (platform presentation). SIAI meeting, Modena, September 11-13
2022. "Differentiation potentials of Very small embryonic-like stem cells isolated from human umbilical cord blood" (invited speaker).

V baltic stem cell meeting, Varsaw, Poland, October, 21-23
 2021. "From gastruloids to organoids: analysis of differentiation potentials of Very Small Embryonic-Like stem cells isolated from human umbilical cord blood" (invited speaker). 2-Days Virtual Meeting on VSELs, November 8-9
 2016. "Cellule staminali: le terapie cellulari nella medicina rigenerativa" (platform presentation). Stem cells meeting, Pavia, April 9
 2015. "Rigenerazione ossea con cellule staminali autologhe" (platform presentation). Corso annuale di aggiornamento in Odontoiatria. Pavia, June 13
 2015. "Cytofluorimetric characterization of progenitor cells from human gingival tissue: new perspectives for bone regeneration in dentistry" (platform presentation). AO Academy of Osseointegration, San Francisco, CA, USA, March 12-14
 2014. "Rigenerazione ossea con cellule staminali autologhe: quale futuro" (platform presentation). 3rd meeting SIRO-ARCOI Roma, November 22
 2014. "Cellule staminali: il futuro della rigenerazione ossea" (platform presentation). AO first italian charter chapter Milan, September 20
 2014. "Mouse antral NSN oocytes developmental arrest is due to lack of MATER and cytoplasmic lattices" 73th annual meeting of the Society for Developmental Biology, Seattle, WA, USA, July 17-21 (poster presentation)
 2014. "Cellule staminali embrionali: differenziamento e riprogrammazione cellulare" Nuove frontiere in trapiantologia oncologica e in medicina rigenerativa, Pavia, 21 June (platform presentation)
 2012. "Mouse antral NSN oocyte developmental arrest is associated with deficiency of MATER and cytoplasmic lattices" Ovarian Club II, Prague, CZ, November 8-10 (poster presentation)
 2012. "Two-cell embryo developmental block is due to lack of cytoplasmic lattices in mouse antral NSN oocytes" 45th annual meeting of the Society for the Study of Reproduction, State College, PA, USA, August 12-15 (platform presentation)
 2012. Santa Cruz Developmental Biology Meeting. Santa Cruz, Ca, 8-11 August (poster presentation)
 2011. "SN versus NSN oocytes: the endless battle for the achievement of the developmental competence" 44th annual meeting of the Society for the Study of Reproduction, Portland, OR, USA, July 31-August 4 (poster presentation)
 2009. ESHRE meeting, Amsterdam, June 28-July 1 (poster presentation)
 2009. "Analysis of gene expression in mouse antral SN and NSN oocytes" International Society of the Developmental Biologists meeting, Edinburgh, UK, September 6-10 (poster presentation)
 2006. Tecnobios Procreazione Symposium and 2nd International conference on the cryopreservation of the human oocyte, Bologna, October 5-7 (platform presentation)
 2006. New Insight and Perspective in Stem Cell Research. Pavia, May 16-17 (platform presentation)

Selected seminars
(2014-2024)

2005. FEBS Practical Course “Real Time Quantitative RT-PCR Analysis of Gene Expression”, Prague, September 18-23 (poster and platform presentation)
2005. 19th International Workshop on the cell nucleus “The Wilhelm Bernhard Workshop”, Munsterschwarzach Abbey, Germany, 1-5 September (poster presentation)
2024. “Cellule staminali e medicina rigenerativa”. Collegio Borromeo, Pavia, March 12
2024. “Al per la selezione di oociti competenti allo sviluppo”. Collegio Ghislieri, Pavia, May 9
2023. “Lo studio delle "omiche" nel campo della biologia dello sviluppo: strumenti, progressi e approcci futuri”. Collegio Ghislieri, Pavia, May 3
2022. “Da dove veniamo? Chi siamo? Dove andiamo?”. Festival della mente, Sarzana, September 2
2022. “Disuguaglianze sociali e disuguaglianze di salute al tempo del Covid”. Scuola di Pace di Bra, May 13
2022. “Genomica sociale, come la vita quotidiana può influenzare il nostro DNA”. Festival di scienza e filosofia, Foligno, April 22
2021. “Vivere bene, lo sguardo della biologia”. Vivere bene, una domanda politica, Associazione Diaforà, Albino, November 13
2021. “CRISPR-Cas9 e l'evoluzione dell'editing genomico”. Collegio Ghislieri, Pavia, April 21
2018. “Riprogrammazione epigenetica delle cellule germinali”. Collegio Ghislieri, Pavia, May 23
2017. “Christian de Duve e Yoshinori Ōsumi: autofagia - fagocitosi – autofagia”, Collegio Ghislieri, Pavia, April 26
2017. “UGM. Umanità geneticamente modificata”. Seminamenti VI edizione, Pistoia, March 25
2017. “Le nuove sfide scientifiche e bioetiche provenienti dalle biotecnologie di nuova generazione”. Le Giornate della Laicità, Reggio Emilia, February 13
2016. “Le cellule in cattedra: imitare per innovare, la plasticità differenziativa”. Campus Il futuro presente 2016. Pistoia, September 8
2016. “Infiammazione, microRNA e sviluppo embrionale” e “Infiammazione, infertilità e longevità”, Collegio Ghislieri, Pavia, May 18
2016. “Il magico mondo delle cellule staminali”, corso Specialista in ricerca biomedica, February, 26
2016. “Cellule staminali. Il nuovo quadro dopo la scoperta delle cellule staminali riprogrammate”. Le Giornate della Laicità, Reggio Emilia, February 15
2016. “Ab ovo usque ad mala”, Department of experimental biology, Jaen University, Spain, January 28
2015. “As mouse NSN oocytes fail development”. Keio University, Department of Systems Medicine, Tokyo, Japan, October 1
2015. “Uovo, la staminale totipotente è un miniaturizzato laboratorio di biologia molecolare”. Le Giornate della Laicità, Reggio Emilia, February 16
2015. “La funzione di staminalità” e “Le very small embryonic-like stem cells, cellule rare con grandi potenzialità in medicina rigenerativa”, Collegio Ghislieri, Pavia, May 11

2014. "Ab ovo: dalla staminale totipotente alla medicina rigenerativa". Fondazione IRCCS Policlinico San Matteo, December 18

2014. "Ab ovo usque ad mala". IUSS, Institute for Advanced Studies, University of Pavia, Italy, December 16

2014. "Early developmental arrest in the mouse embryo results from the lack of cytoplasmic lattices in mouse oocytes". Brown University, RI, USA, July 31

2014. "Cellule staminali tessuto-specifiche: unità funzionali più che anatomiche". Convegno: "I nuovi bersagli della terapia cellulare". Collegio Ghislieri, Pavia, May 12

2014. Origine, definizione ed eterogeneità biologica delle cellule staminali mesenchimali. Convegno: "I nuovi bersagli della terapia cellulare". Collegio Ghislieri, Pavia, May 14

Science communication

Excellent skills in communicating science to a layperson audience
 Authors of several scientific articles published on the main Italian magazines and newspapers (Le Scienze, La Lettura, Corriere della Sera)

Invited speaker to TEDxReggio Emilia, October 18th, 2020

Invited speaker to several festivals and science festival like "Spoleto, festival dei due mondi", "Sarzana, festival della mente", "Montebelluna festival of the arts", "Giornate della Laicità, Reggio Emilia", "Milano Focus Live", "Milano bookcity", "Bergamo Scienza", "Festival delle scienze di Roma", and "Fiera del libro di Torino".

Invited speaker to "MEMEX, la scienza spiegata dai protagonisti", RAI scuola (2016), to "Geo&Geo", RAI (2017), "Quante storie" (2018), broadcast on public Italian TV

Invited speaker to the annual conference "Science for peace cinema" organized by the Fondazione Umberto Veronesi (from 2015 to present)

Curator and protagonist of the play "The egg. A wonderful cell" performed at the "Elfo Puccini Theater", Milan (March 2016), "Gaetano Donizetti Theater", Bergamo (October 2016) and "Arcimboldi Theater", Milan (February 2017)

Awards

2018. Premio Cesare Angelini giovani for the book "Staminali, dai cloni alla medicina rigenerativa", Pavia November, 21

2017. International HM Goldman "Spazio Ricerca 2017" prize "Treatment of intrabony defects with dental pulp stem cells\collagen sponge versus collagen sponge alone: a randomized clinical trial" XVIII International SIdP 2017 – SIdP 18th International Congress 2017 meeting

2012. Best European abstract award. Society for the Study of Reproduction meeting, Penn State, PA, USA

Additional information**REFERENCES:**

-Prof. CarloAlberto Redi, Accademia dei Lincei.
Tel:
Email: carloalberto.redi@unipv.it

-Prof. Minoru Ko, Department of Systems Medicine The Sakaguchi Laboratory, Graduate School of Medicine, Keio University. Laboratory of Genetics, National Institute of Aging, National Institutes of Health, 251 Bayview Blvd, 21224 Baltimore MD, USA.
Tel:
Email: kom@z7.keio.jp

ANNEXES**PATENT:**

Patent application title: Methods for modulating embryonic stem cell differentiation (Minoru Ko, Manuela Monti, Geppino Falco, Sum Lee Lim, Stanghellini Ilaria).
Patent number: US 8617813 B2

Pursuant to Article 13, Act 679/16 (Privacy Law), I hereby agree to the handling of my personal data.
Manuela Monti

PAVIA, 24/05/2024