



## Personal information

Name Manuela Monti

E-mail

Date of birth

## Work experience

- Dates March 2020- Present
- Name and address of employer Università degli Studi di Pavia, c.so Strada nuova 65, 27100 Pavia, Italy
- Type of business or sector Dipartimento di sanità pubblica, medicina sperimentale e forense, Unità di Istologia e embriologia
- Occupation or position held Ricercatore RTDB (settore concorsuale BIO/17)
- Main activities and responsibilities Analysis of clathrin mediated endocytosis on mouse oogenesis
  
- Dates March 2011- March 2020
- Name and address of employer Fondazione IRCCS, Hospital San Matteo, viale Camillo Golgi 19, 27100 Pavia, Italy
- Type of business or sector Biotechnology laboratories, Research Center for Regenerative Medicine
- Occupation or position held Research Scientist
- Main activities and responsibilities 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, Hospital 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, Hospital 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
  
- 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 quantitative real time PCR on mouse preimplantation embryos for the identification of the factor(s) involved in the regulation of zygotic genome activation  
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, Strada Nuova 65, 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 Postdoc (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, Strada Nuova 65, 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

- held
  - Main activities and responsibilities
    - Dates
- Name and address of employer
  - Type of business or sector
- Occupation or position held
  - Main activities and responsibilities

Analysis of gene expression and protein localization during mouse folliculogenesis

December 2001- September 2002

University of Pavia, Strada Nuova 65, 27100 Pavia, Italy

Laboratory of Developmental Biology, Department of Animal Biology, piazza Botta n.9, 27100 Pavia, Italy

Postbac (fellowship from Department of Animal Biology, Laboratory of Developmental Biology, University of Pavia)

Analysis of the dioxin effects on preimplantation mouse embryo development with molecular and biochemical methods

## Education and training

- Dates
- Name and type of organization providing education and training
  - Principal subjects/occupational skills covered
- Title of qualification awarded

October 2002 – October 2005

University of Pavia, Department of Engineering, PhD study in Bioengineering and Bioinformatics. Final score “Excellent”

PhD thesis on: 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

Doctor of Philosophy in Bioengineering and Bioinformatics

- Dates
- Name and type of organization providing education and training
  - Principal subjects/occupational skills covered
- Title of qualification awarded

November 2001

University of Pavia, Bachelor course in Biological Sciences, Faculty of Mathematical, Physical and Natural Sciences, Department of Animal Biology, Laboratory of Developmental Biology

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

Bachelor’s degree in Biology

- Dates
- Name and type of organization providing education and training
  - Title of qualification awarded

1995

Liceo Scientifico “Nicolo’ Copernico” – Pavia, Italy

High School Degree

## Personal skills and competences

Mother tongue

Italian

Other languages

<ul style="list-style-type: none"> <li>•Reading skills</li> <li>• Writing skills</li> <li>• Verbal skills</li> </ul>	<p>English</p> <p>Excellent (C2 level)</p> <p>Excellent (C1 level)</p> <p>Excellent (C2 level)</p>
<p>Scientific career</p>	<p>2018-present. Lecturer in Histology-Embryology-Cytology, Structure of the body course, Harvey medical course, University of Pavia, Italy</p> <p>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)</p> <p>2016-present. Professor of “Stem cells and regenerative medicine”, IUSS (University Institute of Advanced Studies), University of Pavia, Italy</p> <p>2016-present. Member of the scientific committee c/o “Mechri, laboratory of philosophy and culture”, Milan, Italy.</p> <p>2016-present. Academic tutoring activities in Zoology (BIO/05, LT Scienze Biologiche), University of Pavia, Italy</p> <p>2016-present. Academic tutoring activities in Developmental Biology (BIO/06, LM Molecular Biology and Genetics), University of Pavia, Italy</p> <p>2007. Academic tutoring activities in Stem cells and regenerative medicine, IUSS (University Institute of Advanced Studies), University of Pavia, Italy</p> <p>2006. Academic tutoring activities in Stem cells and regenerative medicine, IUSS (University Institute of Advanced Studies), University of Pavia, Italy</p> <p>2016-present. 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</p> <p>2016-present. 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</p> <p>2006. Academic tutoring activities in Reproduction Biotechnology, University of Pavia, Italy</p> <p>2005. Academic tutoring activities in Developmental Biology, University of Pavia, Italy</p> <p>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</p> <p>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</p> <p>2004. Academic tutoring activities in Histology and Embryology. Faculty of Medicine, University of Parma, Italy</p>
<p>Organizational skills</p>	<p>Excellent skills in teaching and tutoring young students (both at</p>

and competences	the undergraduate and graduate levels), lab experiments programming, grant writing and thesis preparation.
Technical skills and competences	<p>Histology and Immunohistochemistry: basic techniques of cytology, histology and immunohistochemistry.</p> <p>DNA/RNA: nucleic acid extraction.</p> <p>Embryo culture: In Vitro Maturation (IVM), In Vitro Fertilization (IVF), preimplantation embryo culture, isolation of single blastomere from mouse embryos.</p> <p>Micromanipulation: isolation of single blastomere from mouse embryos.</p> <p>Microinjections: injection of mRNA, dsRNA, siRNA in zygotes, 2-cell and 4-cell stage mouse embryos.</p> <p>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</p> <p>Biophysics techniques: FT-IR (Fourier Transform Infrared Spectroscopy) on mouse oocytes and embryos.</p> <p>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.</p> <p>Good knowledge of Microsoft Windows and Microsoft Word.</p> <p>Excellent ability with bioinformatics tools.</p>
Grants	<p>2019. "Oomedicine: biomarkers and molecular imaging for good quality oocytes isolation". Funding institution: Fondazione Umberto Veronesi (20000€). Role: Principal investigator</p> <p>2015-present. "Neo-oogenesis: caratterizzazione e isolamento di cellule germinali staminali da ovari umani e murini". Funding institution: Fondazione IRCCS Hospital San Matteo, Pavia, Italy (75000€). Role: Principal investigator</p> <p>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 of Unit 3</p>
Scientific publications	<p>1- Pandolfi L, Frangipane V, Bocca C, Marengo A, Tarro Genta E, Bozzini S, Morosini M, D'amato M, Vitulo S, <b>Monti M</b>, Comolli G, Scupoli MT, Fattal E, Arpicco S, Meloni F. Setting the basis to use hyaluronic acid-decorated liposomes for lung fibrotic disorders. <i>Molecules</i>, in press (2019)</p> <p>2- Cova E, Pandolfi L, Colombo M, Frangipane V, Inghilleri S, Morosini M, Mrakic-Sposta S, Moretti S, <b>Monti M</b>, 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. <i>International Journal of Nanomedicine</i>, 14:773-785 (2019)</p> <p>3- Longo M, Boiani M, Redi CA, <b>Monti M*</b>. Cytoplasmic lattices are not linked to mouse 2-cell embryos developmental arrest. <i>European J Histochemistry</i>, 62:2972 (2018)</p>

- 4- Bianchi N, Longo M, Redi CA, **Monti M\***. Mammalian blastocyst mimicry. *Molecular Reproduction and Development* 85:6 (2018)
- 5- **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)
- 6- **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)
- 7- 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)
- 8- **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)
- 9- **Monti M\***, Redi CA. Isolation and characterization of mouse antral oocytes based on nucleolar chromatin organization. *JOVE*, (107), e53616, doi:10.3791/53616 (2016)
- 10- 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)
- 11- **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)
- 12- 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)
- 13- 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)
- 14- 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)
- 15- **Monti M\***. Comet, stickman or heterochromatic DNA. *Molecular Reproduction and Development*, 81(8):677 (2014)
- 16- Cervio M, Scudeller L, Viarengo G, **Monti M**, DelFante C, Arici V, Perotti C. Conditioned medium from  $\gamma$ -irradiated umbilical cord mononuclear cells: different pro-angiogenic effects on mature and progenitor endothelial cells. *Microvascular Research*, 94:9-16 (2014)
- 17- **Monti M\***, Redi CA. The egg, The inside story of a cell. *Molecular Reproduction and Development*, 80:691-697 (2013)

- 18- **Monti M\***, Redi CA. Quid hic? Intueri Naturam. Quo munere? Curiosum esse. *Molecular Reproduction and Development*, 79:503 (2013)
- 19- 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)
- 20- **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)
- 21- **Monti M\***, Perotti C, DelFante C, Cervio M and Redi CA. Stem cells: sources and therapies. *Biological Research* 45:7-14 (2012)
- 22- **Monti M\*** and Redi CA. The biopolitics of frozen embryos. *International Journal of Developmental Biology* 55:243-247 (2011)
- 23- 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)
- 24- 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)
- 25- 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)
- 26- 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)
- 27- **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)
- 28- Redi CA, **Monti M**, Merico V, Neri T, Zanoni M, Zuccotti M, Garagna S. Stem cells. *Endocrine Development* 11:145-51 (2007)
- 29- 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)
- 30- **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)
- 31- 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)
- 32- 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)
- 33- 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)
- 34- 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)
- 35- 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)
- 36- 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\***. Clathrin mediated endocytosis. *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 (2017)
- 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 (2013-2019): 16  
 Tot n. of citations (from 2015): 512

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*.

Member of the Italian Scientific committee for the National University Publishing Award.

1- 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- *DNA. La vita in tre miliardi di lettere*. Carocci ed. (2019)

2- *CON-dividuo. Cellule e genomi XVII corso*, Collegio Ghislieri, Ibis ed. (2019)

3- *Migrazioni. Cellule e genomi XVI corso*, Collegio Ghislieri, Ibis ed. (2018)

4- *Genomica sociale. Come la vita quotidiana può modificare il nostro DNA*. M Monti, CA Redi. Carocci ed. (2018)

- 5- A stroll through a scientific city. Pavia scientific bookguide. M Monti, R Cockerham, CA Redi. Ibis ed. (2017)
- 6- No razza. Si cittadinanza. Cellule e genomi XV corso, Collegio Ghislieri, Ibis ed. (2017)
- 7- Uguaglianza-disuguaglianza. Equità = salute. Cellule e genomi XIV corso, Collegio Ghislieri, Ibis ed. (2016)
- 8- Storia di una cellula fantastica. Scienza, natura, cultura dell'uovo. CA Redi, M. Monti. Sironi ed. (2016)
- 9- Staminali. Dai cloni alla medicina rigenerativa, by M. Monti, E Battifoglia, CA Redi. Carocci ed. (2015)
- 10- Pavia. A spasso nella città della Scienza. C.A. Redi, M. Monti. Pavia Scientific guide. Ibis ed. (2013)

## Meetings

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)

## Seminars

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)
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)
2019. "Dalla medicina rigenerativa alla clonazione umana". I giovedì della bioetica, Piacenza, October 24
2019. "Le nuove frontiere della ricerca biomedica: limiti e opportunità di impiego". Valdagno, October 11
2019. "DNA. 66 anni di rivoluzione scientifica". Campus Il futuro presente. Pistoia, September 5
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

2013. "Ab ovo usque ad mala". IUSS, Institute for Advanced Studies, University of Pavia, Italy, December 16

2013. "Cellule staminali embrionali: differenziamento e riprogrammazione cellulare". Convegno: Impiego clinico di cellule staminali, stato dell'arte, prospettive e implicazioni etiche". Collegio Ghislieri, Pavia, June 15

2013. "Embriogenesi e individuazione delle cellule staminali organo-specifiche" e "Le nicchie delle cellule staminali degli organi solidi". Speaker a "Progressi in biologia e medicina" 12° corso di formazione avanzata Le nicchie delle cellule staminali somatiche normali e tumorali". Collegio Ghislieri, Pavia, April 15-19

2012. "Ab ovo usque ad mala". IUSS, Institute for Advanced Studies, University of Pavia, Italy, November 23

2012. "Mouse antral NSN oocytes developmental arrest is associated with deficiency of MATER and cytoplasmic lattices" Speaker at the 45 annual meeting of the Society for the Study of Reproduction. Penn State, Pennsylvania, USA

2012. "Two-cell embryo developmental block is due to lack of cytoplasmic lattices in mouse antral NSN oocytes". Institute for stem cell biology and regenerative medicine, Stanford School of Medicine, Renee Reijo Pera lab, Stanford, California, USA

2009. "Zscan4 expression in embryonic stem cells and mouse preimplantation embryos". Gurdon Institute, Magdalena Zernicka-Goetz lab, Cambridge, UK

2009. "Zscan4 and heterogeneity in embryonic stem cells". Speaker at the "Stem cells in Pavia" meeting. Fondazione IRCCS Policlinico San Matteo, Pavia

2006. "Quantitative analysis of gene expression during oogenesis in fetal and adult mice: gonadotropins affect the level of gene transcription in oocytes". Laboratory of Genetics, NIA/NIH, Baltimore, MD, USA

2003. "Effetti della diossina sullo sviluppo embrionale preimpianto di topo". Speaker at the "La medicina della riproduzione: aspetti clinici e terapeutici" meeting. Padova, Italy

Science communication

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

Invited speaker to several festivals and science festivals:

“Spoleto, festival dei due mondi”, “Sarzana, festival della mente”, “Montebelluna festival of the arts”, “Giornate della Laicità, Reggio Emilia”, “Milano Focus Live”, “Genova Focus Live”, “Milano bookcity” and “Bergamo Scienza”  
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)  
Scientific consultant for the forum “Disuguaglianze diversità” and the report drafting “Fifteen proposals for social injustices” (2019)  
Consultant for the ethical committee of the Fondazione Umberto Veronesi for the report “Dagli allevamenti intensivi all’agricoltura cellulare” (2019)

#### 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, Laboratory of Developmental Biology, University of Pavia, via Ferrata n.9, 27100 Pavia, Italy.

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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: +15105588359

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

La sottoscritta, consapevole che – ai sensi dell'art. 76 del D.P.R. 445/2000 – le dichiarazioni mendaci, la falsità negli atti e l'uso di atti falsi sono puniti ai sensi del codice penale e delle leggi speciali, dichiara che le informazioni rispondono a verità.

La sottoscritta dichiara di aver ricevuto l'informativa sul trattamento dei dati personali.

PAVIA, 19/06/2020