

September 2025

Emanuela Molinari, Ph.D. ELD, HCLD Laboratory Director

Cell: 917-215-5469

- email: emanuela@givelegacy.com, emanuela.molinari@gmail.com



CURRENT POSITION

SRBT VP elected for 2025-26

October 2023 –Laboratory Director for the State of NY, GiveLegacy, NJ

PREVIOUS POSITION

March 2022- August 2025 Laboratory Director, CCRM NY

Feb 2020 – Feb 2022 Director, Division of Laboratories, CHR NY

March 2019 – Jan 2020 Lab Director, New England Fertility Institute, Stamford, CT

Jun 2017- Feb 2019 Senior Embryologist, New England Fertility Institute, Stamford, CT

Jun 2016-May 2017 Associate Research Scientist, 2017 at Patrizio lab, Yale University

Feb 2015-May 2016 PostDoc Associate at Patrizio lab, Yale University

Jan 2013- Oct 2014 PostDoc Associate at Pyle Lab, Yale University

Nov 2010- Jun 2012 IVF lab Supervisor at Livet Clinic in Via Tiziano 3, 10126 Torino - Italy

Feb 2009 – Oct 2010 Embryologist, OIRM S. Anna Hospital, Via Ventimiglia 3 Torino, Italy

Jan 2005 – Jan 2009 Master degree student and embryologist, OIRM S. Anna Hospital, Via Ventimiglia 3, Torino, Italy

EDUCATION

Jan 2008-Dec 2011 PhD in Clinical Sciences, University of Turin Medical School. School Coordinator: prof. G. Tarone. Advisor: prof. A. Revelli

Jul 2007 Laurea (BA) and Master Degree in Biotechnology, University of Turin Medical School. Final Mark: 110/110. Thesis: "*PLM analysis of human oocyte quality*". Supervisor: prof. A. Revelli.

POST DOCTORAL RESEARCH ACTIVITY

Deciphering the extent of mosaicism within blastocyst cells

The identification of molecular markers of sperm fertilization potential

The identification of molecular markers of oocyte aging, including understanding the mechanisms that lead to oocyte aneuploidy along with increased maternal age by means of cumulus cells RNA-sequencing.

Delineating the Biological Clock of human cumulus cells by means of methylome sequencing

DOCTORAL RESEARCH ACTIVITIES (Coordinator: prof. G. Tarone; Supervisor: prof. A. Revelli)

I. Mechanisms of cryopreservation of mature MII oocytes, with particular regard to fertility preservation in patients with premature ovarian failure

II. Understanding criteria for oocyte selection, with particular regard to polarized light microscopy analysis of birefringent structures within MII oocytes. Meiotic spindle (MS) and zona pellucida (ZP) observation was performed in correlation with embryonic score and

chances to achieve a pregnancy

III. After visiting Prof. Verlinski laboratory at RGI, I introduced polar body diagnosis and preconception genetic screening (PGCD). Mechanical breaching of ZP was learnt as well as polar body/blastomere fixation on slide- (FISH procedure) and preparation for PCR analysis.

IV. Mechanisms of ovarian cortex cryopreservation from both pre and post-pubertal patients.

RELEVANT ACHIEVEMENTS:

Our team achieved the first pregnancy in Italy (20th worldwide) after autologous transplantation of frozen ovarian tissue in a β -thalassemia patient who underwent chemotherapy for bone marrow transplant. I have played an important role as the sole embryologist performing tissue cryopreservation/warming. This has been reported on the top rank scientific journal in the field of human reproduction, selected for press-release during the 28th annual meeting of the European Society of Human Reproduction and advertised on several Newspapers and online media in Italy and Europe.

LANGUAGES

Italian (mother tongue), English, Portuguese (spent several years in Belo Horizonte, Brazil)

PUBLISHED PAPERS

- Barad DH, Albertini DF, **Molinari E**, Gleicher N. **IVF outcomes of embryos with abnormal PGT-A biopsy previously refused transfer: a prospective cohort study**. Hum Reprod. 2022 May 30;37(6):1194-1206. doi: 10.1093/humrep/deac063. PMID: 35413106.
- Barad DH, Albertini DF, **Molinari E**, Gleicher N. **Preliminary report of intraovarian injections of autologous platelet-rich plasma (PRP) in extremely poor prognosis patients with only oocyte donation as alternative: a prospective cohort study**. Hum Reprod Open. 2022 Jun 28;2022(3):hoac027. doi: 10.1093/hropen/hoac027. PMID: 35795849; PMCID: PMC9247703.
- Hu J, **Molinari E**, Darmon SK, Zhang L, Patrizio P, Barad DH, Gleicher N. **Predictive value of cytoplasmic granulation patterns during in vitro fertilization in metaphase II oocytes: part II, donor oocyte cycles**. Fertil Steril. 2021 Nov;116(5):1330-1340. doi: 10.1016/j.fertnstert.2021.06.026. Epub 2021 Jul 20. PMID: 34294452.
- Linehan MM, Dickey TH, **Molinari ES**, Fitzgerald ME, Potapova O, Iwasaki A, Pyle AM. **A minimal RNA ligand for potent RIG-I activation in living mice**. Sci Adv. 2018 Feb 21;4(2):e1701854. doi: 10.1126/sciadv.1701854. PMID: 29492454; PMCID: PMC5821489.
- Patrizio P., **Molinari E.**, Kaplan, A. **Ethics of medical and non-medical oocyte cryopreservation**. Curr Opin Endocrinol Diabetes Obes. 2016 Dec;23(6):470-475
- **Molinari E.**, Patrizio P., Pyle AM., **Transcriptome analysis of human cumulus cells reveals hypoxia as the main determinant of follicular senescence**. Mol Hum Reprod. 2016 Aug;22(8):866-76. doi: 10,
- **Molinari E.**, Mirabelli M., Raimondo S., Brussino A., Gennarelli G., Biongioanni F., Revelli A., **Sperm macrocephaly syndrome in a patient without AURKC mutations and with a history of recurrent miscarriage**. RBMOnline., 2013, Feb 26(2).
- Revelli A., Marchino G., Dolfi E., **Molinari E.**, Delle Piane L., Salvagno F., Benedetto C., **Live birth after orthotopic grafting of autologous cryopreserved ovarian tissue and spontaneous conception in Italy**. Fert Stert. 2013, Jan 99(1).
- **Molinari E.**, Evangelista F, Racca C, Cagnazzo C, Revelli A. **Polarized light microscopy-detectable structures of human oocytes and embryos are related to the likelihood of conception in IVF**. J Assist Reprod Genet. 2012 Aug 16.
- Peccatori, F.A.; Del Pup, L.; Salvagno, F.; Guido, M.; Sarno, M.A.; Revelli, A.; Delle

Piane, L.; Dolfin, E.; Franchi, D.; **Molinari, E.**; Immediata, V.; Chiavari, L.; Vucetich, A.; Borini, A. **Fertility preservation methods in breast cancer.** *Breast Care* 2012;7:188.

- Revelli A, **Molinari E**, Salvagno F, Delle Piane L, Dolfin E, Ochetti S, **Oocyte cryostorage to preserve fertility in oncological patients.** *Obstet Gynecol Int.* 2012;2012:525896. Epub 2012 Jan 15.
- **Molinari E**, Revelli A, Racca C, Delle Piane L, Massobrio M. **Slow-freezing-induced changes of birefringent structures in human oocytes are related to responsiveness to ovulation induction.** *Reprod Biomed Online.* 2010 May;20(5):619-24. Epub 2010 Feb
- Delle Piane L, **Molinari E**, Salvagno F, Chiadò A, Revelli A, Rinaudo P. **Metabolomics in reproductive medicine: general principles and applications to the study of gametes, embryos and follicular fluid.** *J Reprod Stem Cell Biotechnol* 2(1):14-28, 2011
- Revelli A, Delle Piane L, Casano S, **Molinari E**, Massobrio M, Rinaudo P. **Follicular fluid content and oocyte quality: from single biochemical markers to metabolomics.** *Reprod Biol Endocrinol.* 2009 May 4;7:40. Review.

CONFERENCE TALKS

1. **The Ovarian Club - Invited Speaker** – Blastocyst Development and the Process of Implantation, “Cumulus cells: diagnostic and therapeutics in oocyte aging”, Paris, France, November 15-16 2014
2. **Polar Body Diagnostics** – IVF laboratory: current strategies and future perspectives, Turin, Italy, January 27th 2012
3. **Cryopreservation of Oocytes and Embryos** – IVF laboratory: current strategies and future perspectives, Turin, Italy, January 27th 2012
4. **Competence of oocytes derived by antral and preovulatory follicles** – Infertility: confrontation between biologists and clinicians, Milan, Italy, December 17th 2011
5. **IUI Laboratory set-up** – SiDR Meeting, Turin, Italy, October 17-18th 2008

REVIEWER ACTIVITY

Invited Reviewer for:

Journal of Assisted Reproduction and Genetics (*JARG*) (ISSN: 1058-0468)
Reproductive Biomedicine Online (*Reprod Biomed Online*) (ISSN: 1472-6483)
Molecular Human Reproduction (MHR) (ISSN: 1360-9947)

PERSONAL SKILLS AND COMPETENCES

Excellent embryologist skills acquired after 20 years of experience.

Team player (used to play waterpolo professionally, made it to junior Nationals) and coached a Division 2 team for 2 years.

After my waterpolo experience and several years working directing small and big labs (>15 people) I have refined my team leading abilities.

ACADEMIC POSITIONS COVERED

October 2009 – July 2010: Teaching Assistant in Embryology, Master Degree in Biotechnology, University of Turin

March 2011 – December 2011: Teaching Assistant in Embryology, Master di II livello in Medicina della Riproduzione e tecniche di fecondazione in vitro, University of Turin

FELLOWSHIPS

Jan 2008- Jan 2012: O.I.R.M. s. Anna Hospital Ph.D. fellowship

MEMBERSHIPS

European Society for Human Reproduction and Embryology (ESHRE) since 2008

ProFert Society since 2011

American Society of Reproductive Medicine (ASRM) since 2013

Ovarian Club since 2014