

Margherita Isernia

date of birth: 25\07\1998

Formative experiences

01\2025- In progress

Internship Master II level in 'Biology and Biotechnology of Reproduction: from research to the clinic' – Genera Roma, University of Pavia

- Morpheus Project: Developing of an AI-based tool for segmenting images extracted from embryonic development videos captured by an Embryoscope incubator. The project focused on training advanced machine learning algorithms to accurately analyze and interpret embryonic growth stages.

03\2024- 10\2024

Amsterdam UMC- Department of Reproduction and Development

- Functional screening for the potential role of newly discovered genes in trophoblast biology using a TSC-EVT model system comprising both cell cultures and organoids, with implications in pregnancy disorders.

03\2023- 02\2024

IRG- Institute of genetic research

- Genetic typing of KIR receptors and HLA-C ligand in couples undergoing ART treatments with an history of recurrent miscarriage, repeated implant failure and unexplained infertility

09\2022- 02\2023

University of Lisbon

- Practical activity for the course of Human Genetics. Focus on PCR and genetic typing of the bitter taste receptor TAS2R38 and its implications.

02\2022- 10\2022

Advanced course in biology and biotechnology of reproduction

- Oocytes vitrification, ICSI, FIVET, Swim-up, density gradient centrifugation, spermogram



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Language skills

- **Italian:** Native Language
- **English:** C1
- **Portuguese:** A2
- **French:** A2

Certifications

- EIPASS informatic certification
- Cambridge 'Advanced' certification
- FLUL 'A2' certification in portuguese language

Other activities

- Competitive Waterpolo from 2007 to 2015. Società sportiva Acquachiara Napoli
- Gold Medal U15 Italian waterpolo league 2013.

Education

2025- in progress

Master's Degree in biology and biotechnology of reproduction: from research to the clinic. | *Università di Pavia*

2024 **Master's Degree in biology, curriculum differentiation and reproduction** | *Università Federico II*

Final thesis in Biology of reproduction titled: "The role of KIR receptors and HLA-C ligands in embryonic implantation and related complications; from physiology to assisted reproduction techniques Final grade:

110\110 cum laude

2021 **Bachelor's Degree in Biotechnology** | *Università degli studi della Campania L. Vanvitelli*

Final thesis in medical genetics titled: "Molecular basis of myotonic dystrophy and prospects of gene therapy" Final grade: 110\110

National Conferences

"AN ARTIFICIAL INTELLIGENCE TOOL FOR PREDICTING BLASTULATION BASED ON THE OBSERVATION OF CYTOPLASMIC MOVEMENTS IN EARLY HUMAN EMBRYOS."

*A. Fantinato, L. Corso, G. Fiorentino, G. Nicora, M. Meseguer, M. Taggi, F. Innocenti, **M. Isernia**, G. Coticchio, A. Vaiarelli, F. M. Ubaldi, L. Rienzi, S. Garagna, R. Bellazzi, M. Zuccotti, D. Cimadomo.*
70° Conference GEI-SIBSC Modena, 10-13 June 2025.