

## PERSONAL INFORMATION

**Angela Travaglione**

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Sex Female | Date of birth 27/04/1996 | Nationality Italy

## CURRENT POSITION

**Ph.D. student**

Department of Biology, University of Naples Federico II, Complesso Universitario Monte S. Angelo, Via Cinthia 80126 Naples, Italy – with Merck KGaA - Darmstadt, Germany

Project: “Innovative technologies for the dynamic culture of embryos”.

## WORK EXPERIENCE

Oct 2023-Dec 2023

**Ph.D. Scholarship in “Innovative technologies for the dynamic culture of embryos”**  
Laboratory of "Assisted Reproduction and Preimplantation Embryology in Bovine" at the Department of Animal Reproduction, National Institute for Agricultural and Food Research and Technology (INIA) (INIA-CSIC), 28040, Madrid, Spain. Prof. Dimitros Rizos

- embryo-maternal interactions in vitro using the bovine model
- in vitro embryo production (bovine and equine models)

Mar 2021-Dec 2021

**Research Intern**

Department of Biology, University of Naples Federico II, Complesso Universitario Monte S. Angelo, Via Cinthia 80126 Naples, Italy

Project: “strategies for performing folliculogenesis in vitro in order to preserve female fertility”

## EDUCATION AND TRAINING

- 2021 **Advanced course of vitrification of oocytes, embryos and ovarian tissue**  
Iatropolis- Genesis Day Surgery Sdc, Caserta, Italy
- 2021 **Master's Degree in Biology of cell differentiation and reproduction grade 110/110 (cum laude)**  
University of Naples "Federico II", Italy
- 2019 **Bachelor's Degree in Biological Science**  
University of Naples "Federico II", Italy
- 2019 **Postgraduate course in Biotechnology of Human Reproduction**  
University of Naples "Federico II", Italy

## PERSONAL SKILLS

**Mother tongue(s)** Italian

**Other language(s)**

|         | UNDERSTANDING |                    | SPEAKING           |                   | WRITING            |
|---------|---------------|--------------------|--------------------|-------------------|--------------------|
|         | Listening     | Reading            | Spoken interaction | Spoken production |                    |
| English | Intermediate  | Upper Intermediate | Intermediate       | Intermediate      | Upper intermediate |
| Spanish | Beginner      | Beginner           | Beginner           | Beginner          | Beginner           |

**Communication skills** Excellent relations and experience at the research laboratories

**Organisational / managerial skills**  
 Aptitude for team working  
 Ability to coordinate the working groups  
 Aptitude for problem solving  
 Ability to withstand sustained pace of work

**Job-related skills** -In vitro embryo production: Oocyte screening, oocyte and embryo handling, oocyte Maturation and Fertilization and embryo Culture, ICSI, Computer Assisted Sperm Analysis (CASA), complete semen analysis, Vitrification of embryos-oocyte and ovarian tissue, set up of static and dynamic cell cultures.

-Nuclear fragmentation test (tunel assay), live-dead assay, LDH, MTT.

-Histology sample preparation: fixation, processing, embedding, sectioning. Microtome, immunohistochemistry and immunofluorescence techniques. Staining techniques (gram, may grunwald&giemsa, hematoxilin&eosin, Periodic Acid Schiff (PAS) reaction, alcian blue, Masson's tricrome, picrosirius red

-Instrumentation: brightfield and fluorescence microscopy, Confocal (Leica, Zeiss, Olympus) and Multiphoton microscopy  
Other: Sterilization techniques

## Digital skills

| SELF-ASSESSMENT        |                  |                  |                  |                  |
|------------------------|------------------|------------------|------------------|------------------|
| Information processing | Communication    | Content creation | Safety           | Problem solving  |
| Independent user       | Independent user | Proficient user  | Independent user | Independent user |

Excellent knowledge and use of Microsoft application and Office  
Excellent knowledge and use of Mac OS X operating system  
Excellent knowledge and use of Adobe Photoshop CS6 and Illustrator, Image J, Quantity One, Scion Image.  
Excellent knowledge and use of Leica Application Suite Advanced Fluorescence software platform  
Excellent knowledge and use of Zen Imaging software (Carl Zeiss)  
Basic knowledge and use of Olympus Imaging software

## ADDITIONAL INFORMATION

## Member of professional societies

GEI SIBSC - Gruppo Embriologico Italiano Società Italiana dello Sviluppo e della Cellula year 2024  
European Society of Human Reproduction and Embryology (ESHRE) year 2022

## Teaching activities

-Teacher for the theoretical and hands-on activities for the International Hands-on laboratory management activities – Module 3 – Embriology (2<sup>nd</sup> part), University of Naples Federico II. 24-28 June 2024

-Invited Speaker and lab training for Advanced Course in Biology and Technologies of Assisted Reproduction - 20<sup>th</sup> and 21<sup>th</sup> edition -Title "INFLUENCE OF THE MICROENVIRONMENT ON EMBRYO DEVELOPMENT". April 2022-2024

## Other relevant scientific activities

- FUTURO REMOTO 2023. Interazione Intelligente Tra Gameti. L'iniziativa sarà rivolta principalmente agli studenti delle scuole superiori a cura di Vincenza De Gregorio (RTDa), **Angela Travaglione** (PhD student) e Vincenzo Genovese (PhD student) affiliazione: Dipartimento di Biologia dell'Università degli studi di Napoli Federico II. L'attività si svolgerà in presenza. 2023, Città della Scienza, Napoli, Italia.
- FUTURO REMOTO 2022. Sezione Salute. Fertilization is a stable balance between gametes (cod. P\_124). A cura di Vincenza de Gregorio, **Travaglione Angela** e Genovese Vincenzo del Dipartimento di Biologia, Università degli Studi di Napoli "Federico II". Attività svolta in presenza. 22-24 Novembre 2022, Città della Scienza, Napoli, Italia.

## Publications

Gualtieri R, De Gregorio V, Candela A, **Travaglione A**, Genovese V, Barbato V, Talevi R. In Vitro Culture of Mammalian Embryos: Is There Room for Improvement? *Cells*. 2024 Jun 7;13(12):996. doi: 10.3390/cells13120996. PMID: 38920627; PMCID: PMC11202082.

**Travaglione A**, Candela A, De Gregorio V, Genovese V, Cimmino M, Barbato V, Talevi R, Gualtieri R. Individually Cultured Bovine Zygotes Successfully Develop to the Blastocyst Stage in an Extremely Confined Environment. *Cells*. 2024 May 17;13(10):868. doi: 10.3390/cells13100868. PMID: 38786090; PMCID: PMC11119105.

Fragomeni G, De Napoli L, De Gregorio V, Genovese V, Barbato V, Serratore G, Morrone G, **Travaglione A**, Candela A, Gualtieri R, Talevi R, Catapano G. Enhanced solute transport and steady mechanical stimulation in a novel dynamic perfusion bioreactor increase the efficiency of the in vitro culture of ovarian cortical tissue strips. *Front Bioeng Biotechnol*. 2024 Feb 8;12:1310696. doi: 10.3389/fbioe.2024.1310696. PMID: 38390358; PMCID: PMC10882273.

Spampinato M, Siciliano A, **Travaglione A**, Chianese T, Mileo A, Libralato G, Guida M, Trifuoggi M, De Gregorio V, Rosati L. Unravelling the ecotoxicological impacts of gadolinium (Gd) on *Mytilus galloprovincialis* embryos and sperm in seawater: A preliminary study. *Heliyon*. 2024 May 17;10(10):e31087. doi: 10.1016/j.heliyon.2024.e31087. PMID: 38826730; PMCID: PMC11141363.

Barbato, V., Genovese, V., De Gregorio, V., **Travaglione A**. et al. Dynamic in vitro culture of bovine and human ovarian tissue enhances follicle progression and health. *Sci Rep* 13, 11773 (2023). <https://doi.org/10.1038/s41598-023-37086-0> .

D. Deeleep Bhagat Amonkar, V. Genovese, V. De Gregorio, **A. Travaglione**, S. Uppangala, R. Vani Lakshmi, G. Kalthur, R. Gualtieri, R. Talevi, SK. Adiga. Impact of prepubertal bovine ovarian tissue pre-freeze holding duration on follicle quality. *Reproductive Biology*.

- International and national conference communications and participations
- **Poster presentation.** Improvement of follicle growth and health during dynamic culture of bovine ovarian cortical tissue (BOCT) is associated to a higher remodeling of the extracellular matrix  
V. Genovese, V. De Gregorio, **A. Travaglione**, A. Candela, R. Gualtieri, R. Talevi 7-10 July 2024,ESHRE 40th Annual Meeting, Amsterdam, The Netherlands
  - **Oral presentation.**Evaluation of material biocompatibility for manufacturing ovarian tissue (OT) dynamic culture devices  
A. Candela,V. Genovese, V. De Gregorio, **A. Travaglione**, V. Barbato, R. Talevi, R. Gualtieri 11-14 June 2024 - 69°CONVEGNO GEI-SIBSC, Naples, Italy
  - Poster presentation.** ENHANCED FOLLICLE GROWTH AND HEALTH ASSOCIATED WITH EXTRACELLULAR MATRIX REMODELING IN BOVINE OVARIAN TISSUE THROUGH DYNAMIC CULTURE  
V. Genovese, V. De Gregorio, **A. Travaglione**, A. Candela, M. Cimmino, R. Gualtieri, R. Talevi. 11-14 June 2024 - 69°CONVEGNO GEI-SIBSC, Naples, Italy
  - **Poster presentation.** Effects of single embryo culture in a confined environment on the developmental competence of bovine embryos  
**A. Travaglione**, A. Candela, V. De Gregorio, V. Genovese, M. Cimmino, R. Talevi, R. Gualtieri 11-14 June 2024 - 69°CONVEGNO GEI-SIBSC, Naples, Italy
  - **Poster presentation.** La progressione e la salute follicolare durante la coltura dinamica del tessuto corticale ovarico bovino sono associate ad un miglior rimodellamento della matrice extracellulare (ECM)  
V. Genovese, V. De Gregorio, **A. Travaglione**, A. Candela, R. Gualtieri, R. Talevi. 14-16 March, X congresso Nazionale SIERR IVFuture, Roma, Italy
  - **Poster presentation.** La coltura singola di embrioni bovini in microambienti sub-microlitrici migliora i tassi di sviluppo e la competenza delle blastocisti rispetto alla coltura standard di gruppo.  
**A. Travaglione**, A. Candela, V. Genovese, V. De Gregorio, G. Catapano, R. Talevi, R. Gualtieri 14-16 March, X congresso Nazionale SIERR IVFuture, Roma, Italy
  - **Poster presentation.** Valutazione della biocompatibilità dei materiali per la produzione di dispositivi per la coltura dinamica di tessuto ovarico bovino.  
V De Gregorio, V Genovese, A Candela, A Travaglione, G Catapano\*, R Gualtieri, R Talevi 14-16 March, X congresso Nazionale SIERR IVFuture, Roma, Italy
  - **Poster presentation.** Quick toxicity test of materials biocompatibility for dynamic culture of reproductive tissues.  
V. De Gregorio, V. Genovese, A. Candela, A. Travaglione, V. Barbato, L. De Napoli, G. Fragomeni, R. Gualtieri, R. Talevi, G. Catapano. 29 Aug - 1 Sept 2023, 49th ESAO (European Society for Artificial Organs) and IFAO Congress. 29 Aug-1 Sept. 2023. University of Bergamo (Sant'Agostino historical building), Bergamo, Italy.
  - **Poster presentation.** Addressing challenges in 3D modeling and printing for virtual and rapid prototyping of implants and devices for substitutive medicine and tissue engineering.  
L. De Napoli, G. Fragomeni, G. Serratore, G. Morrone, V. Genovese, V. Barbato, V. De Gregorio, **A. Travaglione**, R. Gualtieri, R. Talevi, G. Catapano. 29 Aug-1 Sept 2023. University of Bergamo (Sant'Agostino historical building), Bergamo,

Italy.

- **Poster presentation.** Mechanical and biochemical challenges in a novel dynamic bioreactor for ovarian cortical tissue culture.  
G. Serratore, G. Morrone, V. Genovese, L. De Napoli, G. Fragomeni, V. Barbato, V. De Gregorio, M. Di Nardo, **A. Travaglione**, R. Gualtieri, R. Talevi, G. Catapano. 29 Aug-1 Sept 2023. University of Bergamo (Sant'Agostino historical building), Bergamo, Italy.

- **Poster presentation.** Long-term in vitro dynamic culture of bovine ovarian cortical tissue increases follicle growth, viability and AMH secretion.  
V. Barbato, V. Genovese, V. De Gregorio, **A. Travaglione**, A. Candela, G. Catapano, A. Amoresano, S. Sepico, G. Pinto, G. Mondrone, T. Dhooghe, S. Longobardi, W. Zheng, R. Gualtieri, R. Talevi. 25-28 June 2023. ESHRE 39th Annual Meeting, Copenhagen, Denmark.

- **Oral presentation.** Long-Term In Vitro Dynamic Culture Of Bovine Ovarian Cortical Tissue (Boct) Increases Follicle Growth, Viability And Amh Secretion.  
V. Barbato, V. Genovese, V. De Gregorio, **A. Travaglione**, A. Candela, A. Amoresano, S. Sepico, G. Pinto, G. Mondrone, T. Dhooghe, S. Longobardi, W. Zheng, G. Catapano, R. Gualtieri, R. Talevi. 4-8 June 2023, 68°CONVEGNO GEI-SIBSC, Oliveri (ME), Italy.

- **Oral presentation.** Establishing individual bovine embryo cultures in sub-microliter environment maintains the blastocyst competence. V. De Gregorio, **A. Travaglione**, V. Genovese, A. Candela, V. Barbato, R. Talevi, R. Gualtieri. 4-8 June 2023, 68°CONVEGNO GEI-SIBSC, Oliveri (ME), Italy.

- **Poster presentation.** Enhancing oxygen availability in the dynamic culture of bovine ovarian cortical tissue improves the yield to secondary follicles. R. Talevi, G. Catapano, M. Di Nardo, V. Barbato, V. Genovese, V. De Gregorio, **A. Travaglione**, R. Gualtieri. 3-6 July 2022. ESHRE 38th Annual Meeting, Milan, Italy.

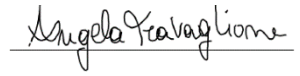
- **Poster presentation.** Influence of strip thickness and FSH supplementation on follicle growth in the in vitro culture of strips of bovine ovarian cortical tissue in gas-permeable dishes. R. Gualtieri, D.B. Amonkar, V. Genovese, **A. Travaglione**, V. Barbato, V. De Gregorio, G. Catapano, S.K. Adiga, R. Talevi. 3-6 July 2022. ESHRE 38th Annual Meeting, Milan, Italy.

- **Poster presentation.** Development of a dynamic bioreactor to culture ovarian cortical tissue under suitable oxygen concentrations and mechanical challenges. G. Fragomeni, L. De Napoli, M. Di Nardo, V. Barbato, V. Genovese, V. De Gregorio, **A. Travaglione**, R. Gualtieri, R. Talevi, G. Catapano. 6-10 September 2022. 48th Annual ESAO Congress, Krems, Austria.

- **Poster presentation.** Influence of tissue thickness and FSH on follicle maturation in bovine ovarian strips cultured in vitro in gas-permeable dishes. D.B. Amonkar, V. Genovese, **A. Travaglione**, V. Barbato, V. De Gregorio, G. Catapano, S.K. Adiga, R. Talevi, R. Gualtieri. ACE 2022, New Delhi, India.

Information Pursuant To Ee Art. 14 Eu Regulation  
679/2016 ("Gdpr") And Italian Legislative Decree "D. Lgs. 30 June 2003, N. 196" On The Protection Of  
Personal Data

Firma

A handwritten signature in black ink, reading "Angela Travaglione", is written over a horizontal line.

