

PERSONAL INFORMATION

Vincenzo Genovese

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Sex Male | Date of birth 10/09/1990 | Nationality Italy

CURRENT POSITION

PhD student

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

Project: "Optimization of in vitro development of human and animal cortical ovarian tissue"

WORK EXPERIENCE

Sep 2023-Dic 2023

Ph.D. Scholarship / Embryologist

Centre of excellence in clinical Embryology, Department of Reproductive science, KMC Manipal, India

- Preservation and culture of human ovarian tissue
- IVF Mice (research)
- IVF Human, Clinic

Jan 2021-Dic 2021

Research fellow / Consultant

IVF Research Education & Development S.r.l. (IVFRED S.r.l.)

Jan 2020-Dic 2020

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

Advanced course of vitrification of oocytes, embryos and ovarian tissue
Iatropolis- Genesis Day Surgery Sdc, Caserta, Italy

Registration in the Register of Biologists

Enabling awarded upon passing of State Examination
University of Naples "Federico II", Italy

Master's Degree in Biology "Curriculum Biology of Reproduction and Differentiation" LM6

Thesis title: "Nuove tecnologie per lo sviluppo follicolare in vitro: analisi istologica e molecolare di tessuto ovarico umano coltivato in bioreattore"
"New technologies for follicular development in vitro: Histological and molecular analysis of human ovarian tissue grown in bioreactor"
University of Naples "Federico II", Italy

Bachelor's degree in biological sciences

Thesis title : "Stress ossidativo esogeno ed antiossidanti: effetto protettivo di zinco, coenzima Q10 e D-aspartato su spermatozoi bovini in vitro" –
"Exogenous oxidative stress and antioxidants: protective effect of zinc, coenzyme Q10 and D-aspartate on bovine spermatozoa in vitro"
University of Naples "Federico II", Italy

Hight school diploma
L. Da Vinci (Salerno)

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

Communication skills Excellent relations and experience at the research laboratories

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

Job-related skills

Theory

• cytology and animal and plant cell differentiation, • biology of reproduction in the human and zootechnical field • embryonic development of model organisms • developmental genetics • bioinformatics, molecular biology, cellular biochemistry • methodologies used in biochemistry, genetics, molecular biology • methods of analysis and manipulation of cells and complex organisms

Techniques

• Electrophoresis • PCR • RT-PCR • RNA extraction from tissue • live/dead assay • LDH • MTT • In vitro embryo production: Oocyte screening, oocyte and embryo handling, oocyte Maturation and Fertilization and embryo Culture • FIVET • ICSI • Spermogram • Sperm DNA fragmentation test by TUNEL assay • Sperm Class Analyzer (SCA) • Sperm selection: swim up – percoll density gradient • Vitrification of oocytes, embryos and ovarian tissue

-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, Fluorescence microplate reader.

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,.
 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
 Google Drive
 Zoom
 Social Media
 Skype

Driving licence

Type B and A2

ADDITIONAL INFORMATION



Member of professional societies

GEI SIBSC - Gruppo Embriologico Italiano Società Italiana dello Sviluppo e della Cellula year 2023
European Society of Human Reproduction and Embryology (ESHRE) year 2022,
Società Italiana Embriologia Riproduzione e Ricerca (SIERR)

Teaching activities

-Teacher for the theoretical and hands-on activities for the International Hands-on laboratory management activities – Module 3 – Embriology (2nd 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 - 20th -22th edition -Title "Sperm selection methods for assisted reproduction techniques". Mar 2022, 2023,2024

-Lecture for the master's degree course in Reproductive Biology Prof. Riccardo Talevi entitled " Analisi del liquido seminale: Spermigramma ". 14 May 2023

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.

- Di Emidio G, Tatone C, Barbato V, **Genovese V**, Placidi M, Talevi R, Gualtieri R; Italian Society of Embryology, Reproduction, Research (SIERR). Protective effects of a SIRT1 inhibitor on primordial follicle activation and growth induced by cyclophosphamide: insights from a bovine in vitro folliculogenesis system. J Assist Reprod Genet. 2022 Apr;39(4):933-943. doi: 10.1007/s10815-022-02437-9. Epub 2022 Mar 5. PMID: 35247119; PMCID: PMC9051010.

Publications

-Barbato, V., **Genovese, V.**, De Gregorio, V. 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> . *V.B., V.G. and V.D.G. equally contributed to the manuscript and share first authorship.

-Amonkar DDB, **Genovese V**, De Gregorio V, Travaglione A, Uppangala S, Vani Lakshmi R, Kalthur G, Gualtieri R, Talevi R, Adiga SK. Impact of prepubertal bovine ovarian tissue pre-freeze holding duration on follicle quality. Reprod Biol. 2023 Sep;23(3):100794. doi: 10.1016/j.repbio.2023.100794. Epub 2023 Jul 31. PMID: 37531931.

Publications

- 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.

- 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.

- 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.

- 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
 - **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
 - **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.** 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.** 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.** 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.** Impatto dello spessore di “strips” di tessuto corticale ovarico bovino e della supplementazione con FSH sullo sviluppo follicolare durante la coltura in vitro a lungo termine.
A. Candela, V. Genovese, A. Travaglione, V. De Gregorio, R. Talevi, R. Gualtieri 4-16 March, X congresso Nazionale SIERR IVFuture, Roma, Italy
 - **Partecipation** at Conference “ISAR 2023 Embryology”, 3-5 Nov 2023, Forum convention centre, club 07, Ahmedabad, India
 - **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.

- International and national conference communications and participations
- **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. Dhooche, 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. Dhooche, 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.
 - Partecipation** at Conference "Hot Spots in medicina della Riproduzione", 14 Oct 2022, Hotel San Francesco al Monte, Naples.
 - **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.

References

- Professor Riccardo Talevi - Dipartimento di Biologia - VIA CINTIA - COMPLESSO MONTE S.ANGELO- Federico II – email: riccardo.talevi@unina.it- tel: 081-679197 081-679198

- Professor Roberto Gualtieri - Dipartimento di Biologia - VIA CINTIA - COMPLESSO MONTE S.ANGELO- Federico II – email: roberto.gualtieri@unina.it – tel: 081679212

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

Vincenzo Genovese

