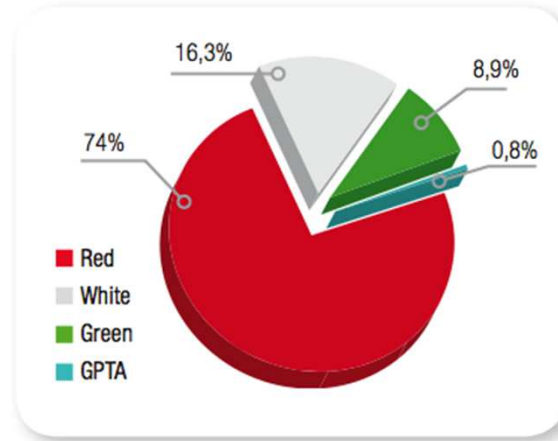
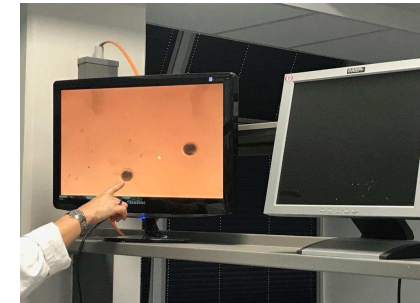
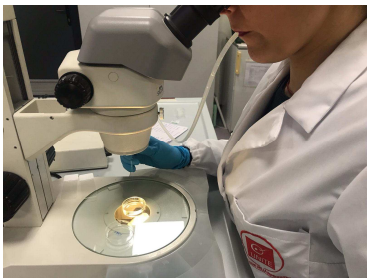




UNIVERSITÀ
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DI TERAMO



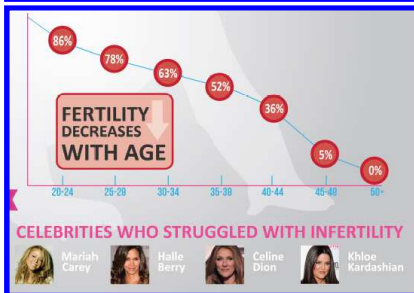
Second-cycle Degree Course in REPRODUCTIVE BIOTECHNOLOGIES (LM-9) AY 2019-20



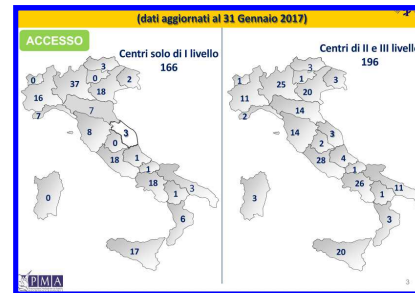
Second-cycle Degree Course in REPRODUCTIVE BIOTECHNOLOGIES

AIM: To train experts able to work in the field of Assisted Reproductive Technology, both in **human** and **animal** field

WORLD: 50-80 MILLION
PEOPLE AFFECTED BY INFERTILITY



25 July 1978



- **10-15% couples (50 millions couples) are infertile and turn to IVF/ART**
- **OMS: Increase of 6.5 millions of infertile couples in 20y**
- **In 40y, 8 millions babies were born through ART**
- **500.000 newborns/y using ART; 13.000 in Italy**
- **370 centers of ART in Italy**
- **71% of all cycles of ART in Europe**

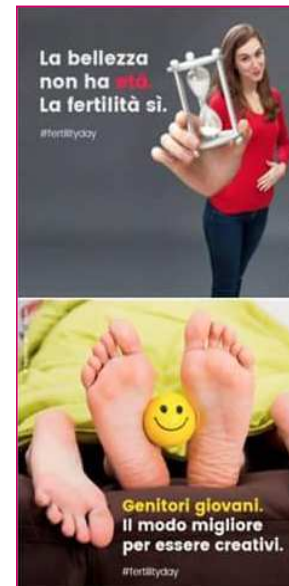
- **Zootechnics**
- **Global populations of vertebrates declined by 58% (1970-2012)**
- **Endangered animal species (>3000)**

“Here we adapt existing Assisted Reproduction (ART) Techniques to fertilize Southern White Rhinoceros oocytes with Northern White Rhinoceros spermatozoa *(from dead animals)*”



Second-cycle Degree Course in REPRODUCTIVE BIOTECHNOLOGIES

Medicine of reproduction is one of the most active sector in modern medicine



At present, there is a growing demand for assisted reproduction, which requires trained specialists in an field in which theoretical, practical, ethical, legal, and communication notions are constantly evolving

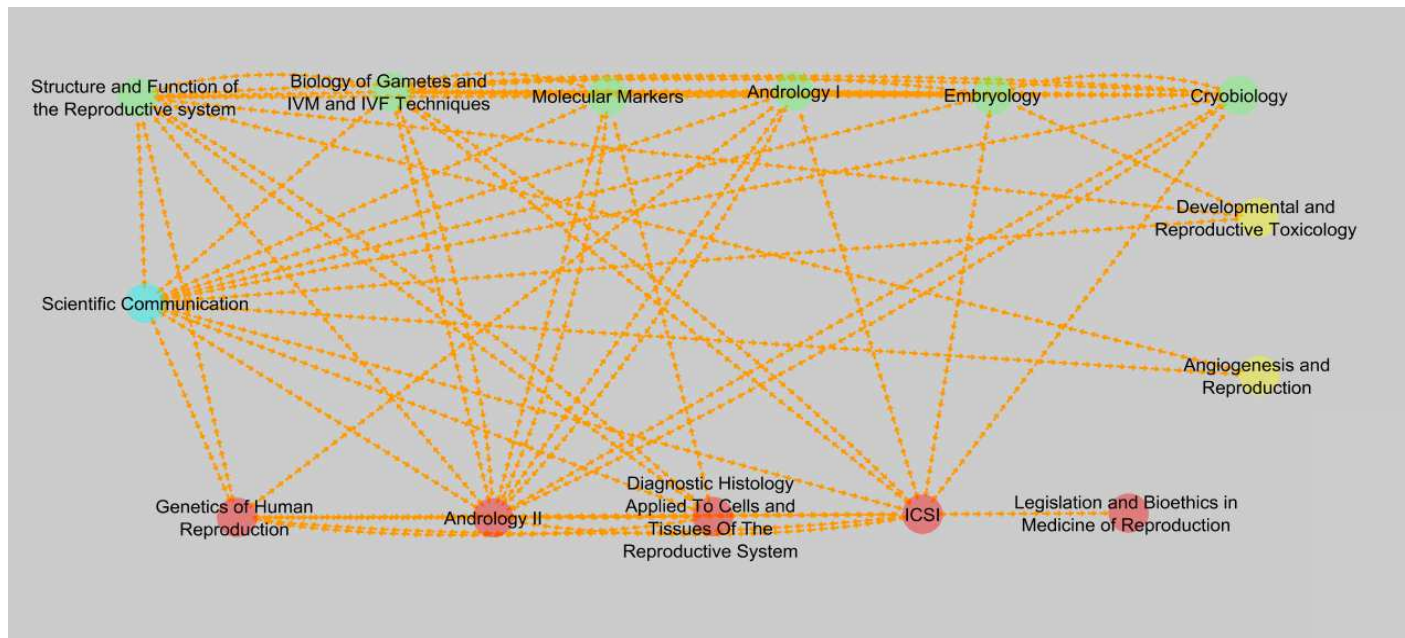
ENTRY REQUIREMENTS

Bachelor or Master degree in an appropriate biological-, biomedical- or veterinary- science subject, medicine or healthcare science (**Biotechnologies, Life Sciences, Livestock science, Nursing, Pharmacy, Medicine, Veterinary Medicine,...**)

BASIC KNOWLEDGE in:

- ✓ Cytology and Istology
- ✓ Cell Physiology and Cell Culture
- ✓ Biochemistry and Molecular Biology
- ✓ Applied and Medical Genetics
- ✓ English language

PREPARATORY COURSES
+
ENTRANCE TEST (not mandatory)
(Nov-Dec)



Graduation (on time)

I YEAR

Jan-June

Elective/Preparatory courses

Nov-Dec

II YEAR

Jan-May

Second-cycle Degree Course in REPRODUCTIVE BIOTECHNOLOGIES

MAIN FEATURES OF THE DIDACTIC PLAN

LESSONS IN ENGLISH (level B1 required)



INNOVATIVE in ITS TEACHING LESSONS PLAN

- Remedial/Preparatories Courses
- Lessons condensed in **1 semester Jan-June** (Single-subject classes)
- **Laboratorial** and practical lessons (**50% of total hours**)
- **Professional experts** in human medicine as **teachers** (II year) + up-to-date scientific **Seminars**
- **Career Day**

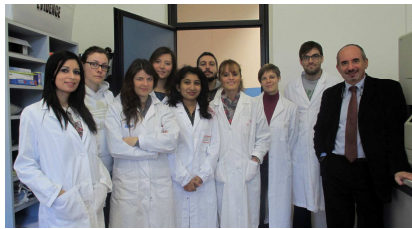
Dr. A. Barbonetti (AQ)



Dr. Listorti (AlmaRes RM)



Prof. L. Stuppia (Chieti)



Dr. A. Borini (BO)



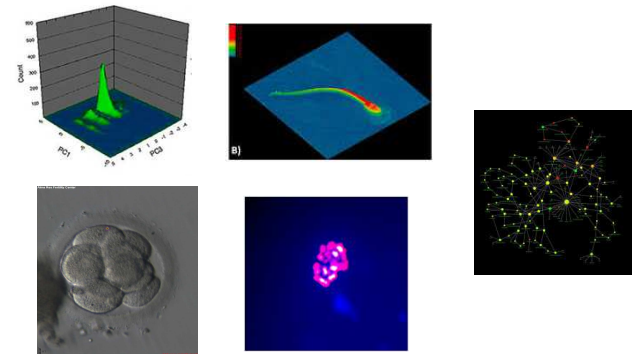
Dr. F. Gallo (RM)



Second-cycle Degree Course in REPRODUCTIVE BIOTECHNOLOGIES

MAIN STRENGTHS OF THE COURSE

- **RESEARCH-LED TEACHING** (up-to-date lessons)
regenerative medicine, embryology, stem cells, computational biology, tumors progression, andrology, cryobiology, angiogenesis, toxicology, endocannabinoids, epigenetics, nutrigenetics, genetic testing.
- **DIDACTIC/RESEARCH LABORATORIES**
Individual workstations
- **STUDENT-ORIENTED COURSE**
 - 22-25 students/year
 - Personalized tutoring (1 teacher/student)
 - Active involvement of students in the decision making process (AVA system)
- **OTHER PROFESSIONALISING ACTIVITIES**
(Radio di Ateneo; Corte Costituzionale/Senato; Registro nazionale PMA; Erasmus traineeship: Svezia, Spagna, Inghilterra, Germania, Scozia)



RADIOFREQUENZA
la radio dell'Università di Teramo



Senato (Elena Cattaneo)



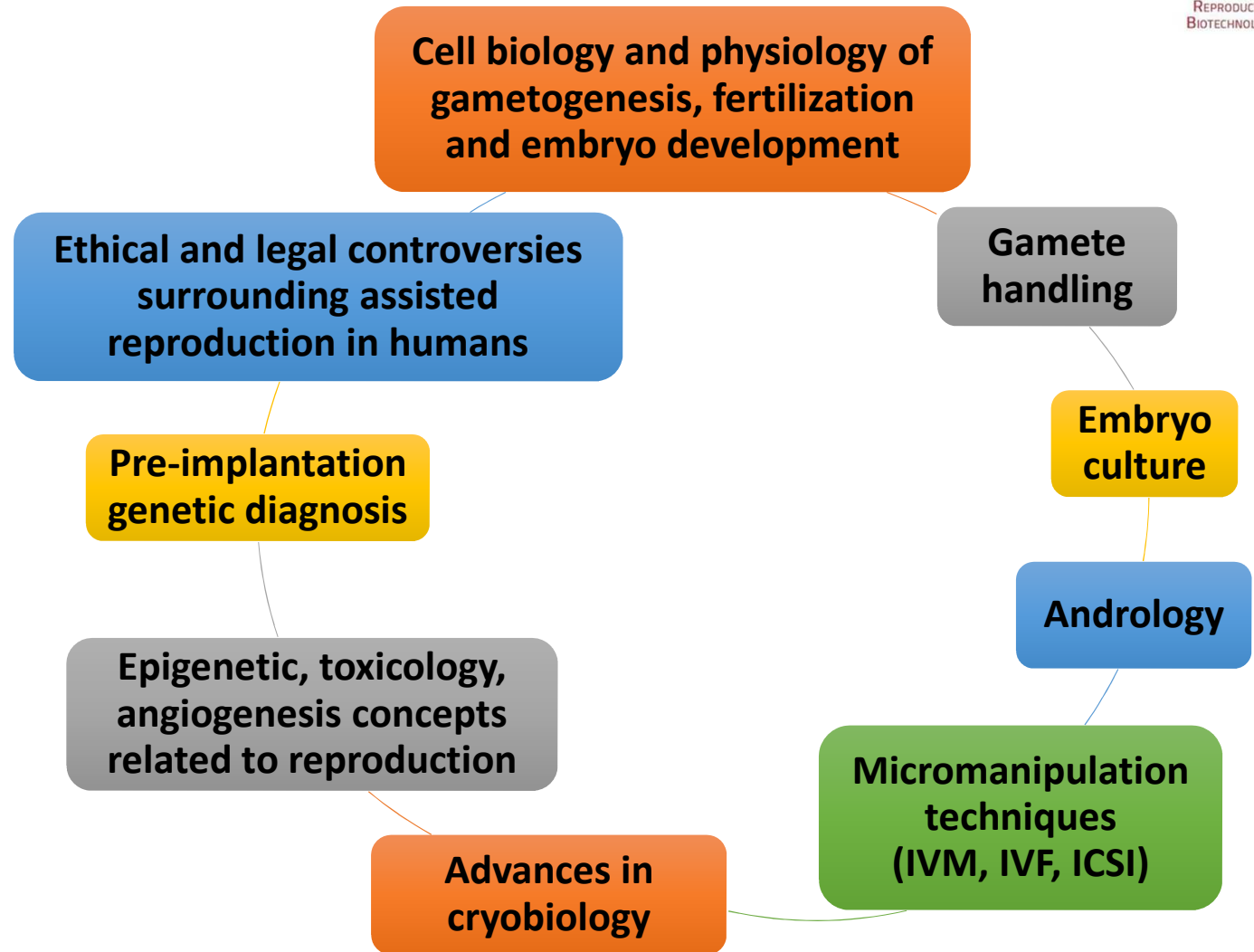
Registro nazionale PMA
(Dr. Filomena Gallo)



Students will receive training in:

EDUCATIONAL GOALS

The Course will provide the fundamental **theoretical** and **practical knowledge** necessary to understand and perform up-to-date techniques in the areas of Assisted Reproduction Technology (ART).



Second-cycle Degree Course in REPRODUCTIVE BIOTECHNOLOGIES

FIRST YEAR

✓ STRUCTURE AND FUNCTION OF THE REPRODUCTIVE SYSTEM	11 CFU
✓ BIOLOGY OF GAMETES, IVM AND IVF TECHNIQUES	10
✓ ANDROLOGY I	6
✓ MOLECULAR MARKERS IN REPRODUCTION	12
✓ EMBRYOLOGY	6
✓ CRYOBIOLOGY	11
✓ SCIENTIFIC COMMUNICATION, PART I	3

BASIC TEACHING SUBJECTS
(+++ animal models)

Second-cycle Degree Course in REPRODUCTIVE BIOTECHNOLOGIES

SECOND YEAR

✓ GENETICS OF HUMAN REPRODUCTION	10 CFU
✓ DIAGNOSTIC HISTOLOGY APPLIED TO CELLS AND TISSUES OF THE RS	5
✓ ANDROLOGY II	6
✓ ICSI PROCEDURE AND ADVANCED TECHNIQUES IN PMA	6
✓ LEGISLATION AND BIOETHICS IN MEDICINE OF REPRODUCTION	6
✓ SCIENTIFIC COMMUNICATION, PART II	3

PROFESSIONALISING TEACHING SUBJECTS
(+++ human samples/ External Centres)

Second-cycle Degree Course in REPRODUCTIVE BIOTECHNOLOGIES

ELECTIVE COURSES (8 CFU)

- | | |
|---|-------|
| ✓ ANGIOGENESIS AND REPRODUCTION | 3 CFU |
| ✓ DEVELOPMENTAL AND REPRODUCTIVE TOXICOLOGY | 5 |
| ✓ <i>LIVE CELLS IMAGING</i> | 4 |
| ✓ <i>CELLULE STAMINALI IN MEDICINA RIGENERATIVA</i> | 4 |
| ✓ <i>TECNICHE DI MICROMANIPOLAZIONE EMBRIONALE</i> | 5 |

Second-cycle Degree Course in REPRODUCTIVE BIOTECHNOLOGIES

PROFESSIONAL GOALS

The Reproductive Biotechnologies MSc allows graduates to pursue a career in **assisted reproduction and/or research** in the reproductive sciences, both in **human** and **animal** field



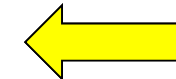
UNITE:
- CELLULAR AND MOLECULAR
BIOTECHNOLOGY
- HORIZON 2020

Second-cycle Degree Course in REPRODUCTIVE BIOTECHNOLOGIES

LM-9 Reproductive Biotechnologies

Altre informazioni sulle caratteristiche degli studenti laureati

	Teramo	Mezzogiorno*	Italia
Età alla laurea (medie, in anni)	26,9	27,0	26,5
Voto di laurea (medie, in 110-mi)	111,6	111,2	109,6
In corso	94,7	71,8	76,2
Durata degli studi (medie, in anni)	2,0	2,5	2,4
Indice di ritardo (rapporto fra ritardo e durata legale)	0,01	0,16	0,13



ALMALAUREA 2017

Job of graduates in LM9:

- 24% Education and Research
- 23% Chemical
- 21% Health Care
- 9% Abroad

Most graduates works as Researchers or Biologists

Second-cycle Degree Course in REPRODUCTIVE BIOTECHNOLOGIES

EDUCATIONAL RESULTS

And our graduates?

A sample of 33 our graduates
(from LinkedIn)

EMBRYOLOGISTS or BIOTECHNOLOGISTS (73%)

6/33



- LONDON (UK) ++
- CAMBRIDGE (UK) ++
- WIESBADEN (Germany)
- WARSAW (Poland)



18/33

- MILANO +++
- BOLOGNA
- MODENA
- REGGIO EMILIA
- ASCOLI PICENO
- TERAMO ++
- L'AQUILA
- PESCARA
- ROMA++
- NAPOLI
- SALERNO
- CASERTA
- BARI
- POTENZA

RESEARCHERS or PhD STUDENTS (27%)

9/33

- | | | |
|--------------------|------------------|-----------|
| PHILADELPHIA (USA) | LONDON (UK) | TERAMO ++ |
| WIEN (AUSTRIA) | LEUVEN (Holland) | CHIETI |
| | MURCIA (Spain) | |
| | CACERES (Spain) | |



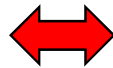
- IZS
- TORNO SUBITO

Second-cycle Degree Course in REPRODUCTIVE BIOTECHNOLOGIES

<http://www.unite.it/UniTE/Didattica/Corsi di laurea 2018 2019/>

Programme Director:

Alessia Colosimo acolosimo@unite.it



Educational Manager:

Natalia Izzi nizzi@unite.it



Alumni interviews

- Course structure diagram
- Course unit syllabus
- Lessons
- Examinations
- Class timetable
- Propaedeutic subjects

Information

- Admission requirements
- How to enroll
- Remedial courses
- Internships and placements
- Final examinations
- International mobility
- Associazione Biotecnologie
- Click here to find us on eLearning

**Second-Cycle Degree Course in
REPRODUCTIVE BIOTECHNOLOGIES**

Biology of gametes and techniques of IVM and IVF (1 year)

- TECHNIQUES OF IVM AND IVF

LECTURER: PROF. LUISA GIOIA

AIMS OF THE COURSE:
To provide the student with the theoretical knowledge and practical skills concerning *in vitro* maturation (IVM) and *in vitro* fertilization (IVF) techniques, which are commonly used to reproduce in the laboratory two main steps of the reproductive process: the oocyte maturation and fertilization, and so produce embryos in the laboratory (*in vitro*).

MAIN/NOVEL TOPICS:
"Starting from an immature oocyte to obtain an embryo". Using the deep knowledge on biology of gametes, student can critically approach updated protocols, involving collection, selection and evaluation of ovarian follicles, cumulus-oocyte complexes and semen; proper handling of gametes, correct choice, set-up, and management of an IVM/IVF protocol (model of domestic animals). The student should be also able to apply such techniques for therapeutic and research purposes.



<https://www.facebook.com/Reproductive-Biotechnologies-University-of-Teramo>

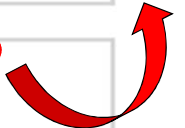


Student guides

Student guide (2121 KB)

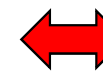


Guida dello studente



Orientation

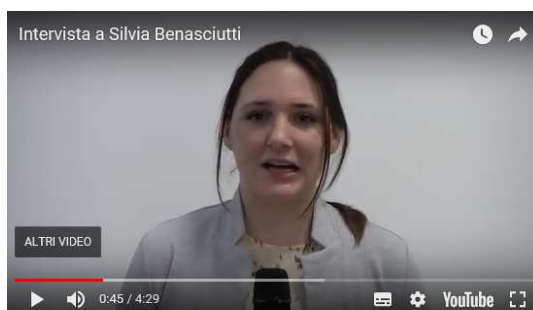
Valentina Russo
tel. 0861 266930
vrusso@unite.it



Second-cycle Degree Course in REPRODUCTIVE BIOTECHNOLOGIES

http://www.unite.it/UniTE/Le_interviste_a_due_ex_studenti_di_Biotecnologie_della_riproduzione

<http://youtube.be/hO43PvHHB9I>



EX-ALUMNI



Silvia Benasciutti & Attilio Anastasi

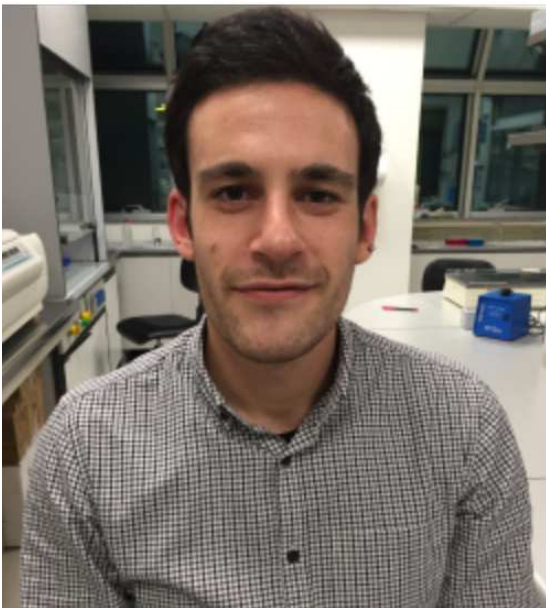
Second-cycle Degree Course in REPRODUCTIVE BIOTECHNOLOGIES

EX-ALUMNI

Fabio Bellia (PhD)

 **Reproductive Biotechnologies - University of Teramo**
11 febbraio · 🌐

La Società Italiana di Neuropsicofarmacologia premia ricercatore dell'università di Teramo
Fabio Bellia, studente del secondo anno del dottorato di ricerca in Biotecnologie cellulari e molecolari dell'Università degli Studi di Teramo, è stato premiato per un poster sullo studio di un probabile collegamento tra il disturbo ossessivo-compulsivo e l'alcolismo.
A Fabio i complimenti di UniTe / Università degli Studi di Teramo 🙌
https://www.unite.it/.../La_Societa_Italiana_di_Neuropsicofar...
Società Italiana di Neuropsicofarmacologia



Miglior poster Congresso
Società Italiana
Neuropsicofarmacologia

Primo premio Start-up
«Wonder Prenatal test»

Giulia Sabatinelli (PhD)

 **Reproductive Biotechnologies - University of Teramo**
5 h · 🌐

Si è conclusa la #01 edizione del Contamination Lab - UniTe. La Finale ha visto trionfare tra le dieci startup "Wonder Prenatal Test", un test prenatale rapido, low cost e privo di rischi sia per la mamma che per il feto, che vede tra i protagonisti una nostra ex studentessa Giulia Sabatinelli...COMPLIMENTI!
Un pubblico di oltre 110 persone e una giuria di esperti del mondo dell'innovazione, imprenditori, manager e giornalisti hanno valutato i progetti di startup finalisti.
<https://www.facebook.com/search/top/...>



Thank you for your attention!



Email: acolosimo@unite.it