



TO MAGNIFICO RETTORE OF UNIVERSITA' DEGLI STUDI DI MILANO

ID CODE 6191

I the undersigned asks to participate in the public selection, for qualifications and examinations, for the awarding of a type B fellowship at **Department of Veterinary Medicine and Animal Science**

Scientist- in - charge: Prof. Alberto Maria Luciano

Magdalena Ladrón de Guevara

CURRICULUM VITAE

PERSONAL INFORMATION

Surname	Ladrón de Guevara
Name	Magdalena
Date of birth	10/02/1989

PRESENT OCCUPATION

Appointment	Structure
PhD Student	University of Milan

EDUCATION AND TRAINING (attachments 1)

Degree	Course of studies	University	year of achievement of the degree
Degree	Veterinary Medicine (D.V.M)	Universidad Católica de Córdoba, Córdoba, Argentina.	2013 (attachment 1.1 and 1.2)
Specialization			
Master	Animal breeding, Genetics and Reproductive biotechnology	Universitat Autònoma de Barcelona, Universitat Politècnica de València, Instituto Nacional de Investigación y Tecnología Agraria y Alimentaria (INIA), Spain.	2018 (attachment 1.2)
Degree of medical specialization			
Degree of European specialization			
Other			



REGISTRATION IN PROFESSIONAL ASSOCIATIONS

Date of registration	Association	City

FOREIGN LANGUAGES

Languages	level of knowledge
English	C1 (IELTS) (attachment 6.1)
Italian	A2 (attachment 3.1)

AWARDS, ACKNOWLEDGEMENTS, SCHOLARSHIPS (attachments 2)

Year	Description of award
2017	Centro internacional de altos estudios agronómico mediterráneos (CIHEAM) - Spain (attachment 2.1)
2021-2024	Marie Curie ITN-ETN "EUROVA - European Oocyte Biology Research Innovation Training Net" Scholarship - Italy (attachment 2.2)

TRAINING OR RESEARCH ACTIVITY (attachments 3)

<ul style="list-style-type: none">- Cell and tissue culture: from basic knowledge to advanced techniques - University of Milan (attachment 3.1)- Digital imaging and image integrity in scientific publication - University of Milan (attachment 3.1)- Computational Statistics with R and Python - University of Milan (attachment 3.1)- Transcriptomics-tutorial - University College Dublin- Simple steps to publication-quality western blots - Thermofisher (attachment 3.2)- World CRISPR Day - Synthego (attachment 3.3)- Bovine in vitro embryo production (IVM, IVF, IVC)- Cell culture: bovine oviductal epithelial cells (BOEC)- Western Blotting, PCR, qPCR- Coordination and conduction of the embryo transfer of mouse lines (strain rederivation)- Embryo and gamete cryopreservation- Generation of KO by electroporation of ribonucleoprotein complex (RNP) into zygotes.- gRNA design: Using CRISPOR website- gRNA production: Generation of the DNA template by PCR (GoTaq and PrimeSTAR)- In vitro transcription of the gRNA template (GeneArt Precision)- Spin column purification of the product



- Generation of KI by pronuclear and intracytoplasmic injections of mRNA Cas9, gRNA, and DNA template into zygotes.
- Construct design: Using SnapGene software
- Construct production: Amplification of each fragment by PCR (GoTaq and PrimeSTAR). Ligation into a plasmid (pNF) using InFusionHD and Gibson Assembly. Cloning into DH5a competent cells. Plasmid isolation by mini-prep and enzymatic restriction
- Neural blastocyst complementation (NBC): Injection of donor ES cells (wild-type GFP) into host blastocysts (forebrain ablation by diphtheria toxin activated upon Cre-mediated recombination).
- In utero Intra-ventricular injection (E14.5/E13.5) of virus: astrocyte and neuronal labeling through Lentivirus and Adenovirus intracranial injection.

Supervision of internship, master, and PhD students:

1 student

Elisa Rossi (2023), bachelor's in animal science (University of Milan), Lodi - Italy

PROJECT ACTIVITY

Year	Project
2021- Current	Title: Somatic signals regulating mRNA translation in mammalian oocytes - ReD Bio Lab- Università degli Studi di Milano Funding: Marie Curie ITN-ETN "EUROVA - European Oocyte Biology Research Innovation Training Net" PI: Federica Franciosi, University of Milan. Role: Main project: Conducting most experiments, data analysis, data presentation
2018-2021	Title: Generation of genetically modified mice for modeling neurodevelopmental disorders using CRISPR/Casmediated genome engineering - Group Novarino - Institute of science and technology Funding: Institute of science and technology Austria PI: Gaia Novarino, Institute of science and technology Austria. Role: Main project: Conducting most experiments.
2018-2021	Title: Study the functional consequences of mutations in the GATOR1 and KICSTOR complexes in neurodevelopmental disorders Funding: Institute of science and technology Austria PI: Gaia Novarino, Institute of science and technology Austria. Role: Performing Neural Blastocyst Complementation.
2018-2021	Title: Elucidating the role of Cul3 in brain development and neurodevelopmental disorders - Institute of science and technology Austria Funding: Institute of science and technology Austria PI: Gaia Novarino, Institute of science and technology Austria. Role: Performing In Utero Intra-ventricular Injections.



2017- 2018	<p>Title: Testing the effect of polymethoxylated flavone Nobiletin in bovine oocyte maturation and subsequent development in vitro - Instituto Nacional de Investigación y Tecnología Agraria y Alimentaria (INIA)</p> <p>Funding: Centro internacional de altos estudios agronómico mediterráneos (CIHEAM)</p> <p>PI: Dimitrios Rizos, Instituto Nacional de Investigación y Tecnología Agraria y Alimentaria (INIA).</p> <p>Role: Master Thesis: Conducting most experiments.</p>
2017- 2018	<p>Title: Testing the fertilizing ability of ram semen cold-stored up to 48 h at 5 °C in UHT-based extender by heterologous IVF using zona-intact bovine oocytes - Instituto Nacional de Investigación y Tecnología Agraria y Alimentaria (INIA)</p> <p>Funding: Centro internacional de altos estudios agronómico mediterráneos (CIHEAM)</p> <p>PI: Dimitrios Rizos, Instituto Nacional de Investigación y Tecnología Agraria y Alimentaria (INIA).</p> <p>Role: Technical role: Performing IVF and oocyte stains.</p>

PATENTS

Patent

CONGRESSES AND SEMINARS (attachments 4)

Date	Title	Place
May 29 to June 1, 2023	International Ruminant Reproduction Symposium. Short communication and poster presentation: A meta-analysis suggests that the culture environment affects mRNA translation in bovine oocytes. (attachment 4.1)	Galway, Ireland
February 6, 2023	EUROVA Workshop 5: Insights from Industry. Short communication: Somatic signals regulating mRNA translation in mammalian oocytes.	Barcelona, Spain
June 26-30, 2022	19th International Congress on Animal Reproduction. Poster presentation: Somatic signals regulate the PI3K/AKT/mTOR pathway in bovine oocytes. (attachment 4.2)	Bologna, Italy
April 18-21, 2022	EMBO Workshop - Awakening of the genome: The maternal-to-zygotic transition. Attendee (attachment 4.3)	Vienna (online)
March 12, 2022	3 rd INTERNATIONAL WORKSHOP within APM NAWA project ScienceNet: Assisted reproduction: Comparative aspects between Large and Small Animals. Attendee (attachment 4.4)	Italy (online)
March 9-11,	The 4 th International EBART Congress.	Barcelona, Spain (online)



2022	Attendee (attachment 4.5)	
November 6, 2021	2 nd INTERNATIONAL WORKSHOP within APM NAWA project ScienceNet: CRYOBANKING a life insurance for biodiversity. Attendee (attachment 4.6)	Italy (online)
October 13-14, 2021	EUROVA Mid Term meeting and Symposium II. Poster presentation: Somatic signals regulating mRNA translation in mammalian oocytes. (attachment 4.7)	Dublin, Ireland

PUBLICATIONS

4 peer-reviewed articles, 0 book chapter, and 3 conference proceedings.

H-index: 3; number of citations:81 (from Google Scholar 09/01/2024)

Books

Articles in reviews (attachments 5)
Progress toward species-tailored prematuration approaches in carnivores. Theriogenology Volume 196, Pages 202-213, 2023 . ALBERTO MARIA LUCIANO, FEDERICA FRANCIOSI, PRITHA DEY, MAGDALENA LADRON DE GUEVARA , NOEMI MONFERINI, SAI KAMAL NAG BONUMALLU, GIULIA MUSMECI, FERNANDA FAGALI FRANCHI, RODRIGO GARCIA BARROS, MARTINA COLOMBO, VALENTINA LODDE. (attachment 5.1)
Antioxidant nobiletin enhances oocyte maturation and subsequent embryo development and quality. International journal of molecular sciences, 2020 . YULIA N CAJAS, KARINA CAÑÓN-BELTRÁN, MAGDALENA LADRÓN DE GUEVARA , MARÍA G MILLÁN DE LA BLANCA, PRISCILA RAMOS-IBEAS, ALFONSO GUTIÉRREZ-ADÁN, DIMITRIOS RIZOS, ENCINA M GONZÁLEZ. (attachment 5.2)
137 assessment of fertilizing ability of merino ram semen cold stored up to 48 h by heterologous IVF of bovine oocytes. Reproduction, Fertility and Development, 2019 . DA GALARZA, M LADRÓN DE GUEVARA , P BELTRÁN-BREÑA, MJ SÁNCHEZ-CALABUIG, A LÓPEZ-SEBASTIÁN, J SANTIAGO-MORENO, D RIZOS. (attachment 5.3)
Influence of sperm filtration and the addition of glycerol to UHT skimmed milk- and TEST-based extenders on the quality and fertilizing capacity of chilled ram sperm. Theriogenology, 2019 . J. GALARZA, D.A. LADRÓN DE GUEVARA , M. BELTRÁN-BREÑA, P. SÁNCHEZ-CALABUIG, M.J. RIZOS, D. LÓPEZ-SEBASTIÁN, A. SANTIAGO-MORENO. (attachment 5.4)

Congress proceedings
A meta-analysis suggests that the culture environment affects mRNA translation in bovine oocytes. M LADRON DE GUEVARA , MB RABAGLINO, MA SIRARD, F FRANCIOSI. In: International Ruminant Reproduction Symposium (IRRS), 2023, Galway, Ireland.
Somatic signals regulate the PI3K/AKT/mTOR pathway in bovine oocytes. MAGDALENA LADRON DE GUEVARA , GIULIA MUSMECI, VALENTINA LODDE, ALBERTO MARIA LUCIANO, FEDERICA FRANCIOSI. In: 19 International Congress on Animal Reproduction (ICAR), 2022, Bologna, Italy.
Sperm selection by density-gradient centrifugation of Merino ram semen cold-stored up to 48 h improves viability and membrane integrity. Animal Reproduction, 2018 . DA GALARZA, M LADRÓN DE GUEVARA , P BELTRÁN-BREÑA, D RIZOS, A LÓPEZ-SEBASTIÁN, J SANTIAGO-MORENO. In: 34th Meeting of the Association of Embryo Transfer in Europe (AETE) 2018, Nantes - France.



OTHER INFORMATION (attachments)

Organization Skills

Organization of the Basic oocyte forum EUROVA (BOB), Online monthly meetings.

Organization of the Veterinary and animal science days (VAS seminar days), session: embryology and reproduction. September 2023, University of Milan, Lodi - Italy.

Declarations given in the present curriculum must be considered released according to art. 46 and 47 of DPR n. 445/2000.

The present curriculum does not contain confidential and legal information according to art. 4, paragraph 1, points d) and e) of D.Lgs. 30.06.2003 n. 196.

Please note that CV WILL BE PUBLISHED on the University website and It is recommended that personal and sensitive data should not be included. This template is realized to satisfy the need of publication without personal and sensitive data.

Please DO NOT SIGN this form.

Place and date: ____Lodi____, ____16/01/24____