



**AL MAGNIFICO RETTORE
DELL'UNIVERSITA' DEGLI STUDI DI MILANO**

COD. ID: 5904

Il sottoscritto chiede di essere ammesso a partecipare alla selezione pubblica, per titoli ed esami, per il conferimento di un assegno di ricerca presso il Dipartimento di Scienze Agrarie e Ambientali -Produzione, Territorio, Agroenergia dell'Università degli Studi di Milano

Responsabile scientifico: Laura Rossini

GIADA CALLIZAYA TERCEROS

CURRICULUM VITAE

INFORMAZIONI PERSONALI

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| Cognome | CALLIZAYA TERCEROS |
| Nome | GIADA |

OCCUPAZIONE ATTUALE

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| Incarico | Struttura |
| Assegno di ricerca | CREA- Centro di ricerca Zootecnia e Acquacoltura, sede di Lodi |

ISTRUZIONE E FORMAZIONE

| Titolo | Corso di studi | Università | anno conseguimento titolo |
|----------------------|--------------------------------|----------------------------------|----------------------------------|
| Dottorato Di Ricerca | Molecular and cellular biology | Università degli studi di Milano | 2023 |
| Laurea Magistrale | Molecular Biology LM-6 | Università degli studi di Milano | 2019 |
| Laurea Triennale | Scienze Naturali | Università degli studi di Milano | 2016 |

LINGUE STRANIERE CONOSCIUTE

| lingue | livello di conoscenza |
|---------------|------------------------------|
| Inglese | B2 |

PREMI, RICONOSCIMENTI E BORSE DI STUDIO

| anno | Descrizione premio |
|-------------|---------------------------|
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| 2023 | Assegno di ricerca presso il CREA - Centro di ricerca Zootecnia e Acquacoltura, sede di Lodi |
| 2023 | Contratto di collaborazione occasionale (3 mesi) presso il laboratorio della professoressa Lucia Colombo, Università degli studi di Milano |
| 2020 | Premio CON. SCIENCE Master's Degree Thesis 2019 |
| 2019 | Borsa di dottorato ministeriale Molecular and Cellular Biology XXXV ciclo |
| 2019 | Borsa di studio giovani promettenti (ID 3056 B) Seed WAKE-up with APTamers: new technology for dormancy release and improved seed priming strategy (WAKE-APT) (3 mesi) |
| 2018 | Borsa di studio Piera Santambrogio per meriti accademici |

ATTIVITÀ DI FORMAZIONE O DI RICERCA

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| <p>Assegno di ricerca presso il CREA- Centro di ricerca Zootecnia e Acquacoltura, sede di Lodi, nell'ambito del progetto AGRITECH SPOKE 2 (CUP C23C22000450006).</p> <p>The main goal is the extraction of secondary metabolites such as, alkaloids, sapogenins and phenols from <i>Medicago sativa</i> and <i>truncatula</i>, Parsley and Lupine to evaluate their content in each species and variety of plants, and their possible role as biocides against pathogens.</p> <p>Biochemistry skills:</p> <ul style="list-style-type: none">• Extraction of secondary metabolites, such as, sapogenin, alkaloids and phenols from lyophilized plant material• UPLC and GC analyses |
| <p>PhD in Molecular and Cellular Biology, at the laboratory of Professor Lucia Colombo, Department of Biosciences, University of Milan.</p> <p>During the PhD, I focused on studying the molecular network controlled by two phytohormones auxin and cytokinin, and two transcription factors during female germline development and in the fertilization process in <i>Arabidopsis thaliana</i>.</p> <p>I used different genetic and molecular approaches and in particular, I analysed different reporter marker lines, in particular for the two hormones, whereas, the phenotypical characterization of knock-out lines for the two transcription factors revealed a new role for them in the regulation of ovule development affecting in particular, the female germline progression and differentiation, in correlation with the hormones.</p> <p>The main laboratory skills that I've acquired are the following:</p> <p>Cell and Molecular Biology:</p> <ul style="list-style-type: none">• DNA and RNA extraction, primer and probe design. PCR, RT-PCR• Gene expression analyses through Real-time PCR and qPCR, in situ hybridization• Excellent cloning knowledge and experience in Gateway cloning technology, Golden Gate Cloning technology, Gibson method based cloning technology• Excellent experience and knowledge in Genome editing: CRISPR- Cas9 cloning systems.• Preparation of culture media for bacteria and yeast, transformation and growth of <i>E.coli</i>, <i>A.tumefaciens</i>, <i>S.cerevisiae</i>• Plant Treatments with hormones and chemical substances (IAA,NPA,BAP)• Selection of transformant plants through antibiotics/erbicide BASTA) <p>Microscopy</p> <ul style="list-style-type: none">• Excellent experience in using of stereomicroscope, optical fluorescent and confocal microscope.• Preparation of samples for histological and morphological analyses, clearing, wax and Technovit embedding and preparation of samples for TEM analyses |



- Use of different staining techniques such as Alexander staining, Braselton-Feulgen staining, aniline blue, GUS staining test, Renaissance staining

Data Analysis and Presentation

- Good Knowledge of biological and molecular software such as ApE, SnapGene and Geneious, and for imaging handling ImageJ
- Good expertise in using Clustal, Tair and NCBI databases.
- Good knowledge of Microsoft Office package: Word, Excel, PowerPoint, Teams, Onenote.

PhD secondment at the laboratory of Professor Matthew Tucker at the University of Adelaide, Australia (5 months and half).

I exploited the role of a natural antisense for the cytokinin oxidase/dehydrogenase 6 (CKX6) during the fertilization process. I characterized a transgenic line in which I tried to silence the transcript of this natural antisense and meanwhile I analysed different TDNA mutant lines already available. I tried also to better characterize the expression pattern within ovules of this natural antisense by in situ experiment.

Master's thesis at the laboratory of Professor Lucia Colombo, Department of Biosciences, University of Milan.

The main objective of this thesis was to study the molecular network controlled by the complex formed by the two transcription factors VDD-VAL during the fertilization process. I mainly analysed TDNA lines and I generated a CRISPR-Cas9 line to find putative targets of VDD-VAL complex

Internship at Nutrigenomics laboratory of Professor Petroni, University of Milan. The laboratory activity was focused on the evaluation of optimal concentration and anti-obesity effects of RED anthocyanin-rich extract on 3T3-L1 cell line. I used tests of vitality such as MTT test and I performed histological analyses and gene expression analyses.

During my bachelor thesis at Professor Gianfranceschi (University of Milan) I focused on developing molecular marker as tool to evaluate the genetic variability present within the natural population of *Androsace Brevis*. I analyzed different types of SNPs that would have been used as markers for studying the genetic variability of *Androsace Brevis*

CONGRESSI, CONVEGNI E SEMINARI

| Data | Titolo | Sede |
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| 6 th -7 th October 2022 | Molecular and Cellular Biology PhD Workshop (TALK) | University of Milan |
| 18 th -25 th June 2022 | The 26th International Conference on Sexual Plant Reproduction (POSTER) | Prague |
| 7 th - 8 th October 2021 | Molecular and Cellular Biology PhD Workshop (POSTER) | University of Milan |
| 3 rd -4 th February 2020 | Symposium Down Under: Mechanism Controlling Plant Reproduction (SHORT TALK) | Adelaide, South Australia |
| 8 th November 2019 | WRI Agrifood and Wine Research Showcase | Adelaide, S.A. |



PUBBLICAZIONI

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| Articoli su riviste |
| The Importance of Cytokinins during Reproductive Development in Arabidopsis and Beyond. Terceros GC, Resentini F, Cucinotta M, Manrique S, Colombo L, Mendes MA. Int J Mol Sci. 2020 Oct 31;21(21):8161. doi: 10.3390/ijms21218161. PMID: 33142827; PMCID: PMC7662338. |
| AUXIN RESPONSIVE FACTOR 10 Insensitive to miR160 Regulation Induces Apospory-Like Phenotypes in Arabidopsis (submitted on iScience). Pessino S., Cucinotta M., Colono C., Costantini E., Perrone D., Di Marzo M., <u>Callizaya Terceros G.</u> , Petrella R., Azzaro C., Podio M., Marconi G., Albertini E., Dickinson H., Colombo, L., Mendes M.A. |

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| Atti di convegni |
| The role of two transcription factors, BELL1 and AINTEGUMENTA, during megasporogenesis process in Arabidopsis thaliana (talk) Annual PhD workshop, Milan, 2022 |
| The role of BELL1 and AINTEGUMENTA in megasporogenesis (poster) at The 26th International Conference on Sexual Plant Reproduction, 2022, Prague |
| The role of cytokinin during ovule development (poster), Annual PhD workshop, Milan, 2021 |
| Cytokinin role during the female gametophyte development and specification (short talk), Adelaide, 2020 |

ALTRE INFORMAZIONI

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| Attività di tutoraggio sia a studenti magistrali sia per esercitazioni di Botanica per i corsi di laurea triennale di Biologia e di Scienze Naturali |
| Additional courses attended during PhD: <ul style="list-style-type: none">• Introduction to transcriptomic data analysis• Introduction to the analysis of genome• Virology: new advances in basic and applied research,• Molecular and cellular biology: methods and communication of results• Biostatistics for molecular and cellular biology,• Modern imaging techniques in biology• Insights in agrofood biotechnology research and entrepreneurship |

Le dichiarazioni rese nel presente curriculum sono da ritenersi rilasciate ai sensi degli artt. 46 e 47 del DPR n. 445/2000.

Il presente curriculum, non contiene dati sensibili e dati giudiziari di cui all'art. 4, comma 1, lettere d) ed e) del D.Lgs. 30.6.2003 n. 196.

RICORDIAMO che i curricula **SARANNO RESI PUBBLICI sul sito di Ateneo** e pertanto si prega di non inserire dati sensibili e personali. Il presente modello è già precostruito per soddisfare la necessità di pubblicazione senza dati sensibili.

Si prega pertanto di **NON FIRMARE** il presente modello.

Luogo e data: Milano, 29/09/2023