



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

**COD. ID: 6578**

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: Professoressa Laura Rossini

**GIADA CALLIZAYA TERCEROS**

**CURRICULUM VITAE**

## INFORMAZIONI PERSONALI

<b>Cognome</b>	CALLIZAYA TERCEROS
<b>Nome</b>	GIADA

## OCCUPAZIONE ATTUALE

<b>Incarico</b>	<b>Struttura</b>
Assegnista	Dipartimento di Scienze Agrarie e Ambientali -Produzione, Territorio, Agroenergia dell'Università degli Studi di Milano

## ISTRUZIONE E FORMAZIONE

<b>Titolo</b>	<b>Corso di studi</b>	<b>Università</b>	<b>anno conseguimento titolo</b>
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

<b>lingue</b>	<b>livello di conoscenza</b>
Inglese	B2

## PREMI, RICONOSCIMENTI E BORSE DI STUDIO

<b>anno</b>	<b>Descrizione premio</b>
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2023	Assegno di ricerca presso Dipartimento di Agrarie e Ambientali -Produzione, Territorio, Agroenergia dell'Università degli Studi di Milano (ID 5904)
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

descrizione dell'attività
<p>Assegno di ricerca presso Dipartimento di Agrarie e Ambientali -Produzione, Territorio, Agroenergia dell'Università degli Studi di Milano nell'ambito del progetto BEST-CROP (ID 5904). The project provides genetic and molecular analyses of genes involved in control of barley canopy architecture.</p> <p>I acquired experience in growing barley and improved my skills in identification through Sanger sequencing, of mutated alleles, in candidate genes, in TILLING population. In addition, I performed molecular and phenotypical characterization of mutants obtained in controlled/field conditions.</p>
<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). 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"><li>• Extraction of secondary metabolites, such as, sapogenin, alkaloids and phenols from lyophilized plant material</li><li>• UPLC and GC analyses</li></ul>
<p>PhD in Molecular and Cellular Biology, at the laboratory of Professor Lucia Colombo, Department of Biosciences, University of Milan. 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>. 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>



## Cell and Molecular Biology

- 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 E.coli, A.tumefaciens, S.cerevisiae
- Plant Treatments with hormones and chemical substances (IAA,NPA,BAP)
- Selection of transformant plants through antibiotics/erbicide BASTA)

## Microscopy

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

## PUBBLICAZIONI

<b>Articoli su riviste</b>
The Importance of Cytokinins during Reproductive Development in Arabidopsis and Beyond. <b>Terceros G.C.</b> , 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., <b>Callizaya Terceros G.</b> , Petrella R., Azzaro C., Podio M., Marconi G., Albertini E., Dickinson H., Colombo, L., Mendes M.A.

## ALTRE INFORMAZIONI

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"><li>• Introduction to transcriptomic data analysis</li><li>• Introduction to the analysis of genome</li><li>• Virology: new advances in basic and applied research,</li><li>• Molecular and cellular biology: methods and communication of results</li><li>• Biostatistics for molecular and cellular biology,</li><li>• Modern imaging techniques in biology</li><li>• Insights in agrofood biotechnology research and entrepreneurship</li></ul>

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



# UNIVERSITÀ DEGLI STUDI DI MILANO

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, 02/04/2024