



TO MAGNIFICO RETTORE OF UNIVERSITA' DEGLI STUDI DI MILANO

ID CODE 6195

I the undersigned asks to participate in the public selection, for qualifications and examinations, for the awarding of a type B fellowship at Dipartimento di Bioscienze

Scientist- in - charge: Marta Mendes

[Name and surname]

CURRICULUM VITAE

PERSONAL INFORMATION

Surname	Buendia Monreal
Name	Manuel

PRESENT OCCUPATION

Appointment	Structure
Unemployed	

EDUCATION AND TRAINING

Degree	Course of studies	University	year of achievement of the degree
Degree	Food Chemistry	UNAM (National Autonomous University of Mexico)	2008
Specialization			
PhD	Plant Biotechnology	LANGEBIO (National Laboratory for Genomics of Biodiversity)	2017
Master	Biochemical Sciences	UNAM (National Autonomous University of Mexico)	2011
Degree of medical specialization			
Degree of European specialization			
Other			



REGISTRATION IN PROFESSIONAL ASSOCIATIONS

Date of registration	of Association	City

FOREIGN LANGUAGES

Languages	level of knowledge
English	Fully proficient
Spanish	Native
German	Intermediate
French	Intermediate
Italian	Beginner

AWARDS, ACKNOWLEDGEMENTS, SCHOLARSHIPS

Year	Description of award
2018-2020	Postdoc Research Fellowship - Max Planck Society (GER) / CONACYT (MEX)
2017	SNI (National System of Mexican Researchers) - Level Candidate
2011-2015	PhD Fellowship - CINEVESTAV / CONACYT (MEX)
2009-2011	Masters Fellowship - UNAM / CONACYT (MEX)
2008	Assistant to an SNI III researcher - SNI (MEX)

TRAINING OR RESEARCH ACTIVITY

Description of activity
<ul style="list-style-type: none">Sep 2018 - Sep 2023 Postdoctoral Researcher Max Planck Institute for Plant Breeding Research; Cologne, Germany I worked on two different projects aimed at elucidating the evolution of the <i>LMI1</i> and <i>RCO</i> genes in the Brassicaceae family and their influence on leaf shape. For the first one, I designed and carried out the experiments to study the expression of these genes from different plant species and test their functionality in <i>Arabidopsis</i> and <i>Cardamine</i>. I performed gene sequence analysis, construction of transcriptional and translational vectors of expression markers, confocal microscopy, leaf shape analysis, and prepared the data for publication. For the second, I performed a yeast one hybrid experiment to identify the upstream regulators of <i>LMI1</i> and <i>RCO</i>. I then tested the importance of such regulations using genetics in both <i>Arabidopsis</i> and <i>Cardamine</i>. The project is still in progress.Apr 2017 - Jun 2018 Postdoctoral Researcher LANGEBIO (Laboratorio Nacional de Genomica para la Biodiversidad); Irapuato, Mexico



I designed and performed experiments to test the influence of some subunits of the Mediator transcriptional complex on the expression and function of genes controlling leaf shape.

- Sep 2011 - Mar 2017 PhD, Plant Biotechnology

LANGEBIO / CINVESTAV (Centro de Investigación y de Estudios Avanzados del IPN); Irapuato, Mexico

My PhD was granted by a CONACYT fellowship, at the "Genetics and Epigenetics of Seeds" group, under the supervision of Stewart Gillmor, at LANGEBIO

Dissertation Thesis: "The role of the CDK8 module of Mediator in vegetative phase change of *Arabidopsis thaliana*"

I characterized how some subunits of the Mediator transcriptional complex control the juvenile to adult transition in plants by regulating the microRNA miR156. I published 2 research articles and 2 review articles, and I presented my results in Mexico, USA and Colombia.

- Feb 2009 - Aug 2011 Master's degree, Biochemical Sciences

Facultad de Química, Universidad Nacional Autónoma de México; Mexico City, Mexico

My Masters was granted by a CONACYT fellowship, at the Faculty of Chemistry - UNAM, under the supervision of Jorge Vazquez Ramos.

Dissertation Thesis: "Phylogenetic characterization and expression patterns of the maize D-type cyclins"

I published a research article and presented the results in a national conference.

- Aug 2003 - Nov 2008 Bachelor's degree, Food Chemistry

Facultad de Química, Universidad Nacional Autónoma de México; Mexico City, Mexico

My Bachelor Thesis was under the supervision of Jorge Vazquez Ramos.

Dissertation Thesis: "Study on the promoter regions of maize *CycD2;1*, *CycD4;1*, *CycD5;1*, and *CycD5;2* genes"

I have recently attended the following workshops:

- **Critical Reasoning and Logic** April 2022
Instructor: Malte Engel (Univ Göttingen)
- **Basics in Image Analysis** March 2022
Instructor: Arif Khan, Antonio Politi, Anniek Stokkermans, Christian Tischer (EMBL Heidelberg)
- **Biorender - Grants Mini-Series** Jan 2022
Instructor: Shiz Aoki, Daniel Murin, Peter Turnbaugh, Danielle Matsushima, Ariella Shikanov (Biorender)
- **Adobe Photoshop & Illustrator Software for Scientists** May 2021
Instructor: Anncharlott Berglar (SciVisLab)
- **Improved Reading** March 2021
Instructor: Friedrich Hasse (Improved Reading GmbH & Co)
- **Creativity in Science** February 2021
Instructor: Alexander Schiller (Schiller & Mertens)
- **Scientific Writing** September 2019
Instructor: Brian Cusack (Science Craft)
- **Grant Writing for Scientists** June 2019
Instructor: Christina Schütte (ProSciencia)
- **Statistics with R** March 2019



Instructor: Grit Kunert (Max Planck Institute for Chemical Ecology)

PROJECT ACTIVITY

Year	Project
2019-2023	The evolution of <i>LMI1</i> and <i>RCO</i> and their influence on leaf shape
2018-2019	Differential upstream regulators of <i>LMI1</i> and <i>RCO</i> in Brassicaceae
2017-2018	Regulation of miR156 and miR164 by the CDK8 module of Mediator
2011-2017	The role of the CDK8 module of Mediator in vegetative phase change of <i>Arabidopsis thaliana</i>
2009-2011	Phylogenetic characterization and expression patterns of the maize D-type cyclins
2003-2008	Study on the promoter regions of maize <i>CycD2;1</i> , <i>CycD4;1</i> , <i>CycD5;1</i> , and <i>CycD5;2</i> genes

PATENTS

Patent

CONGRESSES AND SEMINARS

As invited speaker:

Date	Title	Place
November 8-11, 2021	XIX National Plant Biochemistry and Molecular Biology Congress	Mexico (Online)
October 9 - 13, 2017	IX Latin American Society for Developmental Biology Meeting 2017	Medellín, Colombia
November 6-11, 2016	XXXI Congreso de la Sociedad Mexicana de Bioquímica	Aguascalientes, Mexico
July 9-13, 2016	Plant Biology 2016	Austin, Texas, USA
November 7-12, 2010	XXVIII Congreso de la Sociedad Mexicana de Bioquímica	Tuxtla Gutiérrez, Chiapas, Mexico

PUBLICATIONS

Books

Articles in reviews
<ol style="list-style-type: none">1. Buendía-Monreal M, Bazakos C, Huijser P, Tsiantis M (<i>In prep.</i>) Divergent expression of <i>RCO</i> produces divergent leaf shapes in Brassicaceae species.2. Buendía-Monreal M*, Gillmor CS. (2018) The Times They Are A-Changin': Heterochrony in Plant Development and Evolution. <i>Frontiers in Plant Science</i> 9:1349.



3. **Buendía-Monreal M**, Gillmor CS. (2017) Convergent repression of miR156 by sugar and the CDK8 module of Arabidopsis Mediator. *Developmental Biology* 423(1):19-23.
4. **Buendía-Monreal M**, Gillmor CS. (2016) Mediator: A key regulator of plant development. *Developmental Biology* 419(1):7-18.
5. Gillmor CS, Silva-Ortega CO, Willmann MR, **Buendía-Monreal M**, Poethig RS (2014). The Arabidopsis Mediator CDK8 module genes *CCT (MED12)* and *GCT (MED13)* are global regulators of developmental phase transitions. *Development*. 141(23): 4580-9.
6. **Buendía-Monreal M**, Rentería-Canett I, Guerrero-Andrade O, Bravo-Alberto CE, Martínez-Castilla LP, García E, Vázquez-Ramos JM (2011). The family of maize D-type cyclins: genomic organization, phylogeny and expression patterns. *Physiologia Plantarum* 143(3): 297-308.

*As corresponding author

Congress proceedings

OTHER INFORMATION

I was Co-director of Andrea Sempere's bachelor's thesis: "Functional analysis of the coding regions of the *RCO* gene in *Euclidium syriacum* and *Arabis alpina*", presented on July 11th, 2023, at the Miguel Hernández University of Elche, Spain.

I have peer-reviewed articles for the following journals:

- *The Plant Journal*
- *Frontiers in Genetics*
- *Frontiers in Cell & Developmental Biology*
- *Revista Fitotecnia Mexicana*

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: Mexico city , January 8, 2024