

EVELIA LORENA COSS

NAVARRETE

Research Associate at Laboratorio Internacional de Investigacin Sobre el Genoma Humano - UNAM | Gene regulation | Evolution | Bioinformatics | Autoimmune diseases | lncRNAs



EDUCATION

2023
|
2018

- **PhD, Plant Biotechnology**

Centro de Investigacin y de Estudios Avanzados del IPN (Cinvestav), UGA-Langebio

📍 Guanajuato, Mnico

- Dr. Selene Fernández Valverde
- Identification and characterization of conserved long non-coding RNAs in Brassicaceae.
- Grade: 9.3/10. First person to graduate from the generation.

2018
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2016

- **M. Sc., Plant Biotechnology**

Centro de Investigacin y de Estudios Avanzados del IPN (Cinvestav), Irapuato.

📍 Guanajuato, Mnico

- Dr. Raúl Alvarez Venegas and Dr. Stefan de Folter
- Effect of priming activation on bean nodule development and its relationship against *Pseudomonas syringae* pv. *phaseolicola*.
- Grade: 9.4/10. Second person to graduate from the generation.

2016
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2012

- **B.Sc., Biotechnology Engineering**

Universidad Politécnica de Sinaloa (UPSiN).

📍 Sinaloa, Mnico

- Grade: 9.6/10.



RESEARCH EXPERIENCE

2015

- **Professional Practices 3 | Undergraduate Thesis Student**

Centro de Investigacin y de Estudios Avanzados del IPN (Cinvestav), Irapuato.

📍 Querétaro, Mnico

- Dr. Raúl Alvarez Venegas, Dr. Ángel Barraza Celis and Dr. Alejandra Hernández Barrera
- Histochemical analysis of the effect of bean (*Phaseolus vulgaris* L.) trithorax group methyltransferases during nodulation.

CONTACT

✉ ecoss@liigh.unam.mx

🐦 [EveliaCoss](#)

⌚ [EveliaCoss](#)

PROGRAMMING LANGUAGES

Expertise: R and Rstudio, Bash, AWK

Familiarity: Git/Github, python

LANGUAGES

Spanish - Native

English - B2 (TOEFL-IBT)

Made with the R package
[pagedown](#).

The source code is available at
[EveliaCoss/CV](#) and is powered by
[nstrayer/cv](#).

Last updated on 2023-08-29.

- 2015
- **Research Stay 1 (Delfin project)**
Universidad Polit^{ica}cnica de Sinaloa (UPSiN).
📍 Sinaloa, M^{exico}
 - Dr. Jesus Aar^{on} Salazar Leyva
 - Characterization of the proteolytic properties of the crude extract of aguama fruit (*Bromelia pinguin* L).
 - Protease analysis by zymography.
- 2014
- **Professional Practices 2**
Centro de Investigaciⁿ y de Estudios Avanzados del IPN
(Cinvestav), Irapuato.
📍 Guanajuato, M^{exico}
 - Dr. Ra^{quel}lvarez Venegas and Dr. Aar^{on} Barraza Celis
 - Analysis of histone methyltransferases expression in different tissues of bean (*Phaseolus vulgaris*) plant.
- 2014
- **Social Service**
Facultad de Ciencias del Mar (FACIMAR), Universidad Aut^{noma} de Sinaloa (UAS)
📍 Sinaloa, M^{exico}
 - Dr. Miguel ngel Hurtado Oliva and M.C. Idalia Osuna Ruiz
 - Standardization of biochemical methods in aquatic organisms.
- 2014
- **Research Stay 1 (Delfin project)**
Facultad de Ciencias del Mar (FACIMAR), Universidad Aut^{noma} de Sinaloa (UAS)
📍 Sinaloa, M^{exico}
 - M.C. Idalia Osuna Ruiz.
 - Standardization of biochemical methods for microalgae.
- 2013
- **Professional Practices 1**
Centro de Investigaciⁿ en Alimentaciⁿ y Desarrollo (CIAD)
📍 Sinaloa, M^{exico}
 - M.P.A. Noem^{ica} Garc^a Aguilar and M.C. Gabriela Velasco Blanco
 - Cultivation of herbs (*Mentha spicata*), oregano (*Origanum vulgare*), radish (*Raphanus sativus*), green forage and Tilapia (*Oreochromis sp*) in an aquaponic system.



TEACHING EXPERIENCE

2023

- **CDSB 2023 - Quality control in scRNA-Seq** 📍 Virtual event
 - Instructor for CDSB2023
 - Comunidad de Desarrolladores de Software en Bioinformática (CDSB), Nodo Nacional de Bioinformática

2023

- **Introduction to RNA-seq data analysis with R**
Estudios Superiores, Unidad Juriquilla (ENES), UNAM
📍 Querétaro, México
 - Main instructor: Dr. Alejandra Medina-Rivera
 - Instructor for RNAseq_classFEB2023
 - Bioinformatics and Statistics 2, Genomic Sciences Program

2023

- **Data analysis with R**
Centro de Ciencias Matemáticas (CCM), UNAM 📍 Virtual event
 - Instructor for Manipulacion_de_datos
 - R-ladies Morelia

2022

- **Helper in R Workshop and Git/Github**
Centro de Ciencias Matemáticas (CCM), UNAM 📍 Virtual event
 - Main instructor: Dr. Abraham Avelar Rivas, M.Sc. Diego Garfias Gallegos and M.Sc. Claudia Ziriñan Martínez
 - Helper for Software Carpentry
 - Software Carpentry

2022

- **Rmarkdown Introduction**
Centro de Ciencias Matemáticas (CCM), UNAM 📍 Virtual event
 - Instructor for Rmarkdown
 - R-ladies Morelia

2022

- **Data analysis and graphs in R**
Centro de Ciencias Matemáticas (CCM), UNAM 📍 Virtual event
 - Instructor for Marvel_vs_DCcomics
 - R-ladies Morelia

DATA SCIENCE WRITING

2022

- **Plants & Python: A series of lessons in coding, plant biology, computation, and bioinformatics**

• VanBuren R , Rougon-Cardoso A, Amorosquita EJ, Coss-Navarrete EL, Espinosa-Jaime A, Gonzalez-Iturbe OA, Luckie-Duque AC, Mendoza-Galindo E, Pardo J, Rodriguez-Gomez-Guerrero G, Rosiles-Loeza PY, Vazquez-Cruz M, Fernandez-Valverde SL, Hernández-Tadevosian T, Palande S, and Chitwood. DH. Plants & Python: A series of lessons in coding, plant biology, computation, and bioinformatics, (2022). The Plant Cell, Volume 34, Issue 7, July 2022, Page e1, <https://doi.org/10.1093/plcell/koac187>

PUBLICATIONS

2022

- **Transcriptome-guided annotation and functional classification of long non-coding RNAs in *Arabidopsis thaliana***

• Corona-Gomez, J.A., Coss-Navarrete, E.L., Garcia-Lopez, I.J. et al. Transcriptome-guided annotation and functional classification of long non-coding RNAs in *Arabidopsis thaliana*. Sci Rep 12, 14063 (2022). <https://doi.org/10.1038/s41598-022-18254-0>

2020

- **Chapter 6- Induction of plant resistance to biotic stress by priming with β -aminobutyric acid (BABA) and its effect on nitrogen-fixing nodule development**

• Coss-Navarrete EL, Diaz-Valle A, Alvarez-Venegas R. Chapter 6 - Induction of plant resistance to biotic stress by priming with β -aminobutyric acid (BABA) and its effect on nitrogen-fixing nodule development, Editor(s): Mohammad Anwar Hossain, Fulai Liu, David J. Burritt, Masayuki Fujita, Bingru Huang, Priming-Mediated Stress and Cross-Stress Tolerance in Crop Plants, Academic Press, 2020, Pages 101-114, ISBN 9780128178928, <https://doi.org/10.1016/B978-0-12-817892-8.00006-4>.

2018

- **Down-regulation of PvTRX1h increases nodule number and affects auxin, starch, and metabolic fingerprints in the common bean (*Phaseolus vulgaris* L.)**

• Barraza A, Coss-Navarrete EL, Vizuet-de-Rueda JC, Martinez-Aguilar K, Hernández-Chavez JL, Ordaz-Ortiz JJ, Winkler R, Tiessen A, Alvarez-Venegas R. Down-regulation of PvTRX1h increases nodule number and affects auxin, starch, and metabolic fingerprints in the common bean (*Phaseolus vulgaris* L.) (2018). Plant Science, Volume 274, Pages 45-58, ISSN 0168-9452, <https://doi.org/10.1016/j.plantsci.2018.05.006>

2017

● CARACTERIZACIÓN PARCIAL DE LA ACTIVIDAD COAGULANTE Y CASEINOLÍTICA DE LAS PROTEASAS DEL FRUTO DE *<U+201C>AGUAMA<U+201D>* (*Bromelia pinguin L.*)

- Moreno-Hernández, J. M., Hernández-Mancillas, X. D., Coss Navarrete, E. L., Bañuelos-Pérez, M. de J., Salazar-Leyva, J. A., Osuna-Ruiz, I., Rodríguez-Gómez-Tirado, V. A., & Mazorra-Manzano, M. (2017). CARACTERIZACIÓN PARCIAL DE LA ACTIVIDAD COAGULANTE Y CASEINOLÍTICA DE LAS PROTEASAS DEL FRUTO DE *<U+201C>AGUAMA<U+201D>* (*Bromelia pinguin L.*). *Biotecnia*, 19(2), 19<U+2013>24. <https://doi.org/10.18633/biotecnia.v19i2.380>

2016

● Partial Characterization of the Proteolytic Properties of an Enzymatic Extract From *<U+201C>Aguama<U+201D>* *Bromelia pinguin L.* Fruit Grown in Mexico

- Moreno-Hernández, JM, Hernández-Mancillas, XD, Coss-Navarrete, EL, Mazorra-Manzano, MA, Osuna-Ruiz I, Rodriguez-Tirado, VA, Salazar Leyva JA. Partial Characterization of the Proteolytic Properties of an Enzymatic Extract From *<U+201C>Aguama<U+201D>* *Bromelia pinguin L.* Fruit Grown in Mexico. *Appl Biochem Biotechnol* 182, 181<U+2013>196 (2017). <https://doi.org/10.1007/s12010-016-2319-x>



TALKS AND POSTERS

2022

● Sociedad Mexicana de Bioquímica (SMB) X

Poster

📍 Yucatan, México

- Co-authors: M.C. Evelia Lorena Coss Navarrete, Dr. José Antonio Corona-Gómez, Dr. Laurence Hurst, Dr. Stewart Gillmor, Dr. Katarzyna Oktaba, and Dr. Selene L. Fernández-Valverde
- Conservation analysis of sequence-divergent lincRNAs in Brassicaceae

2021

● FASEB 2021: The Mechanisms of Plant Development

Poster

📍 Virtual event

- Co-authors: M.C. Evelia Lorena Coss Navarrete, Dr. José Antonio Corona-Gómez, Dr. Laurence Hurst, Dr. Stewart Gillmor, Dr. Katarzyna Oktaba, and Dr. Selene L. Fernández-Valverde
- Transcriptomic-informed annotation and functional classification of long non-coding RNAs in *Arabidopsis thaliana*

2021

● EMBL Symposium 2021: The Non-Coding Genome

Poster

📍 Virtual event

- Co-authors: M.C. Evelia Lorena Coss Navarrete, Dr. José Antonio Corona-Gómez, Dr. Laurence Hurst, Dr. Stewart Gillmor, Dr. Katarzyna Oktaba, and Dr. Selene L. Fernández-Valverde
- Transcriptomic-informed annotation and functional classification of long non-coding RNAs in *Arabidopsis thaliana*

- 2015 ● **2nd Interinstitutional Congress of Young Researchers**
Talk Chihuahua, M⁹xico
• Co-authors: Coss Navarrete EL, Hernández-Mancillas, XD, Salazar Leyva, JA.
• Biochemical characterization of a crude protease extract obtained from the wild plant aguama (*Bromelia pinguin*) native to southern Sinaloa.
• Biotechnology and agricultural science
- 2014 ● **Delfin, Programa Interinstitucional para el fortalecimiento de la investigación y el posgrado del pacífico**
Talk Nayarit, M⁹xico
• Co-authors: Coss Navarrete EL, Osuna-Ruiz I
• Standardization of biochemical methods in aquatic organisms.

COURSES

- 2023 ● **CDSB 2023: Creando paquetes de R/Bioconductor para análisis transcriptómico de célula única**
Instructor and helper Virtual event
• Main instructor: Dr. Josselyn Cristina Chávez Fuentes, Dr. Leonardo Collado-Torres, Dr. Alejandra Medina Rivera, Dra. Evelia Lorena Coss Navarrete, Dr. Laura Gómez Romero, Dr. Yalbi Balderas Martínez, Dr. Mirna Vázquez Rosas Landa, M.C. José Antonio Ovando Ricardo, M.C. Erick Cuevas Fernández and Andrés Arredondo Cruz
• CDSB2023, DE in scRNA-Seq and R/Bioconductor packages
• Comunidad de Desarrolladores de Software en Bioinformática (CDSB), Nodo Nacional de Bioinformática
- 2022 ● **Analysis of biological and biomedical transcriptomic data using Artificial Intelligence (AI) and Machine Learning methods (ML) methods with R**
UNAM Querétaro, M⁹xico
• Main instructor: Dr. Javier De Las Rivas (CSIC-USAL-IBSAL, Spain), Dr. Maribel Hernandez Rosales (CINVESTAV, M⁹xico), Dr. Enrique De Las Rosa (CSIC-USAL-IBSAL, Spain), and Dr. Flavio Spetale (CIFASIS- CONICET-UNR, Argentina).
• ISCB-LA SolBio BioNetMX Symposium 2022
• RiaBio 2022
- 2022 ● **The art and method of writing a Scientific Manuscript**
Virtual event
• Main instructor: Dr. Susan Marriott
• BioScience Writers

- 2021 ● **Genetic variants search**  Virtual event
- Main instructor: Dr. Victor Flores
 - ATGenomics
- 2021 ● **Network analysis using igraph for R: a primer**  Virtual event
- Main instructor: Dr. Guillermo de Anda J<U+00E1>uregui
 - 2nd Workshop in advanced Bioinformatics
- 2021 ● **Co-expression networks**  Virtual event
- Main instructor: Dr. Katja Nowick
 - 2nd Workshop in advanced Bioinformatics
- 2021 ● **Network medicine**  Virtual event
- Main instructor: Dr. Deisy Gypsi
 - 2nd Workshop in advanced Bioinformatics
- 2019 ● **CABANA workshop: Introduction to R and Bioconductor for genomic analyses**
Centro de Investigaci<U+00F3>n y de Estudios Avanzados del IPN
(Cinvestav), UGA-Langebio  Guanajuato, M<U+00E9>xico
- Main instructor: Dr. Cei Abreu Goodger and Dr. Benilton Carvalho
 - CABANA
- 2019 ● **Theoretical and Practical HiC Workshop: Wet-Lab and Bioinformatics**
Centro de Investigaci<U+00F3>n y de Estudios Avanzados del IPN
(Cinvestav), UGA-Langebio  Guanajuato, M<U+00E9>xico
- Main instructor: Dr. Selene Fernandez-Valverde, Dr. Francisco Perez.
America Ramirez and Emilio Sotelo
 - The Royal Society
- 2012 ● **Mantenimiento correctivo de Computadoras**
Universidad de Occidente Unidad Mazatlan  Sinaloa, M<U+00E9>xico
- Main instructor: M.C. Raymundo Maga<U+00F1>a

SCIENCE COMMUNICATION

2022

- **Conservacion de lincRNAs en Brassicaceaes**
Universidad Polit^{cnica} de Sinaloa (UPSiN).  Virtual event
 - Ciclo de “Bases y Bytes: Platicas de Bioinformatica”

2021

- **PODCAST animalitos & plantitas <U+2022> EP01 El caf<U+ooE9>m<U+ooE1>s caro del mundo con Evelia Coss**
 Podcast
 - The Biologist Apprentice

2021

- **Tercer mesa redonda “Trayectorias acad<U+ooE9>micas”**
 Virtual event
 - El Rinc<U+00F3>n de la Ciencia

2019

- **Identificaci<U+ooF3>n y caracterizaci<U+ooF3>n de ARNs largos no codificantes conservados en Brasicaceas**
Tecnol^{gico} Nacional de M^{exico}, Instituto Tecnol^{gico} Superior de Pur^{os}isma del Rinc<U+00F3>n
 - Guanajuato, M^{exico}
 - Semana Tecnologica