

JOSELYN C. CHÁVEZ-FUENTES

I am an enthusiastic Ph.D. graduate interested in transcriptional regulation and epigenetics. During the last year of my bachelor's, I started developing research skills at [CINVESTAV Irapuato](#) studying epigenetics in the common bean *Phaseolus vulgaris*, learning molecular biology techniques such as PCR, DNA cloning, and generation of transient modified plants. I did a master's at the [Biotechnology Institute-UNAM](#) in Cuernavaca, México, focused on the study of telomeric maintenance and expression of telomeric retrotransposons of *Drosophila melanogaster*, as a model organism for the study of the human AtrX syndrome. During my master's degree, I learned cutting-edge molecular biology techniques such as Real-time qPCR, western blotting, northern blotting, *in situ* hybridization, immunostaining, and Chromatin Inmuno Precipitation.

Following my interest in Bioinformatics, in 2017 I started my Ph.D. in the [Computational Genomics Lab](#) of the Biotechnology Institute-UNAM focused on the study of bacterial and archaeal transcriptional regulation from a bioinformatics approach. During the Ph.D. I had the opportunity to take advanced R programming courses and started writting my first R packages, both for my own research and by establishing external collaborations that lead to the publication of the [regutools package](#) in Bioconductor, a tool for managing the regulonDB database in a programmatic way.

Besides my research project, I enjoy teaching R. I have taught semestral courses in my Graduate program and since 2019 joined diverse communities interested in teaching R and increase the community of software developers in México and Latin America. As a board member of the Community of Developers in Software for Bioinformatics [CDSB](#), the Mexican Network of Bioinformatics [RMB](#), and as co-founder of the chapter [R-Ladies Cuernavaca](#), part of the global initiative R-Ladies, I organize and teach R workshops. Thanks to my interest and work on spreading the programming knowledge, I have been awarded scholarships from RStudio and Bioconductor to present my contributions as a developer on international conferences. Recently, I also was part of the organizing committee of the [useR conference 2021](#).

EDUCATION

2021
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2017

● Ph.D. Biochemical Sciences

Enrique Merino's Lab

📍 Biotechnology Institute, UNAM

- Thesis: Analysis of transcriptional regulatory elements among bacterial and archaeal *phyla*.

2017
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2015

● M.Sc., Biochemical Sciences

Viviana Valadez-Graham's Lab

📍 Biotechnology Institute, UNAM

- Thesis: Role of the proteins dAtrX and Daddl in the telomeric maintenance of *Drosophila melanogaster* (honors thesis project).

2013
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2009

● B.S., Biotechnology Engineer

📍 UPIIG-IPN

- Thesis: Analysis of the PvuATXR3h gene regulation in secondary roots and during the nodule organogenesis of *Phaseolus vulgaris*.



[Download a PDF of this CV](#)

CONTACT

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LANGUAGE SKILLS



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

The source code is available on github.com/josschavezf/cv and is powered by nstrayer/datadrivencv.

Last updated on 2021-09-15.

GROUPS

current
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2021

- **Certified Instructor of Software Carpentries**

The Carpentries - Metadocencia

- R for reproducible scientific analysis

current
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2020

- **Board Member of the Bioinformatics Network of Mexico RMB**

- Teaching and organizing monthly bioinformatics short courses available [online](#).

current
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2019

- **Board Member of the Community of Developers in Software for Bioinformatics CDSB**

- Teaching and organizing annual workshops available [online](#).

current
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2019

- **Co-founder of R-Ladies Cuernavaca**

- Teaching and organizing meetups available [online](#)

TEACHING EXPERIENCE

2021

- **Building Workflows with RStudio and Development of Shiny Apps**

TIBs 2021

 Virtual format

- Instructor and organizer.

2020

- **R for Bioinformatics**

Graduate course

 Biotechnology Institute, UNAM

- Part of the Graduate program of Biochemical Sciences.

2020

- **CDSB Workshop 2020: Building workflows with RStudio and Bioconductor for single cell RNA-seq analysis.**

TIBs 2020

 Virtual format

- Instructor and organizer.

2020

- **Introduction to R and RStudio**

RMB mini courses

 Virtual format

- Instructor and organizer.

2019

- **Programming with Perl**

Graduate course

 Biotechnology Institute, UNAM

- Part of the Graduate program of Biochemical Sciences.

2019

- **Programming with R: writing packages**
RUNA, Peru
• One-week invited online course.

📍 Virtual format

☰ PUBLICATIONS

2021

- **Complementary Tendencies in the Use of Regulatory Elements Transcription Factors, Sigma Factors, and Riboswitches in Bacteria and Archaea**
Journal of Bacteriology
• Joselyn Chávez, Damien P. Devos, Enrique Merino

+ Equal contribution

2020

- **Programmatic access to bacterial regulatory networks with regutools**
Bioinformatics
• Joselyn Chávez*, Carmina Barberena-Jonas*, Jesus E Sotelo-Fonseca*, José Alquicira-Hernández, Heladia Salgado, Leonardo Collado-Torres, Alejandro Reyes

2017

- **dAdd1 and dXNP prevent genome instability by maintaining HP1a localization at Drosophila telomeres**
Chromosoma
• Joselyn Chavez*, Juan Manuel Murillo-Maldonado*, Vanessa Bahena, Ana Karina Cruz, América Castañeda-Sortibrán, Rosario Rodriguez-Arnaiz, Mario Zurita & Viviana Valadez-Graham

2015

- **Expression profiling and down-regulation of three histone lysine methyltransferase genes PvATXR3h, PvASHH2h, and PvTRX1h in the common bean**
Plant OMICS
• Aaron Barraza, Francisco Luna-Martínez, Joselyn C. Chávez-Fuentes, Raúl Álvarez-Venegas,



R PACKAGES

2020

- **regutools**
Co-author and Maintainer

📍 Bioconductor

2020

- **erba**
Author and Maintainer

📍 GitHub

POSTS

- 2021 • **First Annual Meeting R-Ladies Mexico**
R-LadiesMX blog
• Summarizing the first annual meeting of all R-Ladies chapters in Mexico.
- 2021 • **Preparing for an Accessible Online Conference**
UseR2021 blog
• Accessibility guidelines for virtual conferences.

AWARDS

- 2020 • **Diversity Scholarship**
RStudio::conf 2020  San Francisco, USA
• Attending the workshop: What they forgot to teach you about R? By Jenny Bryan
- 2020 • **Developer scholarship**
Bioc2020  Virtual format
• Presenting a BoF and poster
- 2019 • **Developer scholarship**
Bioc2019  New York City, USA
• Presenting a contributors short talk

TALKS AND POSTERS

- 2021 • **An introduction to the R/Bioconductor Ecosystem**
R-Ladies Baltimore  Virtual format
• Invited talk
- 2021 • **Efforts of the CDSB community**
ConectaR 2021  Virtual format
• Contributed talk with Erick Cuevas-Fernandez, Leonardo Collado-Torres and Alejandro Reyes.
- 2021 • **Panel: Initiatives with a gender perspective in science**
Physiology Institute, UNAM  Virtual format
• Invited talk
- 2021 • **Incubator: Five principles to grow up your R community**
useR 2021  Virtual format
• Contributed with Erick Cuevas-Fernandez, Leonardo Collado-Torres and Alejandro Reyes.

- 2021
- **Talk: Using R in Latin America: the great, the good, the bad, and the ugly**
useR 2021
• Contributed with Virginia A. García-Alonso; Paola Corrales; Claudia A. Huaylla; Andrea Gómez-Vargas and Denisse Fierro-Arcos.
- 2020
- **Working with lists in R**
R-Ladies Cuernavaca
• Meetup
- 2020
- **Writing our first Bioconductor package as members of the CDSB community**
Bioconductor Developers Forum
• Invited participation with Carmina Barberena-Jonas and Emiliano Sotelo-Fonseca
- 2020
- **CDSB community: efforts to strengthen the R/Bioconductor developer community in Mexico/LatAm**
BioC2020
• Birds of a Feather session with Carmina Barberena-Jonas, Emiliano Sotelo-Fonseca, Leonardo Collado-Torres and Alejandro Reyes
- 2020
- **Poster: The study of transcriptional regulatory elements using 'erba' reveals a phylum-dependent compensatory effect**
BioC2020
• Contributed Poster. Authored with Damien P. Devos and Enrique Merino.
- 2020
- **Panel: What we talk about when it comes to accessibility?**
Latin-R Conference
• Invited participation
- 2020
- **Creating a new wave of software developers in Mexico and Latin America**
Open Source Software Contributors Meeting
• Contributed talk with Carmina Barberena-Jonas, Leonardo Collado-Torres and Alejandro Reyes
- 2020
- **Panel: Challenges and Perspectives of R-LadiesMX**
R-LadiesMX First Annual Meeting
• Virtual format
- 2019
- **A collaborative approach to improve access to bacterial regulatory networks using R/Bioconductor**
Bioc2019
• Developer's talk presenting the regutools package.
- 2019
- **Introduction to R: variables and help**
R-Ladies Cuernavaca
• Meetup

2016

- **Poster: The role of dAtrx ATPase in telomeric maintenance of *Drosophila melanogaster*.**
2nd MexFly Meeting 📍 Mexico City, Mexico
- **Poster: The role of dAtrx ATPase in telomeric maintenance of *Drosophila melanogaster*.**
National Biochemistry Meeting 📍 Aguascalientes, Mexico