

# Erick Cuevas-Fernández

## Biochemist & Bioinformatician

1ra Priv. De Los Gallos 4, Tejalpa, Jiutepec, Mor., Mexico. C.P. 62570  
[erickcufe94@gmail.com](mailto:erickcufe94@gmail.com) | Tel. +52 7772123774 | <https://erickcufe.github.io>

## SKILLS

- Languages: Spanish (Native), English (IELTS), French (B1)
- Programming skills: (R, Python, bash, JavaScript)
- Ability to create R packages.
- Laboratory skills in biochemistry and molecular biology.
- Machine learning algorithms, Molecular Docking and Protein Modeling.

## RESEARCH EXPERIENCE

- **Laboratory of Systems Biology and Translational Medicine, UAEM, Mexico**
  - Master thesis development "Identification of biomarkers associated with dementia to propose a cellular system for study."
  - Director: Dr. Heriberto Manuel Rivera.
  - 2018 onwards.
- **Research Residency, Laboratory of Cellular Immunology, UAEM, Mexico**
  - Bachelor thesis: "Evaluation of the association of CBP /  $\beta$ -catenin and p300 /  $\beta$ -catenin in the promoter regions of a selection of Wnt /  $\beta$ -catenin response genes".
  - Director: Dr. Ma. Angélica Santana Calderón.
  - 2016-2017
- **Research Intern. Laboratory of Viral Dynamics and Carcinogenesis, UAEM, Mexico**
  - Participation in the project "Molecular typing of human papillomavirus in support of clinical diagnosis".
  - Director: Dr. Raúl Peralta Rodríguez.
  - 2016-2017
- **Research Stay, IBt, UNAM, Mexico**
  - "Identification and characterization of genes involved in the perception and processing of nociceptive signals in *Drosophila melanogaster*".
  - Director: Dr. Enrique Reynaud Garza.
  - 2014-2015.
- **Social Service, Chemical Research Center, UAEM, Mexico**
  - "ASYMETRIC SYNTHESIS OF AMONOPHOSPHONIC ACIDS".
  - 2012

## EDUCATION

- **National Autonomous University of Mexico (UNAM), Mexico**
  - Master in Biochemical Sciences (currently studying)
  - 2018 onwards.
- **Autonomous University of the State of Morelos (UAEM), Mexico**
  - Bachelor of Science in terminal area Biochemistry and Molecular Biology.
  - 2012-2017
- **Autonomous University of the State of Morelos (UAEM), Mexico**

- Pharmaceutical Industrial Laboratory Technician.
- 2009-2012

## ACADEMIC PUBLICATIONS

1. Gerson N. Hernández-Acevedo, Oscar H. López-Portales, Darely Y. Gutiérrez-Reyna, **Erick Cuevas-Fernández**, Linda A. Kempis-Calanis, Rosario G. Labastida-Conde, Oscar B. Aguilar-Luviano, Oscar Ramírez-Pliego, Salvatore Spicuglia, Bárbara Lino-Alfaro, Alicia Chagolla-López, Luis E. González-de la Vara, María Angélica Santana. **“Protein complexes associated with  $\beta$ -catenin differentially influence the differentiation profile of neonatal and adult CD8+ T cells”**. 28 March 2019. doi: 10.1002/jcp.28502. PMID: 30924167.
2. Beltrán-Hernández Nidia E, Sánchez Méndez Joel, **Erick Cuevas-Fernández**, Verleyen Jerome, Sanchez-Flores Alejandro, Rivera Heriberto Manuel. **“Divergent relationship between diabetes Type 2, Obesity and anthocyanins: docking interactions and structural pattern”**. (in preparation)
3. **Erick Cuevas-Fernández**, C. A. Moncada V., Nidia E Beltrán-Hernández, M Loreda G, Rivera Heriberto Manuel. **“Use of machine learning and text mining to evaluate the association with different types of dementia of single nucleotide polymorphisms”**. (in preparation).
4. C. A. Moncada V., Nidia E Beltrán-Hernández, **Erick Cuevas-Fernández**, Sánchez Méndez Joel, M Loreda G, Rivera Heriberto Manuel, G. Reyes S., M. Mejía L. **“Application of Artificial Neural Networks for Genomic data Identification”**. (in preparation).
5. Brito Bahena Oscar David; Villarreal Reyes Fernanda Anaid; Beltrán-Hernández Nidia E.; **Cuevas-Fernández Erick**; Rivera Heriberto Manuel. **“Pharmacogenetics of MMP-12 and MPO: Molecular Docking and the effect of single nucleotide polymorphisms at the protein structural level”**. (in preparation).

## CONFERENCE PRESENTATIONS

- **Welcome Days for the Semester. Faculty of Nutrition. UAEM, Mexico.**
  - **Erick Cuevas-Fernández**
  - Oral presentation: “Artificial Intelligence: Reality or Science Fiction?”
  - 2019
- **Refresher Course for 8th semester nursing students. UAEM, Mexico.**
  - **Erick Cuevas-Fernández**
  - Oral presentation: “Artificial Intelligence”.
  - 2019.
- **XXII Summer of Scientific Research in Morelos, Mexico.**
  - Brito Bahena Oscar David; Villarreal Reyes Fernanda Anaid; Beltrán-Hernández Nidia E.; **Cuevas-Fernández Erick**; Rivera Heriberto Manuel.
  - Poster: “Pharmacogenetics of Biomarkers associated with Dementia”.
  - 2019
- **XXXII National Congress of Biochemistry. Ixtapa, Guerrero, Mexico.**
  - **Erick Cuevas-Fernández**; Carlos Moncada Vázquez; Fernanda Villarreal Reyes; Joel Sánchez Méndez; Monserrat Loreda Guillen; Heriberto Manuel Rivera.
  - Oral presentation: “Identification and Classification of Single Nucleotide Polymorphism associated with dementia through data mining and machine learning”.
  - 2018
- **XXXII National Congress of Biochemistry. Ixtapa, Guerrero, Mexico.**

- Fernanda Anaid Villarreal Reyes; **Erick Cuevas-Fernández**; Heriberto Manuel Rivera.
- Oral presentation: “Cellular systems proposed as a model for the study of dementia”.
- 2018
- **XXXII National Congress of Biochemistry. Ixtapa, Guerrero, Mexico.**
  - José Javier Álvarez Arroyo, Monserrat Loredo Guillen, Joel Sánchez Mendez, **Erick Cuevas-Fernández**, Heriberto Manuel Rivera.
  - Oral presentation: “Identification and Selection of Genetic Biomarkers for Atherosclerosis”.
  - 2018
- **IV Congress of Signal Transduction. Puerto Vallarta, Jalisco, Mexico.**
  - **Erick Cuevas-Fernández**; Darely Y. Gutierrez Reyna; Oscar H. López Portales; Gerson N. Hernández Acevedo; Oscar Ramírez Pliego; María Angélica Santana.
  - Poster presentation: “Differential recruitment of beta-catenin to the promoters of genes associated with proliferation and differentiation in neonate and adult CD8 + T cells”.
  - 2017

## COURSES & MEETING ATTENDANCE

- **RIIAA 2.0 UNAM, Mexico**
  - Summer School in Artificial Intelligence:
    - Deep Learning for Text Mining
    - Graph Networks
    - Deep Generative Models (VAE/GAN)
  - 2019
- **CDSB Workshop: How to Build and Create Tidy Tools, UNAM, Mexico.**
  - 2019
- **Future of Individualized Medicine, La Jolla, California, USA.**
  - 2019
- **XXXII National Congress of Biochemistry. Ixtapa, Guerrero, Mexico.**
  - 2018
- **Course-Workshop Deep Learning, UAEM, Mexico.**
  - 2018
- **2018 International Bioinformatics Workshop: R for all & Latin America R/Bioconductor Developers Workshop. UNAM, Mexico.**
  - T2: Exploratory and statistical analysis of biological data using R.
  - 2018
- **IV Congress of Signal Transduction. Puerto Vallarta, Jalisco, Mexico.**
  - 2017

## SOFTWARE

- **R Packages**
  - seekerBio: <https://github.com/Erickcufe/seekerBio>
  - qualitycheck: <https://github.com/Erickcufe/qualitycheck>
  - mxearthquakes: <https://github.com/ComunidadBioInfo/mxearthquakes>
- **Experience using databases:**
  - NCBI, ENSEMBL, Reactome, KEGG, GWASCatalog, OMIM.
- **Experience using software:**
  - WEKA, AutoDock-Vinna, I-TASSER, LigPlot, PyMOL, ProtDCal.

## **TEACHING EXPERIENCE**

- **Course R. Laboratory of System Biology and Translational Medicine, UAEM, Mexico.**
  - <https://erickcufe.github.io/teaching.html>
  - 2019

## **ACADEMIC REFERENCES**

- **Dr. Heriberto Manuel Rivera, Universidad Autónoma del Estado de Morelos**
  - Tel. +52 777 3297000 ext 3500. Mail: m2mrivera@uaem.mx
- **Dr. Alejandro Garcíarrubio Granados, Universidad Nacional Autónoma de México**
  - Tel. +52 777 3291864 ext 27864. Mail: alejandro@ibt.una.mx
- **Dra. Leonor Perez Martinez, Universidad Nacional Autónoma de México**
  - Tel. +52 777 329-1777 ext 38310. Mail: leonor@ibt.unam.mx
- **Dra. Ma. Angelica Santana Calderon, Universidad Autónoma del Estado de Morelos**
  - Tel +52 777 3297000 ext. 3666. Mail: santana@uaem.mx