

ENRIQUE I. VELAZQUEZ VILLARREAL

MD, PhD, MS, MPH

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PROFILE

Multidisciplinary Doctor of Philosophy in Precision Medicine, Precision Public Health, Bioinformatics, Biostatistics and Genetics, proficient in Big Data, Artificial Intelligence and Supercomputers. Expert in developing and applying computational tools to address genomic-driven solutions on precision medicine challenges using clinical (EHR) and genomic data. Efficient and rigorous data analyst and data manager for large-scale biological data sets from next-generation sequencing based assays, with strong focus on 1) building novel tools, metrics, and multi-approaches for data visualization, summary and interpretation, & 2) integrating analysis into pipelines. Experienced Physician in Primary Health Care, Immunology, Cancer, Neurology, and Neuroimaging. Experienced Clinician focused on diagnosing and treating multiple diseases.

EDUCATION

- September 2016 - September 2017* **Postdoctoral Fellow**, Biostatistics/Bioinformatics
Child & Adolescent Services Research Center (CASRC)
Rady Children's Hospital San Diego (RCHSD)
Laboratory focused on developing and adapting interventions (using behavioral and projecting to use genomic data) to be implemented within existing community programs and systems in the areas of Autism Spectrum Disorders (ASD), Executive Functioning (EF), depression and behavior disorders.
- August 2015 - September 2016* **Postdoctoral Fellow**, Bioinformatics/Genomics
Functional Genomics Laboratory
The Scripps Research institute (TSRI)
Research Interest: Genomics, Immunology and Precision Medicine
Website:
<https://www.ncbi.nlm.nih.gov/pubmed/28188669>
- August 2011 - August 2015* **Doctor of Philosophy (PhD)**, Human Genetics, Bioinformatics
Graduate School of Public Health
University of Pittsburgh, Pittsburgh, PA
Department of Human Genetics
Research Interest: Human Genetics in Public Health
Dissertation: Alternatives to relational database in precision medicine: comparison of NoSQL approaches for big data storage using supercomputers.
Website:
http://d-scholarship.pitt.edu/25614/1/velazquezvillarreal_i_etdPitt_2015.pdf
- May 2010 - August 2011* **Master of Science (MS)**, Epidemiology
Graduate School of Public Health
University of Pittsburgh, Pittsburgh, PA
Research Interest: Epidemiology: Mental Health
Thesis: Association between a sirtuin 5 SNP (*rs SIRT5 SNP, rs9382222*) and three functional markers of brain health

website: <http://d-scholarship.pitt.edu/8575/1/VelazquezEI.pdf>

December 2008 - August 2011 **Master of Public Health (MPH)**, Multidisciplinary
Graduate School of Public Health
University of Pittsburgh, Pittsburgh, PA
Research Interest: Public and Global Health Informatics
*Essay: A solution to the use of burgeoning genomic databases
in public health: data integration*

April 2010 - August 2011 **Certificate in Global Health (CGH)**
Graduate School of Public Health
University of Pittsburgh, Pittsburgh, PA
Research Interest: Global Health Informatics
Essay: Global Health informatics

August 1999 - November 2006 **Medical Doctor (MD)**, General Practitioner
School of Medicine
Nuevo Leon State University (UANL), Monterrey, Mexico.
Research Interest: Neurosciences, Mental Health

HONORS:

November 2006 Graduated with Honors, Medical Doctor (MD),
by the Nuevo Leon State University

July 2007 Graduated with Special Mention, Medical Researcher,
by the National Institute of Neurology and Neurosurgery
of Mexico and Mexican Secretary of Health

PROFESSIONAL EXPERIENCE

April 2017 - present **Adjunct assistant professor, Graduate School of Public Health, San
Diego State University (SDSU)**
Collaborating with researchers in the area of Public Health and Genomics.

April 2017 - present **Adjunct professor, Computer Science, National University (NU) San
Diego CA**
Teaching classes to the Master of Science Data Analytics program and
Computational Science program in advanced statistical and computational
topics using computational tools:
Class ANA625: Categorical Data Methods and Applications
Class CSC 335: Data Structures and Algorithms
Class CSC 338: Algorithm Design

February 2017 - present **Consultant in Research, University of California San Diego (UCSD)**
Conducted a research project with Rachel Haine-Schlagel, Ph.D. and
Danielle L. Fettes, Ph.D. focused on Community-based mental health
services, Evidence-based practices, Dissemination & Implementation.

February 2017 - present **Physician, Precision Medicine, Primary health care at Bethesda
Clinic, Tijuana BC, Mexico.**
Diagnosis and treatment of multiple diseases

September 2016 - September 2017 **Autism / Biostatistics / Bioinformatics analyst**

Conducting my Postdoctoral fellow in Autism with Dr. Mary Baker to developing and adapting interventions by analyzing behavioral data and projecting the use of genomic data for this purpose. In this research position, I'm in charge of data management, data analyses (Artificial Intelligence, Machine Learning algorithms), dealing with the IRB and HIPPA (main IRB contact person), applying for new projects and uploading to the IRB, conducting clinical assessment to participants/patients (DKEFS, BRIEF, SRS, SSPA, ADOS, GSE, ISI, ACHENBACH, QLESQ, WMS, Adapt Functioning, Sleep Functioning, Cognitive Problems, Cognitive Strategies, Social Problems, Social Strategies, among others.) leading collaborations, scheduling scientific meetings, and study the integration of behavioral/clinical and genomic data to personalize treatments.

August 2015 – September 2016

Bioinformatics analyst at Functional Genomics Laboratory, The Scripps Research Institute (TSRI) La Jolla CA

Conducted a research using Artificial Intelligence/Machine Learning, clinical and genomic data (RNAseq & Microarray) in the area of Immunology and Organ Transplants to predict acute and sub-acute rejection in kidney transplantation. The project was leaded by Dr. Daniel Salomon, physician, professor and chief scientist at TSRI, and startups, transplantgenomics.com and igenomx.com.

February 2015 – August 2015

Bioinformatics analyst at Pittsburgh Supercomputer Center (PSC), Carnegie Mellon University

Conducted my dissertation project using computer clusters that support databases with Dr. Michael M. Barmada. My project focused on finding NoSQL alternatives to relational database in precision medicine for big data storage.

October 2014 – August 2015

Bioinformatics analyst at the Public Health Dynamics Laboratory (PHDL), University of Pittsburgh

Conducted a research project with Dr. John J. Grefenstette to gain knowledge and experience in computational modeling and simulation of infectious diseases. The project focused on determine and calibrate the population parameters such as transmissibility and vaccination patterns that determine the spread of influenza (flu), using the Agent Based Framework for Reconstruction Epidemiological Dynamics (FRED) to simulate data at county (Allegheny), state (PA) and national (US) level.

September 2014 – August 2015

Bioinformatics analyst at the Kamboh's Lab in the Department of Human Genetics, University of Pittsburgh

Conducted research of two projects with Dr. Illias Kamboh, Dr. Michael M. Barmada and Dr. Yesim Demirci to gain knowledge and experience in Alzheimer's Disease and Systemic Lupus Erythematosus (SLE). The projects focused on the identification of very rare genetic variants from whole exome sequencing of patients and controls with Late-Onset Alzheimer's Disease (LOAD) and SLE.

September 2013 – August 2015

Bioinformatics analyst at the Bioinformatics Resource Center of the Institute for Personalized Medicine, University of Pittsburgh

Conducted research with Dr. Michael M. Barmada to gain knowledge and experience in the field of Database Management Systems (DBMS) and Precision Medicine in cancer (Precision Oncology). Projects focused on analysis and data manipulation of cancer data (mainly breast cancer) from

The Cancer Genome Atlas (TCGA) through the Pittsburgh Genome Resource Repository (PGRR).

September 2011 – August 2015

Bioinformatics analyst at the Center for Simulation and Modeling, University of Pittsburgh

Conducted research with Dr. Michael M. Barmada to gain knowledge and experience in the analysis of next generation sequencing data. Projects focused on the analysis of whole exome, whole genome data, RNAseq data, Methylation/Copy-Number Variation and Integration of NGS and GWAS data in patients with multiple diseases, including cancer.

September 2009 – August 2015

Bioinformatics analyst at the Center for Computational Genetics, University of Pittsburgh

Conducted my master of public health essay project with Dr. Michael M. Barmada and projects related to precision medicine informatics. Projects focused on the integration of genomic data into Electronic Health Records (EHRs) and proposing innovative and transformative informatics systems that provides data extensibility, replication, liquidity, scalability and flexibility to make cross-disciplinary and systems-level analysis more achievable by automating integration.

January 2010 – August 2011

Genetic Statistician at the Department of Psychiatry, Center of Neuroscience, University of Pittsburgh

Conducted my master thesis project in Dr. Etienne Sibille's Lab to gain knowledge and experience in genetics of aging. The project focused on performing association analysis of a genetic variant and three functional markers of brain health that were applicable tests to measure cognitive function, motor function and depressed mood using aging population from the Health ABC longitudinal cohort study database.

April 2010 – August 2011

Global Health Researcher at the Center for Global Health, Graduate School of Public Health, University of Pittsburgh

Conducted my certificate of global health research-essay with Dr. Joanne Russell to gain knowledge and experience in global health informatics. The project focused on addressing gender based violence (GBV) in Mexico through database building.

September 2009 – August 2011

Public Health Researcher at the World Health Organization (WHO) Collaborating Centre, University of Pittsburgh

Conducted a research with Dr. Ronald E. Laporte to gain knowledge and experience in public and global health informatics. The project focused on collecting and managing data related to public health schools, medical schools and public health leaders from around the world to build a useful database for future telecommunication research purposes.

September 2008 – May 2009

Public Health Researcher at the Mexican Health Foundation (Mexico)

Collaborated in a research project related with breast cancer. The project focused on publishing a paper named "the health care cost of breast cancer in the Mexican social security institute" in a peer review journal.

April - July 2006

Medical Researcher at the Brigham and Women's Hospital, Department of Surgery, Harvard Medical School, Harvard University

Conducted basic science and clinical research with Dr. Malcom K. Robinson. The projects focused on studying the techniques of roux-en-Y gastric bypass surgery in animal models, contributing in planning phases

of a quality-assurance study on complications associated with peripherally inserted central catheters, and studying the advantages of laparoscopic bariatric surgeries and urologic surgeries including robotic-assisted prostatectomies.

August 2005 – July 2006

Medical Researcher, Neuroimaging Laboratory, National Institute of Neurology and Neurosurgery (INNNMVS) (Mexico)

Conducted clinical research with Dr. Fernando Barrios. The project focused on performing brain functional magnetic resonance (fMRI) studies in patients with neurological diseases (movement disorders), clinical interpretation of fMRI, data management of fMRI images, 3D image reconstruction from fMRI and communication of precision medicine, and in most cases, precision oncology findings to other clinicians to personalize neurological/neuro-surgical treatment/procedure.

February – March 2004

Medical Researcher, Vall D’Hebron University Hospital, Department of Neurosurgery, University of Barcelona (Spain)

Conducted clinical research with Dr. Enrique Rubio Garcia and Maria Antonia Poca Pastor. The project focused on studying the impact of technological advances of neuroimaging in precision oncology by using conventional neurosurgical procedures.

September 2000 – July 2006

Medical Fellowship, Department of Human Anatomy, School of Medicine, Nuevo Leon State University (Mexico)

Conducted basic, clinical and academic research and co-teach three courses entitled “Human Anatomy”, “Neuroanatomy” and “Anatomy by medical imaging”, required to medical students. Projects focused on describing anatomical variants using human corps and imaging methods, describing surgical and neurosurgical techniques, and reporting relevant clinical cases. The results of this work were mainly published and presented in medical annual meetings and medical journals.

September 2000 – July 2003

Medical Researcher, Medical Student Research Group of the School of Medicine, Nuevo Leon State University (Mexico)

Conducted a public health research with in a research group named G-Folat to gain real practice world experience in public health. The project focused on reporting the impact of the consumption of folic acid in preventing neural tube defects in unprivileged communities. The related activities consisted of traveling to unprivileged communities, distributing folic acid among susceptible women, and reporting results.

GRANTS COLLABORATIONS

Grant Name: Genomics for Transplantation, PI: Dr. Daniel Salomon, Co-Inv: **Dr. Enrique Velazquez**, Institute Awarded: The Scripps Research Institute (TSRI), Awarding Agency: NIH/NIAID, Grant Number: AI063603.

Grant Name: Multi-dimensional "shotgun" epigenetics of circulating blood cell and CD4 memory T-Cell immunity in kidney transplant patients with clinical and biopsy-proven acute or chronic rejection, PI: Dr. Daniel Salomon, Co-Inv: **Dr. Enrique Velazquez**, Institute Awarded: The Scripps Research Institute (TSRI), Awarding Agency: The Mendez National Institute of Transplantation Foundation (MNITF), Date awarded: February 11, 2016.

Grant Name: Shotgun Epigenetics: A genome-wide, multi-dimensional strategy to study epigenetic regulation of memory CD4 T cell activation and immune networks in Ulcerative Colitis. PI: Dr. Daniel Salomon, Co-

Inv: **Dr. Enrique Velazquez**, Institute Awarded: The Scripps Research Institute (TSRI), Awarding Agency: NIH, Grant Number: In submission process.

Grant Name: Supported Employment, Cognitive Enhancement, Social Skills Program. PI: Mary Baker-Ericzen, Ph.D. Co-Inv: **Dr. Enrique Velazquez**, NIMH, grant R34 MH104289-01.

Grant Name: AIM – **Autism** Impact Measure, PI: Dr. Mary Baker-Ericzen, Co-Inv: **Dr. Enrique Velazquez**, Institute Awarded: Rady Children’s Hospital San Diego. Awarding Agency: National Institute of Mental Health (NIMH).

Grant Name: College SUCCESS (Intervention for **Autism**), PI: Dr. Mary Baker-Ericzen, Co-Inv: **Dr. Enrique Velazquez**, Institute Awarded: Rady Children’s Hospital San Diego. Awarding Agency: Department of Disabilities.

Grant Name: High School SUCCESS (Intervention for **Autism**), PI: Dr. Mary Baker-Ericzen, Co-Inv: **Dr. Enrique Velazquez**, Institute Awarded: The Rady Children’s Hospital. Awarding Agency: Institutional Grant.

Grant Name: Command and Control (Intervention for **Autism**), PI: Dr. Mary Baker-Ericzen, Co-Inv: **Dr. Enrique Velazquez**, Institute Awarded: The Rady Children’s Hospital. Awarding Agency: Institutional Grant.

Grant Name: CBID (Intervention for **Autism**), PI: Dr. Mary Baker-Ericzen, Co-Inv: **Dr. Enrique Velazquez**, Institute Awarded: The Rady Children’s Hospital. Awarding Agency: Institutional Grant.

Grant Name: CREW (Community-based Mental Health services), PI: Dr. Rachel Haine-Schlagel, Co-Inv: **Dr. Enrique Velazquez**, Institute Awarded: University of California San Diego. Awarding Agency: NIH.

Grant Name: ACHIEVE (Intervention for **Autism**), PI: Dr. Mary Baker-Ericzen, Co-Inv: **Dr. Enrique Velazquez**, Institute Awarded: The Rady Children’s Hospital. Awarding Agency: Institutional Grant.

PUBLICATIONS

Velazquez E, Kurian S, Orthogonal Comparison of Molecular Signatures of Kidney Transplants with Subclinical and Clinical Acute Rejection – Equivalent Performance is Agnostic to either Technology or Platform. *Am J Transplant*. 2017 Aug;17(8):2103-2116.

Knaut FM, Arreola-Ornelas H, **Velazquez E**, Dorantes J, Mendez O, Avila-Burgos L. The health care costs of breast cancer: the case of the Mexican Social Security Institute. *Salud Publica Mex*. 2009;51 Suppl 2:s286-95.

Velazquez E, Barmada MM, Hochheiser H, Feingold E, Labrinidis A, Minster RL. Alternatives to relational database in precision medicine: comparison of NoSQL approaches for big data storage using supercomputers. (In progress)

Velazquez E, Kurian S, Salomon DR, et al. Genomic profile and correlation of microarrays in whole blood, CD4, CD8, CD14 & CD19 from patients with Fibromialgia. (In progress)

Sibille E, Rosano C, Tseng G, Kammerer CM, **Velazquez E**, Newman AB. Sirtuin polymorphism associates with increased biological and functional aging in elderly subjects. *PLoS Medicine* (in review)

Kamboh MI, Demirci FY, **Velazquez E**, Barmada MM, Feingold E. Whole Exome Sequencing (WES) analysis: Identifying rare coding variants in Alzheimer’s disease. (In progress)

E. Velázquez; "Sorprenden imágenes de las funciones del cerebro (Magnetic Resonance image of the Brain)", *Ciencia, Conocimiento, Tecnología*, No. 23, 17-18, Jan 2006.

E. Velázquez; "La resonancia magnética funcional en el estudio de las emociones (Pictures of Emotions with Magnetic Resonance Image)". *Ciencia, Conocimiento, Tecnología*, No. 19, 23-25, Nov 2006.

E. Velázquez; "El hombro doloroso: Un asunto espinoso (Painful Arm)", *Vesalius*, No. 3, 14-16, Jul 2003.

E. Velázquez; "Resonancia Magnética Funcional: Aplicaciones Clínicas (Functional Magnetic Resonance: Clinic Applications)", *Vesalius*, No. 2, 5-8, Apr 2003.

E. Velázquez; "Determinación de áreas de activación cortical por Resonancia Magnética Funcional, Técnica BOLD (Brain Mapping with Functional Magnetic Resonance)", *Vesalius*, No. 1, 6-10, Mar 2003.

E. Velázquez; "Hernia de Disco Cervical (Cervical Hernia)", *Vesalius*, No. 3, 7-10, Jul 2002.

E. Velázquez; "Nuevas Espectativas en la RM: Difusión (Magnetic Resonance: Diffusion)", *Vesalius*, No. 2, 3-6, Apr 2002.

E. Velázquez; "Hidrocefalia (Hydrocephalus)", *Vesalius*, No. 4, 21-24, Oct 2001.

REVIEWS

Nathan Salomonis. Lineage Profiler: Accurate multi-lineage classification from diseased tissues and cell-free RNA. *PLOS Computational Biology*. Manuscript number: PCOMPBIOL-D-16-00026.

RESEARCH AWARDS

Winner in the "III Competition of Neuroscience of the National Institute of Neurology and Neurosurgery" with the research project "Brain Mapping with BOLD Technique (fMRI)", Mexico D.F. (2006).

Third National Place in the "XL Annual Meeting of the Mexican Radiology Society", with the project "Tractography: Multiple Sclerosis", organized by Mexican Radiology Society, Mexico D.F. (2006).

Second National Place in the "XL Annual Meeting of the Mexican Radiology Society", with the project "Parameter to acquire images by tensor diffusion", organized by Mexican Radiology Society, Mexico D.F. (2006).

Winner in the "II Competition of Neuroscience of the National Institute of Neurology and Neurosurgery", with the research project "Tractography: Image tensor Diffusion new MRI technique in Mexico", Mexico D.F. (2005).

First National Place in the "I^a Medical Scientific Poster Presentation of the Aguascalientes State University", with the project "fMRI: BOLD (Blood Oxygen Level Dependent) Technique", Aguascalientes, Mexico (2003).

Second National Place in the "VI Mexican Scientific Meeting of Medical Students" with the project "New MRI techniques: Difusion", organized by "The Mexican Scientific Association of Medical Students, Guadalajara State University", Guadalajara, Mexico, (2002).

TALK INVITATION, PRESENTATIONS, INTERVIEWS

Panel named “Best practices for large scale multiomic data integration”. Festival of Genomics San Diego, San Diego CA (June 27, 2017). <http://www.festivalofgenomicssandiego.com/speakers/enrique-velazquez>

Interview named “Innovative Technologies are Potential Game Changers”. Front Line Genomics. (May 26, 2017). <http://www.frontlinegenomics.com/interview/12075/short-read-enrique-velazquez/>

Talk named “Alternatives to relational database in precision medicine: comparison of NoSQL approaches for big data storage using supercomputers”. Invited by Dr. George Church and presented at his laboratory, Church laboratory, Department of human genetics at **Harvard Medical School** and **Wyss Institute**. Boston MA (June 25, 2015).

Talk named “Bioinformatics analyses using Clinical and Genomic Data”. Invited by Dr. Daniel Salomon and Dr. Andrew Su and presented at their laboratories, **Department of Molecular and Experimental Medicine, The Scripps Research Institute (TSRI)**, La Jolla (May 12, 2015).

Collaboration with the talk named: “Breast Cancer: Priority” made by Felicia Marie Knaul, Julio Frenk, Rafael Lozano, Ana Langer, Gustavo Nigenda, Héctor Arreola Ornelas, Héctor Gómez Dantés, **Enrique Velázquez**, Oscar Méndez, Javier Dorantes. Presented at the “Internacional Seminar on Breast Cancer: Challenges and Responses”. Sponsors: Carso Health Institute, Mexican Health Foundation, Seattle Cancer Care Alliance, Fred Hutchinson Cancer Research Center, el Breast Health Global Initiative, Roche and the Mexican National Institutes of Cancer, Perinatology, Genetic and Public Health. Mexico City (2008).

Talk named "Central Nervous System Disease". Unidos Lo Lograremos Association. Instituto Tecnológico de Estudios Superiores Monterrey (ITESM), Monterrey N.L. Mexico (2000).

PROFESSIONAL TRAINING IN PRECISION PUBLIC HEALTH

Workshop on Analysis of Next-Generation Sequencing Data: August 7th – August 9th, 2013
Metagenomics, Center for Simulation and Modeling,
University of Pittsburgh.

Workshop on Analysis of Next-Generation Sequencing Data: July 31st – August 2nd, 2013
Whole exome and whole genome data, Center for Simulation
and Modeling, University of Pittsburgh.

Workshop on Analysis of Next-Generation Sequencing Data: July 24th – July 26th, 2013
RNAseq data, Center for Simulation and Modeling
University of Pittsburgh.

MARC 2013 Summer Institute In Bioinformatics, June 18 – June 28, 2013.
Pittsburgh Supercomputing Center,
Carnegie Mellon University.

Workshop on Analysis of Next-Generation Sequencing Data: July 30th – August 10th, 2012
RNAseq, Methylation/Copy-Number Variation,
Integration of NGS and GWAS data,
Center for Simulation and Modeling
University of Pittsburgh.

MARC 2012 Summer Institute In Bioinformatics, June 18 – June 29, 2012
Pittsburgh Supercomputing Center,
Carnegie Mellon University.

Entrepreneurship training, Joseph M. Katz
Graduate School of Business,
University of Pittsburgh. September 17 –December 12, 2011

Weekly Workshops Bioinformatics Tools
in Molecular Biology (MolBio),
Health Science Library System (HSLs),
University of Pittsburgh. September 2009 – April 2014

PROFESSIONAL TRAINING IN MEDICINE

Clinical Internship,
University Hospital "Jose Eleuterio González",
Monterrey N.L. México. September 2003 – August 2005

CONTINUING PROFESSIONAL EDUCATION IN PRECISION MEDICINE

Department of Integrative and Structural Biology
seminar: “Molecular and structural basis for virus
neutralization by human antibodies”
The Scripps Research Institute, La Jolla, CA. May 3, 2016

Dart NeuroScience Seminar Series: “Neuroendocrine
control of behavioral circuits in *C. elegans*”
The Scripps Research Institute, La Jolla, CA. May 24, 2016

The Cell and Molecular Biology Affinity Group
Seminar Series: “Dissecting the Role of Oxidative
Homeostasis in Lung Cancer Using CRISPR/Cas9
Genome Engineering”
The Scripps Research Institute, La Jolla, CA. May 18, 2016

7th Annual Beutler Lecture on the Edge of Medicine
seminar: “The gut microbiota and childhood undernutrition:
Looking at human development from a microbial perspective”
The Scripps Research Institute, La Jolla, CA. May 12th, 2016

Department of Chemical Physiology
seminar: “Discover new functions of tRNA
synthetases with pathophysiological significance”
The Scripps Research Institute, La Jolla, CA. May 11, 2016

TSRI Addiction Affinity Group Seminar Series”
seminar: "Binge Drinking ERKs my BNST”
The Scripps Research Institute, La Jolla, CA. May 6, 2016

6th Annual Dorris Neuroscience Center Founder’s
Day Celebration: “Illuminating the Neural
Circuits Underlying Decision Making”
The Scripps Research Institute, La Jolla, CA. May 4, 2016

Department of Integrative Structural and Computational May 3, 2016

- Biology seminar: "Molecular and structural basis for virus neutralization by human antibodies"
The Scripps Research Institute, La Jolla, CA.
- The IMS seminar series: "Imaging Immunity: Creating a Spatiotemporal Understanding of Host Defense"
The Scripps Research Institute, La Jolla, CA. April 28, 2016
- Department of Integrative Structural and Computational Biology seminar: "Visualizing Protein Action One Molecule at a Time"
The Scripps Research Institute, La Jolla, CA. April 13, 2016
- DISCoBio & The Structure and Computation Affinity Group seminar: "Real-time forecasting of virus evolution"
The Scripps Research Institute, La Jolla, CA. March 31, 2016
- Department of Integrative Structural and Computational Biology seminar: "Thermodynamics control of molecular machines"
The Scripps Research Institute, La Jolla, CA. March 29, 2016
- Department of Integrative Structural and Computational Biology seminar: "Mechanisms of Gene-Regulation by Small RNAs"
The Scripps Research Institute, La Jolla, CA. March 28, 2016
- Department of Molecular and Cellular Neuroscience Seminar: "The Sound of Silence: Auditory Perception and Deafness"
The Scripps Research Institute, La Jolla, CA. March 9, 2016
- Department of Integrative Structural and Computational Biology (ISCB) seminar: "Integrating experimental results and user expertise into computational model building"
The Scripps Research Institute, La Jolla, CA. March 3, 2016
- Department of Immunology and Microbial Science seminar: "An alternative approach to an HIV vaccine"
The Scripps Research Institute, La Jolla, CA. February 10, 2016
- Department of Chemistry seminar: "Development of Proof-of-Concept Chemical Probes Targeting Novel Biological Targets"
The Scripps Research Institute, La Jolla, CA. January 13, 2016
- Department of Cancer Biology seminar: "Quality control in 40S ribosome assembly"
The Scripps Research Institute, La Jolla, CA. November 11, 2015
- Department of Cell and Molecular Biology seminar: The role of the p38 MAPK pathway
October 14, 2015

in cancer development

The Scripps Research Institute, La Jolla, CA.

Pittsburgh Genome Resource Repository (PGRR) information session, Institute for Personalized Medicine, UPMC Cancer Center, University of Pittsburgh.	May 29, 2014
18 th Annual Conference on Research in Computational Molecular Biology, RECOMB 2014. Ray and Stephanie Lane Center for Computational Biology, School of Computer Science, Carnegie Mellon University.	March 31 – April 5, 2014
Annual meeting, American Society of Human Genetics (ASHG). Boston MA.	October 22 – 26, 2013
Great Lakes Bioinformatics (GLBIO) Conference. International Society of Computational Biology (ISCB), Pittsburgh PA.	May 14 – 16, 2013
Annual meeting, Science 2013 Convergence, University of Pittsburgh.	October 2 – 4, 2013
Annual meeting, Science 2012 Translation, University of Pittsburgh.	October 3 – 5, 2012
The 4 th Annual Personalized Medicine Conference. Boston MA.	September 12 – 13, 2012
Annual meeting, Science 2011 Next Gen, University of Pittsburgh.	October 6 – 7, 2011
Annual meeting, Science 2010 Transformation, University of Pittsburgh.	October 7 – 8, 2010
Annual meeting, Science 2009 Unplugged, University of Pittsburgh.	October 15 – 16, 2009
Allegheny County Air Toxics Information Conference, Allegheny County Health Department, University of Pittsburgh.	November 17, 2009

CONTINUING PROFESSIONAL EDUCATION IN PUBLIC HEALTH

Seminar on Health Risk Factors to Latin America and the Caribbean”, Carso Health Institute, Mexican Health Foundation, Institute of Health Metrics and Evaluation, University of Washington, Mexico City.	2008
International Seminar on Breast Cancer: Challenges and Responses, Carso Health Institute, Mexican Health Foundation, Seattle Cancer Care Alliance, Fred Hutchinson Cancer Research Center, Breast Health Global Initiative, Roche and	2008

the Mexican National Institutes of Cancer, Perinatology, Genetic and Public Health, Mexico City.	
International Consultation to design a collaborative community on health metrics and evaluation, Bill and Melinda Gates Foundation and Carso Health Institute, Mexico City.	2008
Conference on Health Financing and Social Protection to Latin America, Carso Health Institute, Mexican Health Foundation, Competitively and Health organization, Mexico City.	2008
Conference on Practical Analysis for Health Financing and Social Protection to Latin America, Carso Health Institute, Mexican Health Foundation and The Health and Competitively and Health organization, Mexico City.	2008
XII Annual Meeting of Public Health, National Institute of Public Health of Mexico, Cuernavaca Morelos, México	2007
Annual Meeting of Respiratory Diseases, Prevention and Rehabilitation Medical Center of Respiratory Diseases, Monterrey N.L. Mexico.	2004
2nd Pan-American Symposium of Neurovirology and AIDS, Pan-American Society for Neurovirology, Monterrey N.L. Mexico.	2004
XXI Annual Meeting of Health and Women, Medical Association of Nuevo León, Monterrey N.L. Mexico.	2003
XVII Annual Meeting of Diabetes Mellitus and High Blood Pressure, Medical Students Society of Aguascalientes University, Aguascalientes Ags. Mexico	2003
Symposium of Diagnosis, Prevention and Rehabilitation of Respiratory Diseases, Prevention and Rehabilitation Medical Center of Respiratory Diseases, Monterrey N.L. Mexico.	2003
Annual Meeting of Public Health, Health Department of Monterrey, Monterrey N.L. Mexico.	2003
3th Annual Meeting of Family Medicine, Mexican Society of Family Medicine,	2003

Monterrey N.L. Mexico.	
Symposium of Occupational Health, Mexican Council of Occupational Health, Monterrey N.L. Mexico.	2002
Symposium of New Technologies to Prevent Neonatal diseases, Nuevo Leon State University, Monterrey N.L. Mexico.	2002
Symposium of Medical Bioethics, Nuevo Leon State University, Monterrey N.L. Mexico.	2002
Symposium of Womens Health, Nuevo Leon State University, Monterrey N.L." . Mexico.	2002
Detection of Neonatals Metabolism Diseases, Department of Prevention and Control Diseases of Monterrey, Monterrey N.L. Mexico.	2001
XVII Annual Meeting of Occupational, Health Mexican Council of Occupational Health, Monterrey N.L. Mexico.	2001
IV Annual Meeting of Mielomeningocele disease in Children, Mexican Association of Congenital defects, Monterrey N.L. Mexico.	2001
III Annual Meeting of Allergy and Infectious diseases, Nuevo León Association of Allergy, Monterrey N.L. Mexico.	2001
1st International Symposium of Young medicine, Nuevo Leon State University, Monterrey N.L. Mexico.	2001
III Annual Meeting of Metabolism in mexican communities, Mexican Association of Clinic Nutrition and Obesity, San Pedro Garza García N.L. Mexico.	2000
III Annual Meeting of Health strategies, Mexican Society of Health Care, San Pedro Garza García N.L. Mexico.	2000
5 th Annual Meeting of Diabetes, Nuevo Leon State University, Mexican Association of Diabetes, Monterrey N.L. Mexico.	2000
XXIII Annual Meeting of Pediatrics, Nuevo Leon Department of State Health Services, Monterrey N.L. Mexico.	2000

CONTINUING PROFESSIONAL EDUCATION IN MEDICINE

Annual Meeting, Ibero Latino American Society of Neuroradiology, San Juan, Puerto Rico.	2006
Annual Meeting, The American Association of Immunologists (AAI), Boston MA.	2006
Annual Meeting, National Institute of Neurology and Neurosurgery, Mexico City.	2006
Medical Research Course, Medical Research Department of National Institute of Neurology and Neurosurgery, Mexico City.	2006
XL Annual Meeting of Radiology, Mexican Society of Radiology. Mexico City.	2006
91 st Scientific Assembly and Annual Meeting, Radiol. Soc. of North Am. (RSNA), Chicago IL.	2005
Annual Meeting, International Society for Magnetic Resonance in Medicine, Mexico City.	2005
4th Annual Meeting of Medical Students, Nuevo Leon State University, Monterrey N.L. Mexico.	2004
Neuroimaging course, Mexican Society of Radiology, Monterrey N.L. Mexico.	2004
Cervical and Lumbar Spine Surgery Course, Nuevo Leon State University, Monterrey N.L. Mexico.	2003
Surgical Sutures Course, Nuevo Leon State University, Monterrey N.L. Mexico.	2003
XVI Annual Meeting of Internal Medicine, Internal Medicine Association of Nuevo León, Monterrey N.L. Mexico.	2003
XVII Annual Meeting of Neurosurgery, Mexican Society of Neurosurgery, Monterrey N.L. Mexico.	2003
3th Annual Meeting of Medical Students, Nuevo Leon State University,	2003

Monterrey N.L. Mexico.	
Cardiothoracic Emergencies, Nuevo Leon State University. Monterrey N.L. Mexico.	2003
1st Annual Meeting, Society of Psicomatic Medicine, Monterrey N.L. Mexico.	2003
Symposium of Pediatric Emergencies, Nuevo Leon State University. Monterrey N.L. Mexico,	2002
XIX Annual Meeting, Mexican Society of Anatomy. Colima, Colima, Mexico.	2002
7th Annual Meeting, Mexican Northeastern Society of Neurology, Monterrey N.L. Mexico.	2002
2nd Annual Meeting of Medical Students, Nuevo Leon State University, Monterrey N.L. Mexico.	2002
Clinical Therapeutic Course, Nuevo Leon State University. Monterrey N.L. Mexico.	2002
VI Annual Meeting, Mexican Association of Medical Students, Guadalajara Jalisco, Mexico.	2002
Orthopedic Course, Nuevo Leon State University, Monterrey N.L. Mexico.	2001
XIV Annual Meeting of Internal Medicine, Association of Internal Medicine of Nuevo Leon, Monterrey N.L. Mexico.	2001
XIV Annual Meeting, Pan-American Society of Trauma, Monterrey N.L. Mexico.	2001
Vascular Diseases Course, Nuevo Leon State University, Monterrey N.L. Mexico.	2001
VI Annual Meeting, Mexican Society of Radiology, Monterrey N.L. Mexico.	2001
VIII Annual Meeting, Mexican Association of Pediatric Critical Care, Monterrey N.L. Mexico.	2000
Organ Transplant Course, Nuevo Leon Department of State Health Services, Monterrey N.L. Mexico ()	2000

IV Annual Meeting , Mexican Society of Radiology,
San Pedro Garza García, N.L. Mexico.

2000

CONFERENCE POSTERS

E. Velazquez, M. Baker. "ASEBA in SUCCESS Project, ASD". International Society for Autism Research (INSAR). San Francisco CA, USA (2017).

M. Baker, **E. Velazquez**, "SUCCESS Project, ASD". International Society for Autism Research (INSAR). San Francisco CA, USA (2017).

E. I. Velázquez, M. M. Barmada "*Diagnosis and Treatment, A new Statistical Vision of Breast Cancer to make decisions*". BioIT World Congress. Boston MA, USA (2015).

E. I. Velázquez, J. Dorantes. "*Diagnosis and Treatment, A new Statistical Vision of Breast Cancer to make decisions*". Annual Meeting. National Institute of Public Health of Mexico, Cuernavaca Morelos, México (2009).

E. I. Velázquez, E. Pasaye, S. Alcauter, F.A. Barrios. "Resonancia Magnética funcional (BOLD) y Tractografía Pre y Pos-Quirúrgicas en pacientes con diagnóstico de Meningiomas (*Functional Magnetic Resonance BOLD and Tractography in patients with Meningioma diagnosis*)". Sociedad Ibero Latino Americana de Neuroradiología Diagnóstica y Terapéutica. Congreso SILAN, San Juan, Puerto Rico (2006).

E. Pasaye, **E. I. Velázquez**, F. Barrios, J. Sotelo. "Utilidad del Tensor de Difusión en pacientes con Esclerosis Múltiple Experiencia Preliminar (*Utility of Tensor Difusión in Multiple Sclerosis*)". Sociedad Ibero Latino Americana de Neuroradiología Diagnóstica y Terapéutica. Congreso SILAN, San Juan, Puerto Rico (2006).

E. Aguilar, S. Gomez- Llata, **E. I. Velázquez**, E. Pasaye. "*Cerebral Activation in Response to Negative and Positive Emotionally Valenced Images in Neurosurgical Patients using fMRI*". American Neuropsychiatry Society. Annual Meeting, La Jolla California, USA (2006).

S. Alcauter, E. Pasaye **E. I. Velázquez**, F.A. Barrios. "Parámetros a considerar en la adquisición de imágenes por tensor de difusión (*Parameters to acquire Difussion tensor Image*)". Sociedad Mexicana de Radiología e Imagen. XL Curso Anual de Radiología e Imagen, Mexico D.F. (2006).

S. Alcauter, E. Pasaye **E. I. Velázquez**, F.A. Barrios. "Espectroscopia de 1H por Resonancia Magnética (*Magnetic Resonance: 1H Spectroscopy*)". Sociedad Mexicana de Radiología e Imagen. XL Curso Anual de Radiología e Imagen, Mexico D.F. (2006).

S. Alcauter, E. Pasaye **E. I. Velázquez**, F.A. Barrios. "Sobre la Viabilidad de la Cuantificación de estudios de espectroscopia por Resonancia Magnética de H a 1T en la región de la Amígdala Cerebral (*Viability and quantification of the brain using Spectroscopy with Magnetic Resonance*)". Sociedad Mexicana de Radiología e Imagen. XL Curso Anual de Radiología e Imagen, Mexico D.F. (2006).

E. Pasaye, S. Alcauter, **E. I. Velázquez**, F. A. Barrios. "Tractografía en Pacientes con Esclerosis Múltiple (*Tractography in Patients with Multiple Sclerosis*)".

Sociedad Mexicana de Radiología e Imagen. XL Curso Anual de Radiología e Imagen, Mexico D.F. (2006).

E. I. Velázquez, E. Pasaye, F. Barrios, P. Salgado. "Espectroscopia en 1H por Resonancia Magnética de 3T (Spectroscopy 1H with Magnetic Resonance)". Facultad de Medicina de la UANL. XXIII Congreso Nacional de Investigación Biomédica, Monterrey N.L. Mexico (2005).

E. I. Velázquez, E. Pasaye, F. Barrios, P. Salgado. "Tractografía: Imágenes por tensor de difusión (DTI) Nuevas Aplicaciones de la Resonancia Magnética (*New Applications of Magnetic Resonance, Tractography: Diffusion Tensor Image*)". Facultad de Medicina de la UANL. XXIII Congreso Nacional de Investigación Biomédica, Monterrey N.L. Mexico (2005).

E. I. Velázquez, E. Pasaye, F. Barrios, P. Salgado. "Tractografía: Imagen por tensor de difusión, nuevas técnicas de RM en México (*Tractography: Difusión Tensor Image, new technique in Mexico*)". II Congreso Nacional con las Neurociencias, Instituto Nacional de Neurología y Neurocirugía MVS, Mexico D.F. (2005)

E. I. Velázquez, E. Pasaye, F. Barrios, P. Salgado. "Espectroscopia por Resonancia Magnética (*Spectroscopy with Magnetic Resonance*)". II Congreso Nacional con las Neurociencias, Instituto Nacional de Neurología y Neurocirugía MVS, Mexico D.F. (2005)

E. I. Velázquez, A. Gil. F. García, L. Vera. "Craneosinostosis. Segunda parte (*Craniosynostosis*)". Facultad de Medicina de la UANL. IV Congreso Internacional de Estudiantes de Medicina, Monterrey, N.L. Mexico (2004).

E. I. Velázquez, A. Gil. F. García, L. Vera. "Medula Anclada. Segunda parte (*Spinal Cord Surgery*)". Facultad de Medicina de la UANL. IV Congreso Internacional de Estudiantes de Medicina, Monterrey, N.L. Mexico (2004).

E. I. Velázquez, A. Gil. F. García, L. Vera. "Anatomía del primer par craneal. Segunda parte (*Anatomy of first cranial nerve*)". Facultad de Medicina de la UANL. IV Congreso Internacional de Estudiantes de Medicina, Monterrey, N.L. Mexico (2004).

E. I. Velázquez, A. Gil. F. García, L. Vera. "Trigémino: Distribución de sus ramas y correlación imagenológica. Segunda parte (*Trigeminous: Anatomy and MRI correlation*)". Facultad de Medicina de la UANL. IV Congreso Internacional de Estudiantes de Medicina, Monterrey, N.L. Mexico (2004).

E. I. Velázquez, A. Gil. F. García, L. Vera. "Pares craneales bajos, ubicación, trayecto y anatomía. Segunda parte (*Anatomy of IX, X, XI, XII Cranial Nerves*)". Facultad de Medicina de la UANL. IV Congreso Internacional de Estudiantes de Medicina, Monterrey, N.L. Mexico (2004).

E. I. Velázquez, A. Gil. F. García, L. Vera. "Nervio auditivo, porciones cocleares vestibulares: Correlación anatómica por imagen. Segunda parte (*Anatomy of The Eight Cranial Nerve*)". Facultad de Medicina de la UANL. IV Congreso Internacional de Estudiantes de Medicina, Monterrey, N.L. Mexico (2004).

E. I. Velázquez, A. Gil. F. García, L. Vera. "Nervios Oculomotores: Origen real y aparente por imagen. Segunda parte (*Anatomy of Oculomotors nerve*)". Facultad de Medicina de la UANL. IV Congreso Internacional de Estudiantes de Medicina,

Monterrey, N.L. Mexico (2004).

E. I. Velázquez, A. Gil. F. García, L. Vera. "La espectroscopia en tumores intracraneales. Segunda parte (*Spectroscopy in Intracranial Brain Tumors*)". Facultad de Medicina de la UANL. IV Congreso Internacional de Estudiantes de Medicina, Monterrey, N.L. Mexico (2004).

E. I. Velázquez, A. Gil. F. García, L. Vera. "La perfusión cerebral utilizada para pronosticar la evolución de los infartos cerebrales. Segunda parte (*Utility of The Cerebral Perfusion in Vascular Diseases*)". Facultad de Medicina de la UANL. IV Congreso Internacional de Estudiantes de Medicina, Monterrey, N.L. Mexico (2004).

E. I. Velázquez, A. Gil. F. García, L. Vera. "La Perfusión Cerebral como Herramienta en el Pronóstico de la EVC. Segunda parte (*Prognosis of Vascular diseases using Cerebral Perfusion*)". Facultad de Medicina de la UANL. IV Congreso Internacional de Estudiantes de Medicina, Monterrey, N.L. Mexico (2004).

E. I. Velázquez, A. Gil. F. García, L. Vera. "Localización por imagen de la vía visual. Segunda parte (*Fist cranial nerve: Anatomy*)". Facultad de Medicina de la UANL. IV Congreso Internacional de Estudiantes de Medicina, Monterrey, N.L. Mexico (2004).

E. I. Velázquez, A. Gil. F. García, L. Vera. "Aplicaciones Clínicas de la espectroscopia cerebral. Segunda parte (*Cerebral Spectroscopy: Clinical Application*)". Facultad de Medicina de la UANL. IV Congreso Internacional de Estudiantes de Medicina, Monterrey, N.L. Mexico (2004).

A. Gil, **E. I. Velázquez**, F. García, L. Vera. "Médula Anclada (*Spinal Cord Surgery*)". Facultad de Medicina de la UANL. XXI Congreso Nacional de Investigación Biomédica, Monterrey N.L. Mexico (2003).

A. Gil, **E. I. Velázquez**, F. García, L. Vera. "Craneosinostosis (*Craniosynostosis*)". Facultad de Medicina de la UANL. XXI Congreso Nacional de Investigación Biomédica, Monterrey N.L. Mexico (2003).

A. Gil, **E. I. Velázquez**, F. García, L. Vera. "Anatomía del primer par craneal (*Anatomy of first cranial nerve*)". Facultad de Medicina de la UANL. XXI Congreso Nacional de Investigación Biomédica, Monterrey N.L. Mexico (2003).

A. Gil, **E. I. Velázquez**, F. García, L. Vera. "Trigémino: Distribución de sus ramas y correlación imagenológica (*Trigeminous: Anatomy and MRI correlation*)". Facultad de Medicina de la UANL. XXI Congreso Nacional de Investigación Biomédica, Monterrey N.L. Mexico (2003).

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A. Gil, **E. I. Velázquez**, F. García, L. Vera. "Nervio auditivo, porciones cocleares vestibulares: Correlación anatómica por imagen (*Anatomy of The Eight Cranial Nerve*)". Facultad de Medicina de la UANL. XXI Congreso Nacional de Investigación Biomédica, Monterrey N.L. Mexico (2003).

A. Gil, **E. I. Velázquez**, F. García, L. Vera. "Nervios Oculomotores: Origen real y aparente por imagen (*Anatomy of Oculomotor nerve*)". Facultad de Medicina de la UANL. XXI Congreso Nacional de Investigación Biomédica, Monterrey N.L. Mexico (2003).

A. Gil, **E. I. Velázquez**, F. García, L. Vera. "La espectroscopia en tumores intracraneales (*Spectroscopy in Intracranial Brain Tumors*)". Facultad de Medicina de la UANL. XXI Congreso Nacional de Investigación Biomédica, Monterrey N.L. Mexico (2003).

A. Gil, **E. I. Velázquez**, F. García, L. Vera. "La perfusión cerebral utilizada para pronosticar la evolución de los infartos cerebrales (*Utility of the Cerebral Perfusion in Vascular Diseases*)". Facultad de Medicina de la UANL. XXI Congreso Nacional de Investigación Biomédica, Monterrey N.L. Mexico (2003).

A. Gil, **E. I. Velázquez**, F. García, L. Vera. "Localización por imagen de la vía visual (*Anatomy of the Second Cranial Nerve*)". Facultad de Medicina de la UANL. XXI Congreso Nacional de Investigación Biomédica, Monterrey N.L. Mexico (2003).

A. Gil, **E. I. Velázquez**, F. García, L. Vera. "La Perfusión Cerebral como Herramienta en el Pronóstico de la EVC (*Prognosis of Vascular Diseases using Cerebral Perfusion*)". Facultad de Medicina de la UANL. XXI Congreso Nacional de Investigación Biomédica, Monterrey N.L. Mexico (2003).

A. Gil, **E. I. Velázquez**, F. García, L. Vera. "Aplicaciones Clínicas de la espectroscopia cerebral (*Cerebral Spectroscopy: Clinical Application*)". Facultad de Medicina de la UANL. XXI Congreso Nacional de Investigación Biomédica, Monterrey N.L. Mexico (2003).

F. Martínez, L. Vera, F. García, **E. I. Velázquez**. "Lipomeningocele y Diastematomelia: Reporte de un caso (*Lipomeningocele and Diastematomyelia: Clinical Case*)". Sociedad de Alumnos de la Carrera de Medicina de la Universidad Autónoma de Aguascalientes. XVII Semana de la Carrera de Medicina, Aguascalientes Ags. Mexico (2003).

F. Martínez, L. Vera, F. García, **E. I. Velázquez**. "Determinación de Áreas Corticales Cerebrales empleando Técnica BOLD en Pacientes con Movimientos Anormales. Segunda Parte (*Brain Mapping with BOLD Technique using MRI in Patients with Movement Disorders*)". Sociedad de Alumnos de la Carrera de Medicina de la Universidad Autónoma de Aguascalientes. XVII Semana de la Carrera de Medicina, Aguascalientes Ags. Mexico (2003).

F. Martínez, L. Vera, F. García, **E. I. Velázquez**. "Nuevas Expectativas en la Resonancia Magnética Funcional: Aplicaciones Clínicas. Segunda Parte (*Functional Magnetic Resonance: New Techniques*)". Sociedad de Alumnos de la Carrera de Medicina de la Universidad Autónoma de Aguascalientes. XVII Semana de la Carrera de Medicina, Aguascalientes Ags. Mexico (2003).

E. I. Velázquez, R. Omaña, K. Torres, J. Almager. "Hernia del Disco Cervical (*Cervical Spinal Cord Surgery*)". Tercera parte". III Congreso Internacional de Estudiantes de medicina, Monterrey, N.L. Mexico (2003).

E. I. Velázquez, A. Gil, F. García, L. Vera. "Empleo de la Resonancia Magnética Funcional con Técnica BOLD (Blood Oxygen Level Dependent) para estudiar las

Áreas Activas Cerebrales en Pacientes Hipocinéticos, Discinéticos e Hiperkinéticos (*BOLD Technique with Magnetic Resonance in patients with movement Disorders*). Sociedad Mexicana de Anatomía y la Facultad de Medicina de la Universidad de Colima. XIX Congreso Nacional de Anatomía, Colima Col. Mexico (2002).

E. I. Velázquez, A. Gil, F. García, L. Vera. "Nuevas Expectativas en la RMf: Difusión (*New MRI techniques: Difusion*)". Sociedad Mexicana de Anatomía y la Facultad de Medicina de la Universidad de Colima. XIX Congreso Nacional de Anatomía, Colima Col. Mexico (2002).

E. I. Velázquez, A. Gil, F. García, L. Vera. "RMf: Aplicaciones Clínicas. Segunda parte (*Clinical Application, Functional Magnetic Resonance*)". Sociedad Mexicana de Anatomía y la Facultad de Medicina de la Universidad de Colima. XIX Congreso Nacional de Anatomía, Colima Col. Mexico (2002).

E. I. Velázquez, A. Gil, F. García, L. Vera. "Anatomía del Lóbulo Temporal por RM. Tercera parte (*Anatomy of Temporal Lobe*)". Sociedad Mexicana de Anatomía y la Facultad de Medicina de la Universidad de Colima. XIX Congreso Nacional de Anatomía, Colima Col. Mexico (2002).

L. Vera, M. Mere, J. Muraira, **E. I. Velázquez**. "Neurocirugía en el Hospital Infantil de Monterrey de la Secretaría de Salud 1963-2000 (*Childrens Hospital: Neurosurgery 1963-2000*)". Facultad de Medicina de la UANL. XX Congreso Nacional de Investigación Biomédica, Monterrey N.L. Mexico (2002).

A. Gil, **E. I. Velázquez**, F. García, L. Vera. "Resonancia Magnética Funcional: Aplicaciones Clínicas (*Clinical Applications in Magnetic Resonance*)". Facultad de Medicina de la UANL. XX Congreso Nacional de Investigación Biomédica, Monterrey N.L. Mexico (2002).

A. Gil, **E. I. Velázquez**, F. García, L. Vera. "Determinación de Áreas de Activación Cerebral en Pacientes con Movimientos Anormales Empleando Resonancia Magnética Funcional con Técnica BOLD (*Brain Mapping with Functional Magnetic Resonance*)". Facultad de Medicina de la UANL. XX Congreso Nacional de Investigación Biomédica, Monterrey N.L. Mexico (2002).

A. Gil, **E. I. Velázquez**, F. García, L. Vera. "Imagen Corporal a Través de la Resonancia Magnética Nuclear (*Corporal Image using fMRI*)". Facultad de Medicina de la UANL. XX Congreso Nacional de Investigación Biomédica, Monterrey N.L. Mexico (2002).

A. Gil, **E. I. Velázquez**, F. García, L. Vera. "Nuevas Expectativas de la Resonancia Magnética Funcional (*Using Functional Magnetic Resonance*)". Facultad de Medicina de la UANL. XX Congreso Nacional de Investigación Biomédica, Monterrey, N.L. Mexico (2002).

A. Gil, **E. I. Velázquez**, F. García, L. Vera. "Estudio Anatómico y Funcional por Imagen del Lóbulo Temporal. Segunda parte (*Anatomical and Funcional research of The Temporal Lobe*)". Facultad de Medicina de la UANL. XX Congreso Nacional de Investigación Biomédica, Monterrey N.L. Mexico (2002).

A. Gil, **E. I. Velázquez**, F. García, L. Vera. "Técnica de Difusión en la RMf y su Utilidad en el Diagnóstico de la Enfermedad Vascular Cerebral aguda (*Diffusion Technique in Vascular disease diagnosis*)". Facultad de Medicina de la UANL. XX Congreso Nacional de Investigación Biomédica, Monterrey N.L. Mexico (2002).

A. Gil, **E. I. Velázquez**, F. García, L. Vera. "Nuevas Técnicas en RMf: difusión (*Diffusion new technique in fMRI*)". Facultad de Medicina de la UANL. XX Congreso Nacional de Investigación Biomédica, Monterrey N.L. Mexico (2002).

A. Gil, **E. I. Velázquez**, F. García, L. Vera. "RMf con técnica BOLD en pacientes con movimientos discinéticos, hipocinéticos e hiperkinéticos (*BOLD with Magnetic Resonance in patients with movement Disorders*)". Facultad de Medicina de la UANL. XX Congreso Nacional de Investigación Biomédica, Monterrey N.L. Mexico (2002).

E. I. Velázquez. "Nuevas Tendencias en la RM: Difusión (*Functional Magnetic Resonance: Diffusion*)". Facultad de Medicina de la UANL. Segundo Congreso Internacional de Estudiantes de Medicina, Monterrey N.L. Mexico (2002).

E. I. Velázquez . "Técnica de Difusión en la RMf (*New MRI techniques: Diffusion*)". Asociación Científica de Estudiantes de Medicina, Universidad de Guadalajara. VI Congreso Científico Mexicano de Estudiantes de Medicina, Guadalajara Jal. Mexico (2002).

E. I. Velázquez . "Anatomía del Lóbulo Temporal por Resonancia Magnética. Primera parte (*Anatomy of The Temporal Lobe with MRI*)". Asociación Científica de Estudiantes de Medicina, Universidad de Guadalajara. VI Congreso Científico Mexicano de Estudiantes de Medicina, Guadalajara Jal. Mexico (2002).

E. I. Velázquez . "Hernia de disco Cervical. Segunda Parte (*Cervical Spine Surgery*)". Asociación Científica de Estudiantes de Medicina, Universidad de Guadalajara. VI Congreso Científico Mexicano de Estudiantes de Medicina, Guadalajara Jal. Mexico (2002).

E. I. Velázquez . "Hidrocefalia. Tercera Parte (*Hydrocephalus*)". Asociación Científica de Estudiantes de Medicina, Universidad de Guadalajara. VI Congreso Científico Mexicano de Estudiantes de Medicina, Guadalajara Jal. Mexico (2002).

E. I. Velázquez , A. Gómez, L. Vera. "Cirugía de Hernia de Disco Cervical (*Surgical Technique of Cervical Spine Surgery*)". Facultad de Medicina de la UANL. XIX Congreso Nacional de Investigación Biomédica, Monterrey N.L. Mexico (2001).

E. I. Velázquez , A. Gómez, L. Vera. "Hidrocefalia. Segunda Parte (*Hydrocephalus: Clinic Case*)". Facultad de Medicina de la UANL. XIX Congreso Nacional de Investigación Biomédica, Monterrey N.L. Mexico (2001).

E. I. Velázquez. "Fractura Cervical: Caso clínico (*Cervical fractures: Clinic Case*)". Sociedad Asociación Científica Mexicana de Estudiantes de Medicina, Escuela Superior de Medicina IPN. V Congreso Científico Mexicano de Estudiantes de Medicina, Mexico D.F. (2001).

E. I. Velázquez. "Hernia de Disco cervical. Primera Parte (*Cervical Spine Surgery*)" Sociedad Asociación Científica Mexicana de Estudiantes de Medicina, Escuela Superior de Medicina IPN. V Congreso Científico Mexicano de Estudiantes de Medicina, Mexico D.F. (2001).

E. I. Velázquez. "Hidrocefalia. Primera parte (*Hydrocephalus: Clinic Case*)" Sociedad Asociación Científica Mexicana de Estudiantes de Medicina, Escuela Superior de Medicina IPN. V Congreso Científico Mexicano de Estudiantes de

Medicina, Mexico D.F. (2001).

A. Gómez, L. Vera, J. Rodríguez, **E. I. Velázquez**. "Fractura Listesis de la Columna Cervical (*Listesis of Cervical spine*)". Facultad de Medicina de la UANL. XVIII Congreso Nacional de Investigación Biomédicas. Monterrey N.L. Mexico (2000).

A. Gómez, L. Vera, J. Rodríguez, **E. I. Velázquez**. "Angiolipoma Torácico Intrarraquídeo Extradural (*Thoracic Spinal Extradural Angliolipoma*)". Facultad de Medicina de la UANL. XVIII Congreso Nacional de Investigación Biomédicas. Monterrey N.L. Mexico (2000).

A. Gómez, L. Vera, J. Rodríguez, **E. I. Velázquez**. "Mielopatía Espondilótica Cervical (*Cervical Spondylotic Myelopathy*)". Facultad de Medicina de la UANL. XVIII Congreso Nacional de Investigación Biomédicas. Monterrey N.L. Mexico (2000).

A. Gómez, L. Vera, J. Rodríguez, **E. I. Velázquez**. "Listesis Cervical (*Cervical Listesis*)". Facultad de Medicina de la UANL. XVIII Congreso Nacional de Investigación Biomédica. Monterrey N.L. Mexico (2000).

PROFESSIONAL MEMBERSHIPS

Member, International Society for Autism Research (December 2016 – present)

Member, American Society for Human Genetics (April 2013 – present)

Member, International Society of Computational Biology (April 2013 – present)

Member of the SoF Executive committee 2015-2016
<https://www.scripps.edu/california/sof/about/committee.html>

Co-chair Industry bridge program (IBP) Society of Fellows at The Scripps Research Institute (2015 - 2016)
 website: <https://www.scripps.edu/california/sof/ibp/index.html>

This program was designed to provide opportunities for Scripps postdocs and graduate students to learn about industry careers by visiting biotech, pharmaceutical and medical device companies. As part of the experience, postdocs have the opportunity to obtain industry exposure, interact with industry scientists and learn how to prepare for the transition from academia to industry.

LANGUAGES

Spanish, fluent (reading, writing, speaking)

English, fluent (reading, writing, speaking)

SPECIAL SKILLS

Computers and operating systems: Mac OS X, Microsoft Windows, Unix.

Statistical Packages: R, SAS, STATA, MINITAB.

Computer programming: Python, Java, Perl.

Database administration: SQL (MySQL) and NoSQL (MongoDB, Redis, Cassandra, Hbase, Neo4j).

Web development: PHP, JavaScript, CSS, HTML5.

Special packages: R(Bioconductor, i.e., edgeR/Limma), Python (Pandas/NumPy), R(Machine learning, i.e., Caret for boothstrap and n-fold-cross validation)

Special genetic analysis: Next-generation sequencing (NGS) , RNAseq DGE, exome/genome sequencing (WGS, WES), NGS-mapping algorithms (bowtie, bwa, STAR) NGS-based variant calling algorithms (GATK), NGS-quality control software (FastQC and Picard), ChIPseq, ATACseq, ChIC-seq, MethylSeq Global CpGme-seq, 5-OH methyl-seq, BS-oxBS-seq, Nascent Chain RNAseq, Ribosomal capture RNAseq, Genome Wide Association Study, Meta-analysis.

Familiarity with grid computing, parallel computing environments, high-performance and high-throughput computing, data-intensive computing, storage networking and cloud computing.