



JULIO ENRIQUE CASTAÑEDA DELGADO

julio.castaneda@bioestadistica.com

Born in Atolinga, Zacatecas, Mexico (Jul-1985)

BioEstadística, S.C. Associate Consultant, Nov 2022

PROFESSIONAL EXPERIENCE

- **BioEstadística, S.C.**
Associate Consultant, Nov 2022 to date.
- **Researcher.**
Cátedras CONACYT / Researcher for Mexico CONACYT. Zacatecas, Mexico, 2014 to date.

TEACHING

- **Autonomous University of Zacatecas. 2009 to date.**
 - Immunodiagnosics course in the Faculty of Chemistry/Pharmacy.
 - Immunobiology course in the Faculty of Chemistry/pharmacy.
 - Molecular biology course at the Faculty of Chemistry/Pharmacy.
 - Flow cytometry course at the Master's in Biomedical Sciences.
 - Biostatistics course co-coordinator at the Master's in Biomedical Sciences.
 - Evidence Based Medicine course at the Master's in Biomedical Sciences.
- **Autonomous University of Durango. 2012 to 2013.**
 - Evidence based medicine and Immunology course.
- **Autonomous University of San Luis Potosí. 2014 to date.**
 - Invited professor for topics in the Molecular Biology Course, graduate program in interdisciplinary sciences (PCI) at the Physics institute.

ACADEMICS SOCIETIES MEMBERSHIP

- Member of the Mexican Society of Immunology (SMI) and serving as acting secretary-treasurer for term 2021 to 2023.
- Member of the Flow Cytometry Chapter at SMI (an ISAC affiliated society).
- Founding member of the National Association of Catedras investigators (ANIC A.C.)
- Founding member of the National Association of integrative and systems biology A.C (ANBlyS A.C.)
- Member of the Ibero American Flow Cytometry Network (Red Iberoamericana de Citometria de Flujo).
- Member of the International Society for the Advancement of Cytometry (ISAC), since 2020.

PATENTS

- Patent title for MX/a/2017/017100, "USO DE LA COMBINACIÓN DE BIOMARCADORES Y ANTICUERPOS SÉRICOS PARA EL DIAGNÓSTICO DE TUBERCULOSIS HUMANA" Status: Granted.

EDUCATION AND QUALIFICATIONS

- **PhD Degree, Master and Doctorate in Basic Biomedical Sciences. 2014.**
 - Thesis. Characterization of the innate immune response mediated by antimicrobial peptides in elderly adults. Thesis directors, PhD. Bruno Rivas-Santiago, PhD. Esther Layseca Espinoza. Faculty of Medicine, Autonomous University of San Luis Potosí, Mexico.
- **Master in Basic Biomedical Sciences. Section of basic investigation applied to healthcare. 2010.**
 - Thesis: Evaluation of antimicrobial peptide expression in patients with diabetic foot ulcers and characterization of peptide inducers in vitro. Thesis directors, PhD. Bruno Rivas-Santiago, PhD. Roberto González Amaro, Faculty of Medicine, Autonomous University of San Luis Potosí, Mexico.
- **Pharmacology (Químico Fármaco Biólogo QFB). 2008.**
 - Thesis: Role of cathelicidin in the immunopathogenesis of tuberculosis in an experimental murine model. Faculty of Chemical Sciences, Autonomous University of Zacatecas, Mexico.

PUBLICATIONS IN INTERNATIONAL PEER-VIEWED JCR SCIENTIFIC JOURNALS

- Increased frequency of CD14+HLA-DR-/low cells in type 2 diabetes patients with poor glycemic control. Valtierra-Alvarado MA, Castañeda-Delgado JE, Lugo-Villarino G, Dueñas-Arteaga F, Rivas-Santiago B, Enciso-Moreno JA, Serrano CJ. Hum Immunol. 2022 Aug 23; S0198-8859(22)00166-5. Doi: 10.1016/j.humimm.2022.08.011.
- López-Hernández Y, Monárrez-Espino J, Oostdam AH, Castañeda-Delgado JE, Zhang L, Zheng J, Valdez JJO, Mandal R, González FLO, Moreno JCB, Trejo Medinilla FM, López JA, Moreno JAE, Wishart DS. Targeted metabolomics identifies high performing diagnostic and prognostic biomarkers for COVID-19. Sci Rep. 2021 Jul 19;11(1):14732. Doi: 10.1038/s41598-021-94171-y. Erratum in: Sci Rep. 2022 Jan 25;12(1):1673.
- Non-Coding RNAs in Rheumatoid Arthritis: Implications for Biomarker Discovery. Castañeda-Delgado JE, Macias-Segura N, Ramos-Remus C. Noncoding RNA. 2022 May 25;8(3):35. Doi: 10.3390/ncrna8030035.
- Kynurenine and Hemoglobin as Sex-Specific Variables in COVID-19 Patients: A Machine Learning and Genetic Algorithms Approach. Celaya-Padilla JM, Villagrana-Bañuelos KE, Oropeza-Valdez JJ, Monárrez Espino J, Castañeda-Delgado JE, Oostdam ASH, Fernández-Ruiz JC, Ochoa González F, Borrego JC, Enciso-Moreno JA, López JA, López-Hernández Y, Galván-Tejada CE. Diagnostics (Basel). 2021 Nov 25;11(12):2197. Doi: 10.3390/diagnostics11122197.
- Immunometabolic signatures predict risk of progression to sepsis in COVID-19. Herrera-Van Oostdam AS, Castañeda-Delgado JE, Oropeza-Valdez JJ, Borrego JC, Monárrez-Espino J, Zheng J, Mandal R, Zhang L, Soto-Guzmán E, Fernández-Ruiz JC, Ochoa-González F, Trejo Medinilla FM, López JA, Wishart DS, Enciso-Moreno JA, López-Hernández Y. PLoS One. 2021 Aug 30;16(8): e0256784. Doi: 10.1371/journal.pone.0256784. eCollection 2021.
- Impact of type 2 diabetes on the capacity of human macrophages infected with Mycobacterium tuberculosis to modulate monocyte differentiation through a bystander effect.
- Valtierra-Alvarado MA, Lugo-Villarino G, Dueñas-Arteaga F, González Contreras BE, Lugo-Sánchez A, Castañeda-Delgado JE, González-Amaro R, Venegas Gurrola OA, González Valadez ADR, Enciso-Moreno JA, Serrano CJ. Immunol Cell Biol. 2021 Nov;99(10):1026-1039. Doi: 10.1111/imcb.12497. Epub 2021 Sep 16.

- Clinical Factors Associated with COVID-19 Severity in Mexican Patients: CrossSectional Analysis from a Multicentric Hospital Study. Monárrez-Espino J, Zubía-Nevárez CI, Reyes-Silva L, Castillo-Palencia JP, Castañeda-Delgado JE, Herrera van-Oostdam AS, López-Hernández Y. *Healthcare (Basel)*. 2021 Jul 15;9(7):895. Doi: 10.3390/healthcare9070895.
- Overexpression of TLR7 and TLR9 Occurs Before Onset Symptoms in First Degree Relatives of Rheumatoid Arthritis Patients. Ramos-González EJ, Bastian Y, Castañeda-Delgado JE, Zapata-Zúñiga M, Gómez-Moreno M, Castillo-Ortiz JD, Ramos-Remus C, Enciso-Moreno JA. *Arch Med Res*. 2022 Jan;53(1):86-92. Doi: 10.1016/j.arcmed.2021.06.010. Epub 2021 Jul 14.
- UVB Inhibits Proliferation, Cell Cycle, and Induces Apoptosis via p53, E2F1 and Microtubules System in Cervical Cancer Cell Lines. Granados-López AJ, Manzaneros-Acuña E, López-Hernández Y, Castañeda Delgado JE, Fraire-Soto I, Reyes-Estrada CA, Gutiérrez-Hernández R, López JA. *Int J Mol Sci*. 2021 May 14;22(10):5197. Doi: 10.3390/ijms22105197.
- Calpain Participates in Cortical Cytoskeleton Modification and DNA Release during Neutrophil Extracellular Trap Formation. de Lourdes Ochoa-González F, Bastian Y, Rivera-Carrera V, García-Tiscareño IA, Zapata-Zuñiga M, Lopez JA, Méndez JA, Enciso-Moreno JA, Castañeda Delgado JE. *Int Arch Allergy Immunol*. 2021;182(9):877-887. Doi: 10.1159/000515201. Epub 2021 Apr 21.
- The analysis on the human protein domain targets and host-like interacting motifs for the MERS-CoV and SARS-CoV/CoV-2 infers the molecular mimicry of coronavirus. Martínez YA, Guo X, Portales-Pérez DP, Rivera G, Castañeda-Delgado JE, García-Pérez CA, Enciso-Moreno JA, Lara-Ramírez EE. *PLoS One*. 2021 Feb 17;16(2): e0246901. Doi: 10.1371/journal.pone.0246901. eCollection 2021.
- Methotrexate reduces keratinocyte proliferation, migration and induces apoptosis in HaCaT keratinocytes in vitro and reduces wound closure in Skh1 mice in vivo. Medellín-Luna MF, Castañeda-Delgado JE, Fernández-Ruiz JC, Ochoa González FL, Troncoso-Vázquez L, García-Cruz S, Zapata-Zúñiga M, Serrano CJ, Portales-Pérez D, Enciso-Moreno JA, Cervantes-Villagrana AR. *J Tissue Viability*. 2021 Feb;30(1):51-58. Doi: 10.1016/j.jtv.2020.10.004. Epub 2020 Oct 28.
- Innate Immunity Alterations in Type 2 Diabetes Mellitus: Understanding Infection Susceptibility. de Lourdes Ochoa-González F, González-Curiel IE, Cervantes-Villagrana AR, Fernández-Ruiz JC, Castañeda-Delgado JE. *Curr Mol Med*. 2021;21(4):318-331. Doi: 10.2174/1566524020999200831124534.
- Type 2 diabetes mellitus metabolic control correlates with the phenotype of human monocytes and monocyte-derived macrophages. Valtierra-Alvarado MA, Castañeda Delgado JE, Ramírez-Talavera SI, Lugo Villarino G, Dueñas-Arteaga F, Lugo-Sánchez A, Adame-Villalpando MS, Rivas-Santiago B, Enciso-Moreno J, Serrano CJ. *J Diabetes Complications*. 2020 Nov;34(11):107708. Doi: 10.1016/j.jdiacomp.2020.107708. Epub 2020 Aug 13.
- Subclinical inflammation in the preclinical phase of rheumatoid arthritis might contribute to articular joint damage. Gomez-Moreno M, Ramos-González EJ, Castañeda-Delgado JE, Castillo-Ortiz JD, Ramos-Remus C, Zapata-Zúñiga M, Méndez JA, Monsiváis-Urenda A, Portales-Pérez DP, Enciso-Moreno JA, Bastián Y. *Hum Immunol*. 2020 Dec;81(12):726-731. Doi: 10.1016/j.humimm.2020.07.003. Epub 2020 Jul 18.
- Myeloid-Derived Suppressor Cells Show Different Frequencies in Diabetics and Subjects with Arterial Hypertension. Fernández-Ruiz JC, Galindo-De Ávila JC, Martínez-Fierro ML, Garza-Veloz I, Cervantes-Villagrana AR, Valtierra-Alvarado MA, Serrano CJ, García-Hernández MH, Enciso-Moreno JA, Castañeda Delgado JE. *J Diabetes Res*. 2019 Dec 12; 2019:1568457. Doi: 10.1155/2019/1568457. eCollection 2019.

- Lipid Metabolism Alterations in a Rat Model of Chronic and Intergenerational Exposure to Arsenic. Rivas-Santiago C, González-Curiel I, Zarazua S, Murgu M, Ruiz Cardona A, Lazalde B, Lara-Ramírez EE, Vázquez E, Castañeda Delgado JE, Rivas-Santiago B, Lopez JA, Cervantes-Villagrana AR, López Hernández Y. *Biomed Res Int.* 2019 Oct 15;2019:4978018. Doi: 10.1155/2019/4978018. eCollection 2019.
- Identification of putative miRNA biomarkers in early rheumatoid arthritis by genome-wide microarray profiling: A pilot study. Romo-García MF, Bastian Y, Zapata-Zuñiga M, Macías-Segura N, Castillo-Ortiz JD, Lara-Ramírez EE, Fernández-Ruiz JC, Berlanga-Taylor AJ, González-Amaro R, Ramos-Remus C, Enciso-Moreno JA, Castañeda-Delgado JE. *Gene.* 2019 Dec 15; 720:144081. Doi: 10.1016/j.gene.2019.144081. Epub 2019 Aug 29.
- Variability in the virulence of specific Mycobacterium tuberculosis clinical isolates alters the capacity of human dendritic cells to signal for T cells. Ramos-Martinez AG, Valtierra-Alvarado MA, Garcia-Hernandez MH, Hernandez-Pando R, Castañeda-Delgado JE, Cougoule C, Rivas-Santiago B, Neyrolles O, Enciso-Moreno JA, Lugo-Villarino G, Serrano CJ. *Mem Inst Oswaldo Cruz.* 2019;114: e190102. Doi: 10.1590/0074-02760190102. Epub 2019 Aug 12.
- Glycerophospholipid Metabolism Alterations in Patients with Type 2 Diabetes Mellitus and Tuberculosis Comorbidity. López-Hernández Y, Lara-Ramírez EE, Salgado-Bustamante M, López JA, Oropeza-Valdez JJ, Jaime-Sánchez E, Castañeda-Delgado JE, Magaña-Aquino M, Murgu M, Enciso-Moreno JA. *Arch Med Res.* 2019 Feb;50(2):71-78. Doi: 10.1016/j.arcmed.2019.05.006. Epub 2019 Jun 19.
- Evaluation of the transcriptional immune biomarkers in peripheral blood from Warao indigenous associate with the infection by Mycobacterium tuberculosis. Araujo Z, Palacios A, Enciso-Moreno L, Lopez-Ramos JE, Wide A, Waard JH, Rivas-Santiago B, Serrano CJ, Bastian-Hernandez Y, Castañeda-Delgado JE, Enciso-Moreno JA. *Rev Soc Bras Med Trop.* 2019 May 16;52: e20180516. Doi: 10.1590/0037-8682-0516-2018.
- Medicinal Plant Extracts and Their Use as Wound Closure Inducing Agents. Medellín-Luna MF, Castañeda-Delgado JE, Martínez-Balderas VY, Cervantes Villagrana AR. *J Med Food.* 2019 May;22(5):435-443. Doi: 10.1089/jmf.2018.0145. Epub 2019 Apr 3.
- 5p and 3p Strands of miR-34 Family Members Have Differential Effects in Cell Proliferation, Migration, and Invasion in Cervical Cancer Cells. Córdova-Rivas S, Fraire-Soto I, Mercado-Casas Torres A, Servín-González LS, Granados-López AJ, López-Hernández Y, Reyes-Estrada CA, Gutiérrez Hernández R, Castañeda-Delgado JE, Ramírez-Hernández L, Varela-Silva JA, López JA. *Int J Mol Sci.* 2019 Jan 28;20(3):545. Doi: 10.3390/ijms20030545
- Evaluation of SUMO1 and POU2AF1 in whole blood from rheumatoid arthritis patients and at-risk relatives. Romo-García MF, Nava-Ramírez HS, Zapata Zúñiga M, Macías-Segura N, Santiago-Algarra D, Castillo-Ortiz JD, Bastián Y, Ramos-Remus C, Enciso-Moreno JA, Castañeda-Delgado JE. *Int J Immunogenet.* 2019 Apr;46(2):59-66. Doi: 10.1111/iji.12414. Epub 2019 Jan 25.
- Diabetic complication could get a gene therapy boost. Castañeda-Delgado JE. *Gene Ther.* 2018 Sep;25(6):401. Doi: 10.1038/s41434-018-0037-4. Epub 2018 Aug 10.
- Analysis of miRNA expression in patients with rheumatoid arthritis during remission and relapse after a 5-year trial of tofacitinib treatment. Fernández-Ruiz JC, Ramos-Remus C, Sánchez-Corona J, Castillo-Ortiz JD, Castañeda-Sánchez JJ, Bastian Y, Romo-García MF, Ochoa-González F, Monsivais-Urenda AE, González-Amaro R, Enciso-Moreno JA, Castañeda Delgado JE. *Int Immunopharmacol.* 2018 Oct; 63:35-42. Doi: 10.1016/j.intimp.2018.07.028. Epub 2018 Jul 31.

- Improvement in the Diagnosis of Tuberculosis Combining Mycobacterium Tuberculosis Immunodominant Peptides and Serum Host Biomarkers. López-Ramos JE, Macías-Segura N, Cuevas-Cordoba B, Araujo-Garcia Z, Bastián Y, Castañeda-Delgado JE, Lara-Ramirez EE, Gándara-Jasso B, Serrano CJ, Salinas E, Enciso-Moreno JA. Arch Med Res. 2018 Apr;49(3):147-153.e1. Doi: 10.1016/j.arcmed.2018.07.003. Epub 2018 Jul 20.
- Dental, periodontal and salivary conditions in diabetic children associated with metabolic control variables and nutritional plan adherence. Díaz Rosas CY, Cárdenas Vargas E, Castañeda-Delgado JE, Aguilera-Galaviz LA, Aceves Medina MC. Eur J Paediatr Dent. 2018 Jun;19(2):119-126. Doi: 10.23804/ejpd.2018.19.02.05.
- Transcriptional signature associated with early rheumatoid arthritis and healthy individuals at elevated risk to develop the disease. Macías-Segura N, Castañeda-Delgado JE, Bastian Y, Santiago-Algarra D, Castillo-Ortiz JD, Alemán-Navarro AL, Jaime-Sánchez E, Gomez-Moreno M, Saucedo-Toral CA, Lara-Ramírez EE, Zapata-Zuñiga M, Enciso-Moreno L, González-Amaro R, Ramos-Remus C, Enciso-Moreno JA. PLoS One. 2018 Mar 27;13(3): e0194205. Doi: 10.1371/journal.pone.0194205. eCollection 2018.
- Type-2 diabetes alters the basal phenotype of human macrophages and diminishes their capacity to respond, internalize, and control Mycobacterium tuberculosis. Lopez-Lopez N, Martinez AGR, Garcia-Hernandez MH, Hernandez-Pando R, Castañeda-Delgado JE, Lugo-Villarino G, Cougoule C, Neyrolles O, Rivas Santiago B, Valtierra-Alvarado MA, Rubio-Caceres M, Enciso-Moreno JA, Serrano CJ. Mem Inst Oswaldo Cruz. 2018 Feb 19;113(4): e170326. Doi: 10.1590/007402760170326.
- Vitamin D and L-Isoleucine Promote Antimicrobial Peptide hBD-2 Production in Peripheral Blood Mononuclear Cells from Elderly Individuals. Castañeda-Delgado JE, Araujo Z, Gonzalez-Curiel I, Serrano CJ, Rivas Santiago C, Enciso-Moreno JA, Rivas-Santiago B. Int J Vitam Nutr Res. 2016 Feb;86(1-2):56-61. Doi: 10.1024/03009831/a000423. Epub 2017 Oct 20.
- Type I Interferon Gene Response Is Increased in Early and Established Rheumatoid Arthritis and Correlates with Autoantibody Production. Castañeda-Delgado JE, Bastián-Hernandez Y, Macias-Segura N, Santiago Algarra D, Castillo-Ortiz JD, Alemán-Navarro AL, Martínez-Tejada P, Enciso Moreno L, Garcia-De Lira Y, Olguín-Calderón D, Trouw LA, Ramos-Remus C, Enciso-Moreno JA. Front Immunol. 2017 Mar 20; 8:285. Doi: 10.3389/fimmu.2017.00285. eCollection 2017.
- Differences in Cytokine Production during Aging and Its Relationship with Antimicrobial Peptides Production. Castañeda-Delgado JE, Frausto-Lujan I, González-Curiel I, Montoya-Rosales A, Serrano CJ, Torres-Juarez F, Enciso-Moreno JA, Rivas-Santiago B. Immunol Invest. 2017 Jan;46(1):48-58. Doi: 10.1080/08820139.2016.1212873. Epub 2016 Sep 12.
- Correction: Metformin Induces Cell Cycle Arrest, Reduced Proliferation, Wound Healing Impairment In Vivo and Is Associated to Clinical Outcomes in Diabetic Foot Ulcer Patients. Ochoa-Gonzalez F, Cervantes-Villagrana AR, Fernandez-Ruiz JC, Nava Ramirez HS, Hernandez-Correa AC, Enciso-Moreno JA, Castañeda-Delgado JE. PLoS One. 2016 Jul 12;11(7): e0159468. Doi: 10.1371/journal.pone.0159468. eCollection 2016.
- Metformin Induces Cell Cycle Arrest, Reduced Proliferation, Wound Healing Impairment In Vivo and Is Associated to Clinical Outcomes in Diabetic Foot Ulcer Patients. Ochoa-Gonzalez F, Cervantes-Villagrana AR, Fernandez-Ruiz JC, Nava Ramirez HS, Hernandez-Correa AC, Enciso-Moreno JA, Castañeda-Delgado JE. PLoS One. 2016 Mar 10;11(3): e0150900. Doi: 10.1371/journal.pone.0150900. eCollection 2016.

- Human neutrophil peptide-1 decreases during ageing in selected Mexican population. Rivas-Santiago B, Castañeda-Delgado JE, de Haro-Acosta J, Torres-Juarez F, Frausto-Lujan I, Marin-Luevano P, González-Amaro R, Enciso-Moreno JA. *Immunol Res.* 2016 Apr;64(2):445-54. Doi: 10.1007/s12026-015-8689-2.
- Associated Risk Factors for Latent Tuberculosis Infection in Subjects with Diabetes. Martínez-Aguilar G, Serrano CJ, Castañeda-Delgado JE, Macías-Segura N, Hernández-Delgadillo N, Enciso-Moreno L, García de Lira Y, Valenzuela Méndez E, Gándara-Jasso B, Correa-Chacón J, Bastián-Hernández Y, Rodríguez-Morán M, Guerrero-Romero F, Enciso-Moreno JA. *Arch Med Res.* 2015 Apr;46(3):221-7. Doi: 10.1016/j.arcmed.2015.03.009. Epub 2015 Apr 10.
- Regulatory T-cell subsets in response to specific Mycobacterium tuberculosis antigens in vitro distinguish among individuals with different QTF and TST reactivity. Serrano CJ, Castañeda-Delgado JE, Trujillo-Ochoa JL, González-Amaro R, García-Hernández MH, Enciso-Moreno JA. *Clin Immunol.* 2015 Apr;157(2):145-55. Doi: 10.1016/j.clim.2015.02.008. Epub 2015 Feb 26.
- Vitamin D supplementation promotes macrophages' anti-mycobacterial activity in type 2 diabetes mellitus patients with low vitamin D receptor expression. Lopez-Lopez N, Gonzalez-Curiel I, Castañeda-Delgado J, Montoya-Rosales A, Gandara-Jasso B, Enciso-Moreno JA, Rivas-Santiago B. *Microbes Infect.* 2014 Sep;16(9):755-61. Doi: 10.1016/j.micinf.2014.06.010. Epub 2014 Jul 9.
- Tuberculin skin test and interferon-gamma release assay values are associated with antimicrobial peptides expression in polymorphonuclear cells during latent tuberculous infection. Castañeda-Delgado JE, Cervantes-Villagrana A, Serrano-Escobedo CJ, Frausto-Lujan I, Rivas-Santiago C, Enciso-Moreno JA, Rivas-Santiago B. *Mem Inst Oswaldo Cruz.* 2014 Jun;109(3):330-4. Doi: 10.1590/00740276140348.
- Production of antimicrobial peptides preserved in aging. Castañeda-Delgado JE, Miranda-Castro NY, González-Amaro R, González Curiel I, Montoya-Rosales A, Rivas-Calderon B, Rivas-Santiago B. *Clin Immunol.* 2013 Aug;148(2):198-205. Doi: 10.1016/j.clim.2013.05.015. Epub 2013 May 31.
- Ability of innate defense regulator peptides IDR-1002, IDR-HH2 and IDR-1018 to protect against Mycobacterium tuberculosis infections in animal models. Rivas-Santiago B, Castañeda-Delgado JE, Rivas Santiago CE, Waldbrook M, González-Curiel I, León-Contreras JC, Enciso-Moreno JA, del Villar V, Mendez Ramos J, Hancock RE, Hernandez-Pando R. *PLoS One.* 2013;8(3): e59119. Doi: 10.1371/journal.pone.0059119. Epub 2013 Mar 21.
- Bacterial expression and antibiotic activities of recombinant variants of human β -defensins on pathogenic bacteria and M. tuberculosis. Corrales-Garcia L, Ortiz E, Castañeda-Delgado J, Rivas-Santiago B, Corzo G. *Protein Expr Purif.* 2013 May;89(1):33-43. Doi: 10.1016/j.pep.2013.02.007. Epub 2013 Mar 1.
- Prime-boost BCG vaccination with DNA vaccines based in β -defensin-2 and mycobacterial antigens ESAT6 or Ag85B improve protection in a tuberculosis experimental model. Cervantes-Villagrana AR, Hernández-Pando R, Biragyn A, Castañeda-Delgado J, Bodogai M, Martínez-Fierro M, Sada E, Trujillo V, Enciso-Moreno A, Rivas Santiago B. *Vaccine.* 2013 Jan 11;31(4):676-84. Doi: 10.1016/j.vaccine.2012.11.042. Epub 2012 Nov 26.
- Activity of LL-37, CRAMP and antimicrobial peptide-derived compounds E2, E6 and CP26 against Mycobacterium tuberculosis. Rivas-Santiago B, Rivas Santiago CE, Castañeda-Delgado JE, León-Contreras JC, Hancock RE, Hernandez-Pando R. *Int J Antimicrobic Agents.* 2013 Feb;41(2):143-8. Doi: 10.1016/j.ijantimicag.2012.09.015. Epub 2012 Nov 8.
- [Antimicrobial peptides: a potential arsenal against HIV infection]. Castañeda-Delgado JE, Cervantes-Villagrana AR, Rivas-Santiago B. *Invest Clin.* 2012 Mar;53(1):71-83.

- Expression of antimicrobial peptides in diabetic foot ulcer. Rivas-Santiago B, Trujillo V, Montoya A, Gonzalez-Curiel I, Castañeda-Delgado J, Cardenas A, Rincon K, Hernandez ML, Hernández-Pando R. J Dermatol Sci. 2012 Jan;65(1):19-26. Doi: 10.1016/j.jdermsci.2011.09.013. Epub 2011 Oct 17.
- Differential expression of antimicrobial peptides in active and latent tuberculosis and its relationship with diabetes mellitus. Gonzalez-Curiel I, Castañeda-Delgado J, Lopez-Lopez N, Araujo Z, Hernandez-Pando R, Gandara-Jasso B, Macias-Segura N, Enciso-Moreno A, Rivas-Santiago B. Hum Immunol. 2011 Aug;72(8):656-62. Doi: 10.1016/j.humimm.2011.03.027. Epub 2011 Apr 15.
- Induction of β -defensins by l-isoleucine as novel immunotherapy in experimental murine tuberculosis. Rivas-Santiago CE, Rivas-Santiago B, León DA, Castañeda-Delgado J, Hernández Pando R. Clin Exp Immunol. 2011 Apr;164(1):80-9. Doi: 10.1111/j.13652249.2010.04313.x. Epub 2011 Jan 14.
- Kinetics and cellular sources of cathelicidin during experimental latent tuberculous infection and progressive pulmonary tuberculosis. Castañeda-Delgado J, Hernández-Pando R, Serrano CJ, Aguilar-León D, León Contreras J, Rivas-Santiago C, Méndez R, González-Curiel I, Enciso-Moreno A, Rivas-Santiago B. Clin Exp Immunol. 2010 Sep;161(3):542-50. Doi: 10.1111/j.13652249.2010.04199.x.

HONORS AND REWARDS

- Secretary/ treasurer of the Mexican Society of Immunology for 2021-2023 term.
- Member of the National System of Investigators (SNI) level 2, January 2022 3. President of the National Association of Catedras investigators (ANIC A.C.).
- Member of the National System of Investigators (SNI) level 1, Renewal January 2018
- Member of the National System of Investigators (SNI) level 1. January 2015.
- State of Zacatecas Youth award for academic accomplishment, 2013.
- Young investigators travel grant awardee, AAI advance course in immunology 2010.
- Honorific Mention (CUM LAUDE), in the bachelor's in Chemistry, Pharmacy and Biology (QFB) thesis entitled "Role of cathelicidin in the immunopathogenesis of tuberculosis in an experimental murine model", 2008. Autonomous University of Zacatecas, UAZ.
- Elected member of the Health Sciences Area Council, Student councilor from the Chemical Sciences Faculty, UAZ, 2007.

GRANTS AND FUNDING

- 2015-2018 FOCIS_Sectorial CONACYT, "The role of miRNAs in inflammatory diseases. \$ 750,000.00 MXN.
- 2016-2017 Sectorial infrastructure CONACYT "Acquisition of flow cytometry and imaging capabilities at UIBMZ". \$2,000,000.00 MXN.
- 2016-2018 co-funded through a joint proposal with the UIBMZ-head JECD at the IMSS call for proposals. "The role of interferon pathway in rheumatic diseases. \$300,000 MXN 2019 Funding for the first interdisciplinary conference of cátedras CONACYT in Zacatecas. (NOT MONETARY, equivalent to \$100,000.00 MXN).
- 2019-2020. International PANLAR investigation award 20,000 USD Joint Proposal with Dr. Martin Zapata-Zuñiga.