

Oscar Medina Contreras, Ph.D.

CURRICULUM VITAE

Revised: 07/16/2022

Current Position

Medical Sciences Researcher
Mexico Children's Hospital
Immunology & Proteomics Research Unit
Epidemiology, Endocrinology & Nutrition Research Unit
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EDUCATION

- 2009 Ph.D. in Molecular Biomedicine
Center for Research and Advanced Studies (CINVESTAV)
Mexico City, Mexico
- 2005 Master of Science in Molecular Biomedicine
Center for Research and Advanced Studies (CINVESTAV)
Mexico City, Mexico
- 2003 Bachelor of Science in Biology
State of Mexico Autonomous University (UAEMex)
Toluca, Mexico

PROFESSIONAL POSITIONS

- 2015 - Present Assistant Professor
Mexico Children's Hospital
- 2014 - 2015 Research Scholar
National Institute for Respiratory Diseases
- 2013 - 2014 Research Associate
Center for Inflammation, Immunity & Infection,
Georgia State University
- 2009 - 2013 Postdoctoral Fellow
Department of Pediatrics,
Emory University School of Medicine and Emory Children's Center

PUBLICATIONS (1000+ cites, *h* index 14)

Gutierrez-Roman CI, Rios-Lozano YZ, Medina-Contreras O. Crtam and IL-36g are required for the control of Salmonella infection in the intestine. in preparation

Jiménez-Pineda A, Vique-Sánchez JL, Medina-Contreras O, Benitez-Cardoza CG. Leptin-receptor modulators: Docking-based virtual screening. in preparation

Prieto-Islas MA, Godoy-Dahbura E, Elisa Azuara-Liceaga E, Martínez-Rodríguez NL, Álvarez-Neri H, Medina-Contreras O. HPV vaccination induces a strong immune response against respiratory papillomas in children. in preparation

Torres-Arroyo A, Martínez-Aguilar J, Castillo-Villanueva A, Zárate-Mondragón F, Cervantes-Bustamante R, Patiño-López G, Medina-Contreras O, Espinosa S, Valencia-Rojas S, Romero-Guzmán L, Oria-Hernández J, Reyes-Vivas H. Immunoproteomics of cow's milk allergy in a Mexican pediatric group. Food Funct. under review

Castro-Ochoa KF, Guerrero-Fonseca IM, Vargas-Robles H, Castellanos-Martínez R, Chánez-Paredes S, Nava Porfirio, Shibayama M, Rosales C, Medina-Contreras O, Flemming S, Schlegel N, Schnoor M. HS1 deficiency protects from experimental colitis by reducing neutrophil recruitment to the mucosa and transepithelial migration. J Leuk Biol. under review

Manzanares-Meza LD, Castro-Martinez FA, Guzman-Ortiz AL, Gutierrez-Roman CI, Patiño-Lopez G, Rodriguez-Arellano ME, Ortiz-Navarrete V, Valle-Rios R, Medina-Contreras O. IL-36gamma is secreted through exosomes and processed in situ. Front Immunol. under review

Avila-Bonilla RG, López-Sandoval Á, Soto-Sánchez J, Marchat LA, Rivera G, Medina-Contreras O, Ramírez-Moreno ME. Proteomic and functional analysis of the effects of quinoxaline derivatives on Entamoeba histolytica. Front Cell Infect Microbiol. 2022, 12:1-13.

Armenta-Medina Y, Martinez-Vieyra I, Medina-Contreras O, Benitez-Cardoza CG, Jimenez-Pineda A, Reyes-Lopez CA, Cerecedo D. Differentially expressed proteins in platelets derived from patients with hypertension. J Hum Hypertens 2022, 36:640-50.

Aparicio-Bautista DI, Chávez-Valenzuela D, Ambriz-Álvarez G, Córdova-Fraga T, Reyes-Grajeda JP, Medina-Contreras Ó, Rodríguez-Cruz F, García-Sierra F, Zúñiga-Sánchez P, Gutiérrez-Gutiérrez AM, Arellanes-Robledo J, Basurto-Islas G. An Extremely Low-Frequency Vortex Magnetic Field Modifies Protein Expression, Rearranges the Cytoskeleton, and Induces Apoptosis of a Human Neuroblastoma Cell Line. Bioelectromagnetics. 2022, 43(4):225-244.

Rivera-Torruco G, Martínez-Mendiola CA, Angeles-Floriano T, Jaimes-Ortega GA, Maravillas-Montero JL, García-Contreras R, González Y, Juárez E, Nava P, Ortiz-Navarrete V, Medina-Contreras O, Licona-Limón P, Valle-Rios R. Isthmin 1 is Expressed by Progenitor-Like Cells in the Lung: Phenotypical Analysis of Isthmin 1+ Hematopoietic Stem-Like Cells in Homeostasis and during Infection. J Immunol Res. 2022, 2022:2909487.

Rodea GE, González-Villalobos E, Medina-Contreras O, Castelán-Sánchez HG, Aguilar-Rodea P, Velázquez-Guadarrama N, Hernández-Chiñas U, Eslava-Campos CA, Balcázar JL, Molina-

López J. Genomic characterization of two bacteriophages (vB_EcoS-phiEc3 and vB_EcoS-phiEc4) belonging to the genus Kagunavirus with lytic activity against uropathogenic *Escherichia coli*. *Microb Pathog*. 2022, 165:105494.

Manzanares-Meza LD, Valle-Rios R, Medina-Contreras O. Interleukin-1 Receptor-Like 2: One Receptor, Three Agonists, and Many Implications. *J Interferon Cytokine Res*. 2022, 42(2):49-61.

Martin-Hernandez R, Rodriguez-Canul R, Kantun-Moreno N, Olvera-Novoa MA, Medina-Contreras O, Garikoitz-Legarda C, Trivino JC, Zamora-Briseno JA, May-Solis V, Poot-Salazar A, et al.: Comparative Transcriptomes of the Body Wall of Wild and Farmed Sea Cucumber *Isostichopus badionotus*. *Int J Mol Sci* 2021, 22.

Guzmán-Ortiz AL, Josué N-RA, Briceida L-M, Israel P-O, Tania A-F, Nancy M-R, Lourdes J-B, Daniela DIR-Z, Fernando O-R, Mauricio J-EC, et al.: Sensitivity of the Molecular Test in Saliva for Detection of COVID-19 in Pediatric Patients With Concurrent Conditions. *Front Pediatr* 2021, 9:642781.

Castro-Martínez F, Encarnación-García MdR, Candelario-Martinez A, Medina-Contreras O, Patiño-Lopez G, Schnoor M, Nava P: Evaluation and Quantification of Micro Epithelial Gaps in the Colonic Mucosa using Immunofluorescence Staining. *J Vis Exp* 2021.

Castro-Eguiluz D, Medina-Contreras O: Microbiota. In *Inmunología Molecular, Celular y Traslacional*, edn 2nd. Edited by Lenin Pavon-Romero MdCJMEG: Wolters Kluwer; 2021:463-470.

Villagomez FR, Medina-Contreras O, Cerna-Cortes JF, Patino-Lopez G: The role of the oncogenic Rab35 in cancer invasion, metastasis, and immune evasion, especially in leukemia. *Small GTPases* 2020, 11:334-345.

Vasquez-Procopio J, Osorio B, Cortes-Martinez L, Hernandez-Hernandez F, Medina-Contreras O, Rios-Castro E, Comjean A, Li F, Hu Y, Mohr S, et al.: Intestinal response to dietary manganese depletion in *Drosophila*. *Metallomics* 2020, 12:218-240.

Olivera-Castillo L, Grant G, Kantun-Moreno N, Barrera-Perez HA, Montero J, Olvera-Novoa MA, Carrillo-Cocom LM, Acevedo JJ, Puerto-Castillo C, May Solis V, et al.: A Glycosaminoglycan-Rich Fraction from Sea Cucumber *Isostichopus badionotus* Has Potent Anti-Inflammatory Properties In Vitro and In Vivo. *Nutrients* 2020, 12.

Ngo VL, Abo H, Kuczma M, Szurek E, Moore N, Medina-Contreras O, Nusrat A, Merlin D, Gewirtz AT, Ignatowicz L, et al.: IL-36R signaling integrates innate and adaptive immune-mediated protection against enteropathogenic bacteria. *Proc Natl Acad Sci U S A* 2020, 117:27540-27548.

Medina-Contreras O, Luvian-Morales J, Valdez-Palomares F, Flores-Cisneros L, Sanchez-Lopez MS, Soto-Lugo JH, Castro-Eguiluz D: Immunonutrition in Cervical Cancer: Immune Response Modulation by Diet. *Rev Invest Clin* 2020, 72:219-230.

Manzanares-Meza LD, Medina-Contreras O: SARS-CoV-2 and influenza: a comparative

overview and treatment implications. *Bol Med Hosp Infant Mex* 2020, 77:262-273.

Mancilla-Rojano J, Ochoa SA, Reyes-Grajeda JP, Flores V, Medina-Contreras O, Espinosa-Mazariego K, Parra-Ortega I, Rosa-Zamboni D, Castellanos-Cruz MDC, Arellano-Galindo J, et al.: Molecular Epidemiology of *Acinetobacter calcoaceticus*-*Acinetobacter baumannii* Complex Isolated From Children at the Hospital Infantil de Mexico Federico Gomez. *Front Microbiol* 2020, 11:576673.

Esteban-Kenel V, Sara AO, Everardo CQ, Hector Q, Medina-Contreras O, Elizabeth FR, Irma RP, Jose AG, Bulmaro C, Rigoberto HC, et al.: Proteomics profiles of *Cronobacter sakazakii* and a fliF mutant: Adherence and invasion in mouse neuroblastoma cells. *Microb Pathog* 2020, 149:104595.

Calleja LF, Belmont-Diaz JA, Medina-Contreras O, Quezada H, Yoval-Sanchez B, Campos-Garcia J, Rodriguez-Zavala JS: Omeprazole as a potent activator of human cytosolic aldehyde dehydrogenase ALDH1A1. *Biochim Biophys Acta Gen Subj* 2020, 1864:129451.

Alvarez-Herrera S, Escamilla R, Medina-Contreras O, Saracco R, Flores Y, Hurtado-Alvarado G, Maldonado-Garcia JL, Becerril-Villanueva E, Perez-Sanchez G, Pavon L: Immunoendocrine Peripheral Effects Induced by Atypical Antipsychotics. *Front Endocrinol* 2020, 11:195.

Alarcon-Sanchez BR, Guerrero-Escalera D, Rosas-Madrigal S, Ivette Aparicio-Bautista D, Reyes-Gordillo K, Lakshman MR, Ortiz-Fernandez A, Quezada H, Medina-Contreras O, Villa-Trevino S, et al.: Nucleoredoxin interaction with flightless-I/actin complex is differentially altered in alcoholic liver disease. *Basic Clin Pharmacol Toxicol* 2020, 127:389-404.

Ochoa-Araujo DA, Flores-Peredo V, Romero-Martínez JT, Martínez-Rodríguez NL, Medina-Contreras O: Incidence and risk factors of retinopathy of prematurity in the Lic. Adolfo López Mateos Regional Hospital, ISSSTE. *Rev Mex Oftalmol* 2019, 93:279-285.

Jimenez-Osorio AS, Musalem-Younes C, Cardenas-Hernandez H, Solares-Tlapechco J, Costa-Urrutia P, Medina-Contreras O, Granados J, Lopez-Saucedo C, Estrada-Garcia T, Rodriguez-Arellano ME: Common Polymorphisms Linked to Obesity and Cardiovascular Disease in Europeans and Asians are Associated with Type 2 Diabetes in Mexican Mestizos. *Medicina* 2019, 55.

Jimenez-Osorio AS, Aguilar-Lucio AO, Cardenas-Hernandez H, Musalem-Younes C, Solares-Tlapechco J, Costa-Urrutia P, Medina-Contreras O, Granados J, Rodriguez-Arellano ME: Polymorphisms in Adipokines in Mexican Children with Obesity. *Int J Endocrinol* 2019, 2019:4764751.

Costa-Urrutia P, Vizuet-Gamez A, Ramirez-Alcantara M, Guillen-Gonzalez MA, Medina-Contreras O, Valdes-Moreno M, Musalem-Younes C, Solares-Tlapechco J, Granados J, Franco-Trecu V, et al.: Obesity measured as percent body fat, relationship with body mass index, and percentile curves for Mexican pediatric population. *PLoS One* 2019, 14:e0212792.

Piedra-Quintero ZL, Serrano C, Villegas-Sepulveda N, Maravillas-Montero JL, Romero-Ramirez S, Shibayama M, Medina-Contreras O, Nava P, Santos-Argumedo L: Myosin 1F Regulates M1-

Polarization by Stimulating Intercellular Adhesion in Macrophages. *Front Immunol* 2018, 9:3118.

Ngo VL, Abo H, Maxim E, Harusato A, Geem D, Medina-Contreras O, Merlin D, Gewirtz AT, Nusrat A, Denning TL: A cytokine network involving IL-36gamma, IL-23, and IL-22 promotes antimicrobial defense and recovery from intestinal barrier damage. *Proc Natl Acad Sci U S A* 2018, 115:E5076-E5085.

Antonio-Herrera L, Badillo-Godinez O, Medina-Contreras O, Tepale-Segura A, Garcia-Lozano A, Gutierrez-Xicotencatl L, Soldevila G, Esquivel-Guadarrama FR, Idoyaga J, Bonifaz LC: The Nontoxic Cholera B Subunit Is a Potent Adjuvant for Intradermal DC-Targeted Vaccination. *Front Immunol* 2018, 9:2212.

Manzanares-Meza LD, Gutierrez-Roman CI, Medina-Contreras O: MALDI imaging: beyond classic diagnosis. *Bol Med Hosp Infant Mex* 2017, 74:212-218.

Guzman-Ortiz AL, Aparicio-Ozores G, Valle-Rios R, Medina-Contreras O, Patino-Lopez G, Quezada H: Proteomic changes in a childhood acute lymphoblastic leukemia cell line during the adaptation to vincristine. *Bol Med Hosp Infant Mex* 2017, 74:181-192.

Camacho-Millan R, Aguilar-Medina EM, Quezada H, Medina-Contreras O, Patino-Lopez G, Cardenas-Cota HM, Ramos-Payan R: Characterization of Cry toxins from autochthonous *Bacillus thuringiensis* isolates from Mexico. *Bol Med Hosp Infant Mex* 2017, 74:193-199.

Medina-Contreras O, Harusato A, Nishio H, Flannigan KL, Ngo V, Leoni G, Neumann PA, Geem D, Lili LN, Ramadas RA, et al.: Cutting Edge: IL-36 Receptor Promotes Resolution of Intestinal Damage. *J Immunol* 2016, 196:34-38.

Hernandez-Trejo JA, Suarez-Perez D, Gutierrez-Martinez IZ, Fernandez-Vargas OE, Serrano C, Candelario-Martinez AA, Meraz-Rios MA, Citalan-Madrid AF, Hernandez-Ruiz M, Reyes-Maldonado E, et al.: The pro-inflammatory cytokines IFNgamma/TNFalpha increase chromogranin A-positive neuroendocrine cells in the colonic epithelium. *Biochem J* 2016, 473:3805-3818.

Gomez-Suarez M, Gutierrez-Martinez IZ, Hernandez-Trejo JA, Hernandez-Ruiz M, Suarez-Perez D, Candelario A, Kamekura R, Medina-Contreras O, Schnoor M, Ortiz-Navarrete V, et al.: 14-3-3 Proteins regulate Akt Thr308 phosphorylation in intestinal epithelial cells. *Cell Death Differ* 2016, 23:1060-1072.

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Nava P, Kamekura R, Quiros M, Medina-Contreras O, Hamilton RW, Kolegraff KN, Koch S, Candelario A, Romo-Parra H, Laur O, et al.: IFNgamma-induced suppression of beta-catenin signaling: evidence for roles of Akt and 14.3.3zeta. *Mol Biol Cell* 2014, 25:2894-2904.

Geem D, Medina-Contreras O, McBride M, Newberry RD, Koni PA, Denning TL: Specific microbiota-induced intestinal Th17 differentiation requires MHC class II but not GALT and

mesenteric lymph nodes. *J Immunol* 2014, 193:431-438.

Khounlotham M, Kim W, Peatman E, Nava P, Medina-Contreras O, Addis C, Koch S, Fournier B, Nusrat A, Denning TL, et al.: Compromised intestinal epithelial barrier induces adaptive immune compensation that protects from colitis. *Immunity* 2012, 37:563-573.

Geem D, Medina-Contreras O, Kim W, Huang CS, Denning TL: Isolation and characterization of dendritic cells and macrophages from the mouse intestine. *J Vis Exp* 2012:e4040.

Medina-Contreras O, Geem D, Laur O, Williams IR, Lira SA, Nusrat A, Parkos CA, Denning TL: CX3CR1 regulates intestinal macrophage homeostasis, bacterial translocation, and colitogenic Th17 responses in mice. *J Clin Invest* 2011, 121:4787-4795.

Denning TL, Norris BA, Medina-Contreras O, Manicassamy S, Geem D, Madan R, Karp CL, Pulendran B: Functional specializations of intestinal dendritic cell and macrophage subsets that control Th17 and regulatory T cell responses are dependent on the T cell/APC ratio, source of mouse strain, and regional localization. *J Immunol* 2011, 187:733-747.

Medina-Contreras O, Soldevila G, Patino-Lopez G, Canche-Pool E, Valle-Rios R, Ortiz-Navarrete V: Role of CRTAM during mouse early T lymphocytes development. *Dev Comp Immunol* 2010, 34:196-202.

Garay E, Patino-Lopez G, Islas S, Alarcon L, Canche-Pool E, Valle-Rios R, Medina-Contreras O, Granados G, Chavez-Munguia B, Juaristi E, et al.: CRTAM: A molecule involved in epithelial cell adhesion. *J Cell Biochem* 2010, 111:111-122.

Valle-Rios R, Patino-Lopez G, Medina-Contreras O, Canche-Pool E, Recillas-Targa F, Lopez-Bayghen E, Zlotnik A, Ortiz-Navarrete V: Characterization of CRTAM gene promoter: AP-1 transcription factor control its expression in human T CD8 lymphocytes. *Mol Immunol* 2009, 46:3379-3387.

FUNDED PROJECTS

IL-36gamma promotes intestinal inflammation via intestinal macrophage/DC activation CCFA/3636	PI: Oscar Medina	08/12-07/15
Role of IL-36 in the regulation of the intestinal mucosa immune responses HIM/2016/056	PI: Oscar Medina	01/16-12/17
New mechanisms of intestinal inflammation regulation FC/2016/1204	Co-PI: Oscar Medina	09/16/08/18
Intestinal microbiota associated to children's irritable bowel disease HIM/2017/011	PI: Oscar Medina	01/17-12/18
Role of IL-36 cytokines in the regulation of the intestinal mucosa immune responses CB/2016/280815	PI: Oscar Medina	01/17-12/19
Intestinal microbiota associated to obesity 124.2018, ISSSTE	Co-PI.: Oscar Medina	01/18-12/20
Therapeutical efficacy of HPV vaccine against respiratory papillomatosis in children HIM/2017/112, SSA	Co-PI.: Oscar Medina	01/18-12/19
Quantification of ISTHMIN1 in mouse sepsis and diabetic individuals HIM/2017/117, SSA	PI: Oscar Medina	01/18-12/19
Sistema de Citometría multiparamétrica HIMFG Patrons Fund	PI: Oscar Medina	08/19
Characterization of ISM1-expressing lung-derived hematopoietic stem cells HIM/2018/083, SSA	Responsable: Oscar Medina	01/19-12/20
Role of leptin in modulation inflammation during obesity HIM/2021/028, SSA	Responsable: Oscar Medina	01/22-12/23
Design and validation of specific CAR-T HIM/2022/002, SSA	Responsable: Oscar Medina	01/23-12/24

PROFESSIONAL ACTIVITIES

Lectures

Emergen and re-emergent health problems in México

Sleep, brain and gastrointestinal system

Professional Memberships and Other Experience

2006-Present	Mexican Society of Immunology
2001-Present	Mexican Society of Biochemistry
2012	American Society for Investigative Pathology
2013-Present	Society of Mucosal Immunology
2013-Present	American Association of Immunologists
2012-2015	Crohn's & Colitis Foundation of America
2013-Present	National Researchers System, level I
2015-Present	Reviewer for CONACyT - Mexico
2017-Present	Reviewer for CONICYT - Argentina
2014-Present	Research Network on Glycosciences in Health, CONACyT
2015-Present	Research Network on Virology, CONACyT
2022-present	Research Network on Protein Structure, Function & Evolution
2022-present	Mexican Society for Sleep
2022-present	Associate Editor, Frontiers in Immunology
2020-present	Review Editor, Frontiers in Physiology
2022-2023	Guest Associate Editor, Frontiers in Cellular and Infection Microbiology
	Reviewer for <i>The American Journal of Pathology, Technology in Cancer Research & Treatment, Pharma Nutrition, Scientific Reports, Food & Function, Frontiers in, Basic & Clinical Pharmacology & Toxicology, Open Forum Infectious Diseases, Boletín Medico del Hospital Infantil de Mexico, Revista de Investigacion Clinica, RSC Advances, Chemical Communications, Experimental and Therapeutic Medicine, The Journal of Molecular Diagnostics, Pathogens and Global Health, The Application of Clinical Genetics, Diabetes, Metabolic Syndrome and Obesity: Targets and Therapy, The Journal of Immunology</i>

Work presented at Meetings and Conferences

- 6° Latinoamerican Meeting on Glycobiology. 2021. Mexico.
- 2nd Iberoamerican Meeting on Magnetobiology, Iberoamerican Bioelectromagnetism Network. 2020. Mexico
- XVIII National Meeting of Immunology, Mexican Society of Immunology. 2020. Mexico.
- Reshaping the Microbiome Through Nutrition Nature meeting. 2020. USA
- 2019 ATTC Symposia. 2019. Mexico
- Gut Microbiota for Health World Summit. 2019. USA

- Eukaryome. 2019. France
- National Consensus on Cervical Cancer, Nutritional intervention on immune modulation. 2019. Mexico
- 68th Mexican Meeting on Academic Experts, Mexican Pediatrics Academy. 2019. Mexico
- 12th Meeting in Pediatric Research, Mexico Ministry of Health. 2018. Mexico
- 11th National Research Meeting, ISSSTE. 2018. Mexico
- IV International Meeting on Genomic Medicine. 2018. México
- CXXV Annual Meeting, Pediatric Research Association. 2017. Mexico
- Institutional Seminar, Biotechnology Institute. 2017. Mexico
- First diplomat in translational medicine and immunogenetics, ISSSTE. 2017. Mexico
- III Inflammation Topics, IMSS. 2017. Mexico
- XXII National Research Meeting, Mexico Ministry of Health. 2017. Mexico
- Monthly Conference, Mexican Society of Immunology. 2017. Mexico
- 10th Meeting in Pediatric Research, Mexico Ministry of Health. 2016. Mexico
- 2016 Flow Cytometry Colloquium, IMSS. 2016. Mexico
- 1st Inter-institutional Meeting in Immunology, UABJO .2016. Mexico
- Symposium on Microbial Models relevant for Health, Basic Research, and Biotechnology, BUAP. 2016. Mexico
- XXII National Meeting on Immunology, Mexican Society of Immunology. 2016. Mexico
- 2015 Cancer Genomics Meeting: Children Cancer, National Cancer Institute. 2015. Mexico
- 9th Meeting in Pediatric Research, Mexico Ministry of Health. 2015. Mexico
- Second International Symposium on Tuberculosis. 2015. México
- IX National Virology Meeting, Mexican Society of Virology .2015. México
- New talents in Immunology in Mexico. Mexican Society of Immunology. 2015. Mexico
- Dendritic Cells and Macrophages Reunited, Keystone Symposia Conference. 2015. Canada
- Inflammatory Diseases, Keystone Symposia Conference. 2014. Canada
- Advances in Inflammatory Bowel Disease, CCFA. 2013. USA
- 16th International Congress of Mucosal Immunology, SMI. 2013. Canada
- Advances in Inflammatory Bowel Disease, CCFA. 2012. USA
- Experimental Biology, ASIP. 2012. USA
- Mucosal Biology, Keystone Symposia Conference. 2011. Canada
- Advances in Inflammatory Bowel Disease, CCFA. 2010. USA
- CSHL Meeting on Gene Expression & Signaling in the Immune System, CSHL. 2008.

USA

- XVIII National Meeting of Immunology, Mexican Society of Immunology. 2008. Mexico.
- XVII National Meeting of Immunology, Mexican Society of Immunology. 2006. Mexico.

Honors and Awards

The Barrie Hesp Scholarship on behalf of Ashley Rebecca Cukier

2014 Keystone Symposia Conference J4: Inflammatory Diseases: Recent Advances in Basic and Translational Research and Therapeutic Treatments
Vancouver, British Columbia, Canada.
January 17-22, 2014

Young Investigator Travel Award

Society for Mucosal Immunology
International Congress in Mucosal Immunology
Vancouver, British Columbia, Canada.
July 17-20, 2013

Crohn's and Colitis Foundation of America Research Fellowship Award

July 2012-June 2015

Keystone Scholarship

2011 Keystone Symposia Conference
X5: Mucosal Biology: A fine balance between tolerance and immunity
Vancouver, British Columbia, Canada.
February 26-March 3, 2011

Best Basic Science Poster

2010 Advances in Inflammatory Bowel Disease
Hollywood, Florida, USA.
December 9-12, 2010

Cold Spring Harbor Laboratory Scholarship

2008 CSHL Meeting on Gene Expression & Signaling in the Immune System
Cold Spring Harbor. New York, USA.
April 22-26, 2008

Students

B. Sc.	1 graduated	1 in progress
M.D. Specialty		1 in progress
M.Sc.	4 graduated	1 in progress
Ph. D.	2 graduated	2 in progress

Teaching

- 2008 UACM Molecular Biology. MSc program in Genomic Sciences.
- 2015 UNAM Cellular Immunology. PhD program in Biomedical Sciences.
- 2015 UABJO Immunology. MSc program in Experimental Biomedicine.
- 2015 UNAM Fundamentals of Scientific Research. BSc in Medicine.
- 2016. UNAM Research Methodology. BSc in Medicine.
- 2017 UNAM Molecular Biology. PhD program in Biological Sciences.
- 2017 ENCB-IPN Immunobiology. MSc program in Immunology.
- 2017 ENCB-IPN Immunogenetics in Molecular Antropology. Department of Immunology.
- 2017 UNAM Research Methodology. BSc in Medicine.
- 2017 UNAM Pathogeny and immune responses. Departament of Experimental Medicine.
- 2017 UNAM Molecular Biology. MSc program in Medical and Health Sciences.
- 2018 ISSSTE Immunology. BSc in Medicine.
- 2018 ENCB-IPN Immunogenetics in Molecular Antropology. Department of Immunology.
- 2018 UAA Informational Molecules. PhD program in Biological Sciences.
- 2019 UNAM Cellular Immunology. PhD program in Biomedical Sciences.