

Marco A. Cabrera

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EDUCATION

M.S., The University of Texas Rio Grande Valley, **2020**
Major: **Biology**

B.S., The University of Texas Rio Grande Valley, **2017**
Major: **Biology**
Minor: **Psychology**

A.S., Dual Enrollment Medical Science Academy – South Texas College, **2015**
Major: **Biology**

PROFESSIONAL EXPERIENCE

August 2021 - Present

Laboratory Technician, Department of Immunology & Microbiology, University of Texas Rio Grande Valley, Edinburg, Tx, USA

May 2020 – August 2021

Clinical Laboratory Technician, Department of Health Affairs, University of Texas Rio Grande Valley, Edinburg, Tx, USA

January 2020 – May 2020

Graduate Teaching Assistant, Department of Biology, The University of Texas Rio Grande Valley, Edinburg, Tx, USA January – May 2020

January – December 2019

Graduate Assistant, Department of Biology, The University of Texas Rio Grande Valley, Edinburg, Tx, USA

April – July 2019

Graduate Research Assistant, Department of Molecular Science, The University of Texas Rio Grande Valley, Edinburg, Tx, USA

September 2015 - December 2017

Laboratory Assistant, Department of Biology, The University of Texas Rio Grande Valley, Edinburg, Tx, USA

RESEARCH & FIELD EXPERIENCE

Ongoing – Development of A Novel Fluorescent NIR Probe for Cancer Bioimaging

Ongoing – Role of miRNA-205 in Liver Disease

One Health: Conducted and gathered identification of ticks, and mosquitoes with their respective vectored pathogens and insecticide resistance. Discussed worldwide public health problems. Underwent an unknown vectored pathogen simulation whereby we investigated its origin, vector incrimination, signs and symptoms, interviewed patients to track down its spread and Ro, and performed pan RT-PCR to identify its sequence.

***Flaviviridae* Viral Capsid Evolutionary Analysis**

Phylogenetic Analysis of *Herpesviridae* UL27 Gene

Mammalian Dung Preference in Dung Beetles During Thorn Forest Regeneration in Abandoned Pastures

Migration Preference of Target Environment of *Tamarixia radiata* According to Tissue Sample

SCIENTIFIC SOFTWARE & RESEARCH METHODOLOGY

Scientific Software Utilization: JMP Pro 13, Mega X, Fiji (Image J), Chimera, Cn3D, BLAST®, Motif scan and BioRender.

Microscope Utilization: Light microscopy, Fluorescent Microscopy, Phase Contrast Microscopy, Confocal Microscopy, Stereomicroscopy, and Virtual Microscope Imaging.

Molecular & Cellular Methods: Immunohistochemistry, Immunocytochemistry, Magnetic Nanoparticle Formulation, Cell Culture, Flow Cytometry, Protoplast Isolation, RT-PCR, PCR, Western, and Northern blots.

AWARDS & HONORS

2015 – 2016

Profiles in Excellence, The University of Texas Rio Grande Valley, Nomination and Selection.

2014 – 2015

Profiles in Excellence, South Texas College, Nomination and Selection.

2013 – 2015

Certificate of Special Congressional Recognition for Exceptional Achievement, Work Ethic, and Community Leadership.

COMMUNITY OUTREACH

3/12/2021

COVID-19 Task Force Member Spotlight – UT Health RGV: Promoted the administration of COVID-19 vaccine throughout the Rio Grande Valley and delivered my message on *why* I got vaccinated and *why* one should do so too.

1/13/2021

COVID-19 Vaccine Interview – UTRGV's Newspaper, The Rider: Expressed personal experience with COVID-19 vaccine, informed the public on its safety and efficacy in conjunction with scientific background.

12/22/2020

COVID-19 Vaccine Radio Interview – La Nueva Estrella 95.1 FM: Addressed the public’s concerns regarding the COVID-19 vaccine, explained its safety and efficacy along with the science behind it.

6/28/2020

COVID-19 Informational Video – Social Media: Development of an informational video addressing what SARS-CoV2 and COVID-19 is, preventative measures, ways of transmission and types of tests one should know to stay informed and mitigate the spread.

9/27/2017

Dual Enrollment Medical Science Academy (DEMSA) Summit Speaker – Shared academic successes and how the DEMSA program mediated such processes, encouraging prospective student enrollment and school districts partnerships.

4/6/2016

Service-Learning Project at The University of Texas Rio Grande Valley - Child Nutritional Guidelines.

11/15/2015

Service-Learning Project at Boys and Girls Club - Mission, Tx - Educational Public Speaker.

LEADERSHIP

March 2019 – July 2019

Journal Club: Department of Molecular Science, UTRGV School of Medicine.

2016 – 2017

Marksmanship Society: Historian, The University of Texas Rio Grande Valley.

2014 – 2015

Biology Club: Vice-President, South Texas College.

2014 – 2015

Psychology Club: Member, South Texas College.

TRAININGS & CERTIFICATES

- Institutional Biosafety Committee Member
- Initial Biosafety Training
- Animal Biosafety
- Avalon Laboratory Information Systems (LIS)
- Reducing Pain and Distress in Laboratory Mice and Rats
- Biosafety/Biosecurity Level 2
- Emergency and Incident Response to Biohazard Spills and Releases
- Biomedical Responsible Conduct of Research
- Aseptic Surgery
- Working with Mice in Research

CONFERENCES

6/20/2019

Western Gulf Center of Excellence for Vector-borne Diseases Annual Conference – UTRGV School of Medicine.

3/29/2019

College of Science Annual Research Conference – UTRGV

3/21/2019

Western Gulf Center of Excellence for Vector-borne Diseases – Host Speaker Dr. Alejandro Cordoba – UTRGV.

SCIENTIFIC SOCIETY MEMBERSHIPS

2021 – Present

Associate Member, American Association for Cancer Research.

2020 – 2021

Member, The Subtropical Agriculture and Environments Society (SAES).

SEMINARS

8/27/2021

Yale University – Vector Biology: The Past, Present and Future of Endectocides for Controlling Mosquito-borne Diseases – By Dr. Brain Foy.

11/12/2020

University of Texas Rio Grande Valley – Biology Seminar Series: Citizen Science Effort in New York for Tick Work and Tick-Borne Diseases – By: Dr. Saravanan Thangamani.

10/1/2020

University of Texas Rio Grande Valley – Biology Seminar Series: Vector-Borne Disease Surveillance Efforts – By Dr. John-Paul Mutebl, CDC Fort Collins.

10/13/2019

University of Texas Rio Grande Valley – Biology Seminar Series: Current Research at USDA on Vector Evolutionary Relationships - By Dr. Jason Tidwell.

10/03/2019

University of Texas Rio Grande Valley – Biology Seminar Series: One Health – Animal Bites and Human Diseases – By Dr. Ronald Tyler, Public Health Veterinarian.

09/12/2019

University of Texas Rio Grande Valley – Biology Seminar Series: Advances in Pancreatic Cancer Diagnosis and Treatment – By Dr. Subash Chauhan.