

# SALVATORE GEISER CARADONNA

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Cleveland Heights, OH 44106

## EDUCATION

July 2022-present **Case Western Reserve University, Cleveland, OH**  
M.D., Expected Graduation: May 2030  
Ph.D., Expected Graduation: May 2028

May 2019 **The Ohio State University, Columbus, OH**  
B.S., Neuroscience, Molecular & Cellular Specialization  
Minor in Music  
Cumulative GPA: 3.86

## HONORS AND AWARDS

2019 ***Magna Cum Laude***  
The Ohio State University, Columbus, OH, United States

2015-2019 **Biological Scholar**  
The Ohio State University, Ohio, OH, United States

2015-2019 **Dean's List**  
The Ohio State University, Ohio, OH, United States

2016 **Second Year Transformational Experience Award**  
The Ohio State University, Ohio, OH, United States

2015 **Provost Scholarship**  
The Ohio State University, Ohio, OH, United States

## RESEARCH EXPERIENCE

January 2022-June 2022 **Research Specialist**  
Touro University, Department of Biology  
New York, NY, United States  
PI: Jordan Marrocco, Ph.D.

- Acquired Skills: scRNA-seq, Introduction to R.

Research Summary: Investigated the genomic mechanisms of early-life adversity, with a focus on sex differences and epigenetics.

June 2019-December 2021 **Research Assistant**  
The Rockefeller University, Laboratory of Neuroendocrinology  
New York, NY, United States  
Advisor: Jordan Marrocco, Ph.D.; PI: Bruce McEwen, Ph.D.

- Acquired Skills: ATAC/RNA-seq, Immunoassays, Golgi Analysis, Rodent Behavior, GraphPad, Prism.
- Rodent husbandry, surgery, and injections.
- Supervised research volunteers for internship.

Research Summary: Investigated the neuroendocrine mechanisms in the hippocampus of psychiatric disorders, including anxiety and depression, focusing on the sex-differences and epigenetic basis of susceptibility to stress and therapeutic biomarkers.

June 2016- **Student Research Assistant**

May 2019

The Ohio State University, Comprehensive Cancer Center  
Columbus, OH, United States

Advisor: Wei Lee, Ph.D.; PI: Arnab Chakravarti, M.D.

- Acquired Skills: RT-qPCR, Cell Culture, Protein Analysis, Radiation Assay, Excel.

Research Summary: Investigated the biological mechanism of radiation resistance in glioma stem cells in relation to miRNA let-7a-3p and its ability to reprogram pluripotency and radioresistance pathways.

## TEACHING APPOINTMENTS

June 2016-  
May 2017

### **Teaching Assistant**

The Ohio State University, Department of Chemistry and Biochemistry,  
Columbus, OH, United States

General Chemistry Lab Supervisor: Katie Moga, Ph.D.

Class topics: Stoichiometry, Aqueous Reactions, Oxidation-Reduction, Chemical Kinetics, Thermochemistry, Acids and Bases, Electrochemistry

## PROFESSIONAL SOCIETIES

2023-  
2019-2022

Global Association for the Study of Neurodegenerative Diseases  
Society for Neuroscience

## ACADEMIC SERVICE

April 2023-

### **University Hospitals Culture Change Initiative**

University Hospitals, Cleveland, OH., United States

Assisted in building a new LGBTQ competency curriculum for the UH Parma medical center. Designed lesson plans for eventual implementation summer of 2023.

January 2023-

### **Curricular Diversity Design Team**

Case Western Reserve University School of Medicine, Cleveland, OH, United States

Helped produce new medical school curriculum to support diversity in Gender Identity & Sexual Orientation. Analyzed the current curriculum to seek areas of improvement.

January 2021-  
December 2021

### **Early Career Policy Ambassador**

The Society for Neuroscience, Washington D.C., United States

Advocated for science funding and policy to national lawmakers. Met with congressional representatives to request support for research initiatives. Promoted advocate efforts in the scientific community at Rockefeller and other institutions.

August 2020-  
December 2021

### **Member/Speaker/Moderator**

The Rockefeller University, Inclusive Science Initiative Journal Club on Diversity, Equity, Inclusion, and Justice (DEIJ), New York, NY, United States

Discussed relevant academic publications regarding issues of DEIJ of academic scientists and tactics to further improve these policies in the greater scientific field.

- June 2019-  
December 2021 **Member**  
The Rockefeller University, People at Rockefeller Identifying as Sexual/Gender Minorities, New York, NY, United States  
Attended events and socials to strengthen connections and inclusion of LGBTQIA+ members of the Rockefeller community.
- August 2017-  
May 2019 **Resident Advisor**  
The Ohio State University, Department of Residence Life, Columbus, OH, United States  
Implemented university policy for the residence hall while planning and executing student programs and mediating resident physical and emotional crises.
- November 2017-  
March 2019 **Outreach Chair**  
The Ohio State University, Buckeye Mela, Columbus, OH, United States  
Organizer of the Buckeye Mela dance completion. Responsible for reaching out to local businesses and organized event sponsorship.

## COMMUNITY SERVICE

- December 2019-  
December 2021 **Patient Care Volunteer, Emergency Medicine**  
Weill Cornell Medical Center, New York, NY, United States  
Coordinated visitation and care for patients. Aided clinical staff with treatment during patient stay and preparation of the hospital setting for incoming patients. Observed clinical staff in roles providing treatment, addressing patient concerns, and responding to trauma.

## LEADERSHIP

- January 2023- **Board Member, Case Med Pride**  
Case Western Reserve University School of Medicine, Cleveland, OH, United States  
Appointed to the board to plan and improve advocacy and education initiatives for the LGBTQ students of the school of medicine. Responsible for improving the educational experience of LGBTQ med students and building relationships with LGBTQ organizations in the greater Cleveland community.
- August 2022- **MSTP Councilmember**  
Case Western Reserve University, Cleveland, OH, United States  
Council chair for various positions on the MSTP council, including M1 Social chair, Retreat chair, Social Media chair, and Advocacy chair. Assisted in the overall administration of the MSTP at Case Western.
- August 2017-  
May 2019 **Resident Advisor**  
The Ohio State University, Department of Residence Life, Columbus, OH, United States  
Implemented university policy for the residence hall while planning and executing student programs and mediating resident physical and emotional crises.
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March 2019 **Outreach Chair**  
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Organizer of the Buckeye Mela dance completion. Responsible for reaching out to local businesses and organized event sponsorship.

## PEER REVIEWED PUBLICATIONS

- DeRosa H, **Caradonna SG**, Tran H, Marrocco J, Kentner AC. (2022) Got milk? Maternal immune activation during the mid-lactational period affects nutritional milk quality and adolescent offspring sensory processing in male and female rats. **Molecular Psychiatry**. 10.1038/s41380-022-01744-y.
- DeRosa H, **Caradonna SG**, Tran H, Marrocco J, Kentner AC. (2022) Milking it for all it's worth: The effects of environmental enrichment on maternal nurturance, lactation quality, and offspring social behavior. **eNeuro**. 10.1523/ENEURO.0148-22.2022.
- Caradonna SG**, Paul MR, Marrocco J. (2022) An allostatic epigenetic memory on chromatin footprints after double-hit acute stress. **Neurobiology of Stress**. 10.1016/j.ynstr.2022.100475.
- Caradonna SG**, Einhorn NR, Saudagar V, Khalil H, Petty GH, Lihagen A, LeFloch C, Lee FS, Akil H, Guidotti A, McEwen BS, Gatta E, Marrocco J. (2022) Corticosterone induces discrete epigenetic signatures in the dorsal and ventral hippocampus that depend upon sex and genotype: focus on methylated Nr3c1 gene. **Translational Psychiatry**. 10.1038/s41398-022-01864-7.
- Caradonna SG**, Zhang T-Y, O'Toole N, Mo-Jun S, Khalil H, Einhorn NR, Wen X, Parent C, Lee FS, Akil H, Meaney MJ, McEwen BS, Marrocco J. (2021) Genomic Modules and Intramodular Network Concordance in Susceptible and Resilient Male Mice across Disparate Stress Paradigms. **Neuropsychopharmacology**. 10.1038/s41386-021-01219-8.

## CONFERENCE ABSTRACTS

- Caradonna SG**, Miller E, Byrne M, Singh R, Tripathi SJ, Chakraborty S, Higgins JJ, Vázquez-Rosa E, Paul BD, Rajadhyaksha AM, Pieper AA. Mechanisms of cereblon-mediated neurodegeneration. **CWRU Pathology Department Retreat**. Cleveland, OH. 2024.
- Caradonna SG**, Miller E, Byrne M, Singh R, Tripathi SJ, Chakraborty S, Higgins JJ, Vázquez-Rosa E, Paul BD, Rajadhyaksha AM, Pieper AA. Mechanistic insights into impaired cognition resulting from cereblon deficiency. **Veterans Affairs Research Day**. Tucson, AZ. 2023.
- Caradonna SG**, Miller E, Byrne M, Singh R, Tripathi SJ, Chakraborty S, Higgins JJ, Vázquez-Rosa E, Paul BD, Rajadhyaksha AM, Pieper AA. Mechanistic insights into impaired cognition resulting from cereblon deficiency. **International Research Conference on Neurodegenerative Diseases**. Tucson, AZ. 2023.
- Barker S, Vázquez-Rosa E, Shin M-K, **Caradonna SG**, Kornblit R, Apostolakis A, Corella S, Chaubey K, Franke K, Cintrón-Pérez CJ, Sridharan P, Gan L, Pieper AA. Pharmacologically reducing acetylated tau prevents traumatic brain injury-induced acceleration of Alzheimer's disease. **International Research Conference on Neurodegenerative Diseases**. Tucson, AZ. 2023.
- Vázquez-Rosa E, Chaubey K, Barker S, **Caradonna SG**, Cintrón-Pérez CJ, Ezepue A, Lindley K, Yu Y, Hyung J, Gordon D, Ives J, Yang M, Dolph R, Garbarino J, Sotudeh N, O'Donovan KJ, Pieper AA. Chromatin accessibility in the brain after mild injury reveals chronic changes in gene expression linked to neuropsychiatric impairment. **International Research Conference on Neurodegenerative Diseases**. Tucson, AZ. 2023.
- Loria M, Waitzman R, Fraiman E, Amkraut R, **Caradonna SG**; Rajoulh C, Mo A, Chambers K, Auriemma A, McNamara M, Gupta S. Development of a Novel Educational Program to Improve Healthcare Experiences for LGBTQ Individuals: LGBTQ Integrative Team Education (LITE) Study. **United States Professional Association for Transgender Health Scientific Symposium**. Denver, CO. 2023.
- Loria M, Waitzman R, Fraiman E, Amkraut R, **Caradonna SG**; Rajoulh C, Mo A, Chambers K, Auriemma A, McNamara M, Gupta S. Development of a Novel Educational Program to Improve Healthcare Experiences for LGBTQ Individuals: LGBTQ Integrative Team Education (LITE) Study. **Case Western Reserve University School of Medicine Education Retreat**. Cleveland, OH. 2023.
- Loria M, Waitzman R, Fraiman E, Amkraut R, **Caradonna SG**; Rajoulh C, Mo A, Chambers K, Auriemma A, McNamara M, Gupta S. Development of a Novel Educational Program to Improve Healthcare Experiences for LGBTQ Individuals: LGBTQ Integrative Team Education (LITE) Study. **Medical Student Pride Alliance Conference**. 2023. Online.
- Caradonna SG**, Einhorn NR, Khalil H, Petty GH, Gatta E, Saudagar V, Lee FS, Akil H, McEwen BS, Marrocco J. Endocrine-Behavioral Profiling and Hippocampal Genomics in Male and Female Mice Maintained on Chronic Oral Corticosterone: Implication for Methylated 1F Exon of Glucocorticoid Receptor. **60th Annual Meeting of the American College of Neuropsychopharmacology**. San Juan, Puerto Rico. 2021.

**Caradonna SG**, Paul MR, Bulloch K, McEwen BS, Marrocco J. Chromatin footprints in the ventral hippocampus in a double-hit model of heterotypic acute stress. Program No. P606.03. 2021 Neuroscience Meeting Planner. **Society for Neuroscience, 2021**. Online

Marrocco J, **Caradonna SG**, Khalil H, Einhorn NR, Lee FS, Akil H, McEwen BS. Sex and genotypic differences in the genomic signatures of oral corticosterone in the dorsal and ventral hippocampus. **International Behavioral Neuroscience Society**. Puerto Vallarta, Mexico. 2021.

**Caradonna SG**, Khalil H, Einhorn NR, Lee FS, Akil H, McEwen BS, Marrocco J. Genomic signatures of corticosterone in dorsal and ventral hippocampus of males and females. Program No. 248.02. 2021 Neuroscience Meeting Planner. **Society for Neuroscience Global Connectome, 2021**. Online

**Caradonna SG**, Khalil H, Einhorn NR, Gatta E, Saudagar V, Lee FS, Akil H, McEwen BS, Marrocco J. Genomic signatures of corticosterone in dorsal and ventral hippocampus of males and females. **59th Annual Meeting of the American College of Neuropsychopharmacology**. 2020. Online

Marrocco J, **Caradonna SG**, Khalil H, Einhorn NR, O'Toole N, Zhang T-Y, Meaney MJ, Akil H, McEwen BS. Cross-model transcriptional profiling of the stressed ventral hippocampus. **58th Annual Meeting of the American College of Neuropsychopharmacology**. Orlando, FL. 2019.

Marrocco J, Einhorn NR, **Caradonna SG**, LeFloch C, Lihagen A, Petty GH, Gatta E, Khalil H, Jašarević E, Lee FS & McEwen BS. (2019) Transcriptional profiling of the stressed hippocampus: Does sex make a difference? Program No. 636.04. 2019 Neuroscience Meeting Planner. Chicago, IL: **Society for Neuroscience**, 2019.

**Caradonna SG**, Singh R, Chakravarti A. MicroRNA-mediated modulation of radioresistance of glioma stem cells. **Denman Undergraduate Research Forum**. Columbus, OH, Spring 2018.

## REFERENCES

Jordan Marrocco, Ph.D.	jmarrocco@rockefeller.edu	+1 212 327 8625
Francis S. Lee, M.D. Ph.D.	fslee@med.cornell.edu	+1 212 746 5403
Benedetta Leuner, Ph.D.	leuner.1@osu.edu	+1 614 292 5218

**INTERESTS:** classical violin, tennis, gardening