

MICHAEL HSU
(832)-612-6931
michael.hsu@osumc.edu

740 BRT, 460 W 12th Ave
Columbus, OH, 43212

Education

Ohio State University

Ph.D. Student in Biomedical Sciences May 2021 - Now

Advisors: Dr. Jerry Lio and Dr. Qin Ma

Texas A&M University

M.S. in Biomedical Sciences May 2019

Texas A&M University

B.S. in Biochemistry and Genetics December 2016

Professional Experience

Publications

June 2021 – Now

1. Haoxin Zhao, Lydia N. Raines, Jaeoh Park, Yuzhu Wang, **Michael Hsu**, Wei Cao, Heng-Yi Chen, Alex Y. Huang, Ping-Chih Ho, Chan-Wang Jerry Lio, Stanley Ching-Cheng Huang. **"Tumors suppress a mitochondrial chaperone activity in macrophages to facilitate immune evasion."** In preparation.
2. Heng-Yi Chen, Ana Almonte-Loya, Fang-Yun Lay, **Michael Hsu**, Eric Johnson, Edahí González-Avalos, Jieyun Yin, Richard S Bruno, Qin Ma, Hazem E Ghoneim, Daniel J Wozniak, Fiona E Harrison, Chan-Wang Jerry Lio. **"Epigenetic remodeling by vitamin C potentiates plasma cell differentiation."** *eLife* (2022)11:e73754, DOI: <https://doi.org/10.7554/eLife.73754>
3. Chen, Heng-Yi, **Michael Hsu**, and Chan-Wang Jerry Lio. **"Micro but mighty—micronutrients in the epigenetic regulation of adaptive immune responses."** *Immunological Reviews* 305.1 (2022): 152-164, DOI: [10.1111/imr.13045](https://doi.org/10.1111/imr.13045)

Presentations

1. Michael Hsu. Poster Presentation: **"From Silence to Expression: Prediction of Imminent Transcription from DNA Modification"** Edward F. Hayes Research Forum (2023).

Prior Research Experience

Research Assistant (Nationwide Children's Hospital)

June 2020 – March 2021

- Cultured and drug treated leiomyosarcoma, liposarcoma, and meningioma cell lines
- Studied the effects of drug treated cells by Western Blot
- Conducted immunohistochemistry (IHC) on patient samples
- Managed and maintained lab equipment and solutions

Undergraduate Researcher (A&M)

May 2015 – August 2016

- Cultured and observed swimming track patterns of *Paramecium tetraurelia*
- Utilized Modified Fernández-Galiano Silver Carbonate Stain and compound light microscopy
- Quantitated ciliary row configurations and described correlation to swimming patterns
- Studied apoptosis signal pathways in *Arabidopsis thaliana*, focusing on RALF-like protein genes
- Utilized virus-induced gene silencing (VIGS) system to create efficient knockout models

Honors and Awards

- Ohio State University Fellowship, May 2021 – April 2022
 - Awarded by the Dean of Ohio State University's Graduate School, Alicia L. Bertone

Research Skills

- **Bioinformatics** - Sequencing analysis, machine learning, survival analysis, univariate and multivariate analysis
- **Experiments** - PCR, tagmentation, DNA/RNA purification, immunoprecipitation, enzymatic modification, library preparation, western blot, SDS-PAGE, gel electrophoresis
- **Programming Languages** - Python, R, Java, C++, Linux

References

1. Michael Criscitiello, PhD, Associate Dean

Email: mcriscitiello@cvm.tamu.edu, *Phone:* (979)-845-4207

Department of Veterinary Pathobiology of the College of Veterinary Medicine & Biomedical Sciences, Texas A&M University

2. Stephen Lessnick, MD, PhD, Director

Email: Stephen.lessnick@nationwidechildrens.org, *Phone:* (614)-722-3550

Center for Childhood Cancer & Blood Diseases for The Research Institute, Nationwide Children's Hospital

3. Chan-Wang Jerry Lio, PhD, Assistant Professor

Email: Chan-wang.Lio@osumc.edu, *Phone:* (614)-366-9335

Department of Microbial Infection and Immunity, The Ohio State University

4. Qin Ma, PhD, Professor and Section Chief of Computational Biology and Bioinformatics, Leader of the Immuno-Oncology Informatics Group

Email: qin.ma@osumc.edu, *Phone:* (614)-366-9335

Department of Biomedical Informatics, The Ohio State University