JASON YEUNG

PROFILE

Combined MD/PhD student studying viruses with diverse research skills in data science, virology, and molecular biology. Former professional artist who simultaneously performed at an international level of ballet, pursued diverse interests, and maintained a high-level of academic achievement. Interested in emerging infectious diseases, data science, and equity in the arts.

EDUCATION

University of Texas Medical Branch School of Medicine May 2027
MD/PhD in Biochemistry, Cellular and Molecular Biology, GS2

University of Pittsburgh, Graduate School of Public Health May 2020
MS in Infectious Disease and Microbiology

Texas A&M University, College of Veterinary Medicine and Biomedical Science May 2018
BS in Biomedical Studies

ACADEMIC EXPERIENCE

Xuping Xie Lab (Formerly Pei-Yong Shi Lab) | University of Texas Medical Branch 2021 - 2023
Graduate Member (Thesis Lab)

- Applied molecular cloning and virologic techniques at Biosafety Level 3 to characterize emerging SARS-CoV-2 variants and mutants resistant to antiviral drugs at different approval stages (pre-IND to phase 1 trials).

Andrew Routh Lab | University of Texas Medical Branch 2021 - 2023
Collaborator

- Developed web application, NoSQL database, documentation and Nanopore-compatible software for ViReMa, a viral recombination mapper software that detects non-homologous recombination in sequencing data.

St. Vincent's Student Clinic | University of Texas Medical Branch 2020 - 2021
Steering Committee Member (Logistics and Smoking Cessation Programming)

- Contributed to development of a student-run comprehensive care clinic for congestive heart failure patients and performed motivational interviewing for tobacco use.

Ernesto Marques, Jr. Lab | University of Pittsburgh Graduate School of Public Health 2018 - 2020
Graduate Member (MS Thesis Work)

- Worked on projects related to pathogenesis and host response of Dengue and Zika viral infection, developed and optimized immunoassays, and analyzed large datasets of immune-related patient features.

Vishwajit Nimgaonkar Lab | University of Pittsburgh Medical Center Western Psychiatric Hospital 2019 - 2020
Graduate Member

- Applied virologic techniques and cultured brain organoids for modeling of herpes simplex infections.

Koichi Kobayashi Lab | Texas A&M College of Medicine 2016 - 2018
Undergraduate Member

- Contributed to several projects related to the role of the gene NLRC5 in various cancers, worked with transgenic mice models, analyzed large public datasets (TCGA), and mentored students.

MD Anderson Cancer Center | T. Boone Pickens Academic Tower 2016 - 2017
Integrative Medicine Trainee and Internal Medicine Observer

- Used R to prepare large clinical datasets for multivariate survival analysis, collected clinical data from EPIC software, presented at weekly meetings, attended lectures, and shadowed physicians.

Aggie Research Scholar | Texas A&M Vet-Med GI Lab 2016 - 2017
Team Member

- Contributed to research projects utilizing cytokine levels to diagnose canine chronic enteropathies.

RESEARCH PUBLICATIONS

JOURNAL ARTICLES

1. **Yeung, J.**, Wang, T., Shi, P.-Y., 2023. Improvement of mucosal immunity by a live-attenuated SARS-CoV-2 nasal vaccine. Current Opinion in Virology 62, 101347. https://doi.org/10.1016/j.coviro.2023.101347
2. Bills, C.J., Xia, H., Chen, J.Y.-C., **Yeung, J.**, Kalveram, B., Walker, D., Xie, X., Shi, P.-Y., 2023. Mutations in SARS-CoV-2 variant nsp6 enhance type-I interferon antagonism. Emerging Microbes & Infections 0, 2209208. https://doi.org/10.1080/22221751.2023.2209208
3. Adam, A., Kalveram, B., Chen, J.Y.-C., **Yeung, J.**, Rodriguez, L., Singh, A., Shi, P.-Y., Xie, X., Wang, T., 2023. A single-dose of intranasal vaccination with a live-attenuated SARS-CoV-2 vaccine candidate promotes protective mucosal and systemic immunity. bioRxiv (Pre-print). https://doi.org/10.1101/2023.04.17.537235
4. Sotcheff, S., Zhou, Y., **Yeung, J.**, Sun, Y., Johnson, J.E., Torbett, B.E., Routh, A.L., 2023. ViReMa: a virus recombination mapper of next-generation sequencing data characterizes diverse recombinant viral nucleic acids. GigaScience 12, giad009. https://doi.org/10.1093/gigascience/giad009
5. Xia, H.*, **Yeung, J.***, Kalveram, B.*, Bills, C.J., Chen, J.Y.-C., Kurhade, C., Zou, J., Widen, S.G., Mann, B.R., Kondor, R., Todd Davis, C., Zhou, B., Wentworth, D.E., Xie, X., Shi, P.Y., 2023. Cross-neutralization and viral fitness of SARS-CoV-2 Omicron sublineages. Emerging Microbes & Infections 0, 1–19. https://doi.org/10.1080/22221751.2022.2161422
6. **Yeung, J.**, Routh, A.L., 2022. ViReMaShiny: an interactive application for analysis of viral recombination data. Bioinformatics 38, 4420–4422. https://doi.org/10.1093/bioinformatics/btac522
7. Yoshihama, S., Cho, S.X., **Yeung, J.**, Pan, X., Lizee, G., Konganti, K., Johnson, V.E., Kobayashi, K.S., 2021. NLRC5/CITA expression correlates with efficient response to checkpoint blockade immunotherapy. Sci Rep 11, 3258. https://doi.org/10.1038/s41598-021-82729-9
8. Zheng, W., Klammer, A.M., Naciri, J.N., **Yeung, J.**, Demers, M., Milosevic, J., Kinchington, P.R., Bloom, D.C., Nimgaonkar, V.L., D'Aiuto, L., 2020. Patterns of Herpes Simplex Virus 1 Infection in Neural Progenitor Cells. Journal of Virology 94, e00994-20. https://doi.org/10.1128/JVI.00994-20
9. Liu, W., Qdaisat, A., **Yeung, J.**, Lopez, G., Weinberg, J., Zhou, S., Cohen, L., Bruera, E., Yeung, S.-C.J., 2019b. The Association Between Common Clinical Characteristics and Postoperative Morbidity and Overall Survival in Patients with Glioblastoma. Oncologist 24, 529–536. https://doi.org/10.1634/theoncologist.2018-0056
10. Liu, W., Qdaisat, A., Lee, E., **Yeung, J.**, Vu, K., Lin, J.-Z., Canada, T., Zhou, S., Cohen, L., Bruera, E., Yeung, S.-C.J., 2019a. The association between weight stability and parenteral nutrition characteristics and survival in patients with colorectal cancer. Gastroenterol Rep (Oxf) 7, 419–425. https://doi.org/10.1093/gastro/goz021

BOOK CHAPTERS

1. Marques, E.T.A., Demers, M., D'Aiuto, L., Castanha, P.M.S., **Yeung, J.**, Wood, J.A., Chowdari, K.V., Zheng, W., Yolken, R.H., Nimgaonkar, V.L., 2022. Herpesvirus Infections in the Human Brain: A Neural Cell Model of the Complement System Derived from Induced Pluripotent Stem Cells, in: Current Topics in Behavioral Neurosciences. Springer, Berlin, Heidelberg, pp. 1–22. https://doi.org/10.1007/7854_2022_383

*Contributed equally

SKILLS AND ACTIVITIES

Proficient with R / Shiny, D3.js / Observable

Experience with Python, Java, Linux systems, Docker, MongoDB

Coached media training

ARTISTIC EXPERIENCE

Dance Data Project ® | Chicago, IL 2020 - 2023

Board Member

- Serve on the board of directors for Dance Data Project, a non-profit organization featured by the *NYT* that "promotes equity in all aspects of classical ballet by providing metrics-based analysis".

Final Bow for Yellowface / Gold Standard Arts Foundation | Houston, TX **2021 - 2023**
Research Collaborator

- Involved in IRB-approved, survey-based research for Final Bow for Yellowface and their non-profit organization dedicated to promoting the visibility of Asian Americans and Pacific Islanders in dance.

Data Pointes | Pittsburgh, PA **2019 - 2023**
Founder / Writer

- Created a data-driven ballet consulting organization analyzing patterns in training, diversity, and hiring; launched app visualizing common trajectories for ballet dancers.

City Ballet of Houston | Houston, TX **2014 - 2017**
Artist in Residence

- Performed as the lead artist in outreach shows at Jones Hall (Greater Houston Youth Nutcracker) for Houston public school systems; outreach shows integrate inner city youths into the performance and award dance scholarships to promising children.

Tulsa Ballet | Tulsa, OK **2012 - 2014**
Full-Time Second Company Performer

- Performed in shows with the critically acclaimed company including outreach shows and teaching events for children from the Tulsa public school system.

Awards

College of American Pathologists Medical Student Travel Award – 2023
Graduate School of Biological Sciences Associates Travel Award – 2023
UTMB WE Summit Top Student Researcher Awardee – 2022
Carl J. Herzog Endowment for the MD/PhD Program Awardee – 2022
Delta Omega Honorary Society in Public Health – based on "outstanding scholarship in students" – 2020
Valentina Kozlova International Ballet Competition Semi-Final New Orleans – Bronze medal – 2015
Valentina Kozlova International Ballet Competition Finals New York – Awarded New Jersey Ballet Contract (one of four recipients of a corps company job contract) – 2015
World Ballet Competition – an international competition with competitors from 32 countries – 3rd Place Pas De Deux Division – 2015

Committee Responsibilities

UTMB Pathology Association for Students – Vice President – 2022, 2023
UTMB SOM Student Ambassador – Member – 2022, 2023
Dance Data Project – Board Member (Treasurer) – 2021, 2022, 2023
St. Vincent's Student Clinic - Steering Committee Member (Logistics and Smoking Cessation Programming) - 2020
Public Health Premedical Organization – President – 2020
CrunchME – Volunteer – 2023