Kenneth Lee

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EDUCATION

Duke-NUS, Center for Quantitative Medicine, Singapore — Aug 2020 – May 2024 (Expected)
Doctor of Philosophy (PhD), Biostatistics
Committee: Dr. Roger Vaughan (Chair), Dr. Cheung Yin Bun (Advisor), Dr. Bibhas Chakraborty, Dr. Li Jialiang

Vassar College, Poughkeepsie, NY — Aug 2014 – May 2018
Bachelor of Arts, Neuroscience

WORK EXPERIENCE

Graduate Researcher — Aug 2020 – Present
Duke-NUS, Center for Quantitative Medicine, Singapore
Supervisor: Dr. Cheung Yin Bun

- Evaluating time-varying intervention effects in Cluster Randomized Trials, fixed effects models for the analysis of Stepped-Wedge Cluster Randomized Trials, and developing methods to control for bias in Self-Controlled Case Series.

Biostatistician (part-time) — Jan 2022 – Jul 2022
Singapore Clinical Research Institute, Singapore
Supervisor: Dr. Mihir Gandhi

- Reviewed statistical analysis plans for randomized clinical trials exploring the effects of continuous glucose monitoring on diabetes (GLiMPSE) and aspirin on colorectal cancer (ASCOLT).
- Used SAS to generate and analyze ADaM datasets for data collected from a randomized longitudinal study of continuous glucose monitoring in the management of diabetes.

Bioinformatician (part-time) — Dec 2021 – Feb 2023
Treat Therapeutics, Singapore

- Interpreted microbiome sequencing results following 16s rRNA sequencing of canine fecal matter
- Developed a straight-to-consumer report generating pipeline using Bioconductor in R.
- Performed pathway analysis with Picrust2.
- Used Differential Analysis to explore the effect of different probiotic treats on the canine gut microbiome.
- Created a comparative scoring system to compare canine gut microbiome composition.

Research Associate — Jul 2018 – Jul 2020
Neuroscience Institute, NYU Langone Health, New York, NY
Supervisor: Dr. James Salzer

- Studied the role of MYPT1 in the assembly of the axon initial segment in mouse layer V pyramidal neurons.
- Modelled the effect of demyelinating drugs on myelination in the mouse corpus collosum in R.

ADDITIONAL EXPERIENCE

Biostatistics Trainee — Aug 2020 – Present
Summer Institute for Training in Biostatistics (SIBS), Emory University, Atlanta, GA
Supervisors: Dr. Reneé Moore, Dr. Lance Waller, Dr. Ixavier Higgins, Dr. Raphiel Murden, Dr. Andrea Lane

- Performed three collaborative research studies incorporating modelling and survival analysis methods in R and SAS to analyze the efficacy of two sleep apnea treatments and to identify biomarkers of chronic kidney disease.

Undergraduate Thesis Researcher — Jan 2022 – Jul 2022
Department of Neuroscience, Vassar College, Poughkeepsie, NY
Supervisors: Dr. Kevin Holloway, Dr. Kelli Duncan

- Collected and evaluated data on the role of steroid hormones in response to traumatic brain injury in the Japanese quail brain using R.

Biostatistics Trainee Dec 2021 – Feb 2023
Department of Neuroscience, Vassar College, Poughkeepsie, NY
Supervisor: Dr. Justin Touchon

- Compared different models in R for identifying the effects of flexible hatching timing and other covariates on red-eyed tree frog embryos and subsequent phenotype development of tadpoles.

Undergraduate Summer Researcher Jul 2018 – Jul 2020
Department of Neuroscience and Cell Biology, Rutgers-RWJMS, New Brunswick, NJ
Supervisors: Dr. Long-Jun Wu, Dr. Ukpong Eyo

- Identified and presented findings on the role of the microglia P2Y12 receptor in neuroprotection, seizure intensity and microglia development.

PUBLICATIONS

1. Mobley, A, … , **Lee, K. M.**, … Syndemic profiles of incarcerated men living with HIV in Malaysia transitioning back to the community: A Latent Class Analysis. (in progress; submitting to *AIDS and Behavior*)

2. **Lee, K. M.**, Yang, G. M., & Cheung, Y. B. Inclusion of unexposed clusters improves the precision of fixed effects analysis of stepped-wedge cluster randomized trials with binary and count outcomes. (under review, *Journal of Biopharmaceutical Statistics*)

3. **Lee, K. M.** & Cheung, Y. B. Cluster Randomized Trial designs for modelling time-varying intervention effects (under review, *Statistics in Medicine*)

4. **Lee, K. M.** & Cheung, Y. B. Partitioned analysis reduces bias in self-controlled case series with recurrent events and event dependence (under review, *Statistics in Medicine*)

5. **Lee, K. M.** (2023) Boxing with George EP Box. *Significance*. (online article; in press)

6. **Lee, K. M.**, Ma, X., Yang, G. M., & Cheung, Y. B. (2022). Inclusion of unexposed clusters improves the precision of fixed effects analysis of stepped-wedge cluster randomized trials. *Statistics in Medicine*, 41(15), 2923-2938. [https://doi.org/10.1002/sim.9394]

7. Arndtsen, C., Ballon, J., Blackshear, K., Corbett, C. B., **Lee, K.**, Peyer, J., ... & Duncan, K. A. (2019). Atypical gene expression of neuroinflammatory and steroid related genes following injury in the photoperiodic Japanese quail. *General and comparative endocrinology*, 288, 113361-113361. [https://doi.org/10.1016/j.ygcen.2019.113361]

PRESENTATIONS

1. **Lee, K. M.**, Cheung Y. B. (2023, September). Robust Monitoring of Vaccine and Drug Safety using the Self-Controlled Case Series. Poster presentation at the SingHealth Duke-NUS Scientific Conference 2023, Singapore.

2. **Lee, K. M.**, Cheung Y. B. (2023, September). Cutting the Gordian Knot: Partitioned Analysis of Self Controlled Case Series of non-rare recurrent events. Oral presentation at the Royal Statistical Society International Conference 2023, Harrogate, England.

3. **Lee, K. M.** (2023, September). Boxing with George Box. Oral presentation at the Royal Statistical Society International Conference 2023, Harrogate, England.

4. **Lee, K. M.**, Poh, Z. W., Yeung K. F. (2022, February). Monitoring of treatment response in metastatic colorectal cancer patients with cfDNA. Oral presentation at the Duke-NUS PhD Student Research Symposium, Duke-NUS, Singapore.

5. Hiatt, K., Hu, M., **Lee, K. M.**, Tumasian III, R., Vega, S. (2018, July). Investigating Biomarkers of Kidney Function II. Oral presentation at the Summer Institute for Training in Biostatistics (SIBS), Emory University, Atlanta, GA.

6. Anderson, A., **Lee, K. M.**, Ling, S., Polani, A., Wang, A. (2018, July). Investigating Biomarkers of Kidney Function. Oral presentation at the Summer Institute for Training in Biostatistics (SIBS), Emory University, Atlanta, GA.

7. Holloway, J., **Lee, K. M.**, Ling, S., Struzeski, J. (2018, June). Comparing Caregiver Ratings for Behavior Responses of Children with Sleep Apnea. Oral presentation at the Summer Institute for Training in Biostatistics (SIBS), Emory University, Atlanta, GA.

8. **Lee, K. M.**, Corbett, C. (2017, November). Effect of Photoperiod and Brain Injury on Aromatase Expression in Japanese Quail. Poster presentation at the Society for Neuroscience (SFN) Undergraduate Research Poster Session, Washington D.C.

9. **Lee, K. M.**, Corbett, C. (2017, September). Comparative Analysis of Steroid Mediated Neuroprotection Across Vertebrates. Oral presentation at Undergraduate Research Summer Institute Symposium (URSI), Vassar College, Poughkeepsie, NY.

10. **Lee, K. M.** (2016, August). The Role of the P2Y12 Receptor in Microglial Development. Oral presentation at the Summer Undergraduate Research Program (SURP) in Neuroscience, Rutgers-Robert Wood Johnson Medical School, New-Brunswick, NJ.

HONORS & AWARDS

(Finalist) Royal Statistical Society 2023 Statistical Excellence Award for Early-Career Writing	June 2023
(1st Place) Duke-NUS 2022 PhD Student Research Symposium	Feb 2022
Khoo Pre-Doctoral Fellowship	Aug 2020
Departmental Honors in Neuroscience	May 2018
Olive M. Lammert Book Prize	May 2015

ADDITIONAL TRAINING

NYU School of Professional Studies, *New York, NY* Oct 2019 – May 2020

- Completed Advanced Python, Data Visualization for Business, The Art of Data Visualization.

VOLUNTEER EXPERIENCES

Statistics Without Borders Aug 2019 – Feb 2020

Supervisor: Dr. Janet Raboud

- Used R to characterize, clean, map, and visualize data collected from free-text fields on the Statistics Without Borders membership survey.

TECHNICAL SKILLS

R, SAS, Python, LaTeX