Young Joon Kim

CONTACT INFORMATION

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RESEARCH INTERESTS

Computational neuroscience, neural encoding/decoding, reinforcement learning, statistics for healthcare policy, history of medicine and healthcare

EDUCATION

Harvard Medical School, Boston, MA

M.D. Candidate (expected graduation date: May 2026)

University of Cambridge, Cambridge, UK

M.Phil., Engineering, August, 2021

Columbia University, New York, NY

B.A., Biology, May, 2020 (GPA: 4.11/4.00)
Concentration, Statistics, May, 2020

HONORS AND AWARDS

Marshall Scholarship (NY District), 2019
Rhodes Scholarship Finalist (NY District), 2019
Barry M. Goldwater Scholarship, 2019

Columbia University
Junior Phi Beta Kappa, 2020
Summa Cum Laude, 2020
I. I. Rabi Scholarship, 2016

Columbia Venture Competition (2nd Place), 2018
Empire State Opioid Innovation Challenge (Finalist), 2018
Columbia University Opioid Challenge (Winner), 2017

RESEARCH EXPERIENCE

Computational & Biological Learning Group, Cambridge, UK **Aug. 2020 - Sep. 2021**

- Develop the first dendritic computational model that simultaneously captures dendritic spikes, backpropagation potentials, and electrical compartmentalization for characterizing neuronal input-output function

Center for Theoretical Neuroscience, New York, NY **Aug. 2019 - Aug. 2020**

- Built the first, state-of-the-art nonlinear retinal ganglion cell decoder for natural scene images via neural networks
- *First author manuscript in review for journal publication*

Dana Farber Cancer Institute, Boston, MA **May 2018 - Aug. 2019**

- Elucidated the synthetic lethal targeting of *IKZF1*/IKAROS with lenalidomide in combination with either Menin or DOT1L inhibition in human *MLL*-transformed leukemias

Memorial Sloan Kettering Cancer Center, New York, NY **May 2014 - Apr. 2018**

- Helped identify convergent downstream effects of spliceosomal gene mutations that caused synthetic lethality

- Characterized *SRSF2* point mutations in both murine and human hematopoiesis and demonstrated E7107 to be a potential inhibitor for splicing-mutant leukemias

Publications in preparation

Kim, Y. J., et al.. Nonlinear decoding of natural scenes from primate retinal ganglion responses. bioRxiv 2020.09.07.285742 (*In Review*)

Lee, J. et al. YASS: Yet Another Spike Sorter applied to large-scale multi-electrode array recordings in primate retina. bioRxiv 2020.03.18.997924 **[Co-author]** (*In Review*)

Publications

Lee, S. C.-W. et al. Synthetic Lethal and Convergent Biological Effects of Cancer-Associated Spliceosomal Gene Mutations. Cancer Cell 34, 225-241.e8 (2018). **[Co-author]**

Kim, Y. J. & Abdel-Wahab, O. Therapeutic targeting of RNA splicing in myelodysplasia. Seminars in Hematology 54, 167173 (2017).

Kim, Y. J., Kim, K. & Lee, S. The rise of technological unemployment and its implications on the future macroeconomic landscape. Futures 87, 19 (2017).

Lee, S. C.-W. et al. Modulation of splicing catalysis for therapeutic targeting of leukemia with mutations in genes encoding spliceosomal proteins. Nat Med 22, 672678 (2016). **[Co-author]**

Oh, D. S., **Kim, Y. J.**, Hong, M.-H., Han, M.-H. & Kim, K. Effect of capillary action on bone regeneration in micro-channeled ceramic scaffolds. Ceramics International 40, 95839589 (2014). **[Joint 1st author]**

Leadership Experience

Kenzo Labs, Inc., Co-Founder, CEO

Columbia University Organizations
Columbia Science Review, *Editor-in-Chief*
Department of Biological Sciences, *Teaching Assistant*
Community Impact Student Executive Board
Table Tennis Club, *Vice President*
Road Runners, *Race Coordinator*
Habitat for Humanity, *Special Builds Coordinator*

Skills

Languages: Fluent in English and Korean, Proficiency in Latin
Technical Skills: Fluent in Python, MATLAB, R, PyTorch, and molecular biology techniques
Other Activities and Interests: Cross-country running, Classical violin, Electronic music production