JULIAN W. LANDAW, M.D., Ph.D.

Anesthesiologist, Brigham and Women's Hospital
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Employment History

07/2025 – **Attending Anesthesiologist**
Brigham and Women's Hospital, Boston, MA

Education

06/2022 – 06/2025 **Residency**, Anesthesiology
Brigham and Women's Hospital, Boston, MA
Expected Graduation June 2025

06/2021 – 06/2022 **Internship**, Internal Medicine
Brigham and Women's Hospital, Boston, MA

06/2013 – 06/2021 **M.D.**
University of California, Los Angeles
UCLA-Caltech Medical Scientist Training Program (MSTP)

06/2015 – 04/2019 **Ph.D.**, Biomathematics
University of California, Los Angeles
Thesis title: *Cardiac Memory in the Genesis of Arrhythmias*

07/2008 – 09/2012 **B.A.**, Majors in Mathematics and Statistics
University of California, Berkeley
Highest Honors, Major GPA 4.0

Training Grants

2013 – 2015, 2019 – 2021 UCLA-Caltech Medical Scientist Training Program (T32 Gm008082)
UCLA David Geffen School of Medicine and Caltech

2018 – 2021 NIH National Heart, Lung, and Blood Institute (NHLBI) NRSA Service Award for Individual Predoctoral MD/PhD Degree Fellows (F30 HL140846)
Project Title: *Arrhythmogenic Mechanisms in Brugada Syndrome*
URL: https://reporter.nih.gov/project-details/9611280

2016 – 2018 UCLA Systems and Integrative Biology Training Program (T32 Gm008185)

Honors and Awards

2023 Best Talk in the "Brigham Anesthesia Kudos Series," organized by Dr. Grace Kim, MD
Title: *A Story of MAC to VA-ECMO*
Brigham and Women's Hospital, Boston, MA

2022 Dunne Award
Awarded to medical intern(s) by their peers for their compassion and dedication to patient care
Brigham and Women's Hospital, Boston, MA

2017 UCLA Graduate Division Award
University of California, Los Angeles

2012 Dorothea Klumpke Roberts Prize
For truly exceptional scholarship in mathematics
University of California, Berkeley

Honors and Awards (continued)

- Phi Beta Kappa
  University of California, Berkeley

2008 – 2012

- UC Berkeley Dean's List
  University of California, Berkeley
- UC Berkeley Department of Mathematics Honors Program
  University of California, Berkeley

Research Publications

PhD Thesis

1. **J. W. Landaw**, "Cardiac memory in the genesis of arrhythmias," Ph.D. dissertation, University of California, Los Angeles, 2019. URL: https://escholarship.org/uc/item/49z2b34v.

Journal Articles

1. X. Wang, **J. Landaw**, and Z. Qu, "Intracellular ion accumulation in the genesis of complex action potential dynamics under cardiac diseases," *Physical Review E*, vol. 109, no. 2, p. 024 410, 2024. DOI: 10.1103/PhysRevE.109.024410.
2. **J. Landaw**, X. Yuan, P.-S. Chen, and Z. Qu, "The transient outward potassium current plays a key role in spiral wave breakup in ventricular tissue," *American Journal of Physiology-Heart and Circulatory Physiology*, vol. 320, no. 2, H826–H837, 2021. DOI: 10.1152/ajpheart.00608.2020.
3. C. Huang, Z. Song, **J. Landaw**, and Z. Qu, "Spatially discordant repolarization alternans in the absence of conduction velocity restitution," *Biophysical journal*, vol. 118, no. 10, pp. 2574–2587, 2020. DOI: 10.1016/j.bpj.2020.02.008.
4. **J. Landaw** et al., "Small-conductance Ca^{2+}-activated K^+ channels promote J-wave syndrome and phase 2 reentry," *Heart rhythm*, vol. 17, no. 9, pp. 1582–1590, 2020. DOI: 10.1016/j.hrthm.2020.04.023.
5. **J. Landaw** and Z. Qu, "Bifurcations caused by feedback between voltage and intracellular ion concentrations in ventricular myocytes," *Physical review letters*, vol. 123, no. 21, p. 218 101, 2019. DOI: 10.1103/PhysRevLett.123.218101.
6. **J. Landaw** and Z. Qu, "Control of voltage-driven instabilities in cardiac myocytes with memory," *Chaos: An Interdisciplinary Journal of Nonlinear Science*, vol. 28, no. 11, p. 113 122, 2018. DOI: 10.1063/1.5040854.
7. **J. Landaw** and Z. Qu, "Memory-induced nonlinear dynamics of excitation in cardiac diseases," *Physical Review E*, vol. 97, no. 4, p. 042 414, 2018. DOI: 10.1103/PhysRevE.97.042414.
8. **J. Landaw**, A. Garfinkel, J. N. Weiss, and Z. Qu, "Memory-induced chaos in cardiac excitation," *Physical review letters*, vol. 118, no. 13, p. 138 101, 2017. DOI: 10.1103/PhysRevLett.118.138101.
9. **J. Landaw**, A. Garfinkel, J. N. Weiss, and Z. Qu, "Transient outward potassium current and its arrhythmogenic dynamics in cardiac myocytes," *Biophysical Journal*, vol. 110, no. 3, 272a, 2016. DOI: 10.1016/j.bpj.2015.11.1479.
10. T. Radivoyevitch, L. Hlatky, **J. Landaw**, and R. K. Sachs, "Quantitative modeling of chronic myeloid leukemia: Insights from radiobiology," *Blood, The Journal of the American Society of Hematology*, vol. 119, no. 19, pp. 4363–4371, 2012. DOI: 10.1182/blood-2011-09-381855.

Conference Proceedings

1. **J. Landaw**, "Modeling the genesis of arrhythmias," in *UCLA-Caltech Medical Scientist Training Program (MSTP) Annual Research Conference*, Los Angeles, California, 2019.
2. **J. Landaw** and Z. Qu, "Mechanisms of arrhythmias caused by small conductance calcium-activate potassium current (I_{SK}) in early repolarization syndrome," in *UCLA Cardiovascular Symposium*, Los Angeles, California, 2018.

3. **J. Landaw** and Z. Qu, "Mechanisms of arrhythmias caused by small conductance calcium-activate potassium current (I_{SK}) in early repolarization syndrome," in *The Heart By Numbers: Integrating Theory, Computation and Experiment to Advance Cardiology. Organized by the Biophysical Society (BPS), the Max Delbruck Center for Molecular Medicine Berlin, the German Center for Cardiovascular Diseases (DZHK), and the Berlin Institute of Health*, Berlin, Germany, 2018.

4. **J. Landaw**, A. Garfinkel, J. N. Weiss, and Z. Qu, "Transient outward potassium current and its arrhythmogenic dynamics in cardiac myocytes," in *Biophysical Society 60th Annual Meeting*, Los Angeles, California, 2016.

5. T. Radivoyevitch, L. Hlatky, **J. Landaw**, and R. K. Sachs, "Modeling chronic myeloid leukemia (CML) mathematically: Insights from radiobiology," in *National Cancer Institute, Integrative Cancer Biology Program NCI-ICBP Mathematical Modeling Meeting*, Tampa, Florida, 2012.

6. K. Harmon, **J. Landaw**, J. Miller, and N. Ranu, "Analyzing biological systems under an optical trap," in *National Cancer Institute, Physical Sciences-Oncology Center Meeting, Bay Area Physical Sciences-Oncology Center Site Visit*, 2010.

Teaching Experience

02/2025 — Resident Didactics Lecturer
Lectured senior residents in anesthesiology at Brigham and Women's Hospital preparing for board examinations
Brigham and Women's Hospital, Boston, MA

2023 – 2024 — Resident Didactics Lecturer
Lectured first year residents in anesthesiology at Brigham and Women's Hospital
Brigham and Women's Hospital, Boston, MA

2016 – 2018 — Instructor for Problem-Based Learning (PBL)
Prepared for and facilitated discussion of case-based scenarios for first-year medical students during their first two months of medical school
David Geffen School of Medicine at University of California, Los Angeles

2014 – 2016 — Student Organizer of Experimental Statistics in Medicine Selective
Co-founding member of course teaching statistics to first and second year medical students
Taught basic programming in R and bootstrapping methods for analyzing clinical data
David Geffen School of Medicine, University of California, Los Angeles

RAP/PREP MCAT Instructor
Taught MCAT biology to disadvantaged students and students reapplying for medical school
David Geffen School of Medicine, University of California, Los Angeles

2013 — Grader for upper-division course. Instructor: Dr. Per-Olof Persson
Second semester course in Numerical Analysis
Graded homework for over 33 students
Department of Mathematics, University of California, Berkeley

2012 — Grader for lower-division course. Instructor: Dr. Mira Peterka
Second semester course in Calculus
Graded homework for over 30 students
Department of Mathematics, University of California, Berkeley

Grader for upper-division course. Instructor: Dr. Eliana Hechter
Course titled "Mathematical and Computational Methods in Molecular Biology"
Graded homework for over 30 students
Department of Mathematics, University of California, Berkeley

Skills

Languages — English, proficient in French

Coding — Extensive experience in C, C++, CUDA, Python, R, MATLAB, LaTeX, HTML, JavaScript

Skills (continued)

Mathematics — Mathematical and Computational Biology, Nonlinear Dynamics and Chaos, Numerical Analysis, Differential Equations, Partial Differential Equations, Probability, Statistics, Stochastic Processes

Hobbies and Other Activities

Chess

- FIDE (World Chess Federation) Master
- National Master
- Winner of multiple internationally ranked tournaments, including the American Open in 2011 and the Denker Tournament of High School Champions in 2008