RICHARD LIPKIN, BA, MPH, PHD

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github.com/richlipkin linkedin.com/in/richlipkin

EXPERIENCE

Machine Learning Fellow
Fellowship.ai

October 2018 – Ongoing New York, NY

- Worked directly with the Medical Director of Grossman Burn Center to develop a burn image classification app for first responders
- Published blog post on findings
- Created datasets, managed model pipelines, presented ML results
- Researched attention and object localization mechanisms for neural network-based vision tasks
- Contributed to improvements in platform.ai engine and fastai library
- >140 GitHub commits

Scientific Writer, Editor
Multiple International Firms and Journals

July 2011 – Ongoing New York, NY

- Contractees include: Edanz Group Global, Liwen Bianji, Cactus Communications, and Hong Kong Medical Journal
- Provide writing services and edit papers written in English by international scientists in various fields

PhD Candidate, Adjunct Lecturer
City College of New York

September 2013 – January 2018 New York, NY

- Research and programming of computational molecular simulations on pore formation in membranes by antimicrobial peptides
- First author of 4 peer-reviewed publications
- Wrote successful proposals for 2 competitive grants
- Teaching assistant for undergraduate chemistry courses

Data Analyst, Biostatistician, Scientific Writer
Columbia Lyme and Tick-Borne Diseases Research Center

June 2007 – August 2013 New York, NY

- PET, fMRI, and neuropsychiatric research on patients with chronic Lyme disease
- Programmed new data analysis methods
- Coauthored a peer-reviewed publication

Assistant Research Scientist
Columbia University Dept. of Neuropathology and Molecular Imaging

August 2011 – January 2013 New York, NY

- Developed AI-based automation technology for dendrite/spine tracing
- Performed imaging and analysis of individual neurons
- Immunohistochemical and neuropathological analysis of New York Brain Bank specimens
- Coauthored a peer-reviewed publication

EDUCATION

PHD, MPH, CHEMISTRY
City University of New York

Sept 2013 – Jan 2018

- Research area: Computational Molecular Biophysics; Subdiscipline: Nanotechnology
- Thesis title: "Computational investigation of the pore formation mechanism of beta-hairpin antimicrobial peptides"

BA, PSYCHOLOGY, MUSIC
Columbia University in the City of New York

Sept 2000 – May 2005

- Concentration: Chemistry
- I. I. Rabi Science Scholar

PUBLICATIONS

Online Articles

- Baumgartner C Lipkin R, Grossman P (2019). *Classifying burn depth*. URL: https://platform.ai/blog/page/6/classifying-burn-depth/.

Journal Articles

- Lipkin R, Lazaridis T (2017a). "Computational prediction of the optimal oligomeric state for membrane-inserted beta-barrels of protegrin-1 and related mutants". In: *Journal of Peptide Science* 23 (4), pp. 334–45. DOI: DOI10.1002/psc.2992.
- – (2017b). "Computational studies of peptide-induced membrane pore formation". In: *Philosophical Transactions of the Royal Society B* 372 (1726), Epub. DOI: 10.1098/rstb.2016.0219.
- Lipkin R Pino Angeles A, Lazaridis T (2017). "Transmembrane pore structures of beta-hairpin antimicrobial peptides by all-atom simulations". In: *Journal of Physical Chemistry B* 121 (3), pp. 9126–40. DOI: 10.1021/acs.jpcb.7b06591.
- Lipkin R, Lazaridis T (2015a). "Implicit membrane investivation of the stability of antimicrobial peptide beta-barrels and arcs". In: *Journal of Peptide Science* 23 (4), pp. 334–45. DOI: DOI10.1002/psc.2992.
- GB, Rosoklija et al. (2014). "Reliable and durable Golgi Staining of brain tissue from human autopsies and experimental animals". In: *Journal of Neuroscience Methods* 230, pp. 20–9. DOI: 10.1016/j.jneumeth.2014.04.006.

EXPERIENCE

Brain Imaging Technician, Data Manager

Research Foundation for Mental Hygiene, Dept. of Geriatric Psychiatry

June 2005 – May 2009 New York, NY

- Performed biological psychiatry studies and brain image analysis
- Radiotracer synthesis experiments in a radiochemistry laboratory setting
- Managed several large-scale brain imaging datasets

Structural Biology Laboratory Technician

New York Structural Biology Center

August 2006 – October 2007 New York, NY

- High-throughput studies of gene and protein expression
- Purified DNA and proteins; conducted crystallization trials
- Programmed robots to execute high-throughput wet biology

Personality Psychology Research Intern

Columbia University Motivation Sciences Center

May 2002 – August 2003 New York, NY

- Primary researcher for a psychology scale development study
- Administered survey to subjects, data analysis, and regression

Polymer Photochemistry Research Intern

Columbia University Department of Chemistry

May 2001 – August 2001 New York, NY

- Synthesis and testing to investigate photopolymeric activation and recombination of a potential polymer center label

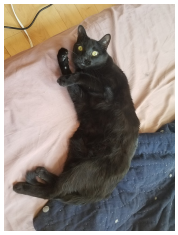
Director of Operations and Engineering, Director of Development and Business

WKCR-FM Radio

January 2002 – August 2003 New York, NY

- As Director of Operations and Engineering, maintained station equipment and physical plant and acted as lead broadcast engineer
- Provided engineering training and licenses to all new programmers; wrote station broadcast manual that is still used today
- As Director of Development and Business, managed fundraising, development projects, payroll, personnel, and budgeting

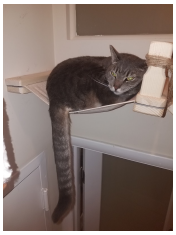
CATS



(a) Terrance II

(b) Rousey II

(c) Connie



(d) Jaegar

PUBLICATIONS

Journal Articles

- Fallon BA, Lipkin R et al. (2009). "Regional Cerebral Blood Flow and Metabolic Rate in Persistent Lyme Encephalopathy". In: *Archives of General Psychiatry* 66 (5), pp. 554–63. DOI: 10.1001/archgenpsychiatry.2009.29.

Conference Proceedings

- Lipkin R, Lazaridis T (2015b). "Mechanism of action of beta-hairpin antimicrobial peptides". In: *Biophysical Journal 108(2) Supp 1*, 547a. DOI: 10.1016/j.bpj.2014.11.3003.

GRANTS

The membrane-bound structure of fusion loops of the Ebola virus envelope glycoprotein
National Science Foundation RAPID #1515890, January 2015 – December 2016

Potentials of Mean Force of Protegrin-1 Oligomerization and Membrane Insertion
XSEDE National Supercomputing Resource Grant #MCB160098, June 2016 — June 2017

SKILLS

Machine Learning | Data Science | Publishing | Scientific Editing | Computational Chemistry | Biomedical Imaging | Psychology | Blockchain

Python | C++ | SQL | Statistical Analysis | Cloud Computing | UNIX/LINUX | GitHub

LANGUAGES

English ●●●●●

Spanish ●●●●○

BUSINESS

SciTechServ Enterprises
President and Founder; 2009–Present

- Data analysis, management, editing, and publishing services for scientists
- Cryptocurrency mining, masternode operations
- Algorithmic trading
- Quantitative and strategic research for blockchain/digital asset venture capital organizations
- Can work under B2B contract arrangement