Alexander R. Nectow, MD PhD

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ACADEMIC APPOINTMENTS

2019 - Present **Columbia University,** Department of Medicine • New York, NY
Principal Investigator, Nectow Lab

2016 - 2019 **Princeton University,** Princeton Neuroscience Institute • Princeton, NJ
CV Starr Fellow, Associate Research Scholar
Principal Investigator, Nectow Lab

CLINICAL APPOINTMENTS

2025 - Present **NewYork-Presbyterian Hospital,** Columbia University • New York, NY
Assistant Attending Physician, Cardiology

EDUCATION

2017 - 2020 **Columbia University,** College of Physicians and Surgeons • New York, NY
MD, 3-Year PhD-MD Program

2011 - 2015 **The Rockefeller University,** Molecular Genetics • New York, NY
PhD, Neuroscience; Advisor: Prof. Jeffrey Friedman

2007 - 2011 **Tufts University,** School of Engineering • Medford, MA
BS, Engineering Science, *magna cum laude*
MS, Biomedical Engineering; Advisor: Prof. David Kaplan

TRAINING

2022 - 2025 **NewYork-Presbyterian Hospital,** Columbia University • New York, NY
Fellow, Cardiology (Research Track)

2020 - 2022 **NewYork-Presbyterian Hospital,** Columbia University • New York, NY
Resident, Internal Medicine (Clinician-Scientist Pathway)

CLINICAL LICENSURE AND BOARD CERTIFICATION

2025 **Board Certification,** Cardiovascular Disease
American Board of Internal Medicine

2024 **Medical License**
New York State, USA

2023 **Board Certification,** Internal Medicine
American Board of Internal Medicine

AWARDS AND HONORS

2026 Louis V. Gerstner Jr. Scholar Award, Columbia University

2026 Glorney-Raisbeck Junior Faculty Research Award in Cardiovascular Diseases, New York Academy of Medicine

2025 Emerging-Generation Award, American Society for Clinical Investigation

2020 Blue Flame Depositor Award, Addgene

2020 Titus Munson Coan Prize, College of Physicians and Surgeons, Columbia University

2018 Pathway to Stop Diabetes Accelerator Award, American Diabetes Association

2017 NARSAD Young Investigator, Brain and Behavior Research Foundation

2017 Dean's Scholarship, College of Physicians and Surgeons, Columbia University

2016 Innovation Fund Award, Princeton Neuroscience Institute, Princeton University

2016 CV Starr Fellowship, Princeton Neuroscience Institute, Princeton University

2016 Salk Helmsley Fellowship, Salk Institute for Biological Studies (*declined*)

2014 Finalist, Collegiate Inventors Competition

2014 David Rockefeller Fellowship, The Rockefeller University

KEY PUBLICATIONS

(*denotes equal contribution; [#]denotes correspondence)

2026 Nachiket G. Kamatkar*, Srikanta Chowdhury*, Ethan Kushnerik, Amajindi Nwankpa, Jing Liu, Hao Huang, Lea Duncker, Stephen X. Zhang, **Alexander R. Nectow[#]**. "Meal Initiation is a Stochastic Process Regulated by Brainstem GABA Neurons," *Submitted*.

2025 Srikanta Chowdhury*, Nachiket G. Kamatkar*, Wendy X. Wang*, Christa A. Akerele, Jiahao Huang, Junlin Wu, Charlotte M. Kane, Varun M. Bhave, Hao Huang, Xiao Wang, **Alexander R. Nectow[#,##]**. "Brainstem Neuropeptidergic Neurons Link a Neurohumoral Axis to Satiation," *Cell* **188**, 1563-1579. ([##]Lead contact)

2019 Marc Schneeberger[#,]*, Luca Parolari*, Tania Das Banerjee*, Varun Bhave, Putianqi Wang, Thomas Topilko, Bindiben Patel, Zhuhao Wu, Chan Hee J. Choi, Paul Cohen, Nicolas Renier, Jeffrey M. Friedman[#], **Alexander R. Nectow[#,##]**. "Regulation of Energy Expenditure by Brainstem GABA Neurons," *Cell* **178**, 672-685. ([##]Lead contact)

2017 **Alexander R. Nectow**[#], Marc Schneeberger, Hongxing Zhang, Bianca C. Field, Nico Renier, Estefania Azevedo, Bindiben Patel, Yupu Liang, Siddhartha Mitra, Marc Tessier-Lavigne, Ming-Hu Han, Jeffrey M. Friedman[#]. "Identification of a Brainstem Circuit Controlling Feeding," *Cell* **170**, 429-442.

2017 **Alexander R. Nectow**[#], Maria V. Moya, Mats I. Ekstrand, Awni Mousa, Kelly L. McGuire, Caroline E. Sferrazza, Bianca C. Field, Gabrielle S. Rabinowitz, Kirsty Sawicka, Yupu Liang, Jeffrey M. Friedman, Nathaniel Heintz[#], Eric F. Schmidt[#]. "Rapid Molecular Profiling of Defined Cell Types Using Viral TRAP," *Cell Reports* **19**, 655-667.

2014 Mats I. Ekstrand*, **Alexander R. Nectow***, Zachary A. Knight, Kaamashri N. Latcha, Lisa E. Pomeranz, Jeffrey M. Friedman[#]. "Molecular Profiling of Neurons Based on Connectivity," *Cell* **157**, 1230-1242.

OTHER PUBLICATIONS

(*denotes equal contribution; [#]denotes correspondence)

2025 **Alexander R. Nectow**[#]. "The Dorsal Raphe Nucleus and the Integrative Control of Feeding," *Diabetes* **74**, 1445-1451.

2022 Marc Schneeberger, Nicola L. Brice, Kyle Pellegrino, Luca Parolari, Jordan T. Shaked, Keith J. Page, Francois Marchildon, Douglas W. Barrows, Thomas S. Carroll, Thomas Topilko, Victoria M. Mulligan, Robert Newman, Kevin Doyle, Roland Burli, Daniel F. Barker, Angela Chan, Maria Jose Ortuno, **Alexander R. Nectow**, Nicolas Renier, Paul Cohen, Mark Carlton, Nathaniel Heintz, Jeffrey M. Friedman[#]. "Pharmacological Targeting of Glutamatergic Neurons Within the Brainstem for Weight Reduction," *Nature Metabolism* **4**, 1495-1513.

2021 Varun M. Bhave and **Alexander R. Nectow**[#]. "The Dorsal Raphe Nucleus in the Control of Energy Balance," *Trends in Neurosciences* **44**, 17-32.

2020 **Alexander R. Nectow**[#] and Eric J. Nestler[#]. "Viral Tools for Neuroscience," *Nature Reviews Neuroscience* **21**, 669-681.

2019 Efrain A. Ribeiro, **Alexander R. Nectow**, Mats I. Ekstrand, Lisa E. Pomeranz, Ja Wook Koo, Rosemary C. Bagot, Eric J. Nestler[#]. "Viral Labeling of Neurons Synaptically Connected to Nucleus Accumbens Somatostatin Interneurons," *PLoS One* **14**, e0213476.

2018 Hongxing Zhang, Dipesh Chaudhury, **Alexander R. Nectow**, et al. "Alpha1 and Beta3 Adrenergic Receptors Mediate Resilience to Social Stress," *Biological Psychiatry* **85**, 226-236.

2018 Marc Schneeberger*, Keith Tan*, **Alexander R. Nectow**, Luca Parolari, Caner Calgar, Estefania Azevedo, Zhiying Li, Ana Domingos, Jeffrey M. Friedman[#]. "Functional Analysis Reveals Differential Effects of Glutamate and MCH Neuropeptide in MCH Neurons," *Molecular Metabolism* **13**, 83-89.

2017 Malavika Murugan, H.J. Jang, Michelle Park, Ellia Miller, Julia Cox, Hee Jae Jang, Joshua Taliaferro, N.F. Parker, Varun Bhave, Hong Hur, Yupu Liang, **Alexander R. Nectow**, Jonathan W. Pillow, Ilana B. Witten[#]. "Combined Social and Spatial Coding in a Descending Projection from the Prefrontal Cortex," *Cell* **171**, 1663-1667.

2016 Sarah A. Stanley, Leah Kelly, Kaamashri N. Latcha, Sarah F. Schmidt, Xiaofei Yu, **Alexander R. Nectow**, Jeremy Sauer, Jonathan P. Dyke, Jonathan S. Dordick, Jeffrey M. Friedman[#]. "Bidirectional Electromagnetic Control of the Hypothalamus Regulates Feeding and Metabolism," *Nature* **531**, 647-650.

2015 **Alexander R. Nectow[#]**, Mats I. Ekstrand, Jeffrey M. Friedman. "Molecular Characterization of Cell Types Based on Patterns of Projection," *Nature Protocols* **10**, 1319-1327.

2014 **Alexander R. Nectow**, Misha E. Kilmer, David L. Kaplan[#]. "Quantifying Cellular Alignment on Anisotropic Biomaterial Platforms," *Journal of Biomedical Materials Research: Part A* **102**, 420-428.

2013 Christoph Borgers[#] and **Alexander R. Nectow[#]**. "Exponential Time Differencing for Hodgkin-Huxley-like ODEs," *SIAM Journal on Scientific Computing* **35**, B623-B643.

2013 **Alexander R. Nectow**, Eun Seok Gil, David L. Kaplan, Misha E. Kilmer[#]. "A Statistical Algorithm for Assessing Cellular Alignment," *Journal of Biomedical Materials Research: Part A* **101**, 884-891.

2013 Dipesh Chaudhury*, Jessica J. Walsh*, Allyson K. Friedman, Barbara Juarez, Stacy M. Ku, Ja Wook Koo, Deveroux Ferguson, Hsing-Chen Tsai, Lisa Pomeranz, Daniel J. Christoffel, **Alexander R. Nectow**, et al. "Rapid Regulation of Depression-Related Behaviours by Control of Midbrain Dopamine Neurons," *Nature* **493**, 532-536.

2012 **Alexander R. Nectow**, Kacey G. Marra, David L. Kaplan[#]. "Biomaterials for the Development of Peripheral Nerve Guidance Conduits," *Tissue Engineering Part B: Reviews* **18**, 40-50.

ADVANCED COURSEWORK

2014 Microelectrode Techniques for Cell Physiology. Marine Biological Association. Plymouth, UK. September 2014.

FUNDING

2026 - 2029 Louis V. Gerstner Jr. Scholar Award, Columbia University

2026 - 2027 Glorney-Raisbeck Junior Faculty Research Award in Cardiovascular Diseases, New York Academy of Medicine

2022 - Present	Start-up Funds, Department of Medicine and Division of Cardiology, Columbia University
2021 - 2024	Obesity Initiative Award, Russell Berrie Foundation Research Initiative on the Neurobiology of Obesity, Columbia University
2021 - 2023	Pilot Award, New York Nutrition and Obesity Research Center, Columbia University
2018 - 2023	Pathway to Stop Diabetes Accelerator Award, American Diabetes Association
2018 - 2022	Innovative Basic Science Award, Core Program, American Diabetes Association
2017 - 2019	Investigator, Foundation for Prader-Willi Research

REVIEW WORK (*AD HOC*)

2019 - Present	Cell, Nature, Science, Nature Neuroscience, Nature Communications, Science Advances, Journal of Experimental Medicine, Molecular Metabolism, Molecular Psychiatry, Neuropharmacology