

COLM ATKINS

Phone: 205.703.6141
atkinsc@gmail.com, cpa53@rutgers.edu

EDUCATION

- PhD** University of Alabama at Birmingham, Biochemistry & Molecular Genetics 2014
- BA** University of Maryland, College Park, English Language & Literature 2007
- BS** University of Maryland, College Park, Cell Biology & Molecular Genetics 2007

RESEARCH POSITIONS

- **RUTGERS UNIVERSITY**
 - February 2019 – Present
 - Research Associate, Cell Biology & Neuroscience, Brian Daniels Lab
- **UNIVERSITY OF TEXAS MEDICAL BRANCH**
 - November 2014 - January 2019
 - Post-Doctoral Fellow, Department of Pathology, Alex Freiberg Lab
- **SOUTHERN RESEARCH INSTITUTE**
 - April 2014 - October 2014
 - Post-Doctoral Researcher, Biochemistry and Molecular Biology, Drug Discovery Division, James Noah Lab
- **UNIVERSITY OF ALABAMA AT BIRMINGHAM**
 - July 2007 – April 2014
 - Department of Biochemistry & Molecular Genetics, Doctoral Student, James Noah Lab

MENTORSHIP

- **Rutgers Mentorship:**
 - **Undergraduate Students:** Aisha Patel, Srijia Indukuri, Winnie Wong, Medha Krishnagari, Po-Lun Kung, Hahram Kim, Nick Panzera, Juan Angel, Ben Buckley, Sarah Adams, Micheal McCourt, Diego Prado, Emmanuel Worede-Kal
 - **Graduate Students:** Nydia Chang, Kimberly Newman, Tsui-Wen Chou, Marissa Lindman, Irving Estevez, Evan DaPrano
- **UTMB (incl. BSL-3 Training):**
 - **Graduate Students:** Corri Levine, Stephanie Foster, Kendra Johnson, Emma Mantlo, Christopher Read, Sarah van Tol, Nathan Bopp, Stephen Hallam, Jacob Nelson, Rachel Sattler.
 - **Postdoctoral Fellows:** Birte Kalveram, Preeti Bharaj.
 - **Faculty:** Ricardo Rajsbaum

1. **RIPK3 promotes neuronal survival by suppressing excitatory neurotransmission during CNS viral infection.** Irving Estevez, Benjamin D. Buckley, Nicholas Panzera, Marissa Lindman, Tsui-Wen Chou, Micheal McCourt, Brandon J. Vaglio, **Colm Atkins**, Bonnie L. Firestein, Brian P. Daniels. In Review. <https://www.biorxiv.org/content/10.1101/2024.04.26.591333v1>
2. **Neuronal DAMPs exacerbate neurodegeneration via astrocytic RIPK3 signaling.** Nydia Chang, Evan DaPrano, Wesley Evans, Marialaina Nissenbaum, Micheal McCourt, Diego Alzate, Marissa Lindman, Tsui-Wen Chou, **Colm Atkins**, Alexander Kusnecov, Rafiq Huda, Brian Daniels. In Review, JCI Insights, May 7, 2024. [10.1172/jci.insight.177002](https://doi.org/10.1172/jci.insight.177002).
3. **RIPK3 promotes brain region-specific interferon signaling and restriction of tick-borne flavivirus infection.** Marissa Lindman, Juan P Angel, Irving Estevez, Nydia P Chang, Tsui-Wen Chou, Micheal McCourt, **Colm Atkins**, Brian P Daniels. PLoS Pathogens. <https://doi.org/10.1371/journal.ppat.1011813>
4. **Tilorone-dihydrochloride protects against Rift Valley fever virus infection and disease in the mouse model.** Kendra N Johnson, Birte Kalveram, Jennifer K Smith, Lihong Zhang, Terry Juelich, **Colm Atkins**, Tetsuro Ikegami, Alexander N Freiberg. Microorganisms. 2021 Dec 31;10(1):92.
5. **Ubiquitination of Ebola virus VP35 at lysine 309 regulates viral transcription and assembly.** Sarah van Tol, Birte Kalveram, Philipp Ilinykh, Adam Ronk, Kai Huang, Leopoldo Aguilera-Aguirre, Preeti Bharaj, Adam Hage, **Colm Atkins**, Maria Giraldo, Maki Wakamiya, Alexander Bukreyev, Alexander Freiberg, and Ricardo Rajsbaum. PLOS Pathogens 18(5): e1010532.
6. **Zika virus-induced TNF- α signaling dysregulates expression of neurologic genes associated with psychiatric disorders.** Po-Lun Kung, Tsui-Wen Chou, Marissa Lindman, Nydia P. Chang, Benjamin D. Buckley, **Colm Atkins**, Brian P. Daniels. Journal of Neuroinflammation volume 19, Article number: 100 (2022)
7. **Nipah virus Bangladesh infection elicits organ-specific innate and inflammatory responses in the marmoset model.** Christian S. Stevens, Jake Lowry, Terry Juelich, **Colm Atkins**, Kendra Johnson, Jennifer K Smith, Maryline Panis, Tetsuro Ikegami, Benjamin tenOever, Alexander N. Freiberg, Benhur Lee. The Journal of Infectious Diseases, Volume 228, Issue 5, 1 September 2023, Pages 604–614
8. **Fibrillar α -synuclein induces neurotoxic astrocyte activation via RIP kinase signaling and NF- κ B.** Tsui-Wen Chou*, Nydia P Chang*, Medha Krishnagiri, Aisha P Patel, **Colm Atkins**, Brian P. Daniels. Cell Death Dis. 2021 Jul 31;12(8):756. doi: 10.1038/s41419-021-04049-0.
9. **Developing Human Pluripotent Stem Cell-Based Cerebral Organoids with a Controllable Microglia Ratio for Modeling Brain Development and Pathology.** Ranjie Xu, Andrew J. Boreland, Xiaoxi Li, Caroline Erickson, Mengmeng Jin, **Colm Atkins**, Zhiping Pang, Brian P. Daniels, Peng Jiang. Stem Cell Reports. 2021 Aug 10;16(8):1923-1937.
10. **VAMP8 contributes to TRIM6-mediated type-I interferon antiviral response during West Nile virus infection.** Van Tol S*, **Atkins C***, Bharaj P, Johnson KN, Hage A, Freiberg AN, Rajsbaum R. J Virol. 2020 Jan 6;94(2).
11. **Human neural stem cell-derived neuron/astrocyte co-cultures respond to La Crosse virus infection with proinflammatory cytokines and chemokines.** Dawes BE, Gao J, **Atkins C**, Nelson JT, Johnson K, Wu P, Freiberg AN. J Neuroinflammation. 2018 Nov 15;15(1):315.

12. **Natural History and Pathogenesis of Wild-Type Marburg Virus Infection in STAT2 Knockout Hamsters.** Atkins C, Miao J, Kalveram B, Juelich T, Smith JK, Perez D, Zhang L, Westover JLB, Van Wettere AJ, Gowen BB, Wang Z, Freiberg AN. J Infect Dis. 2018 Nov 22;218(suppl_5):S438-S447.
13. **Experimental Infection of Syrian Hamsters With Aerosolized Nipah Virus.** Escaffre O, Hill T, Ikegami T, Juelich TL, Smith JK, Zhang L, Perez DE, Atkins C, Park A, Lawrence WS, Sivasubramani SK, Peel JE, Peterson JW, Lee B, Freiberg AN. J Infect Dis. 2018 Oct 5;218(10):1602-1610.
14. **Recent advances in the development of antiviral therapeutics for Rift Valley fever virus infection.** Atkins C, Freiberg AN. Future Virol. 2017 Nov;12(11):651-665.
15. **The Host E3-Ubiquitin Ligase TRIM6 Ubiquitinates the Ebola Virus VP35 Protein and Promotes Virus Replication.** Bharaj P, Atkins C, Luthra P, Giraldo MI, Dawes BE, Miorin L, Johnson JR, Krogan NJ, Basler CF, Freiberg AN, Rajsbaum R. J Virol. 2017 Aug 24;91(18).
16. **Contribution of Human Lung Parenchyma and Leukocyte Influx to Oxidative Stress and Immune System-Mediated Pathology following Nipah Virus Infection.** Escaffre O, Saito TB, Juelich TL, Ikegami T, Smith JK, Perez DD, Atkins C, Levine CB, Huante MB, Nusbaum RJ, Endsley JJ, Freiberg AN, Rockx B. J Virol. 2017 Jul 12;91(15).
17. **Benzimidazole analogs inhibit respiratory syncytial virus G protein function.** Evans CW, Atkins C, Pathak A, Gilbert BE, Noah JW. Antiviral Screening. 2015 Sep;121:31-8.
18. **Global Human Kinase Screening Identifies Therapeutic Host Targets Against Influenza.** Atkins C, Evans CW, Noah JW. Journal of Biomolecular Screening. 2014 Jan 24;19(6):936-946.
19. **Screening methods for influenza antiviral drug discovery.** Atkins, C., Evans, C.W., White, E.L., Noah, J.W. 2012. Expert Opin Drug Discov. 2012 May;7(5):429-38. PMID: 22435452.
20. **Genetic variability and taxonomic status of the Nihoa and Laysan Millerbirds.** Fleischer, R. C., Slikas, B., Beadell, J., Atkins, C., McIntosh, C. E. & Conant, S. Condor 2007. 109: 954-962.
21. **Immunological change in a parasite-impooverished environment: divergent signals from four island taxa.** Beadell, J., Atkins, C., Cashion, E., Jonker, M. & Fleischer, R.C. PLOS One 2: e896. 2007.

* Authors Contributed Equally

PRESENTATIONS AND INVITED LECTURES

1. June 2020 American Society for Virology, Colorado State University, Fort Collins, CO. **p53 Inhibitors Restrict the Replication of Zika Virus *in vitro* and *in vivo*.** (Presented Virtually)
2. September 2018 Animal & Comparative Biomedical Sciences, University of Arizona, Tuscon, AZ, **Natural History and Pathogenesis of Wild-Type Marburg Virus Infection in STAT2 Knockout Hamsters.**
3. June 2018 American Society for Virology, College Park, MD, **Natural History and Pathogenesis of Wild-Type Marburg Virus Infection in STAT2 Knockout Hamsters.**

4. June 2017 Emerging & Reemerging Viruses. Pentagon City, VA. **High Throughput Kinase Inhibitor Screening of a Diverse Viral Library Reveals Conserved Antiviral Pathways.**
5. June 2017 Keystone Symposium Neuroinflammation. Keystone, CO. **Rift Valley Fever Virus Infection in Human Neuronal Cells.**
6. December 2016 Keystone Symposium Viral Hemorrhagic Fevers, Santa Fe, NM. **Rift Valley Fever Virus Infection in Human Neuronal Cells.**
7. June 2016 American Society for Virology, Blacksburg, VA. **Rift Valley Fever Virus Infection and Induction of Cellular Responses in Human Astrocytes.**
8. June 2012 American Society of Virology. Madison, WI. **Human Kinase Activity Profiling during Influenza Virus Infection.**
9. June 2011 American Society of Virology, Minneapolis, MN. **Global Kinase Activity Profiling and Comparison in Season and Avian Influenza Virus Infections.**

PROFESSIONAL AFFILIATIONS

- 2009-Present **American Society for Virology**
- 2020-Present **American Society for Microbiology – New Jersey Branch (Theobald Smith Society)**

FUNDING

- 2019-2020 **New Jersey Commission on Spinal Cord Injury SCI Techniques Training Grant**
- 2018 **McLaughlin Foundation Postdoctoral Travel Grant**
- 2016 **American Society for Virology Postdoctoral Travel Grant**
- 2007-2009 **Howard Hughes Medical Institute Med-into-Grad Fellow**

PROFESSIONAL SERVICE

- 2021-2024 **Member, Executive Council, Rutgers AAUP-AFT Local 6323**
- 2020-Present **Departmental Representative, Rutgers AAUP-AFT Local 6323**
- 2016-2018 **President, UTMB Postdoctoral Association**
- 2015-2016 **Vice Chair, UTMB Postdoctoral Association**
- 2009-2012 **Senator, UAB Graduate Student Association**
- 2010-2012 **Secretary, UAB Graduate Student Association**
- 2009-2012 **Graduate Representative, Lister Hill Library User Centered Design**
- 2010-2011 **Graduate Representative, Biochemistry/Structural Biology Admissions**