CURRICULUM VITAE

Maudry Laurent-Rolle, MD, PhD, BS

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School: Yale School of Medicine

Education:

09/1997 - 05/2001	BS, Long Island University, Biology, New York, NY
08/2002 - 08/2004	Icahn School of Medicine at Mount Sinai, Postbaccalaureate Research Education Program, New York, NY
09/2006 - 06/2011	PhD, Icahn School of Medicine at Mount Sinai, Microbiology, New York, NY
09/2004 - 05/2013	MD, Icahn School of Medicine at Mount Sinai, New York, NY

Career/Academic Appointments:

07/2013 - 06/2016	Resident, Internal Medicine, Albert Einstein/Montefiore Medical Center, New York, NY
07/2016 - 06/2020	Clinical Fellow, Infectious Diseases, Yale School of Medicine, New Haven, CT
07/2016 - 06/2019	Fellow, Infectious Diseases, Yale University, New Haven, CT
09/2017 - 06/2018	Per diem, non-attending Physician, Medicine, Northeast Medical Group, New Haven, CT
09/2018 - 11/2018	Lecturer, Molecular Biophysics and Biochemistry, Yale School of Medicine, New Haven, CT
07/2019 - 06/2020	Research Fellow in Infectious Diseases, Internal Medicine, Section of Infectious Diseases, New Haven, CT
09/2019 - 11/2019	Lecturer, Molecular Biophysics and Biochemistry, Yale School of Medicine, New Haven, CT
07/2020 - 06/2027	Assistant Professor, Infectious Diseases, Yale School of Medicine, New Haven, CT
09/2020 - 11/2020	Lecturer, Molecular Biophysics and Biochemistry, Yale School of Medicine, New Haven, CT
09/2021 - 11/2021	Lecturer, Molecular Biophysics and Biochemistry, Yale School of Medicine, New Haven, CT

01/2022 - 06/2024	Assistant Professor, Microbial Pathogenesis, Yale School of Medicine, New Haven, CT
04/2022 - Present	Lecturer, Department of Microbial Pathogenesis, Yale University, New Haven, CT
04/2022 - Present	Assistant Professor, Center for Infection and Immunity, Yale University, New Haven, CT
08/2022 - 12/2022	Lecturer, Molecular Biophysics and Biochemistry, Yale School of Medicine, New Haven, CT
08/2023 - 12/2023	Lecturer, Molecular Biophysics and Biochemistry, Yale School of Medicine, New Haven, CT

Board Certification:

2016 - 2023	AB of Internal Medicine, Internal Medicine
2018 - 2023	AB of Internal Medicine, Infectious Disease

Invited Speaking Engagements, Presentations & Workshops Not Affiliated With Yale:

International/National

1. "CMPK2 restricts the replication of Multiple Flaviviruses". Lab Roots, Microbiology Virtual Week, Labroots bring academia and industry, research experts, virologists, microbiologists, healthcare professionals, and leading biomedical scientists together at Annual Events in the Microbiology Week Virtual Event Series, September 2021. (Oral Presentation)

Regional

1. "Functional characterization of CMPK2 and its role in the innate antiviral response". Icahn School of Medicine at Mount Sinai Global Health and Emerging Pathogens Institute Seminar Series, New York, NY, March 2021. (Oral Presentation)
2. "My journey in Science and Medicine as a mother, black woman and immigrant- The importance of mentorship and sponsorship". Women in Science and Medicine, Icahn School of Medicine at Mount Sinai, New York, NY, March 2021. (Oral Presentation)
3. "Basic Science Research and the practice of Infectious Diseases as a Form of Resilience in the Black Community". The Federal Emergency Management Agency (FEMA) Black History Month, The Federal Emergency Management Agency (FEMA) Black History Month. New York, NY, Zoom presentation, February 2023. (Oral Presentation)

Peer-Reviewed Presentations Given at Meetings Not Affiliated With Yale:

International/National

1. **Laurent-Rolle M**. CMPK2 is a mitochondrial antiviral factor restricting flavivirus replication. American Society of Virology, Madison, WI, July 2022. (Poster Presentation)
2. **Laurent-Rolle M**. Identification and characterization of ubiquitin-modified SARS-CoV-2 viral proteins. American Society of Virology, Athens, GA, June 2023. (Poster Presentation)
3. **Laurent-Rolle M**. CMPK2 restricts Zika virus replication by inhibiting viral translation. American Society of Virology, Athens, GA, June 2023. (Oral Presentation)

Professional Service:

Peer Review Groups/Grant Study Sections

2023 - Present Reviewer, Early Career Reviewer Program at the Center for Scientific Review (CSR), National Institutes of Health, Early Career Reviewer Program at the Center for Scientific Review (CSR), National Institutes of Health.

Professional Organizations

American College of Physicians

2022 - Present Member, American College of Physicians

American Medical Association

2021 - Present Member, American Medical Association

American Society for Virology

2020 - Present Member, American Society for Virology

Department of Microbial Pathogenesis, Molecular Biology of Animal Viruses, Yale School of Medicine and Yale University

2022 - Present Lecturer, Department of Microbial Pathogenesis, Molecular Biology of Animal Viruses, Yale School of Medicine and Yale University, Department of Microbial Pathogenesis, Molecular Biology of Animal Viruses, Yale School of Medicine and Yale University, New Haven, CT

Infectious Disease Society of America

2016 - Present Member, Infectious Disease Society of America

Yale University / Hospital System

University

2021 - Present Interviewer, Yale Intern Selection Committee (ISC) for the Yale Internal Medicine-Traditional Residency Program (categorical applicants)

2021 - Present Member, Department of Medicine, Retention Working Group

2022 - Present Program Committee, Medical Scientist Training Program Selection Committee, Yale School of Medicine

2022 - Present Program Committee, Department of Microbial Pathogenesis Graduate School Selection Committee

2022 - Present Member, Department of Medicine, Retention Working Group

Public Service / Media Presence

Media Presence

2021	Expert, New York Times, "How the 'Alpha' Coronavirus Variant Became So Powerful"
2021	Expert, Science Magazine, "How a genetic twist in an 'old' variant may be driving Omicron and Delta today"
2023	Expert, NEW HAVEN REGISTER, "Yale researchers are working on a whole new type of vaccine, targeting the insects that carry pathogens"

Bibliography:

Peer-Reviewed Original Research

1. Muñoz-Jordán J, Sánchez-Burgos GG, **Laurent-Rolle M**, García-Sastre A. Inhibition of interferon signaling by dengue virus. Proceedings Of The National Academy Of Sciences Of The United States Of America 2003, 100: 14333-14338. PMID: 14612562, PMCID: PMC283592, DOI: 10.1073/pnas.2335168100.
2. Muñoz-Jordán JL, **Laurent-Rolle M**, Ashour J, Martínez-Sobrido L, Ashok M, Lipkin WI, García-Sastre A. Inhibition of Alpha/Beta Interferon Signaling by the NS4B Protein of Flaviviruses. Journal Of Virology 2005, 79: 8004-8013. PMID: 15956546, PMCID: PMC1143737, DOI: 10.1128/jvi.79.13.8004-8013.2005.
3. Ashour J, **Laurent-Rolle M**, Shi PY, García-Sastre A. NS5 of Dengue Virus Mediates STAT2 Binding and Degradation ▿ . Journal Of Virology 2009, 83: 5408-5418. PMID: 19279106, PMCID: PMC2681973, DOI: 10.1128/jvi.02188-08.
4. Ashour J, **Laurent-Rolle M**, Plumlee C, Bernal D, Fernandez-Sesma A, Schindler C, García-Sastre A. Mouse STAT2 is a dengue virus host restriction factor. Cytokine 2009, 48: 62-63. DOI: 10.1016/j.cyto.2009.07.198.
5. **Laurent-Rolle M**, Boer EF, Lubick KJ, Wolfinbarger JB, Carmody AB, Rockx B, Liu W, Ashour J, Shupert WL, Holbrook MR, Barrett AD, Mason PW, Bloom ME, García-Sastre A, Khromykh AA, Best SM. The NS5 Protein of the Virulent West Nile Virus NY99 Strain Is a Potent Antagonist of Type I Interferon-Mediated JAK-STAT Signaling ▿ . Journal Of Virology 2010, 84: 3503-3515. PMID: 20106931, PMCID: PMC2838099, DOI: 10.1128/jvi.01161-09.
6. Ashour J, Morrison J, **Laurent-Rolle M**, Belicha-Villanueva A, Plumlee CR, Bernal-Rubio D, Williams KL, Harris E, Fernandez-Sesma A, Schindler C, García-Sastre A. Mouse STAT2 Restricts Early Dengue Virus Replication. Cell Host & Microbe 2010, 8: 410-421. PMID: 21075352, PMCID: PMC3310429, DOI: 10.1016/j.chom.2010.10.007.
7. Morrison J, **Laurent-Rolle M**, Maestre AM, Rajsbaum R, Pisanelli G, Simon V, Mulder LC, Fernandez-Sesma A, García-Sastre A. Dengue Virus Co-opts UBR4 to Degrade STAT2 and Antagonize Type I Interferon Signaling. PLOS Pathogens 2013, 9: e1003265. PMID: 23555265, PMCID: PMC3610674, DOI: 10.1371/journal.ppat.1003265.
8. Rajsbaum R, Versteeg GA, Schmid S, Maestre AM, Belicha-Villanueva A, Martínez-Romero C, Patel JR, Morrison J, Pisanelli G, Miorin L, **Laurent-Rolle M**, Moulton HM, Stein DA, Fernandez-Sesma A, tenOever BR, García-Sastre A. Unanchored K48-Linked Polyubiquitin Synthesized by the E3-Ubiquitin Ligase TRIM6 Stimulates the Interferon-IKKε Kinase-Mediated Antiviral Response.

Immunity 2014, 40: 880-895. PMID: 24882218, PMCID: PMC4114019, DOI: 10.1016/j.immuni.2014.04.018.

9. **Laurent-Rolle M**, Morrison J, Rajsbaum R, Macleod JML, Pisanelli G, Pham A, Ayllon J, Miorin L, Martínez-Romero C, tenOever BR, García-Sastre A. The Interferon Signaling Antagonist Function of Yellow Fever Virus NS5 Protein Is Activated by Type I Interferon. Cell Host & Microbe 2014, 16: 314-327. PMID: 25211074, PMCID: PMC4176702, DOI: 10.1016/j.chom.2014.07.015.
10. Rajsbaum R, Bharaj P, Ellis J, Versteeg G, Schmid S, Maestre A, Belicha-Villanueva A, Patel J, Morrison J, Giuseppe Pisanelli G, Miorin L, Martínez-Romero C, **Laurent-Rolle M**, Moulton H, Stein D, Fernandez-Sesma A, tenOever B, Garcia-Sastre A. The role of unanchored polyubiquitin chains and the TRIM E3-ubiquitin ligase family of proteins in the innate immune response to influenza virus infection (INM3P.402). The Journal Of Immunology 2015, 194: 127.7-127.7. DOI: 10.4049/jimmunol.194.supp.127.7.
11. Pisanelli G, **Laurent-Rolle M**, Morrison J, Garcia-Sastre A. ID: 121 STAT2 is a determinant of yellow fever virus host tropism. Cytokine 2015, 76: 88. DOI: 10.1016/j.cyto.2015.08.148.
12. Pisanelli G, **Laurent-Rolle M**, Manicassamy B, Belicha-Villanueva A, Morrison J, Lozano-Dubernard B, Castro-Peralta F, Iovane G, García-Sastre. A. La Piedad Michoacán Mexico Virus V protein antagonizes type I interferon response by binding STAT2 protein and preventing STATs nuclear translocation. Virus Research 2015, 213: 11-22. PMID: 26546155, PMCID: PMC5538256, DOI: 10.1016/j.virusres.2015.10.027.
13. Hsu C, **Laurent-Rolle M**, Cresswell P. Abstract B163: Regulation of translation by the interferon-induced antiviral protein viperin. Cancer Immunology Research 2019, 7: b163-b163. DOI: 10.1158/2326-6074.cricimteatiaacr18-b163.
14. Morrison J, Miorin L, **Laurent-Rolle M**, Pisanelli G, Co P, Albrecht R, García-Sastre A. STAT2 is a determinant of yellow fever virus host tropism. The Journal Of Immunology 2019, 202: 127.18-127.18. DOI: 10.4049/jimmunol.202.supp.127.18.
15. Miorin L, **Laurent-Rolle M**, Pisanelli G, Co PH, Albrecht RA, García-Sastre A, Morrison J. Host-Specific NS5 Ubiquitination Determines Yellow Fever Virus Tropism. Journal Of Virology 2019, 93 PMID: 31043530, PMCID: PMC6600188, DOI: 10.1128/jvi.00151-19.
16. Lu Q, Liu J, Zhao S, Gomez Castro MF, **Laurent-Rolle M**, Dong J, Ran X, Damani-Yokota P, Tang H, Karakousi T, Son J, Kaczmarek ME, Zhang Z, Yeung ST, McCune BT, Chen RE, Tang F, Ren X, Chen X, Hsu JCC, Teplova M, Huang B, Deng H, Long Z, Mudianto T, Jin S, Lin P, Du J, Zang R, Su TT, Herrera A, Zhou M, Yan R, Cui J, Zhu J, Zhou Q, Wang T, Ma J, Koralov SB, Zhang Z, Aifantis I, Segal LN, Diamond MS, Khanna KM, Stapleford KA, Cresswell P, Liu Y, Ding S, Xie Q, Wang J. SARS-CoV-2 exacerbates proinflammatory responses in myeloid cells through C-type lectin receptors and Tweety family member 2. Immunity 2021, 54: 1304-1319.e9. PMID: 34048708, PMCID: PMC8106883, DOI: 10.1016/j.immuni.2021.05.006.
17. Hsu JC, **Laurent-Rolle M**, Pawlak JB, Wilen CB, Cresswell P. Translational shutdown and evasion of the innate immune response by SARS-CoV-2 NSP14 protein. Proceedings Of The National Academy Of Sciences Of The United States Of America 2021, 118: e2101161118. PMID: 34045361, PMCID: PMC8214666, DOI: 10.1073/pnas.2101161118.
18. Briggs N, Gormally MV, Li F, Browning SL, Treggiari MM, Morrison A, **Laurent-Rolle M**, Deng Y, Hendrickson JE, Tormey CA, Desruisseaux MS. Early but not late convalescent plasma is associated with better survival in moderate-to-severe COVID-19. PLOS ONE 2021, 16: e0254453. PMID: 34320004, PMCID: PMC8318280, DOI: 10.1371/journal.pone.0254453.

19. Ortigoza MB, Yoon H, Goldfeld KS, Troxel AB, Daily JP, Wu Y, Li Y, Wu D, Cobb GF, Baptiste G, O'Keeffe M, Corpuz MO, Ostrosky-Zeichner L, Amin A, Zacharioudakis IM, Jayaweera DT, Wu Y, Philley JV, Devine MS, Desruisseaux MS, Santin AD, Anjan S, Mathew R, Patel B, Nigo M, Upadhyay R, Kupferman T, Dentino AN, Nanchal R, Merlo CA, Hager DN, Chandran K, Lai JR, Rivera J, Bikash CR, Lasso G, Hilbert TP, Paroder M, Asencio AA, Liu M, Petkova E, Bragat A, Shaker R, McPherson DD, Sacco RL, Keller MJ, Grudzen CR, Hochman JS, Pirofski LA, Rahman F, Ajayi A, Rodriguez S, Ledesma A, Keeling D, Rappoport N, Ebel S, Kim J, Chang M, Chan K, Patel P, Martocci A, Dave S, Darwish Y, Taveras M, Shoyelu V, Xin P, Iturrate E, Moldolsky L, Raimondo B, Mendez S, Hughes P, Sterling S, Lord A, Yaghi S, Veloso K, Sheikh M, Visconti-Ferrara E, Fleming A, Youn H, Jane Fran B, Medina R, McKell R, Khan S, Hamilton T, Sanchez C, Patel N, Cleare L, Vergnolle O, Nakouzi A, Quevedo G, Bortz R, Wirchnianski A, Florez C, Babb R, Ayala J, Tsagaris K, James A, Eke I, Obeidallah A, Sandu O, Sohval S, Serrano-Rahman L, Uehlinger J, Bartash R, Al-Abduladheem A, Gendlina I, Sheridan C, Bortnick A, Eichler J, Kaufman R, Yukelis S, Pennock M, Goggin M, Shen C, Annam J, Khokhar A, Barboto D, Lally B, Lee A, Lee M, Yang X, Allen S, Malaviya A, Moussa O, Park R, Sample R, Bae A, Benoni G, Boerger L, Baker L, Luther M, Ameti L, Briggs N, Golden M, Gormally M, Huang G, Johnson R, Morrison A, Montagna-Hill M, Rivera B, Cortezzo G, Debski K, Nicoletti, DeBenedictis K, Davis R, Marshall C, Duque Cuartas M, Beauchamps L, Bertran-Lopez J, Gonzales Zamora J, Delgado-Lelievre M, Dominguez S, Lee C, Kusack H, Karakeshishyan V, Hajaz A, Deniz D, Garcia G, Dae K, Blenet P, Jaffe D, Olson L, Sabogal D, Blust O, Del Prete Perez V, Bornia C, Rodriguez-Perez V, Calderon V, Ramdev R, Jolly A, Guzman I, Guerra R, Brito S, Hobbs R, Denham R, Dick J, Hernandez M, Nielsen L, Anjum S, Mader S, Stutz T, Mammadova M, Nichols P, Khan T, Boktour M, Castaneda B, Benitez B, Hinojosa E, Guerra B, Ortiz A, Hebbeler-Clark R, McShane P, Hibbard R, Hawkins B, Dohanich E, Wadle C, Greenlee K, Brooks J, Herrick C, Gode A, Bergl P, Hu K, Patel J, Srinivasan S, Graf J, Klis C, Reimer K, Carpenter E, Naczek C, Petersen R, Dex R, Drossart J, Zelten J, Brummitt C, Liang M, Yanny L, Dennison G, Runningen P, Brzezinski B, Fiebig S, Naczek C, Kasdorf M, Parameswaran L, Corcoran A, Rohatgi A, Wronska M, Wu X, Srinivasan R, Deng F, Filardo T, Pendse J, Blaser S, Whyte O, Gallagher J, Thomas O, Ramos D, Sturm-Reganato C, Fong C, Daus I, Payoen A, Chiofolo J, Friedman M, Wu D, Jacobson J, Schneider J, Sarwar U, Wang H, Huebinger R, Dronavalli G, Bai Y, Grimes C, Eldin K, Umana V, Martin J, Heath T, Bello F, Ransford D, **Laurent-Rolle M**, Shenoi S, Akide-Ndunge O, Thapa B, Peterson J, Knauf K, Patel S, Cheney L, Tormey C, Hendrickson J. Efficacy and Safety of COVID-19 Convalescent Plasma in Hospitalized Patients. JAMA Internal Medicine 2022, 182: 115-126. PMID: 34901997, PMCID: PMC8669605, DOI: 10.1001/jamainternmed.2021.6850.
20. Hsu JC, **Laurent-Rolle M**, Pawlak JB, Xia H, Kunte A, Hee JS, Lim J, Harris LD, Wood JM, Evans GB, Shi PY, Grove TL, Almo SC, Cresswell P. Viperin triggers ribosome collision-dependent translation inhibition to restrict viral replication. Molecular Cell 2022, 82: 1631-1642.e6. PMID: 35316659, PMCID: PMC9081181, DOI: 10.1016/j.molcel.2022.02.031.
21. Hsu JC, Pawlak JB, **Laurent-Rolle M**, Cresswell P. Protocol for assessing translational regulation in mammalian cell lines by OP-Puro labeling. STAR Protocols 2022, 3: 101654. PMID: 36072758, PMCID: PMC9442383, DOI: 10.1016/j.xpro.2022.101654.
22. Arshad N, **Laurent-Rolle M**, Ahmed W, Hsu J, Mitchell S, Pawlak J, Sengupta D, Biswas K, Cresswell P. SARS-CoV-2 accessory proteins ORF7a and ORF3a use distinct mechanisms to down-regulate MHC-I surface expression. Proceedings Of The National Academy Of Sciences Of The United States

Of America 2022, 120: e2208525120. PMID: 36574644, PMCID: PMC9910621, DOI: 10.1073/pnas.2208525120.

23. Pawlak J, Hsu J, Xia H, Han P, Suh H, Grove T, Morrison J, Shi P, Cresswell P, **Laurent-Rolle M**. CMPK2 restricts Zika virus replication by inhibiting viral translation. PLOS Pathogens 2023, 19: e1011286. PMID: 37075076, PMCID: PMC10150978, DOI: 10.1371/journal.ppat.1011286.
24. Boytz R, Keita K, Pawlak J, **Laurent-Rolle M**. Comprehensive Assessment of Inactivation Methods for Madariaga Virus. Viruses 2024, 16: 206. PMID: 38399982, PMCID: PMC10892135, DOI: 10.3390/v16020206.

Peer-Reviewed Reviews, Practice Guidelines, Standards, and Consensus Statements

1. **Laurent-Rolle M**, Morrison J. The Role of NS5 Protein in Determination of Host Cell Range for Yellow Fever Virus. DNA And Cell Biology 2019, 38: 1414-1417. PMID: 31633391, DOI: 10.1089/dna.2019.5115.

Peer-Reviewed Case Reports and Technical Notes

1. Koff A, **Laurent-Rolle M**, Hsu JC, Malinis M. Prolonged incubation of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) in a patient on rituximab therapy. Infection Control And Hospital Epidemiology 2020, 42: 1286-1288. PMID: 33023685, PMCID: PMC7578652, DOI: 10.1017/ice.2020.1239.

Books

1. Caister Academic Press. Chapter 7