

CURRICULUM VITAE

Nathan D. Grubaugh, PhD

Version date: 09/01/2025

Proposed for: Promotion to Professor of Epidemiology, with tenure, Department of Epidemiology of Microbial Diseases, Traditional Track

Term: With tenure beginning on 07/01/2026

School: Yale School of Public Health

Education:

09/2001-05/2005 BS, Biomedical Sciences, Western Michigan University, Kalamazoo, MI
 08/2009-05/2011 MS, Biotechnology, Johns Hopkins University, Baltimore, MD
 08/2012-05/2016 PhD, Microbiology, Colorado State University, Fort Collins, CO

Career/Academic Appointments:

05/2005-07/2006 Research Associate, MPI Research, Mattawan, MI
 07/2006-10/2007 Microbiology Technician, Cargill Kitchen Solutions, Lake Odessa, MI
 10/2007-05/2010 Assistant Scientist, Emergent BioSolutions Inc., Gaithersburg, MD
 05/2010-08/2010 IRTA Fellowship in Systems Immunology, National Institutes of Health, Bethesda, MD
 08/2010-08/2012 Fellowship in Arbovirology, US Army Medical Research Institute of Infectious Diseases, Frederick, MD
 08/2012-06/2016 Graduate Research Associate in Arbovirology, Colorado State University, Fort Collins, CO
 06/2016-07/2018 Postdoctoral Fellowship in Virus Genomics, Scripps Research Institute, San Diego, CA
 07/2018-06/2021 Assistant Professor, Department of Epidemiology of Microbial Diseases, Yale School of Public Health, New Haven, CT
 07/2021-present Associate Professor, Department of Epidemiology of Microbial Diseases, Yale School of Public Health, New Haven, CT
 07/2024-06/2025 Visiting Professor, Laboratory of Clinical & Epidemiological Virology, Rega Institute, Katholieke Universiteit (KU) Leuven, Leuven, Belgium

Professional Honors & Recognition:

External

2001 Stephen G Calvert Memorial Merit Scholarship, Keystone Foods
 2010 Intramural Research Training Award, National Institutes of Health (NIH)
 2011 Postgraduate Research Award, Oak Ridge Institute for Science and Education (ORISE)
 2014 Travel Award, American Society of Tropical Medicine and Hygiene (ASTMH)
 2018 Scherer/Hardy Award (early career award), ASTMH
 2022 Director's New Innovator Award, NIH
 2022 Ayman El-Mohandes Young Professional Public Health Innovation Award, American Public Health Association (APHA)
 2023 On the Front Line Award, Association of Public Health Laboratories (APHL)
 2024 Early Career Applied and Biotechnological Research, American Society of Microbiology (ASM)

University

2010	Student Career Experience Program Fellowship, Johns Hopkins University
2015	Science Communication Fellowship, School of Global Environmental Sustainability, Colorado State University
2015	George Stringe Memorial Travel Award, Colorado State University
2020	Early Career Investigator Award, Yale School of Public Health
2020	Distinguished Student Mentor Award, Yale School of Public Health
2022	COVID-19 Research Award, Yale School of Public Health

Grant History:**Current grants**

Agency:	NIH/NIAID
ID#:	DP2 AI176740-01
Title:	Enhancing dengue virus genomic surveillance to uncover circulating genetic diversity
P.I.:	Nathan Grubaugh
Percent effort:	25%
Total costs:	\$900,000 (of which \$607,500 indirects)
Project period:	09/21/2022-08/31/2025 (Phase I; Phase II [09/01/2025-08/31/2027] is pending)

Agency:	CDC (administered by Massachusetts Department of Health)
ID#:	1 NU50CK000629-01-00
Title:	New England Pathogen Genomics Center of Excellence
P.I.:	Shirlee Wohl
Role on project:	Co-investigator; Yale subaward PI
Percent effort:	15%
Total costs:	\$772,515 (of which \$521,488 indirects)
Project period:	09/30/2022-09/29/26

Agency:	NIH/NIAID
ID#:	R01 AI179874-01
Title:	Real-World Effectiveness of Perinatal RSV Immunoprophylaxis
P.I.:	Carlos Oliveira
Role on project:	Co-investigator
Percent effort:	5%
Total costs:	\$2,477,700 (of which \$1,588,693 indirects)
Project period:	12/08/2023-10/31/2028

Agency:	The Ambrose Monell Foundation (administered by YSPH)
ID#:	Faculty seed grant
Title:	Impact of climate change on endemic arboviral diseases in Brazil
P.I.:	Nathan Grubaugh, Colin Carlson
Percent effort:	5% (no salary support)
Total costs:	\$89,383 (no indirects)
Project period:	05/01/2025-04/30/26

Agency:	Yale Planetary Solutions
ID#:	Acceleration Grant
Title:	Climate-driven global expansion of dengue endemicity
P.I.:	Nathan Grubaugh
Percent effort:	5% (no salary support)
Total costs:	\$99,913 (no indirects)
Project period:	05/01/2025-04/30/26

Past grants

Agency:	Yale University
ID#:	Hecht Global Health Faculty Network Award
Title:	Impact of Wolbachia on native Aedes aegypti mosquito populations.
P.I.:	Nathan Grubaugh
Percent effort:	10% (no salary support)
Total costs:	\$50,000 (no indirects)
Project period:	12/1/2019-12/31/2020
Agency:	NIH/NIAID (administered by Johns Hopkins University)
ID#:	R21 AI151750-01
Title:	Integrating human mobility and pathogen genomics to understand dengue spatial dynamics
P.I.:	Lauren Gardner; Amy Wesolowski
Role on project:	Co-investigator; Subaward PI
Percent effort:	15%
Total costs:	\$65,837 (includes indirects)
Project period:	04/01/2020-03/31/2021
Agency:	Huffman Family Donor Advised Fund
ID#:	Direct lab donation
Title:	COVID-19 response
P.I.:	Nathan Grubaugh
Percent effort:	10% (no salary support)
Total costs:	\$20,000 (includes indirects)
Project period:	06/01/2020-5/31/2021
Agency:	Emergent Ventures at the Mercatus Center, George Mason University
ID#:	Fast Grants
Title:	COVID-19 Surveillance strategies to support data-driven decision making
P.I.:	Nathan Grubaugh
Percent effort:	10% (no salary support)
Total costs:	\$800,000 (includes indirects)
Project period:	6/1/2020-3/31/2022
Agency:	National Basketball Association
ID#:	Sponsored Research Agreement
Title:	Bringing SARS-CoV-2 saliva testing to the masses
P.I.:	Nathan Grubaugh
Percent effort:	20%
Total costs:	\$769,251(includes indirects)
Project period:	6/15/2020-6/14/2021
Agency:	Yale University
ID#:	Yale COVID-19 Research Resource Fund
Title:	SARS-CoV-2 concentration and genomic diversity in wastewater as a leading indicator of COVID-19 outbreak dynamics
P.I.:	Nathan Grubaugh; Jordan Peccia
Percent effort:	10% (no salary support)
Total costs:	\$50,000 (no indirects)
Project period:	6/15/2020-6/14/2021
Agency:	NIH/NIAID
ID#:	U19 AI089992-09S4
Title:	Systems Immune Profiling of Divergent Responses to Infection
P.I.:	David Hafler; Ruth Montgomery
Role on project:	Co-investigator

Percent effort: 5%
 Total costs: \$1,542,322 (includes indirects)
 Project period: 08/10/2020-11/30/2021

Agency: NIH/NIAID (administered by Scripps Research Institute)
 ID#: R56 AI149004-01A1
 Title: Spread and Evolution of West Nile virus in the United States
 P.I.: Kristian Andersen
 Role on project: Co-investigator; Yale subaward PI
 Percent effort: 5%
 Total costs: \$268,000 (includes indirects)
 Project period: 09/02/2020-08/31/2022

Agency: CDC
 ID#: BAA 75D301-20-R-68024, Contract # 75D30120C09570
 Title: Virus Genomics and Human Mobility Reveal the Patterns SARS-CoV-2 Spread
 P.I.: Nathan Grubaugh
 Percent effort: 15%
 Total costs: \$847,345 (includes indirects)
 Project period: 09/02/2020-09/01/2022

Agency: National Football League
 ID#: Sponsored Research Agreement
 Title: Genomic epidemiology of SARS-CoV-2 in the NFL
 P.I.: Nathan Grubaugh
 Percent effort: 15%
 Total costs: \$447,042 (includes indirects)
 Project period: 11/1/2020-2/15/2021

Agency: Tempus Labs
 ID#: Sponsored Research Agreement
 Title: Tempus - Yale School of Public Health research collaboration
 P.I.: Nathan Grubaugh; Anne Wyllie
 Percent effort: 10%
 Total costs: \$500,000 (includes indirects)
 Project period: 11/3/2020-11/2/2022

Agency: National Basketball Association
 ID#: Sponsored Research Agreement
 Title: Genomic epidemiology of SARS-CoV-2 in the NBA
 P.I.: Nathan Grubaugh
 Percent effort: 10%
 Total costs: \$893,663 (includes indirects)
 Project period: 4/14/2021-6/30/2024

Agency: Connecticut Department of Public Health
 ID#: Contract #21PSX0049
 Title: SARS-CoV-2 whole genome sequencing
 P.I.: Yale Center for Genome Analysis
 Role on project: Co-investigator
 Percent effort: 20% (no salary support)
 Total costs: \$1,000,000 (includes indirects)
 Project period: 9/1/2021-6/30/2023

Agency: CDC
 ID#: BAA 75D301-22-F-14697, Contract # 75D30122C14697

Title: Transmissibility and immune escape of emerging SARS-CoV-2 variants
 P.I.: Nathan Grubaugh
 Percent effort: 20%
 Total costs: \$1,980,573 (includes indirects)
 Project period: 09/19/2022-09/18/2024
 Agency: The Ambrose Monell Foundation (administered by YSPH)
 ID#: Faculty seed grant
 Title: Wastewater testing to track vector-borne and zoonotic pathogens
 P.I.: Nathan Grubaugh
 Percent effort: 5% (no salary support)
 Total costs: \$70,000 (no indirects)
 Project period: 05/01/2023-12/31/24

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

1. *"Dynamics of arbovirus evolution during transmission."* Fred Hutch Cancer Center, Center for Inference and Dynamics of Infectious Diseases Seminar Series, Seattle, WA, 2017.
2. *"Multiple introductions of Zika virus into the United States."* University of Texas Medical Branch Departmental Seminar, Galveston, TX, 2017.
3. *"AstroPath: Virus evolution and spread on the International Space Station."* NASA Technology Collaboration Center Workshop, Houston, TX, 2017.
4. *"Genomic epidemiology of Zika virus Florida and in the Americas."* Cell Emerging & Re-emerging viruses conference Symposium, Arlington, VA, 2017.
5. *"Genomic epidemiology of Zika virus in the Americas."* Michigan State University Departmental Seminar, East Lansing, MI, 2018.
6. *"Arbovirus emergence and spread."* KU Leuven/Rega Institute Departmental Seminar, Leuven, Belgium, 2019.
7. *"Genomic epidemiology to map the global emergence and spread of Zika virus."* Fiocruz Molecular Epidemiology Workshop **Keynote**, Salvador, Brazil, 2019.
8. *"Genomic epidemiology to map the global emergence and spread of Zika virus."* University of Michigan MAC-EPID Workshop **Keynote**, Ann Arbor, MI, 2019.
9. *"SalivaDirect."* US Department of Health and Human Services Workshop (online), 2020.
10. *"Public health communication of SARS-CoV-2 genomic epidemiology."* International Virus Evolution Seminar Series (online), 2020.
11. *"West Nile 4K: Collaborative network to uncover virus emergence and spread."* 2020 ASM Conference on Rapid Applied Microbial NGS Symposium **Keynote** (online), 2020.
12. *"Genomic epidemiology of SARS-CoV-2."* Columbia University, Covid19 Virtual Symposium (online), 2020.
13. *"Emergence of SARS-CoV-2 Variants: Surveillance and Public Health Actions."* American Society of Arthropod-borne Viruses SARS-CoV-2 Variants of Concern Workshop (online), 2021.
14. *"Prescreening with mutation-detection assays for variants of concern."* APHL 2021 Virtual Conference, Monitoring for SARS-CoV-2 Variants Plenary session (online), 2021.
15. *"Of Variants and Vaccines."* Howard Hughes Medical Institute, Science of COVID-19 Seminar Series (online), 2021.
16. *"Early introductions and transmission of SARS-CoV-2 variant B.1.1.7 in the United States."* Boston University Precision Diagnostics Center 2021 Virtual Conference Plenary session (online), 2021.
17. *"Of Variants and Vaccines,"* University of North Carolina Departmental Seminar (online), 2021.
18. *"Current SARS-CoV-2 Genomic Surveillance in Connecticut."* Connecticut State House CGA Bioscience Caucus Legislative Briefing (online), 2021.

19. “*Routine SARS-CoV-2 sequencing to estimate variant transmissibility.*” International Conference on Emerging Infectious Diseases, COVID-19 Breakthrough Cases, Variants, and Genomics Symposium, Atlanta, GA, 2022.
20. “*Routine SARS-CoV-2 sequencing to estimate variant transmissibility.*” Centro Internacional de Entrenamiento e Investigaciones Medicas, Virus genomic epidemiology Workshop, Cali, Colombia, 2022.
21. “*The need for dengue virus genomic surveillance.*” Centro Internacional de Entrenamiento e Investigaciones Medicas, Virus genomic epidemiology Workshop, Cali, Colombia, 2022.
22. “*Genomic epidemiology of arboviruses in the United States.*” Cornell University Departmental Seminar (online), 2022.
23. “*Of Variants and Vaccines.*” Ginkgo Bioworks Seminar Series (online), 2022.
24. “*Of Variants and Vaccines.*” Moderna Institutional Seminar, Boston, MA, 2022.
25. “*Genomic epidemiology of arboviruses in the Northeast US.*” Connecticut Agricultural Experiment Station Institutional Seminar, New Haven, CT, 2022.
26. “*Genomics to map the emergence and spread of arboviruses.*” Harvard School of Public Health Departmental Seminar, Boston, MA, 2022.
27. “*Genomic surveillance of neglected viruses reveals new insights into disease ecology.*” Microbial Population Biology Gordon Research Conference, Andover, NH, 2023.
28. “*Genomic epidemiology and ecology of mosquito- and tick-borne viruses.*” Eastern Pennsylvania Branch of ASM **Endowed Lecture**, Philadelphia, PA, 2023.
29. “*Genomic epidemiology and ecology of mosquito- and tick-borne viruses.*” Wesleyan University Departmental Seminar, Middletown, CT, 2023.
30. “*Genomic epidemiology and ecology of mosquito- and tick-borne viruses.*” University of Bruxelles Seminar, Brussels, Belgium, 2024.
31. “*Dengue in the age of genomics.*” Rega Institute at KU Leuven Departmental Seminar, Leuven, Belgium, 2024.
32. “*Dengue in the age of genomics.*” Pasteur Institute Departmental Seminar, Paris, France, 2024.
33. “*Genomics to Uncover Hidden Aspects of Virus Ecology and Epidemiology.*” ASM Microbe 2024 Symposium **Keynote**, Atlanta, GA, 2024.
34. “*Towards a global virus genomic surveillance system.*” International Virus Bioinformatics Meeting 2024 Symposium **Keynote**, Leuven, Belgium, 2024.
35. “*Travel surveillance.*” WHO/PAHO, Meeting of Experts Genomic Surveillance Strategy for Dengue, San Juan, PR, 2024.
36. “*Routine Arbovirus Sequencing for Integration into Public Health.*” Association of Public Health Laboratories Webinar Series (online), 2024.
37. “*Genomic epidemiology and ecology of mosquito- and tick-borne viruses.*” CREATE-NEO Vector-Borne and Zoonotic Diseases Virtual Seminar Series, 2024.
38. “*Dengue in the age of genomics.*” University of Basel Biozentrum Seminar, Basel, Switzerland, 2024.
39. “*Enhancing dengue virus genomic surveillance.*” CSTE/CDC VBD Forecasting Subgroup Webinar (online), 2024.
40. “*Dengue in the age of genomics.*” Colorado State University Departmental Seminar, Fort Collins, CO, 2024.
41. “*Dengue lineage system to aid global surveillance.*” Asia Dengue Summit Symposium, Manila, Philippines, 2025.
42. “*Genomic ecology of mosquito- and tick-borne viruses.*” University of Massachusetts Departmental Seminar, Amherst, MA, 2025.
43. “*Dengue in the age of genomics.*” Boston University Departmental Seminar, Boston MA, 2025.

Peer-Reviewed Presentations & Symposia Given at Meetings Not Affiliated with Yale:

1. **Grubaugh ND**, Andersen K. International travelers and virus genomes reveal ‘hidden’ Zika virus transmission during the epidemic. American Society of Tropical Medicine and Hygiene. New Orleans, LA, October 2018 (Oral presentation).
2. **Grubaugh ND**, Hill V, Cleemput S, Dumon W, Siqueira Pereira J, Lima ARJ, Gifford RJ, Oliveira T. Dengue Lineages: A resource for lineage assignments and genomic surveillance. Pan-American Dengue Network Meeting. Medellin, Colombia, April 2025 (Poster presentation).

* Did not list senior author abstracts of trainees in which Dr. Grubaugh did not present. There are >50 since 2018.

Professional Service:**Grant study section**

2020	PAR-20-177/178, “Emergency Awards: Rapid Investigation of SARS-CoV-2 and COVID-19”, NIH/NIAID
2020	PAR-20-063, “NIAID Resource-Related Research Projects”, NIH/NIAID
2022	ZRG1 IIDA-S (90) S “Topics in Virology”, NIH/NIAID
2023	ZRG1 VDT-Q 01 Q “Viral Dynamics and Transmission”, NIH/NIAID

Scientific Advisory Board

2018–23	Centre of Arbovirus Discovery, Diagnostics, Genomics and Epidemiology, MRC/FAPESP Brazil
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External Consulting

2021–22	Infectious disease genomics consulting, Tempus Laboratories, Chicago, Illinois, USA
2021–23	Genomic epidemiology consulting, National Basketball Association, New York, NY, USA
2023–25	SARS-CoV-2 vaccine consulting, BioNTech, Germany

Expert Guidance

2020–24	Member of SARS-CoV-2 SPHERES, US Centers for Disease Control and Prevention
2020	Expert guidance for genetic sequencing of SARS-CoV-2, World Health Organization

Expert witness/Legal testimonies

2020	Expert Witness for COVID-19 testing, US District Court, Northern District of California, Zepeda Rivas, et al. v. Jennings, et al., 3:20-cv-2731-VC
2021	Expert Witness for COVID-19 Variants and Evolving Research Needs, US House of Representatives, Committee on Science, Space, and Technology, Subcommittee on Investigations and Oversight

Journal serviceEditor

2019–20	Guest Editor, <i>PLOS Neglected Tropical Diseases</i>
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Reviewer (selected)

Cell; Nature; Science; New England Journal of Medicine; JAMA; The Lancet; Nature Medicine; Nature Microbiology; Nature Communications; eLIFE; PLOS Neglected Tropical Diseases; PLOS Pathogens; Emerging Infectious Diseases; Virus Evolution; AJTMH;

Professional societiesMemberships

2014–present	The American Society of Tropical Medicine and Hygiene (ASTMH)
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2014–present American Committee on Arthropod-Borne Viruses (ASTMH)
 2021–present American Committee on Global Health (ASTMH)
 2021–present American Public Health Association

Committee service

2014 Student Representative, American Committee on Arthropod-Borne Viruses
 2018 Judge, Young Investigator Award, The American Society of Tropical Medicine and Hygiene
 2019-23 Elected council member (4-year term), American Committee on Arthropod-Borne Viruses
 2019-present Organizing Committee, Pan American Dengue Research Network Meeting

Yale University Service:

Departmental & School committees

2018–22 Chair, Yale EMD Science Communication Committee
 2019–22 Member/Chair, Yale EMD Seminar Committee
 2023 Member, Yale EMD Assistant Professor faculty search committee
 2023-present Co-chair, Yale EMD Science Communications and Outreach Committee
 2025-present Member, YSPH Committee on Academic and Professional Integrity

University Committees

2020–21 Board of Governors, Yale COVID-19 IMPACT Biorepository
 2021–23 Member, Yale COVID-19 Public Health Task Force
 2022-23 Member, Yale EEB/MSI open-rank faculty search committee
 2023-24 Member, Yale Pediatrics Infectious Disease Section Chief search committee

Public Service:

2020–21 Partnership with the New Haven Health Department to provide SARS-CoV-2 testing for New Haven Public Schools
 2020–21 Member of the Connecticut Higher Ed Resilience Working Group on K-12
 2021–23 Connecticut Department of Public Health SARS-CoV-2 Genomic Surveillance Team

FDA Authorizations:

2020 SalivaDirect™, Manufactured Test, Emergency Use Authorization, U.S. FDA

Bibliography:

*co-first or last author, °corresponding author, trainees underlined

Peer-Reviewed Original Research

1. Lee JS, **Grubaugh ND**, Kondig JP, Turell MJ, Kim HC, Klein TA, O'Guinn ML. *Isolation and genomic characterization of Chaoyang virus strain ROK144 from Aedes vexans nipponii from the Republic of Korea. **Virology** 495(2), 220-224 (2013)*
2. **Grubaugh ND**, Petz LN, Melanson VR, McMenamy SS, Turell MJ, Long LS, Pisarcik SE, Kengluetcha A, Jaichapor B, O'Guinn ML, Lee JS. *Evaluation of a field-portable DNA microarray platform and nucleic acid amplification strategies for the detection of arboviruses, arthropods, and bloodmeals. **The American Journal of Tropical Medicine Hygiene** 88(2), 245-253 (2013)*
3. **Grubaugh ND**°, McMenamy SS, Turell MJ, Lee JS. *Multi-gene detection and identification of mosquito-borne RNA viruses using an oligonucleotide microarray. **PLOS Neglected Tropical Diseases** 7(8), e2349 (2013)*

4. Alout H, Krajacich BJ, Meyers JI, **Grubaugh ND**, Brackney DE, Kobylinski KC, Diclaro II JW, Bolay FK, Fakoli III LS, Diabate A, Dabire RK, Bougma RW, Foy BD. *Evaluation of ivermectin mass drug administration for malaria transmission control across different West African environments. **Malaria*** 13(1), 417 (2014)
5. Krajacich BJ, Slade JR, Mulligan RF, LaBrecque B, Alout H, **Grubaugh ND**, Meyers JI, Fakoli III LS, Bolay FK, Brackney DE, Burton TA, Seaman JA, Diclaro II JW, Dabire RK, Foy BD. *Sampling host-seeking anthropophilic mosquito vectors in West Africa: comparisons of an active human-baited tent-trap against gold standard methods. **The American Journal of Tropical Medicine Hygiene*** 92(2), 415-421 (2015)
6. **Grubaugh ND**, Sharma S, Krajacich BJ, Fakoli III LS, Bolay FK, Diclaro II JW, Johnson WE, Ebel GD, Foy BD, Brackney DE. *Xenosurveillance: a novel mosquito-based approach for examining the human-pathogen landscape. **PLOS Neglected Tropical Diseases*** 9(3), e0003628 (2015)
7. **Grubaugh ND***, Smith DR*, Brackney DE, Bosco-Lauth, AM, Fauver JR, Campbell CL, Felix TA, Romo H, Duggal NK, Dietrich EA, Eike T, Beane JE, Bowen RA, Black WC, Brault AC, Ebel GD. *Experimental evolution of an RNA virus in wild birds: evidence for host-dependent impacts on population structure and competitive fitness. **PLOS Pathogens*** 11(5), e100487 (2015)
8. Fauver JR, Pecher L, Schurich JA, Bolling BG, Calhoon M, **Grubaugh ND**, Burkhalter KL, Eisen L, Andre BG, Nasci RS, LeBailly A, Ebel GD, Moore CG. *Temporal and spatial variability of entomological risk indices for West Nile virus infection in Northern Colorado: 2006-2013. **Journal of Medical Entomology*** tjv234 (2015)
9. **Grubaugh ND**, Massey A, Shives KD, Stenglein MD, Ebel GD, Beckham JD. *West Nile virus population structure, injury, and interferon-stimulated gene expression in the brain from a fatal case of encephalitis. **Open Forum Infectious Diseases*** 3(1), ofv182 (2016)
10. Misencik MJ, **Grubaugh ND**, Andreadis TG, Ebel GD, Armstrong PM. *Isolation of a novel insect-specific Flavivirus from *Culiseta melanura* in the Northeastern United States **Vector-Borne and Zoonotic Diseases*** 16(3), 181-190 (2016)
11. **Grubaugh ND**, Weger-Lucarelli J, Murrieta RA, Fauver JR, Garcia-Luna SM, Prasad AN, Black WC, Ebel GD. *Genetic drift during systemic arbovirus infection of mosquito vectors leads to decreased relative fitness during host switching. **Cell Host & Microbe*** 19(4), 481-492 (2016)
12. Diehl WE*, Lin AE*, **Grubaugh ND***, Carvalho LM*, Kim K, Kyawe PP, McCauley SM, Donnard E, Kucukural A, McDonel P, Schaffner SF, Garber M, Rambaut A, Andersen KG, Sabeti PC, Luban J. *Ebola virus glycoprotein with increased infectivity dominated the 2013–2016 epidemic. **Cell*** 167(4), 1088-1098, e6 (2016)
13. Fauver JR, **Grubaugh ND**, Krajacich BJ, Weger-Lucarelli J, Lakin SM, Fakoli LS, Bolay FK, Diclaro JW, Dabire KR, Foy BD, Brackney DE, Ebel GE, Stenglein MD. *West African *Anopheles gambiae* mosquitoes harbor a taxonomically diverse virome including new insect-specific flaviviruses, mononegaviruses, and totiviruses. **Virology*** 498, 288-299 (2016)
14. **Grubaugh ND***, Rückert C*, Armstrong PM, Bransfield A, Anderson JF, Ebel GD, Brackney DE. *Transmission bottlenecks and RNAi collectively influence tick-borne flavivirus evolution. **Virus Evolution*** 2(2), vew033 (2016)
15. **Grubaugh ND°**, Fauver JR, Rückert C, Weger-Lucarelli J, Garcia-Luna S, Murrieta RA, Gendernalik A, Smith DR, Brackney DE, Ebel GD°. *Mosquitoes transmit unique West Nile virus populations during each feeding episode. **Cell Reports*** 19(4), 709-718 (2017)
16. Quick J, **Grubaugh ND**, Pullan ST, Claro IM, Smith AD, Gangavarapu K, Oliveira G, Robles-Sikisaka R, Rogers TF, Beutler NA, Burton DR, Lexis-Ximenez LL, Jesus JG, Giovanetti M, Hill S, Black A, Bedford T, Carrol MW, Nunes M, Alcantara LC, Sabino EC, Baylis SA, Faria N, Loose M, Simpson JT, Pybus OG, Andersen KG, Loman NJ. *Multiplex PCR method for MinION and Illumina sequencing of Zika and other virus genomes directly from clinical samples. **Nature Protocols*** 12(6), 1261-1276 (2017)

17. **Grubaugh ND***, Ladner JT*, Kraemer MUG*, Dudas G*, Tan AL*, Gangavarapu K*, Wiley MR*, White S*, Theze J, Magnani DM, Prieto K, Reyes D, Bingham A, Paul LM, Robles-Sikisaka R, Oliveira G, Pronty D, Barcellona CM, Metsky HC, Baniecki ML, Barnes KG, Chak B, Freije CA, Gladden-Young A, Gnirke A, Lou C, MacInnis B, Matranga CB, Park DJ, Qu J, Schaffner SF, Tomkins-Tinch C, West KL, Winnicki SM, Wohl S, Yozwiak NL, Quick J, Fauver JR, Khan K, Brent SE, Reiner RC, Lichtenberger PN, Ricciardi M, Bailey VK, Watkins DI, Cone MR, Kopp EW, Hogan KN, Cannons AC, Jean R, Monaghan AJ, Garry RF, Loman NJ, Faria NR, Porcelli MC, Vasquez C, Nagle ER, Cummings DAT, Stanek D, Rambaut A, Sanchez-Lockhart M, Sabeti PC, Gillis LD, Michael SF, Bedford T, Pybus OG, Isern S, Palacios G, Andersen KG. *Genomic epidemiology reveals multiple introductions of Zika virus into the United States. **Nature** 545(7656), 401-405 (2017)*
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