

# J. David Beckham, M.D., FACP, FIDSA

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Division of Infectious Diseases  
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## Education:

1997-2001      Graduate: Baylor College of Medicine, Houston, Texas  
Degree: **Doctor of Medicine**  
1993-1997      Undergraduate: Baylor University, Waco, Texas  
Degree: **Bachelor of Arts**, Biology and Chemistry

## Professional Experience:

2022-Current      **Professor with Tenure, Depts of Medicine and Immunology&Microbiology**  
University of Colorado School of Medicine  
2016-Current      **Staff Physician and VA Merit Scholar**  
VA Eastern Colorado Health Care System  
2015-2022      **Associate Professor of Medicine, Neurology and Immunology&Microbiology**  
University of Colorado School of Medicine  
2009-2015      **Assistant Professor of Medicine, Neurology & Immunology&Microbiology**  
University of Colorado School of Medicine  
2007-2009      **Instructor of Medicine**  
University of Colorado School of Medicine  
2005-2010      **Post-Doctoral Research Training in Neurovirology**  
**Mentor: Kenneth L. Tyler MD**  
University of Colorado School of Medicine  
2004-2005      **Clinical Fellowship**  
University of Colorado School of Medicine  
Aurora, Colorado  
Specialty: **Infectious Disease**  
2001-2004      **Internship and Residency**  
Baylor College of Medicine, Houston, Texas  
Specialty: **Internal Medicine**

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## LICENSURE AND CERTIFICATION:

Texas State Board of Medical Examiners, Medical License, 2003-2004  
State of Colorado Board of Medical Examiners, Medical License, 2004-Present  
American Board of Internal Medicine Certified, Oct.-2004, Recertified Jan 2014

ABIM Infectious Disease Certified, Oct-2006, Recertified November 2016

**ACADEMIC APPOINTMENTS:**

2016-current **Attending Physician**, Rocky Mountain Regional VAMC, Aurora, Colorado  
2007-current **Attending Physician**, University of Colorado Hospital, Aurora, Colorado  
2012-2019 **Director, Infectious Disease Fellowship Training Program**, University of Colorado School of Medicine, Aurora, CO  
2012-2019 **Director, Infectious Disease Advanced Research Training Program**, University of Colorado School of Medicine, Aurora, Colorado  
2014-2016 **Founding Director, NeuroInfectious Diseases and Autoimmune Neurology Fellowship Training Program.** University of Colorado School of Medicine  
2008-13, 2016-17 **Founding Medical Director of Occupational Health**, University of Colorado School of Medicine, Aurora, Colorado

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**AWARDS AND HONORS:**

Undergraduate: Phi Beta Kappa Scholar, Magna Cum Laude Graduate  
Honors Program Graduate with Distinction, Excellence in Biology Award, Folmar Research Award, Golden Key Honor Society, Donald Kaiser Pre-Med Scholarship

Graduate: American Cancer Society Research Grant

Post-Graduate: Residency Assistance Program Leader, Microbiology T32 Training Grant, American Society for Virology Medical Virology Club Award

Professional: VA Career Development Award (2007)

American Society for Clinical Investigation Young Investigator Award (2008)

NIH Loan Repayment Program Participant (2008-2014)

VA Merit Scholar (2017-current)

NIH MIDB Study Section Member (2018-current)

Ad Hoc Study Section Participant for NIH and DOD (>20)

Ad Hoc DOD Programmatic Review Panel member (2017, 2019)

**PROFESSIONAL SOCIETIES:**

Fellow, American College of Physicians (FACP)

Fellow, Infectious Disease Society of America (FIDSA)

Member, American Society for Clinical Investigation (ASCI)

Member, American Society for Virology (ASV)

Member, American Society for Microbiology (ASM)

Member, American Association for the Advancement of Science (AAAS)

Member, American Association of Immunologists (AAI)

Member, American Society of Tropical Medicine & Hygiene (ASTMH)

**Local Memberships:**

UCAMC Movement Disorders Center Member  
UCAMC Colorado Clinical and Translational Sciences Institute Member  
UCAMC Center for Neurosciences Member  
UCAMC Center for RNA Biosciences Member  
UCAMC Center for Global Health Member  
University of Colorado Cancer Center Member  
Colorado Arbovirus Research Consortium Member

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**Research Funding:****Active:**

1) NIH/NINDS R01 NS123431

Title: Determining the Mechanism of alpha-synuclein dependent innate immune responses in the brain

Project period: 3/11/2022-3/10/2027

Role: PI

Direct Annual Funding: \$380,000

2) NIH/NIAID R01 AI153724

Title: Development of a vaccination platform for emerging flavivirus infections.

Project Period: 11/4/2021-11/03/2026

Role: PI

Total Annual Direct: \$280,000/yr

3) VA Merit Review I01BX003863-05

Title: Targeting Innate Immunity as a therapeutic Intervention for Parkinson's Disease.

Project Period: 7/1/2021-6/30/2025

Role: PI

Direct Annual Funding: \$160,000/yr

4) NIH/NIAID R01 AI133348

Title: Mechanisms of viral RNA maturation by co-opting cellular exonucleases.

Project period: 4/1/2022-2/28/2027

Role: Co-investigator

Direct Annual Funding: \$380,000

5) Roche Industry Grant

Title: Clinical and economic impact of respiratory infections in a cohort of Guatemalan agricultural workers and the natural history and protection of the SARS-CoV2 and seasonal coronavirus antibody response.

Project Period: 1/2021-1/2025

Role: Co-PI

Direct Annual Funding: \$100,000/yr

**Pending:**

1) NIH/NIAID R38 AI174251-1

Title: Colorado Immunology and Microbiology StARR Program

Project Period: 1/5/2023-1/4/2028

Role: PI/PD

Direct Annual Funding: \$200,508

**Training Grant Mentor/Preceptor (T32):**

1) T32 AI052066-16 Molecular Pathogenesis of Infectious Diseases, PI Linda Van Dyk.

2) T32 AI007405-31 Training Program in Immunology, PI: Raul Torres, Ross Kedl

3) T32 GM008497-30 Medical Scientist Training Program, PI: Cara Wilson

**Completed:**

2020-2021 CCTSI COVID19 Pilot Award

Project Title: Observational cohort trial of COVID19

Convalescent Plasma Treatment

Role: PI

2017-2020 Department of Defense Medical Investigator Initiated Research Award, PRMRP PR160117

Title: Zika virus Vaccine Target Development in a Mouse Model of Disease

Role: PI

2017-2019 NIH/NIAID R21 AI129569

Title: Understanding pathogenic noncoding RNA production in Zika virus infection

Role: Co-PI

2015-2016 CCTSI and Center for Neuroscience Award

Title: The role of alpha-synuclein in anti-viral responses

Role: PI

2011-2014 NIH/NIAID U54 AI065357/RMDP009

Rocky Mountain Regional Center for Excellence for Biodefense and Emerging Infectious Diseases Developmental Project

Title: mTOR mediated Flavivirus translation

Role: Subproject PI

2009-2012 NIH L30AI084776

Title: Pathogenesis of Viral Encephalitis in humans

Role: PI

2009-2011 ARRA Supplement NIH/NIAID 5K08AI076518-02S1

2008-2013 NIH/NIAID 5K08AI076518

Title: Mechanisms of apoptosis in virus-infected neurons

Role: PI

2009-2011 Mucosal & Vaccine Research Colorado

Title: Role of mTOR in viral mucosal immunity

Role: PI

- 2008-2009 American Society for Clinical Investigation Young Investigator Award  
Title: Mechanisms of apoptosis in virus infected brain tissue.  
Role: PI
- 2007-2008 VA Career Development Award-2  
Title: Mechanisms of virus-induced apoptosis in the CNS.  
Role: PI
- 2005-2007 NIH/NIAID T32AI07537  
Title: Mechanisms of Reovirus-induced neuronal cell death

**Publications:**

- 1) **Beckham JD**, Cadena A, Lin J, Piedra PA, Glezen WP, Greenberg SB, RL Atmar. Respiratory viral infections in patients with chronic obstructive pulmonary disease. J Infection. 2005. 50:322-330.
- 2) **Beckham JD**, Tyler KL. Multiple Sclerosis Treatment Complications. Rev Neurol Dis. 2005. 2(3):158-163.
- 3) **Beckham JD**, Tyler KL. Initial Management of Acute Bacterial Meningitis in Adults: Summary of IDSA Guidelines. Rev Neurol Dis. 2006. 3(2):57-60.
- 4) Tyler KL and **Beckham JD**. Management of Acute Shingles. Rev Neurol Dis. 2007. 4(4):203-208.
- 5) **Beckham JD** and Tyler KL. Developments in the Field of Creutzfeldt-Jakob Disease. Rev Neurol Dis. 2007. 4(3):168-72.
- 6) Goody RJ, **Beckham JD**, Rubtsova K, Tyler KL. JAK-STAT signaling pathways are activated in the brain following reovirus infection. J. Neurovirol. 2007 Jul;13(4):373-383.
- 7) **Beckham JD**, Goody R, Clarke P, Bonny C, Tyler KL. A novel strategy for the treatment of viral CNS infection utilizing a cell-permeable inhibitor of c-Jun N-terminal kinase. Journal of Virology. 2007. 81(13): 6984-92.
- 8) Davis LE, **Beckham JD**, Tyler KL. North American encephalitic arboviruses. Neurol Clin. 2008 26:727-57.
- 9) **Beckham JD**, Tuttle K, Tyler KL. Reovirus activates TGF- $\beta$  and BMP signaling pathways in the CNS which contribute to neuronal survival following infection. Journal of Virology. 2009 May; 83(10):5035-45.
- 10) Clarke P, **Beckham JD**, Goody R, Leser JS, Tyler KL. Fas-mediated apoptotic signaling in the mouse brain following reovirus infection. Journal of Virology. 2009 Jun; 83(12): 6161-70.

- 11) **Beckham JD**, Tuttle KD, Tyler KL. Caspase-3 activation is required for Reovirus-induced Encephalitis in vivo. Journal of Neurovirology. 2010 Aug; 16(4):306-17.
- 12) Dionne KR, Leser JS, Lerenzen KA, **Beckham JD**, Tyler KL. A brain slice culture model of viral encephalitis reveals an innate CNS cytokine response profile and the therapeutic potential of caspase inhibition. Exp Neurol. 2011 Apr; 228(2):222-31.
- 13) **Beckham JD** and Tyler KL. Neuro-Intensive care of patients with CNS infections. Neurotherapeutics. 2012 Jan; 9(1): 124-138.
- 14) Beatman E, Oyer R, Shives KD, Hedman K, Brault AC, Tyler KL, **Beckham JD**. West Nile replication is Independent of Autophagy activation. Virology. 2012. 433: 262-272.
- 15) Davis LE, Oyer R, **Beckham JD**, KL Tyler. Elevated CSF cytokines in the Jarisch-Herxheimer reaction of general paresis. JAMA Neurology. 2013. 79(8):1060-4.
- 16) Clarke P, Leser JS, Quick E, Dionne K, **Beckham JD**, KL Tyler. Death receptor mediated apoptotic signaling is activated in the brain following infection with West Nile Virus in the absence of a peripheral immune response. J. Virology. 2014. 88(2):1080-9.
- 17) Steele A, Lee E, Manuzak J, Dillon S, **Beckham JD**, McCarter M, Santiago ML, Wilson CC. Microbial exposure alters HIV-1-induced Mucosal CD4+ T Cell Death pathways ex vivo. Retrovirology. 2014, Feb 4. PMID: 24495380
- 18) Shives K, Beatman E, Chamanian M, O'Brien CA, Hobson-Peters J, **Beckham JD**. West Nile virus-Induced activation of mTOR Complex 1 supports viral growth and viral protein expression. Journal of Virology. 2014 Aug;88(16):9458-71. PMID: 24920798.
- 19) Kleinschmidt-DeMasters BK, **Beckham JD**. West Nile virus encephalitis 16 years later. Brain Pathology. 2015 Sep; 25(5):625-33. PMID 26276026
- 20) **Beckham JD**, Tyler KL. Arbovirus Infections. Continuum. 2015 Dec;21(6):1599-611. PMID 26633778.
- 21) Henaó-Martínez AF and **Beckham JD**. Cryptococcosis in Solid Organ Transplant Recipients. Current Opinion in Infectious Diseases. 2015 Aug; 28(4):300-7. PMID: 26098495.

- 22) Beatman E, Massey A, Shives K, Chamanian M, Stoermer Burrack KA, Morrison TE, **Beckham JD**. Alpha-synuclein expression restricts RNA viral infections in the brain. Journal of Virology. 2015 Dec 30. PMID 26719256.
- 23) Klionsky DJ, et al. Guidelines for the use and interpretation of assays for monitoring autophagy (3<sup>rd</sup> edition). Autophagy. 2016 Jan 2;12(1):1-222. PMID 26799652. (Co-author on guidelines with other authors in the field)
- 24) Grubaugh N, Massey A, Shives K, Stenglein MD, Ebel G, **Beckham JD**. West Nile virus population structure, injury, and interferon-stimulated gene expression in the brain from a fatal case of encephalitis. Open Forum in Infectious Diseases. eCollection 2016 Jan. PMID 26730392.
- 25) Pastula DM, Smith DE, **Beckham JD**, Tyler KL. Four emerging arboviral diseases in North America: Jamestown Canyon, Powassan, chikungunya, and Zika virus diseases. J Neurovirol. 2016 Feb 22. PMID 26903031.
- 26) **Beckham JD**, Pastula DM, Massey A, Tyler KL. Zika virus, an emerging global pathogen. JAMA Neurology. 2016 May. PMID 27183312.
- 27) White MK, Wollebo HS, **Beckham JD**, Tyler KL, Kamel Khalili. Zika virus: An emergent neuropathological agent. Annals of Neurology. July 2016. Oct; 80(4):479-89. PMID 26464346.
- 28) Massey A, **Beckham JD**. Alpha-synuclein, a novel viral restriction factor hiding in plain sight. DNA and Cell Biology. September 2016. PMID 27631132.
- 29) Pastula DM, Smith DE, **Beckham JD**, Tyler KL. An Overview of Zika Virus Disease. Neurotherapeutics. Jul 2016. 6(3):93-4. PMID 27366289.
- 30) Pastula DM, Durrant JC, Smith DE, **Beckham JD**, Tyler KL. Zika Virus Disease for the Neurointensivist. Neurocrit Care. 2016 Dec 19. PMID 27995511
- 31) Smith DE, **Beckham JD**, Tyler KL, Pastula DM. Zika virus disease for neurologists. Neurol Clin Pract. 2016 Dec;6(6):515-522.
- 32) Henao-Martinez AF, Gross L, McNair B, McCollister B, DeSanto K, Montoya JG, **Beckham JD**. Risk Factors for Cryptococcal meningitis-A single center experience in the US. Mycopathologia. August 2016. PMID 27502502.
- 33) Shives K, Massey A, May N, Morrison TE, **Beckham JD**. MTORC1/4EBP/eIF4E signaling supports positive-strand RNA virus growth and protein expression. Viruses. October 2016. 18;8(10). PMID 27763553.
- 34) Akiyama BM, Laurence HM, Massey AR, Costantino DA, Xuping X, Yang Y, Shi PY, Nix JC, **Beckham JD**, Kieft JS. Zika virus produces non-coding RNAs using a

multi-pseudoknot structure that confounds cellular exonuclease activity. Science. December 2, 2016; 354(6316):1148-1152. PMID 27934765

35) Duca LM, **Beckham JD**, Tyler KL, Pastula DM. Zika virus Disease and Associated Neurologic Complications. Curr Infect Dis Rep. 2017 Jan;19(1):4. PMID 28220392.

36) Shives K, Tyler KL, **Beckham JD**. Molecular mechanisms of neuroinflammation and injury during acute viral encephalitis. Journal of Neuroimmunology. March 11, 2017. S0165-5728(16)30433-7. Doi: 10.1016. PMID 28291542.

37) **Beckham JD**. Zika virus, a novel mosquito-borne congenital virus infection. Journal of Neurovirology. 2017 Apr 20. PMID 28429288.

38) McGuinness I, **Beckham JD**, Tyler KL, Pastula DM. An Overview of Yellow Fever Virus Disease. Neurohospitalist. 2017 Oct;7(4):157-158.

39) Hamadani BH, Franco-Paredes C, McCollister B, Shapiro L, **Beckham JD**, Henao-Martinez AF. Cryptococcosis and cryptococcal meningitis: New predictors and clinical outcomes at a US academic medical center. Mycosis. 2017 Dec 28. PMID: 29284182.

40) Brown B, Fidell A, Ingolia G, Murad E, **Beckham JD**. Defining etiologies and outcomes of patients presenting with neuroinflammation; a retrospective cohort study. Clinical Neurology & Neurosurgery. Sep 2018; 172:105-111. PMID 29986194

41) Lesteberg K, **Beckham JD**. Mechanisms of neuroinflammation in the CNS following viral infection. Viral Immunology. Sep 15, 2018. PMID 30222521.

42) Brown BL, Fidell A, Ingolia G, Murad E, **Beckham JD**. Infectious Causes and Outcomes in Patients presenting with Cerebral Spinal Fluid Pleocytosis. Journal of Neurovirology. 2019. Mar 8. PMID: 30850974

43) Gill CM, **Beckham JD**, Piquet AL, Tyler KL, Pastula DM. Five Emerging Neuroinvasive Arboviral Diseases: Cache Valley, Easter Equine Encephalitis, Jamestown Canyon, Powassan, and Usutu. Semin Neurol. 2019 Aug;39(4):419-427. PMID 31533182.

44) Khan M, **Beckham JD**, Piquet AL, Tyler KL, Pastula DM. An Overview of Powassan Virus Disease. Neurohospitalist. 2019 Oct;9(4):181-82. PMID 31534605

45) Gill CM, Kapadia RK, **Beckham JD**, Piquet AL, Tyler KL, Pastula DM. Usutu Virus disease: a potential problem for North America? J Neurovirol. 2019 Dec 19. PMID 31858483.



- 46) Melia MT, et al. The Struggling Infectious Diseases Fellow: Remediation Challenges and Opportunities. Open Forum Infectious Diseases. 2020 Feb 18;7(3). PMID 32166097.
- 47) Kading RC, Brault AC, **Beckham JD**. Global Perspectives on Arbovirus outbreaks: A 2020 Snapshot. Trop Med Infect Dis. 2020 Sept 7;5(3):E142. PMID: 32906771
- 48) Sparks H, Monogue B, Akiyama BM, Kieft JS, **Beckham JD**. Disruption of Zika virus xrRNA1-dependent sfRNA1 production results in tissue-specific attenuated viral replication. Viruses. 2020 Oct 18;12(10):1177. DOI:103390/v12101177. PMID 33080971.
- 49) Lesteberg K, Fader D, **Beckham JD**. Pregnancy alters innate and adaptive immune responses to Zika virus infection in the genital tract. Journal of Immunology. 2020. Dec 1, 2020;205(11):3107-3121. PMID 33127823
- 50) Brundin P, Nath A, **Beckham JD**. Is COVID-19 a Perfect Storm for Parkinson's Disease. Trends in Neurosciences. Cell Press. December, 2020; 43(12):931-33. PMID 33158605
- 51) Schultz J, Sparks H, **Beckham JD**. Arboviral Central Nervous System Infections. Current Opinion in Infectious Diseases. 2021. Jun 1;34(3):264-271. PMID 33899755
- 52) Akiyama BM, Graham M, O'Donoghue Z, **Beckham JD**, Keift JS. Three-dimensional structure of a flavivirus dumbbell RNA reveals molecular details of an RNA regulator of replication. Nucleic Acids Research. 2021 Jun 16. Epub online. PMID: 34133732.
- 53) Lakshmi Chauhan, Jack Pattee, Joshay Ford, Chris Thomas, Kelsey Lesteberg, Eric Richards, Carl A. Bernas, Michele Loi, Larry Dumont, Kyle Annen, Mary Berg, Mercedes Zirbes, Amanda Miller, Timothy C. Jenkins, Tellen D. Bennett, Daniel Monkowski, Rebecca S. Boxer, and **J. David Beckham**. A Multi-center, Prospective, Observational-cohort controlled study of Clinical Outcomes following COVID-19 Convalescent plasma therapy in hospitalized COVID-19 patients. Clinical Infectious Diseases. Sept 21, 2021. Doi:10.1093/cid/ciab834. PMID: 34549274.
- 54) Bai X, Hippensteel J, Leavitt A, Maloney JP, **Beckham JD**, Garcia C, Li Q, Freed BM, Ordway D, Sandhaus RA, Chan ED. Hypothesis: Apha-1-antitrypsin is a promising treatment option for COVID-19. Med Hypotheses. 2021. Jan;146:110394. PMID 33239231.
- 55) Bai X, Buckle AM, Vladar EK, Janoff EN, Khare R, Ordway D, **Beckham JD**, Fornis LB, Majluf-Cruz A, Fugit RV, Freed BM, Kim S, Sandhaus RA, Chan ED. Enoxaparin augments alpha-1-antitrypsin inhibition of TMPRSS2: a promising drug combination against COVID-19. Scientific Reports. 2022 Apr 19;12(1):6466. PMID

35440617.

56) Moriah J. Castleman, Megan M. Stumpf, Nicholas R. Therrien, Mia Smith, Kelsey E. Lesteberg, Brent E. Palmer, James Maloney, William J. Jansen, Kara J. Mould, **J. David Beckham**, Roberta Pelanda, Raul M. Torres. Phenotypical and functional energy is relaxed in human peripheral BND cells during SARS-CoV 2 infection. J Exp Med. 2022. Jun 6;219(6):e20212553. PMID 35420627

57) Brendan Monogue, Yixi Chen, Hadrian Sparks, Ranya Behbehani, Andrew Chai, Alexander J. Rajic, Aaron Massey, B.K. Kleinschmidt-Demasters, Matthieu Vermeren, Tilo Kunath, **Beckham JD**. Alpha-synuclein supports type 1 interferon signaling in neurons and brain tissue. Brain. 2022. (In Press)  
<http://dx.doi.org/10.1093/brain/awac192>

58) Krett JD, **Beckham JD**, Tyler KL, Piquet AL, Chauhan L, Wallace CJ, Pastula DM, Kapadia RK. Neurology of Acute Viral Infections: A Review. Neurohospitalist. 2022. (In Press).

59) Daniel Olson, Diva M Calvimontes, Molly M. Lamb, Gerber Guzman, Edgar Barrios, Andrea Chacon, Neudy Rojop, Kareen Arias, Melissa Gomez, Guillermo Antonio Bolanos, Jose Monzon, Anna N. Chard, Chelsea Iwamoto, Lindsey M Duca, Nga Vuong, Melissa Fineman, Kelsey Lesteberg, **J. David Beckham**, Mario L. Santiago, Kendra Quicke, Gregory Ebel, Emily Zielinski Gutierrez, Eduardo Azziz-Baumgartner, Frederick G. Hayden, Hani Mansour, Kathryn Edwards, Lee S. Newman, Edwin J. Asturias. Clinical and Economic Impact of COVID-19 on Plantation workers: Preliminary results from Guatemala Agricultural Workers and Respiratory Illness Impact (AGRI) Study. Emerging Infectious Diseases. 2022. (In press)

60) Chelsea Iwamoto, Kelsey E. Lesteberg, Molly M. Lamb, Diva M. Calvimontes, Kejun Guo, Bradley S. Barrett, Kaylee L. Mickens, Lindsey Duca, Jose Monzon, Anna N. Chard, Gerber Guzman, Edgar Barrios, Neudy Rojop, Kareen Arias, Melissa Gomez, Claudia Paiz, Guillermo Antonio Bolanos, Kathryn Edwards, Emily Zielinski Gutierrez, Eduardo Azziz-Baumgartner, Edwin J. Asturias, Mario L. Santiago, **J. David Beckham**, Daniel Olson. High SARS-CoV-2 seroprevalence and rapid neutralizing antibody decline among agricultural workers in rural Guatemala, June 2020–March 2021. Vaccines. 2022 (In press).

61) Kelsey E. Lesteberg, Lakshmi Chauhan, Joaquin Espinosa, **J. David Beckham**. T cells expressing CD62L and perforin are increased in severely ill COVID-19 patients. mBio. 2022 (In peer-review).

62) Castleman MJ, Stumpf MM, Therrien NR, Smith MJ, Lesteberg KL, Palmer BE, Maloney JP, Janssen WJ, Mould KJ, **Beckham JD**, Pelanda R, Torres RM. Autoantibodies Elicited with SARS-CoV 2 infection are linked to alterations in double negative B cells. Frontiers in Immunology. 2022 (in peer-review).

63) Leach S, Kegodi I, Graham ME, Szucs M, Spear E, Kieft JS, **Beckham JD**. Targeted mutation of Zika virus xrRNA2 results in sfRNA-independent attenuation. 2022. Viruses. (In Peer-Review)

64) Graham ME, Szucs M, Kieft JS, **Beckham JD**. The Zika virus 3'UTR dumbbell region supports sfRNA-dependent apoptosis. 2022. PlosPathogens. (In Peer-Review).

### **Book Chapters:**

1) **J. David Beckham** and Kenneth L. Tyler. 'Clinical Manifestations of Neurological Disease'. West Nile Encephalitis Virus Infection: viral pathogenesis and the host immune response. Ed: Michael Diamond. Springer Publishers. 2008.

2) **J. David Beckham** and Kenneth L. Tyler. 'Viral Encephalitis' Mandell, Douglas, and Bennett's Principles and Practice of Infectious Diseases. 8<sup>th</sup> Ed. Elsevier Churchill Livingstone. Philadelphia, 2009. Revised 2013, Revised 2018.

3) **J. David Beckham**, Marylou V. Solbrig, and Kenneth L. Tyler. 'Infections of the Nervous System.' Neurology in Clinical Practice. 6<sup>th</sup> Ed. Bradley, Daroff, Jankovic, Fenichel. Elsevier. 2012. 7<sup>th</sup> Ed.

4) Ryan Oyer, **J. David Beckham**, Kenneth L. Tyler. "West Nile virus and St. Louis virus encephalitis". Handbook of Clinical Neurology. Neurovirology, Vol. 123 (3<sup>rd</sup> series) Neurovirology. Ed. Tselis and Boos. Elsevier B.V. 2014.

5) **J. David Beckham** and Kenneth L. Tyler. "Viral Myelitis". Infections of the Central Nervous System. 4<sup>th</sup> Ed. Scheld, Whitley, Marra. 2014.

6) Daniel E. Smith MD, **J. David Beckham MD**, Daniel M. Pastula MD, MHS, Kenneth L. Tyler MD. Neurologic Manifestations of West Nile virus disease. Clinical Neurovirology. 2<sup>nd</sup> Edition. 2019.

7) Kleinschmidt-DeMasters BK, **Beckham JD**, Tyler KL. Infections and Inflammatory Disorders. Practical Surgical Neuropathology. 2018.

8) Asturias E, **Beckham JD**. Arbovirus Dermatology. Fitzpatrick's Dermatology. 2018.

9) **J. David Beckham**, Marylou V. Solbrig, and Kenneth L. Tyler. 'Infections of the Nervous System.' Neurology in Clinical Practice. 6<sup>th</sup> Ed. Bradley, Daroff, Jankovic, Fenichel. Elsevier. 2020 8<sup>th</sup> Edition.

10) **J. David Beckham**. Arboviruses Causing Fever, Rash, and Neurologic Syndromes. Chapter 350. Goldman-Cecil Medicine. 27<sup>th</sup> Ed. 2022.

11) **J. David Beckham** and Kenneth L. Tyler. 'Viral Encephalitis' Mandell, Douglas,

and Bennett's Principles and Practice of Infectious Diseases. 8<sup>th</sup> Ed. Elsevier Churchill Livingstone. Philadelphia, 2023. (In Press).

### **Invited Seminars**

April 2009: Colorado IDSA Invited Speaker. 'What's New with Viral Infections of the CNS'.

May 2010: UTMB Galveston National Laboratory: 'Search for the Holy Grail: Viral Pathogenesis in the Central Nervous System'

August 2010: Invited Symposium, NIAID Intermountain West Immunology Group: "Neuronal Responses to Acute Viral Encephalitis"

September 2011: NIAID Rocky Mountain Regional Center of Excellence Annual Meeting. "Therapeutic targeting of mTOR to treat viral encephalitis."

October 2012: NIAID Rocky Mountain Regional Center of Excellence Annual Meeting. 'West Nile virus-induced changes in proteostasis'

May 2013: University of Colorado Microbiology, Molecular Pathogenesis of Infectious Diseases Mini-Symposium. "Defining the Mechanisms of WNV Neurovirulence".

October 2013: NIAID Rocky Mountain Regional Center of Excellence Annual Meeting. "Mechanisms of WNV RNA translation"

December 2014: Invited Symposium, Colorado State University. Microbiology, Immunology and Pathology Visiting Professor Seminar "Use of West Nile virus to define Conserved Viral-host Interactions"

July 2015: University of Colorado School of Medicine Department of Neurology Grand Rounds. "Viral-host interactions in the brain from bench to bedside"

July 2015: American Society for Virology Conference: "Alpha-synuclein inhibits viral infections in the brain". J. David Beckham, Kathryn Shives, and Aaron Massey

October 2015: University of North Carolina Systems Immunogenetics Annual Meeting "Translating West Nile virus from the Bedside to the Bench"

January 2016: Molecular Pathogenesis of Infectious Disease Seminar Series, University of Colorado. "Alpha-synuclein is a novel viral restriction factor in the brain"

June 2016: Invited Seminar for the Colorado Children's Immunization Coalition and the Center for Global Health.

“Vector-Borne Disease and Related Vaccine Developments: Zika, Dengue and Chikungunya”.

August 2016: Invited Seminar for University of Colorado Center for Neuroscience Annual Symposium.

“Mechanisms of alpha-synuclein induced restriction of viral infections in the CNS”

September 2016: Invited Seminar for Regis Pharmacy School.

“Emerging Infectious Diseases from alpha to Zika”

October 2016: Invited Seminar for University of Colorado, Center for Global Health

“Zika virus outbreak in the Americas”

October 2016 Molecular Pathogenesis of Infectious Diseases Conference invited seminar. University of Colorado Graduate School. Denver, CO.

“Pathogenesis of Zika virus from mosquitoes to neurons”

October 2016 University of Colorado Department of Medicine Grand Rounds

“Emerging infectious diseases: the impact of RNA virus evolution and host responses”

October 2016: Invited Plenary Talk for International Society for Neurovirology Meeting in Montreal, Canada.

“New insights into flavivirus pathogenesis with the emergence of Zika virus.”

November 2016: Invited Keynote Address for Rocky Mountain American Society for Microbiology. “Zika virus and small RNAs”.

November 2016: Invited Symposium at the Indo-US Research Summit on Emerging Infectious Diseases in Chalsa Hilltop, Jalpaiguri, West Bengal, India.

“Emerging Flavivirus Infections in the CNS”.

January 2017: Invited Visiting Professor, Michigan State University

Seminar: “The impact of RNA virus evolution on host responses to emerging infectious diseases”.

April 2017: Invited Plenary Lecture at the Society for Brain Mapping and Therapeutics symposium and co-chair for the session on Zika Virus:

Seminar: “The emergence of Zika virus as a global pathogen”

July 2017: Invited Plenary Lecture at the NIAID Rocky Mountain Laboratories Vector-borne Viruses Symposium. Hamilton, MT.

Seminar: “Alpha-synuclein: a novel inhibitor of viral infections in the CNS”

November 2017: Invited Visiting Professor Temple University Neurology Grand Rounds

Seminar: “Mechanisms of virus-induced neuroinflammation from the bedside to the bench to Parkinson’s disease pathogenesis.”

March 2018: Invited Speaker, Colorado-IDSA Regional Meeting. “Emerging Viruses You Need to Know”.

January 2019: Invited Speaker, University of California Irvine Virology Research Institute. “The evolution of virus-host interactions from RNA to alpha-synuclein”

June 2019: Invited Symposium Speaker, University of Edinburgh, MRC Center for Regenerative Medicine  
“The functional role of alpha-synuclein during neuroinflammation”

October 2019: Invited Speaker, 20<sup>th</sup> Annual Colorado Immunology Conference. Steamboat Springs, CO.  
“Alpha-synuclein: the Dr Jeckyll and Mr Hyde of innate immunity and neurodegenerative disease”

March 2020: Invited Virtual Seminar, University of Edinburgh Campus Seminar Edinburgh, Scotland UK  
“Update on the SARS-CoV2 Pandemic”

April 2020: Invited Virtual Seminar, University of Colorado Neurology Grand Rounds Aurora, CO  
“Update on the SARS-CoV2 Pandemic in the US and Colorado”

May 2020: DOM Grand Rounds Speaker, University of Colorado Anschutz Campus Aurora, CO  
Neurological and Cognitive Sequelae of SARS-CoV2 infection

August 2020: Indo-US Summit on COVID Biology: “Immunologic outcomes following Convalescent Plasma treatment for COVID19.”

August 2020: CCTSI-CU and CSU Summit: Clinical and Immunological outcomes of COVID19 following treatment with Convalescent plasma.

August 2020: South Central Association of Blood Banks (SCABB) Annual Meeting: The Immunology of Passive Immunity and Convalescent Plasma therapy for COVID19.

September 2020: UC Denver Movement Disorders Center Disciplinary Conference: A Functional Role for Alpha-synuclein in innate immunity.

October 2020: CSU Microbiology Immunology and Pathology Graduate Student Seminar Series Speaker. “Mechanisms of innate immune responses during Viral encephalitis”.

March 2021: Plenary Speaker, 3<sup>rd</sup> Annual Advances in Pharmacotherapy Meeting (SON/SOP). “COVID19-The good, bad, and ugly. Preparing for the next pandemic”.

May 13, 2021: (Virtual), Microbiology Student Seminar, Washington State University. Symposium “New insights into flavivirus-host interactions from RNA structure to innate immunity”.

June 16, 2021: Visiting Professor (Virtual), University of Michigan Infectious Disease Grand Rounds. “Evolution of virus-host interactions from RNA structure to neuronal innate immunity”.

September 19, 2022: Visiting Professor (Virtual), Roche Research and Early Development Seminar. “Alpha-synuclein supports interferon responses in neurons”.

May 8, 2023: Invited Plenary Lecture at 4<sup>th</sup> Parkinson’s disease Gordon Research Conference:  
“Linking alpha-synuclein-dependent interferon signaling to Parkinson’s disease pathogenesis”.

### **Scientific Meeting Organization**

April 2018: Flavivirus Section Organizer and Session Chair  
15<sup>th</sup> Annual International Symposium on Neurovirology and 2018 Conference on HIV in the Nervous System with the 24<sup>th</sup> Scientific Conference of the Society on Neuroimmune Pharmacology. Chicago, Illinois, USA

August 2022: Annual Immunology and Microbiology Retreat, Organizer and Session Chair for the Pathogenesis of Infectious Diseases Session. Vail, CO

### **Scientific Abstracts, Posters, Conference Oral Presentations**

July 2006: American Society for Virology Conference  
Reovirus-induced encephalitis in neonatal mice is associated with JNK and c-Jun Activation.

**J. David Beckham** and Kenneth L. Tyler.

July 2007: American Society for Virology Conference  
Transforming Growth Factor- $\beta$  (TGF $\beta$ ) Signaling is Critical for Reovirus-Induced CNS Infection in Neonatal Mice.

**J. David Beckham** and Kenneth L. Tyler.

July 2008: American Society for Virology Conference  
JNK Signaling Regulates Fas-mediated Apoptosis in Reovirus-infected Cells.  
Penny Clarke, **J. David Beckham**, Robin J. Goody, Smith Leser, Cristen C. Hoyt, Kenneth L. Tyler.

April 2008: Poster Presentation ASCI/AAP Joint Meeting: Transforming growth factor- $\beta$  (TGF- $\beta$ ) superfamily signaling is activated following viral infection of the central nervous system. **J. David Beckham** and Kenneth L. Tyler

June 2009: American Society of Neurovirology Conference: “Viral Activation of BMP signaling pathways contribute to neuronal survival”.

**J. David Beckham**, Kathryn D. Tuttle, and Kenneth L. Tyler.

July 2009: American Society for Virology Conference

Reovirus activates BMP signaling pathways *in vitro* and *in vivo* which contribute to neuronal survival following infection.

**J. David Beckham**, Kathryn D. Tuttle, and Kenneth L. Tyler.

July 2009: American Society for Virology Conference

Potential Role of Daxx in Reovirus-induced Neuronal Apoptosis.

Kalen Dionne, **J. David Beckham**, J. Smith Leser, Kenneth L. Tyler.

July 2011: American Society for Virology Conference

West Nile virus infection activates autophagy in Neurons

Ryan J. Oyer, Karla Hedman, Erica Beatman, **J. David Beckham**

September 2011: Rocky Mountain Regional Center of Excellence Annual Meeting.

Therapeutic targeting of mTOR to treat viral encephalitis.

**J. David Beckham**

March 2012: NIAID Regional Centers of Excellence National Meeting.

West Nile virus Manipulates mTOR activity in Support of Viral Replication

Karla Hedman, Erica Beatman, **J. David Beckham**

July 2013: American Society for Virology Conference Oral Presentations:

1) ‘Defining NS3 host binding partners’ Kathryn Shives and **J. David Beckham**

2) ‘Mechanisms of WNV Subcortical neurovirulence’ Erica Beatman and **J. David Beckham**

July 2014: American Society for Virology Conference, ‘TOR dependent S6K is activated in support of West Nile virus gene expression’ Kathryn Shives and **J. David Beckham**

July 2015: American Society for Virology Conference, ‘Mechanism of Alpha-synuclein restriction in neurons’ Aaron Massey and **J. David Beckham**

July 2015: American Society for Virology Conference, ‘Mechanism of mTOR-dependent RNA translation following viral infections’ Katherine Shives and **J. David Beckham**

September 2015: Grand Challenges In Parkinson’s Disease Conference. “Alpha-synuclein restricts RNA viral infections in Neurons”. **J. David Beckham** and Aaron Massey.



May 2016: Rocky Mountain Neuroscience Conference. “Alpha-synuclein expression restricts RNA virus infections in the brain”. Katherine Shives, Aaron Massey, **J David Beckham**.

October 2016: International Society of Neurovirology Conference. “Alpha-synuclein is phosphorylated in the brain following viral infection.” Aaron Massey, **J. David Beckham**

April 2018: International Society of Neurovirology Conference: “Alpha-synuclein induced immune responses during viral encephalitis.” Aaron Massey, **J. David Beckham**

October 2018: Grand Challenges in Parkinson’s Disease: “Alpha-synuclein functional role in immune mediated responses in the brain.” Aaron Massey, **J. David Beckham**

June 2019: Positive-strand RNA virus Keystone Meeting in Kerry, Ireland  
“A functional role for alpha-synuclein expression in innate immunity during acute viral infection. Aaron Massey, Brendan Monogue, **J. David Beckham**

July 2019: American Society for Virology Conference, University of Minnesota  
1) Oral Presentation: “Xrn1-resistant RNA structures support viral growth and replication” Hadrian Sparks, **J. David Beckham**  
2) Oral Presentation: “Pregnancy-induced immune modulation during acute Zika virus infection” Kelsey Lesteberg, **J. David Beckham**

August 2019: Department of Defense MHSRS Meeting, Kissimmee, FL. “Manipulation of flavivirus 3’UTR structural interactions as a novel vaccine attenuation strategy” Hadrian Sparks, **J. David Beckham**.

June 2020: American Society For Virology Conference (3 abstracts accepted for oral presentations from the lab. (Conference Canceled due to COVID19 pandemic).

Sept 2020: Rocky Mountain Virology Conference (3 abstracts from the lab accepted, meeting canceled).

July 2021: American Society for Virology Conference (Abstracts-Oral Presentations)  
1) Graham ME, Akiyama B, **Beckham JD**. Structure-function relationship of the Zika virus DB-1 structure during viral infection  
2) Monogue BG, Massey A, Sparks H, Chen Y, Lesteberg K, Kunath T, **Beckham JD**. Alpha-synuclein facilitates the type I IFN response in neurons during viral infection.

Sept 2021: Rocky Mountain Virology Conference  
Graham ME, Akiyama B, **Beckham JD**. “The role of Zika virus dumbbell structure in viral pathogenesis.”

June 2022: Keystone Positive Strand RNA virus meeting  
Graham ME and **Beckham JD**. “Flavivirus dumbbell RNA supports sfRNA biogenesis”

June 2022: Keystone Viral Immunology Conference  
Lesteborg K, **Beckham JD**. CD62L+ CD8 Tcell responses are associated with severe COVID-19.

July 2022: American Society for Virology Conference

- 1) Lesteborg K, **Beckham JD**. CD62L+ Cytotoxic Tcell responses are associated with severe COVID-19 outcomes.
- 2) Graham ME, **Beckham JD**. Zika virus dumbbells support sfRNA biogenesis and pathogenicity.

Sept 2022: Cell Symposium – Neuroimmunology

Monogue B, **Beckham JD**. Alpha-synuclein supports type 1 interferon responses in neurons.

### **Invited Community Lectures:**

2012-2019: AIDS Community Outreach Lectures (Mountain Plains AIDS Education center)

2016: Colorado Café Scientifique Lecture: “Zika virus on the Brain?”

2020: Cure Parkinson’s and Rallying to the Challenge Symposium Interview. The Cure Parkinson’s Trust is an international organization based in the UK.

2022: Colorado Café Scientifique Lecture: “Knee deep in viruses, what changed and what’s next?”

### **FDA Investigational Drug Approvals**

FDA IND 21426

COVID19 Convalescent Plasma

Expanded Access program for Colorado

Dates: April 24, 2020-April 23, 2021

### **Journal Editorial Boards**

Editorial Board: Journal of NeuroImmunology (2021-2024)

Associate Editor: Journal of Neurovirology 2017-2021

Topic Editor: Vaccines 2020-2021

Special Issue Editor: “Immunopathogenesis of Emerging RNA viruses” Vaccines 2020-2021, “Neuroinvasive viral infections” Viruses 2019, “Arthropod-borne Infections: The Outbreak Edition” Tropical Medicine and Infectious Diseases 2020

### **Ad Hoc Journal Peer Reviewer:**

General: PNAS, Science Advances, Nature Communications, Scientific Reports, Cell Reports

Neurology: Annals of Neurology, Neurology, Nature Parkinson’s Disease, Journal of Neurology, Journal of Parkinson’s Disease, Journal of Neurovirology, Journal of Neuroimmunology.

Infectious Disease: PLoS Pathogens, Viruses, Journal of Virology, Lancet Infectious Diseases, Vaccines, Virology, American Journal of Tropical Medicine and Hygiene,

Clinical Infectious Diseases, Journal of Infectious Diseases, Antiviral Research, Journal of Clinical Virology.

**NIH Grant Review Committees:**

**Regular Membership:**

NIH MIDB Study Section, Member (July 1, 2018-June 30, 2024)

**Ad Hoc NIH Review Committee work:**

NIH Virology B Study section (ad hoc member: 2014, 2016, 2017, 2018)

NIH Special Emphasis Panel (SEP) ZRG1 BBBP-T (50) June 2016

NIH P01 Special Emphasis Panel (1/2017, 10/2017)

NIH ZAI1-AWA-M-M2 Zika virus Rapid Review Panel (2017)

NIH ZRG1 IDM-P(90), Zika virus Complications Review Panel (2017-2018)

NIH/NIAID Special Emphasis Panel. Emergency Awards: Antiviral Drug Discovery

NIH (AVIDD) Centers for Pathogens of Pandemic Concern Review Panel. (2022)

**International Grant Reviews:**

French National Research Agency, CE13 Evaluation Committee in Cell Biology, Developmental and Evolutionary Biology. 4/2022

**Department of Defense Review Committees:**

PRMRP Vaccine Development for Infectious Diseases (VDID) Review Panel (9/2017)

PRMRP FY17 Programmatic Review Committee (11/2017, 11/2019)

CDMRP FY18 PRMP Review Panel (2/2018, 10/2018)

PRMRP COVID19 Pre-application Review (5/2020)

CDMRP TBDRP DP Panel Review (10/2020)

**VA Scientific Review Committee:**

VA COVID19 Study Section Review Panel (6/2020)

**Other Grant Review Committees:**

University of Colorado School of Medicine: HIV (T32) Training Grants

Wellcome Trust Grant Review

Colorado Clinical & Translational Sciences Institute Grant Reviewer

IDSA Medical Scholars Program/GERM Review Committee (2016-2020)

**National Committee Service:**

2015-2018 IDSA Training Directors Program Committee

2015-2020 IDSA Medical Scholars Program Committee- IDSA Foundation sponsored scholarship program

2016-2018 IDWeek Abstract Review Committee

2014-2018 IDWeek Mentorship Program

**Local Committee Service:**

2010-2019 Infectious Disease Fellowship Research Committee

2009-2012	Co-Director for University of Colorado School of Medicine Division of Infectious Diseases Grand Rounds
2012-2018	Faculty Senate University of Colorado School of Medicine
2012-2018	GME Residency Internal Review Committees
2015-2019	Physician Scientist Training Program Admissions Committee
2015-2016	Infectious Disease Division Committees: Faculty Recruitment, Physician-Scientist Recruitment, Fellow Recruitment, PEC/CCC
2016-2022	Microbiology Graduate Program Admission Committee Member
2018-2020	Member, Colorado IDSA Board of Directors
2019-2022	MSTP Admissions Committee Member
2019-2021	Dept of Immunology&Microbiology Faculty Search Committee
2020-2022	Vice Chancellor's COVID19 Research Prioritization Committee

### **Teaching Experience:**

#### **Medical Students:**

2011-2018	University of Colorado School of Medicine Foundations of Doctoring Preceptor (Students: Lincoln Pac, Joshua Shapiro, Micah Friedman, Francis Li)
2008-2010	Integrated Clinicians Course (IDPT 8005): "Infectious Diseases in Clinical Practice"
2007-current	Inpatient Infectious Diseases Attending Physician (MED 8009)
2012-2019	<b>Course Director</b> Clinical Infectious Diseases (MED 8009) University of Colorado School of Medicine Clinical Elective
2005-2021	<u>Medical School course:</u> Microbiology Infectious Disease Group Cases (IDPT 6004)
2007-2021	<u>Medical School Lectures:</u> Neurology Block (IDPT 6001), 'Acute Infections of the CNS' – 2 hours of lectures on NeuroID
2014-2021	<u>Medical School Lectures:</u> Microbiology/ID Block (IDPT 6004), 'Mechanisms of Herpes Virus Infections' – 2 hours of lecture covering all herpes virus infections. 'COVID19 Immunology and Vaccines' – 1 hour lecture

#### **Graduate Students:**

Graduate School Faculty Appointments: Biomedical Sciences, MSTP, Microbiology, Immunology, Neuroscience, and Clinical Science.

2012-current	<u>Graduate School Lecture (Microbiology):</u> Molecular Virology and Pathogenesis (MICB7701) 'Mechanisms of flavivirus infections'
2012-current	<u>Graduate School Lecture (Neuroscience):</u> Biological Basis of Psychiatric and Neurological Disorders, NRSC 7614. 'The Pathogenesis of Viral Encephalitis'.
2021-current	<u>Graduate School Lecture (Immunology):</u> Immunology of Infection, IMMU 7608. 'SARS-CoV2 Immunity and Vaccine approaches'

### **Medical Science Training Program (MSTP)**

2016-current Faculty Member MSTP  
2016-current Molecules to Medicine MS1 MSTP Lecture  
2016-current MSTP Clinical Preceptor

### **Medicine Residents:**

2007-2008 University of Colorado at Denver HSC Medicine Resident Noon Conference: "Acute and Chronic Meningitis"  
2007-2012 St. Joseph Hospital Medicine Resident Lecture Series. 'Infections of the CNS'.  
2012-2019 **Director** of the Inpatient ID Elective Rotation  
2015-2019 **Director** of the Outpatient ID Elective Rotation  
2015-2019 **Director** of the Inpatient ID Intern Selective Rotation

### **Neurology Residents:**

2011-2016 **Block Director** Neurology Lectures for NeuroID.  
2006-current UCSOM Neurology Residents Lecture Series. 'Infections of the Nervous System'.  
2010-2015 UCSOM Neurology Residents Emergency Lecture Series: 'Acute Infections of the CNS'

### **ID Fellows:**

2007-2018 Outpatient Infectious Diseases Attending Physician  
2007-2019 Lecturer, ID Fellowship Didactic Lecture Series  
2012-2019 **Director** of the Infectious Diseases Fellowship Training Program  
2012-2015 **Course Director:** UCSOM Infectious Diseases Fellow Lecture Series.  
2012-2015 **Director** of Infectious Diseases Case Conference Series

### **Neurology Fellows:**

2014-2016 **Founding Director** of the Neuroimmunology & Neurological Infectious Disease Program  
2014-2019 **Founder & Director** of the NeuroID Clinic, University of Colorado Outpatient Pavilion

### **Primary Mentoring:**

#### **Postbaccalaureate Trainees**

Kathryn Tuttle (2008-2010)-TGFbeta activation during viral infection.  
Current Position: Post-doc Linda Cernic Inst. Univ Colorado  
Ian Francis MD,PhD (2010) Undergraduate Research Project, Denver University.  
Current Position: Resident BCM.  
Erica Beatman MS (2010-2014) Alpha-synuclein function during viral infection.  
Current Position: National Jewish Health Research

Aaron Massey MS (2012-2020): Viral Pathogenesis and Neuroinflammation during viral infection.

Camille Merrick (2021-current): Flavivirus pathogenesis

### **Medical Students**

Greg Ingolia MD (2016-2017)- Research Mentor

Joshay Ford (2020-2021) – Research Mentor

Hashem Anabtawi (2020-2021) – Research Mentor

### **Graduate Thesis Students**

#### **Graduated**

Katherine Delaney Shives PhD (2012-2016) Microbiology Graduate Thesis Advisor and Mentor. Current position: Product Development Scientist for ViroCyte.

Bethany Brown PhD (2012-2017) Mentor for Masters in Clinical Science and Mentor for Clinical Science PhD thesis. Current Position: Clinical Research Manager, The RedCross.

Andrea Fidell MS (2017-2018): MPH of Biostatistics Student Research Mentor.

Current Position: Clinical Trials Coordinator, PCM Trials

Hadrian Sparks (2017-2021): Microbiology Graduate Program Thesis Advisor.

Current Position: Post-doctoral Fellow, Institute of Viral and Liver Diseases, Strasbourg, France.

#### **Current**

Brendan Monogue (2018-current): Microbiology PhD Student Microbiology

Monica Graham (2018-current): Microbiology PhD Student Microbiology

Sarah Leach (2021-current): Microbiology PhD Student, Microbiology

Dustin Heiden (2022-current): Immunology PhD Student Immunology

Imali Kegode (2021-current): Microbiology Masters student in Microbiology

### **Medical Residents/Fellows**

Ryan Oyer MD (2010-2012) ID Research Fellow. Current Position: Private Practice ID Physician.

Jessica Lum MD (2017-2018): ID Fellow Research Project. Current Position: Assistant Professor, Nebraska School of Medicine

Eias Murad MD (2017-2018): ID Fellow Research Project. Current Position: Transplant ID, Pheonix, Az.

Farrell Tobolowski MD (2018-2019): ID Fellow Research Project. Current Position: CDC EIS, Atlanta, Georgia

Alex Rajic MD (2021-2022): Neurology Resident. Current Position: Research Fellow, University of California, San Diego

### **Post-doctoral Trainees**

Mastooreh Chamanian PhD (2013-2014) Mentor for Post-doctoral Research Trainee. Current position, Clinical Research Scientist, Penrose-St. Francis Health.

Kelsey Lesteberg PhD (2017-2021): Post-doctoral Research Fellow. Current position-Research Instructor University of Colorado School of Medicine.

Hadrian Sparks PhD (2022): Post-doctoral Research Fellow. Current position: Post-doctoral fellow, Institute of Viral and Liver Diseases, Strasbourg, France.

**Faculty Trainees**

Andres Haneo Martinez MD (2014-2018): Instructor of Medicine/ID, UCO

Current Position: Assistant Professor of Medicine/ID, UCO

Lakshmi Chauhan (2019-current): Assistant Professor Medicine/ID

Kelsey Lesteberg PhD (2021-current): Research Instructor/ID and Immunology

**Graduate Education Committee Service:**

**CU AMC:**

Graduate School Thesis Mentor: Katherine Shives (2012-2016), Bethany Brown (2015-2018), Hadrian Sparks (2017-2021), Brendan Monogue (2018-current), Monica Graham (2018-current), Sarah Leach (2021-current), Imali Kegode (2022-current, Master's Program).

**Thesis Committee Member:**

Henri Jupille (Graduate: 2013), Laura Griffin (2014), Sam Li(2015), David Hawman(2016), Scott Seitz(2019), Ari Simenauer (2020), Zoe O'Donoghue (2020), Kevin Messacar (2022), Sarah Stonedahl (2022), Matt Szucs (current), Josh Frost (current), Frances Li (current), Cormac Lucas (current), Elizabeth Spear (current), Amita Kashyap (current), Deviyani Rao (current).

**Rotation Students (Entered another lab):**

Matt Szucs (2016), Cormac Lucas (2017), Amita Kashyap (2020), Sarah Mann (2020), Deviyani Rao (2019), Shelby Anderson (2021)