

**EMORY UNIVERSITY SCHOOL OF MEDICINE  
STANDARD CURRICULUM VITAE**

Revised: [01/10/2019]

1. **Name:** Deanna A. Kulpa, PhD
2. **Office Address:** 1760 Haygood Drive, Room E402  
Atlanta, GA 30322  
Telephone: 404.727.4801
3. **E-mail Address:** deanna.kulpa@emory.edu
4. **Citizenship:** United States Citizen
5. **Current Titles and Affiliations:**
  - a. Academic Appointments:
    - i. Primary Appointments:  
Assistant Professor of Medicine, Department of Pediatrics, Emory University School of Medicine, 2016- present
6. **Previous Academic and Professional Appointments:**

Research Assistant, Michigan State University, 1991-1994

Intern, Baylor College of Medicine, 1992

Laboratory Technician, University of Michigan, 1994-1996

Research and Development Scientist, Aastrom Biosciences 1996-1996

Pilot Manufacturing Associate Scientist, Chiron Technologies Center for Gene Therapy, 1996-1997

Research and Development Associate Scientist, Desmos, Inc. 1997-1998

Senior Staff Scientist, Vaccine and Gene Therapy Institute of Florida, 2012-2014

Director of Cell Therapies, Vaccine and Gene Therapy Institute of Florida, 2014-2015

Project Leader, Southern Research Institute, 2015-2016
7. **Licensures/Boards:**

Researcher Pharmacy, Georgia Board of Pharmacy, Issued 2018

Researcher, Drug Enforcement Administration, Issued 2018
8. **Education:**

BS, Michigan State University, 1988-1993

PhD, University of Michigan, 1999-2005
9. **Postgraduate Training:**

Postdoctoral Research Fellow, Fellowship of the Cancer Research Institute, University of Michigan, Ann Arbor, MI

Supervisor: Kathleen Collins, MD, PhD

**Revised 4/17/17**

## 10. Peer Review Activities:

- a. Grants:
  - i. National and International:  
NIH Special Emphasis Panel, 2018
  - ii. Institutional:  
University Research Committee, 2018  
Emory CFAR, 2018
- b. Manuscripts:  
*Plos Pathogens*, 2018- present

## 11. Consultantships/Advisory Boards:

Subject Matter Expert, Southern Research Institute, 2017- present

## 12. Editorships and Editorial Boards:

Editorial Board, *Journal of Virology*, 2017-present

## 13. Supervisory Teaching:

- a. Other:
  - Medical Fellow Research Instructor, University of Michigan, 2010
  - Women in Science Engineering Summer Program Instructor, University of Michigan, 2002
  - Macy Minorities in Medicine Summer Program Instructor, University of Michigan, 2001
  - Graduate Student Instructor, University of Michigan, 2000-2003

## 14. Lectureships, Seminar Invitations, and Visiting Professorships:

National and International:  
“Mechanisms of HIV suppression by CD8+ lymphocytes”, National Cancer Institute, 2019

## 15. Invitations to National/International, Regional, and Institutional Conferences:

- a. National and International:
  - 1. “Differential responses of memory CD4+ T cell subsets to HIV latency reversing agents”, HIV DART and Opportunistic Infections, Miami, FL 2016
  - 2. “The Contribution of Memory CD4+ T Cell Subset Phenotype to Latency Reversal Efficiency” 19<sup>th</sup> Annual International Meeting of the Institute of Human Virology, Baltimore, MD, 2017
  - 3. “HIV Reservoir Dynamics: Implications for HIV latency establishment and reversal”, HIV DART and Opportunistic Infections, Miami, FL 2018
  - 4. “Innate CD8+ Cell Function”, Conference on Retroviruses and Opportunistic Infections (CROI), Seattle, WA, 2019

- b. Regional:  
“When is the HIV reservoir established; where is it maintained; and how does it persist”  
Bridging the Sciences: Advances in HIV, Viral Hepatitis and Emerging Viruses, Atlanta, GA, 2017

**16. Abstract Presentations at National/International, Regional, and Institutional Conferences:**

National and International:

1. **Kulpa DA\***, Talla A, Ribeiro S, Barnard R, Hazuda D, Chomont N, Sékaly RP “The Contribution of Memory CD4+ T Cell Subset Phenotype to Latency Reversal Efficiency” HIV Persistence during Therapy Eighth International Workshop, Miami, Florida December 2017 (Oral)
2. Wonderlich ER\*, Kuzmichev YV, Lackman-Smith C, Mankowski MK, Raney C, Madeira H, Wei J, Bernbaum R, Subramanian K, Jarrett R, Nordgren E, Stone M, Busch MP, Ptak RG, **Kulpa DA** “QVOA Coupled with Digital p24 Analysis Enhances HIV Reservoir Quantification” HIV Persistence during Therapy Eighth International Workshop, Miami, Florida December 2017 (Poster)
3. Wonderlich ER\*, Kuzmichev YV, Lackman-Smith C, Mankowski MK, Raney C, Madeira H, Wei J, Bernbaum R, Subramanian K, Jarrett R, Nordgren E, Stone M, Busch MP, Ptak RG, **Kulpa DA** “QVOA Coupled with Digital p24 Analysis Enhances HIV Reservoir Quantification” Conference on Retroviruses and Opportunistic Infections (CROI), Boston, MA, 2018 (Poster)
4. Zaroni M\*, Palesch D, Pinacchio C, **Kulpa DA**, Silvestri G “TCR-Activated CD8+ T cells Reduce HIV Production by Autologous Infected CD4+ T Cells and Facilitate Transition to Latent Infection” Conference on Retroviruses and Opportunistic Infections (CROI), Seattle, WA, 2019 (Poster)
5. Wonderlich ER\*, Subramanian K, Wiegand A, Lackman-Smith C, Bale MJ, Stone M, Bacchetti P, Maldarelli F, Busch MP, Ptak RG, Kearney MF, **Kulpa DA** “Ex vivo CD4+ T cell Differentiation Amplifies HIV Reservoir Quantification”, Conference on Retroviruses and Opportunistic Infections (CROI), Seattle, WA, 2019 (Poster)

**17. Research Focus:**

My research is focused on defining the mechanisms that promote HIV persistence in ART-treated HIV-infected individuals. My goal is to identify and evaluate therapeutic strategies to counteract these mechanisms, which will constitute the basis for the design of clinical studies aimed at eradication HIV.

**18. Patents:**

- a. Pending:  
Methods for Identifying Latent HIV Reservoirs, U.S. Patent # 62/737,171 Filing Date:  
September 27, 2018

**19. Grant Support:**

- a. Active Support:

Federally Funded:

1. Sub-Award PI, NIH/NIDA, *An unbiased OMICs approach to identify mechanisms of Cocaine regulation of the HIV reservoir*, R01, \$116,204, 2016-2021

2. Sub-Award PI, NIH/NIDA, *OMICS to define impact on immunity and HIV persistence in treated HIV infection*, \$87,273, R01, 2016-2021
3. Key Personnel, NIH/NIMH, *Towards suppression and elimination of HIV in the CNS*, R01, \$4,182, 2018-2022
4. PI, NIH/NIAID, *CD8 T cell suppression of HIV latency establishment and maintenance in virally suppressed individuals*, R01, \$225,864, 2018-2023

Previous Support:

1. Fellow, NIH University of Michigan Graduate Student Training Grant, 2001-2003
2. Fellow, Association for Women in Science Educational Foundation Pre-Doctoral Program Amy Lutz Award, 2003
3. Fellow, Irvington Institute Fellowship of the Cancer Research Institute, 2007-2009
4. PI, University of Miami CFAR, *A deep sequencing approach to the identification of pathways required for HIV reactivation from latency*, Developmental Award, \$30,000, 2013-2014
5. Co-I, University of Miami CFAR, *Development of an assay using induced pluripotent cell lines as an in vitro model to identify mechanisms of action of reactivation of latent HIV*, Developmental Award, \$30,000, 2014-2015
6. Co-I, NIH/NIAID, *Innovative Assays to Quantify the Latent Reservoir*, R21, \$125,000, 2014-2016
7. PI, Emory University CFAR, *Optimizing HIV latency reversal in different memory CD4+ T cell subsets employing multi-compound strategies*, Developmental Award, \$40,000, 2016-2017
8. PI, Emory University Research Committee, *Determining the contribution of CD4+ T cell subset phenotype on HIV latency and reversal in an in vitro latency model*, Developmental Award, \$40,000, 2017-2018

## 20. Bibliography:

- a. Published and Accepted Research Articles (clinical, basic science, other) in Refereed Journals:
  1. Roa, B.B., Garcia, C.A., Suter, U., **Kulpa, D.A.**, Wise, C.A., Mueller, J., Welcher, A.A., Snipes, G.J., Shooter, E.M., Patel, P.I., Lupski, J.R. Charcot-Marie-Tooth Disease Type 1A. Association with a Spontaneous Point Mutation in the *PMP22* Gene. *New England Journal of Medicine*, 1993: 329(2): 96-101.
  2. Rossbach, S., **Kulpa, D.A.**, Rossbach, U., de Bruijn, F.J. Molecular and Genetic Characterization of the Rhizopine Catabolism (*rocABRC*) Genes of *Rhizobium meliloti* L5-30. *Molecular and General Genetics* 1994: 245(1):11-24.
  3. **Kulpa, D.**, Topping, R., Telesnitsky, A. Determination of the Site of First Strand Transfer During Moloney Murine Leukemia Virus Reverse Transcription and Identification of Strand Transfer-Associated Reverse Transcriptase Errors. *EMBO Journal* 1997: 16(4): 856-865.
  4. **Kulpa, D.A.** and Moran, J.V. Ribonucleoprotein Particle Formation is Necessary but not Sufficient for LINE-1 Retrotransposition. *Human Molecular Genetics* 2005: 14:3237-3248.

5. **Kulpa, D.A.** and Moran, J.V. *Cis-Preferential LINE-1 Reverse Transcriptase Activity in Ribonucleoprotein Particles. Nature Structural and Molecular Biology* 2006: 13(7): 655-660.
6. Schaefer, M.R., Williams, M., **Kulpa, D.A.**, Blakely, P.K., and Collins, K.L. A Novel Trafficking Signal Within the HLA-C Cytoplasmic Tail Allows Regulated Expression Upon Differentiation of Macrophages. *Journal of Immunology* 2008: 180:7804-7817.
7. Garcia-Perez, J.L., Morell, M., Scheys, J.O., **Kulpa, D.A.**, Morell, S., Carter, C.C., Kim, J.K., Hammer, G.D., Collins, K.L., Andrews, P.W., O'Shea, K.S., Menendez, P., Moran, J.V. Epigenetic Silencing of LINE-1 Retrotransposition Events in Human Embryonic Carcinoma Cell Lines. *Nature* 2010: 466: 769-773.
8. Doucet, A.J., Hulme, A.E., Sahinovic, E., **Kulpa, D.A.**, Kopera, H.C., Moldovan, J.B., Athanikar, J.N., Hasnaoui, M., Bucheton, A., Moran, J.V., and Gilbert, N. Physical Characterization of LINE-1 Ribonucleoprotein Particles. *PLoS Genetics* 2010: 6(10): e1001150.
9. Wonderlich, E.R., Leonard, J., **Kulpa, D.A.**, Leopold, K., Norman, J.M., and Collins, K.L. ARF-1 Activity is Required to Recruit AP-1 to the MHC-I Cytoplasmic Tail and Disrupt MHC-I Trafficking in HIV-1 Infected Primary T Cells. *Journal of Virology*. 2011: 85(23): 12216-26
10. **Kulpa, D.A.**, Del Cid, N., and Collins, K.L. Adaptor Protein 1 Promotes Cross-Presentation through the Same Tyrosine Signal in Major Histocompatibility Complex Class I as That Targeted by HIV-1. *Journal of Virology* 2013: 87(14): 8085-98
11. Procopio, F.A., Fromentin, R., **Kulpa, D.A.**, Brehm, J., Bebin-Blackwell, A.G., Strain, M., Siliciano, R.F., Richman, D.D., O'Doherty, U., Palmer, S., Siliciano, J.D., Hecht, F., Hoh, R., Barnard, R.C., Miller, M.D., Hazuda, D.J., Deeks, S.G., Sekaly, R.P., Chomont, N. A novel assay measuring the size of the latent HIV reservoir reveals that ART-naïve individuals harbor a large pool of latently infected CD4+ T cells. *EBioMedicine* 2015: 2(8):872-881.
12. Gavegnano, C., Brehm, J.H., Dupuy, F.P., Talla, A., Pereira, S.R., **Kulpa, D.A.**, Cameron, C., Santos, S., Hurwitz, S.J., Marconi, V.C., Routy, J-P., Sabbagh, L., Schinazi, R.F., Sékaly, R-P., "Novel Mechanisms to Inhibit HIV Reservoir Seeding Using Jak Inhibitors" *PLOS Pathogens* 2017: 13(12): e1006740.

b. Manuscripts Submitted:

1. Rosenbloom, D.I.S., Bacchetti, P., Stone, M., Deng, X., Bosch, R.J., Richman, D.D., Siliciano, J.D., Mellors, J.W., Deeks, S.G., Ptak, R.G., Hoh, R., Keating, S.M., Dimapasoc, M., Massanella, M., Lai, J., Sobolewski, M., **Kulpa, D.A.**, Busch, M.P. "Assessing intra-lab precision and inter-lab repeatability of outgrowth assays of HIV-1 latent reservoir size". *Submitted*.
2. **Kulpa, D.A.**, Talla, A., Brehm, J., Ribeiro, S., Yuan, S., Bebin-Blackwell, J., Barnard, R., Miller, M., Hazuda, D., Chomont, N., Sékaly, R.P. "Differentiation to an effector phenotype potentiates HIV-1 latency reversal in CD4+ T cells." *Submitted*.
3. Wonderlich, E.R., Subramanian, K., Cox, B., Wiegand, A., Lackman-Smith, C., Bale, M.J., Stone, M., Hoh, R., Kearney, M.F., Maldarelli, F., Deeks, S., Busch, M.P., Ptak, R.G., **Kulpa, D.A.** "Effector memory differentiation promotes increased detection of replication competent HIV-1 in resting CD4+ T cells from virally suppressed individuals" *Submitted*.

c. Review Articles:

1. **Kulpa, D.A.** and Collins, K.L. The Emerging Role of HLA-C in HIV Infection. *Immunology*. 2011: 134(2): 116-122.
2. **Kulpa, D.A.**, Lawani, M., Cooper, A., Peretz, Y., Ahlers, J., Sekaly, R.P. PD-1 coinhibitory signals: The link between pathogenesis and protection. *Semin. Immunol.* 2013: 25(3): 219-27.
3. **Kulpa, D.A.**, Brehm, J.H., Fromentin, R., Cooper, A., Cooper, C., Ahlers, J., Chomont, N., Sekaly, R.P. (The immunological synapse: the gateway to the HIV reservoir. *Immunol. Rev.* 2013: 254(1): 305-25.
4. **Kulpa, D.A.** and Chomont, N. HIV Persistence in the Setting of Antiretroviral Therapy: When, Where and How HIV Hides?" *Journal of Virus Eradication*. 2015: 1: 59-66

d. Book Chapters:

1. Rossbach, S., McSpadden, B., **Kulpa, D.**, and de Bruijn, F.J. Rhizopine Synthesis and Catabolism Genes for the Creation of "biased rhizospheres" and as a Marker System to Detect (Genetically Modified) Microorganisms in the Soil- Construction of a Minimal moc Cassette. 1994: pp. 223-249. In: L. Morris, C. Grim, J.S. Angle (eds.) Biotechnology Risk Assessment: Risk Assessment Methodologies.
2. Hulme, A., **Kulpa, D.A.**, Garcia-Perez, J.L., and Moran, J.V. The Impact of LINE-1 Retrotransposition on the Human Genome. 2006: pp. 35-55. In: Lupski, J.R. and Stankiewicz, P. (eds.), Genomic Disorders: The Genomic Basis of Disease. Humana Press, Totowa, NJ.