TULANE UNIVERSITY

DATE: 4/2025

CURRICULUM VITAE

De'Broski. R. Herbert, Ph.D.
Professor of Immunology
Department of Microbiology and Immunology
Tulane School of Medicine

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Department of Microbiology and Immunology
1430 Tulane Ave.
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New Orleans, LA 70112

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EDUCATION:

1994 B.S. Xavier University of Louisiana, Major-Microbiology, Minor-Chemistry

2000 Ph.D. Thomas Jefferson University Immunology (Mentor: David Abraham Ph.D.)

POSTDOCTORAL TRAINING and FELLOWSHIP APPOINTMENTS:

2000 – 2006 University of Cape Town, South Africa (Mentor: Frank Brombacher Ph.D.)

FACULTY APPOINTMENTS:

2006 - 2008 Research Instructor, University of Cincinnati (Mentor: Fred Finkelman Ph.D.)

2008 - 2009 Research Assistant Professor, University of Cincinnati

2009 - 2012 Assistant Professor, Cincinnati Children's Research Foundation

2012 - 2015 Assistant Professor of Medicine, University of California at San Francisco

2015 - 2016 Associate Professor of Medicine, University of California at San Francisco

2016 - 2021 Associate Professor of Immunology, University of Pennsylvania, School of Veterinary Medicine

2021- 2024 Associate Director of PennVet Institute for Infectious and Zoonotic Disease (IIZD)

2021- 2024 Professor of Immunology, University of Pennsylvania, School of Veterinary Medicine

2024- Professor of Immunology, Tulane University School of Medicine

HOSPITAL AND ADMINISTRATIVE APPOINTMENTS: N/A

RESEARCH INTERESTS:

Over the course of my career, I have dedicated my research, leadership, and service to advancing the field of immunology. My contributions span several key areas, including recognition and leadership in immunology, contributions to research and professional organizations, and mentorship and influence within the scientific community. As an internationally recognized immunologist, my research has primarily focused on infectious disease, mucosal tissue inflammation, neuroimmunology, and parasitology, with a particular emphasis on the study of parasitic helminths and gastrointestinal protozoa. I currently hold four active federal grants through the National Institutes of Health, which underscores the significance and impact of my work in the field. My H-index stands at 32, reflecting the influence of my research within the academic community. To date, I have published 71 peer-reviewed articles, which have garnered a combined total of 4,411 citations. Notably, my postdoctoral work was pivotal in demonstrating the importance of M2 macrophages, a significant contribution that has since been published in *Immunity* and has received 614 citations.

The over-arching goal of my research program is to uncover new information that increases the basic understanding of the cellular and molecular mechanisms controlling host protective immunity at the barrier interface. Through a focus primarily on Type 2 immunity in the context of allergic disease and helminth infections that affect the skin, lung and intestine, we investigate the regulatory mechanisms that control tissue repair in the context of various disease states. Moreover, our studies have identified of novel receptor ligand interactions, revealed how macrophages promote epithelial cell regeneration, and identified the role of Wnt signaling in dendritic cell development. We have active ongoing collaborations with the Nigerian Institute for Medical Research (NIMR) that investigate the role of Trefoil factor proteins in human helminth infection, studies in mice and humans focused on the biology of interleukin 33 (IL-33), and projects that investigate the molecular details of parasitism through CRISPR/Cas9-mediated gene editing in parasitic nematodes. Recent expansion of our biomedical research efforts that include recruitment of a behavioral neuroscientist to our team has allowed us to delve deeply into neuro-immune interactions, allowing us to ask questions about how sensory cues direct specific immune responses. Taken together, this research program has expertise in host-parasite interactions, mucosal immunology, and neuroimmunology. My leadership positions that I have held include: Director of Penn's NIH funded Parasitology T32 training program, Director of Immunology graduate group admissions, and Penn Institute for Immunology program leader for Allergy, Asthma, and Inflammatory Disease.

SPECIALTY CERTIFICATION:

N/A

LICENSURE:
N/A

AWARDS, HONORS and MEMBERSHIP in HONORARY SOCIETIES:

1991	Minority Access to Research Careers (MARC) Scholarship, Xavier University
2001	National Foundation for Infectious Disease (NFID) Postdoctoral Fellowship
2001	Colin Powell Tropical Disease Postdoctoral Fellowship
2002	Ford Foundation Postdoctoral Fellowship for Minorities
2003	National Research Foundation of South Africa Postdoctoral fellowship
2006	AAI Minority Scientist Travel Award
2007	Keystone Symposia Travel Award
2009	Inaugural Keystone Symposia Scientific Advisory Board fellow
2014	Burke Family Global Health Faculty Scholar UCSF Global Health Sciences
2014	Burroughs Wellcome Award Investigators in the Pathogenesis of Infectious Disease (PATH) https://www.youtube.com/watch?v=XxfGSuQe9Fg
2014	Keystone Symposia Scientific Advisory Board Member
2015	UCSF Alumni Weekend Discovery fellow (https://www.youtube.com/watch?v=ejG1Ph6_UHM
2016	Institute for Immunology Inflammation Program leader
2016	Mucosal Immunology Studies Team (MIST) Project leader https://www.mucosal.org/investigators.php#
2016	Re-appointed to Keystone Symposia Scientific Advisory Board
2018	NIH-WALS lecturer
2018	Featured Article in NIH Catalyst
2018	Penn Fellows Program
2021	American Association for Immunology Vanguard Award Lecturer
2021	Thomas Jefferson University Distinguished Alumni Award
2021	Penn Presidential Professor
2021	Keynote speaker for Immunodiverse colloquia
2023	American Association of Immunology Nominating committee

PROFESSIONAL ASSOCIATIONS:

2006 -	American Association of Immunologists

2013 -	Society of Mucosal Immunology	
2017 -	American Thoracic Society	
2017	AAI Session Chair	Microbial, Parasitic, and Fungal Immunity
2018	AAI Session Chair	Microbial, Parasitic, and Fungal Immunity
2019	AAI Session Chair	Microbial, Parasitic, and Fungal Immunity
2020	AAI Session Chair	Microbial, Parasitic, and Fungal Immunity
2021	AAI Session Chair	Microbial, Parasitic, and Fungal Immunity
2021-	International Cytokine and Interferon Society	
2021-	Associate director for Penn Vet Institute for Infectious and Zoonotic disease	

SYMPOSIA ORGANIZED

2017	Lead Organizer	IFI-Inflammation Symposia Bench to Bedside, UPenn
2019	Lead Organizer	IFI-PennSAM Nutrition and Inflammation, UPenn
2019	Lead Organizer	Woods Hole Immunoparasitology meeting, Woods Hole, MA
2019	Lead Organizer	Keystone Symposia Conference Helminths: New Insights from Immunity to Global Health Cape Town, South Africa

NATIONAL COMMITTEES AND ACTIVITIES:

2009	National Institute of Health Study Section IHD ad hoc member
2010	National Institutes of Health Study Section IHD ad hoc member
2011	National Institutes of Health Study Section IHD ad hoc member
2013	National Institutes of Health Study Section LCMI ad hoc member
2014	National Institutes of Health Study Section PTHE ad hoc member
2014	National Institutes of Health Study Section: International Collaborations in Infectious Disease (U01, U19)
2014	National Institutes of Health Study Section IHD ad hoc member
2015	National Institutes of Health Study Section IHD ad hoc member
2016	National Institutes of Health Study Section LCMI permanent member
2022	AAI Nomination committee member

EDITORIAL POSITIONS:

2009 - present	Editorial Board, Infection and Immunity
2009 - present	Editorial Board, Journal of Clinical and Cellular Immunology
2009 - present	Referee for *Journal of Immunology, Infection and Immunity, Mucosal Immunology, PLoS*

Pathogens, Gastroenterology, Journal of Leukocyte Biology, PLoS one, International J Parasitology, Mucosal Immunology, Journal of Experimental Medicine, Science Immunology

2014 - present Guest Editor, *PLoS Pathogens*
2018 - present Editor, *Infection and Immunity*
2018 - present Guest Editor, *PLoS Neglected Tropical Diseases*
2018 - 2022 Section Editor, *The Journal of Immunology*

AD HOC/INVITED REVIEWS:
Immune System Investigation Using Parasitic Helminths.
Douglas B, Oyesola O, Cooper MM, Posey A, Tait Wojno E, Giacomin PR, Herbert DR.
Annu Rev Immunol. 2021 Apr 26;39:639-665. doi: 10.1146/annurev-immunol-093019-122827. Epub 2021 Mar 1.
PMID: 33646858

CLINICAL SERVICE AT PENNVET: N/A

PUBLICATIONS: I have a current h-index of 28 and a collective total of 4485 citations based on google scholar.

Peer-Reviewed Research Papers:

1. Role of IL-5 in innate and adaptive immunity to larval *Strongyloides stercoralis* in mice. **Herbert, D.R.**, Lee, J.J., Lee, N.A., Nolan, T.J., Schad, G.A., Abraham, D. *J Immunol*. 2000 Oct 15; 165(8):4544-51. PMID: 11035095

2. Immunoaffinity-isolated antigens induce protective immunity against larval *Strongyloides stercoralis* in mice. **Herbert D.R.**, Nolan, T.J., Schad, G.A., Lustigman S, Abraham, D. *Exp Parasitol*. 2002 Feb; 100(2):112-20. PMID: 12054701

3. The role of B cells in immunity against larval *Strongyloides stercoralis* in mice **Herbert, D.R.**, Nolan, T.J., Schad, G.A., Abraham, D. *Parasite Immunol*. 2002 Feb; 24(2):95-101. PMID: 1187456

4. Human immunoglobulin G mediates protective immunity and identifies protective antigens against larval *Strongyloides stercoralis* in mice. Kerepesi, L.A., Nolan, T.J., Schad, G.A., Lustigman, S., **Herbert, D.R.**, Keiser, P.B., Nutman, T.B., Krolewiecki, A.J., Abraham, D. *J Infect Dis*. 2004 Apr 1; 189(7):1282-90. PMID: 15031798

5. Alternative macrophage activation is essential for survival during schistosomiasis and downmodulates T helper 1 responses and immunopathology. **Herbert, D.R.**, Hölscher, C., Mohrs, M., Arendse, B., Schwegmann, A., Radwanska, M., Leeto, M., Kirsch, R., Hall, P., Mossmann, H., Claussen, B., Förster, I., Brombacher, F. *Immunity*. 2004 May; 20(5):623-35. PMID: 15142530
   ******Featured on Front cover of issue*******
6. Exposure to the fish parasite Anisakis causes allergic airway hyperreactivity and dermatitis. Nieuwenhuizen, N., Lopata, A.L., Jeebhay, M.F., **Herbert, D.R.**, Robins, T.G., Brombacher, F. *J Allergy Clin Immunol*. 2006 May; 117(5):1098-105. PMID: 16675338

7. T_H1-dominant granulomatous pathology does not inhibit fibrosis or cause lethality during murine schistosomiasis. Leeto, M., **Herbert, D.R.**, Marillier, R., Schwegmann, A., Fick, L., Brombacher, F. *Am J Pathol*. 2006 Nov; 169(5):1701-12. PMID: 17071593

8. $CD4^+$ T cell specific deletion of IL-4Ra prevents ovalbumin-induced anaphylaxis by an IFN-g dependent mechanism. Nieuwenhuizen, N., **Herbert, D.R**., Lopata, A.L., Brombacher, F., *J Immunol*. 2007 Sep 1; 179(5):2758-65. PMID: 17709489

9. IL-4R*a* expression by bone marrow-derived cells is necessary and sufficient for host protection against acute schistosomiasis **Herbert, D.R.**, Orekov, T., Perkins, C., Rothenberg, M.E., Finkelman, F.D. *J Immunol*. 2008 Apr 1; 180(7):4948-55. PMID: 18354220

10. IL-10 and TGF-β redundantly protect against severe liver injury and mortality during acute schistosomiasis. **Herbert, D.R.**, Orekov, T., Perkins, C., Finkelman, F.D. *J Immunol*. 2008 Nov 15; 181(10):7214-20. PMID: 18981143

11. Peanuts can contribute to anaphylactic shock by activating complement. Khodoun, M., Strait, R., Orekov, T., Hogan, S., Karasuyama, H., **Herbert, D.R.**, Köhl, J., Finkelman, F.D. *J Allergy Clin Immunol*. 2009 Feb; 123(2):342-51. PMID: 19121857

12. Endogenously produced IL-4 nonredundantly stimulates CD8+ T cell proliferation. Morris, S.C., Heidorn, S.M., **Herbert, D.R.**, Perkins, C., Hildeman, D.A., Khodoun, M.V., Finkelman, F.D. *J Immunol*. 2009 Feb 1; 182(3):1429-38. PMID: 19155490

13. Differential requirements for interleukin (IL)-4 and IL-13 in protein contact dermatitis induced by Anisakis. Nieuwenhuizen, N., **Herbert, D.R.**, Brombacher, F., Lopata, A.L. *Allergy*. 2009 Sep; 64(9):1309-18. PMID: 19254288

14. IL-4-/- mice with lethal *Mesocestoides corti* infections have reduced Th2 cytokines and alternatively activated macrophages. O'Connell, A.E., Kerepesi, L.A., Vandergrift, G.L., **Herbert, D.R.**, Van Winkle, T.J., Hooper, D.C., Pearce, E.J., Abraham, D. *Parasite Immunol*. 2009 Dec; 31(12):741-9. PMID: 19891612

15. Intestinal epithelial cell secretion of RELM-*beta* protects against gastrointestinal worm infection. **Herbert, D.R.**, Yang, J.Q., Hogan, S.P., Groschwitz, K., Khodoun, M., Munitz, A., Orekov, T., Perkins, C., Wang, Q., Brombacher, F., Urban, J.F., Rothenberg, M.E., Finkelman, F.D. *J Exp Med*. 2009 Dec 21; 206(13):2947-57. PMID: 19995957

16. Arginase I suppresses IL-12/IL-23p40-driven intestinal inflammation during acute schistosomiasis **Herbert, D.R.**, Orekov, T., Roloson, A., Ilies, M., Perkins, C., O'Brien, W., Cederbaum, S., Christianson, D.W., Zimmermann, N., Rothenberg, M.E., Finkelman, F.D. *J Immunol*. 2010 Jun 1; 184(11):6438-46. PMID: 20483789

17. TGF-ß limits IL-33 production and promotes the resolution of colitis through regulation of macrophage function. Rani, R., Smulian, A.G., Greaves, D.R., Hogan, S.P., and **Herbert, D.R**. *Eur J Immunol*. 2011 Jul; 41(7):2000-9. PMID: 21469118

18. *Toxoplasma gondii* rhoptry kinase ROP16 activates STAT3 and STAT6 resulting in cytokine inhibition and arginase-1-dependent growth control. Butcher, B.A., Fox, B.A., Rommereim, L.M., Kim, S.G., Maurer, K.J., Yarovinsky, F., **Herbert, D.R.**, Bzik, D.J., and Denkers, E.Y. *PLoS Pathog*. 2011 Sep; 7(9):e1002236. PMID: 21931552

19. Trefoil factor 2 rapidly induces interleukin 33 to promote type 2 immunity during allergic asthma and hookworm infection. Wills-Karp, M., Rani, R., Dienger, K., Lewkowich, I., Fox, J.G., Perkins, C., Lewis, L., Finkelman, F.D., Smith, D.E., Bryce, P.J., Kurt-Jones, E.A., Wang, T.C., Sivaprasad, U., Hershey, G., and **Herbert, D.R**. *J Exp Med*. 2012 Mar 12; 209(3):607-22. PMID: 22329990

20. A novel mouse model of *Schistosoma haematobium* egg-induced immunopathology. Fu, C.L., Odegaard, J.I., **Herbert, D.R.**, Hsieh, M.H. *PLoS Pathog*. 2012; 8(3):e1002605. PMID: 22479181.

21. IFN-*g*-driven IDO Production from Macrophages Protects IL-4R*a*-Deficient Mice against Lethality during *Schistosoma mansoni* Infection. Rani, R., Jordan, M.B., Divanovic, S., **Herbert, D.R**. *Am J Pathol.* 2012 May;180(5):2001-8. doi: 10.1016/j.ajpath.2012.01.013. PMID: 22426339

22. Trefoil factor 2 negatively regulates type 1 immunity against *Toxoplasma gondii*. McBerry, C., Egan, C.E., Rani, R., Yang, Y., Wu, D., Boespflug, N., Boon, L., Butcher, B., Mirpuri, J., Hogan, S.P., Denkers, E.Y., Aliberti, J., **Herbert, D.R**. *J Immunol*. 2012 Sep 15; 189(6):3078-84. PMID: 22896633.

23. TGF-ß-responsive myeloid cells suppress type 2 immunity and emphysematous pathology after hookworm infection. Heitmann, L., Rani, R., Dawson, L., Perkins, C., Yang, Y., Downey, J., Hölscher, C., **Herbert, D.R**. *Am J Pathol*. 2012 Sep; 181(3):897-906. PMID: 22901754.

24. IL-33 drives biphasic IL-13 production for noncanonical Type 2 immunity against hookworms. Hung, L.Y., Lewkowich, I.P., Dawson, L.A., Downey, J., Yang, Y., Smith, D.E., **Herbert, D.R**. *Proc Natl Acad Sci U S A*. 2013 Jan 2; 110(1):282-7. PMID: 23248269.

25. Th9 Cells Drive Host Immunity against Gastrointestinal Worm Infection. Licona-Limón, P., Henao-Mejia, J., Temann, A.U., Gagliani, N., Licona- Limón, I., Ishigame, H., Hao, L., **Herbert, D.R.**, Flavell, R.A. *Immunity*. 2013 Oct 17; 39(4):744-57. PMID: 24138883.

26. IL-4R*a* on CD4+ T cells plays a pathogenic role in respiratory syncytial virus reinfection in mice infected initially as neonates. You, D., Marr, N., Saravia, J., Shrestha, B., Lee, G.I., Turvey, S.E., Brombacher, F., **Herbert D.R**., Cormier, S.A., *J Leukoc Biol*. 2013 Apr 9. PMID: 23543769

27. Co-expression of CD49b and LAG-3 identifies human and mouse T regulatory type 1 cells. Gagliani, N., Magnani, C.F., Huber, S., Gianolini, M.E., Pala, M., Licona-Limon, P., Guo, B., **Herbert, D.R.**, Bulfone, A., Trentini, F., Di Serio, C., Bacchetta, R., Andreani, M., Brockmann, L., Gregori, S., Flavell, R.A., Roncarolo, M.G. *Nat Med*. 2013 Apr 28. PMID: 23624599

28. PD-1 modulates steady-state and infection-induced IL-10 production *in vivo*. McBerry, C., Dias, A., Shryock, N., Lampe, K., Gutierrez, F.R., Boon, L., **Herbert, D.R**., Aliberti, J. *Eur J Immunol*. 2014 Feb; 44(2):469-79. PMID: 24165808.

29. Helminth infections predispose mice to pneumococcal pneumonia but not to other pneumonic pathogens. Apiwattanakul, N., Thomas, P.G., Kuhn, R.E., **Herbert, D.R.**, McCullers, J.A. *Med Microbiol Immunol*. 2014 Oct; 203(5):357-64. PMID: 24952091.

30. JUNB Is a Key Transcriptional Modulator of Macrophage Activation. Fontana, M.F., Baccarella, A., Pancholi, N., Pufall, M.A, **Herbert, D.R.**, Kim, C.C. *J Immunol*. 2015 Jan 1; 194(1):177-86. PMID: 25472994.

31. A protective role for IL-13 receptor alpha 1 in bleomycin-induced pulmonary injury and repair Karo-Atar, D., Bordowitz, A., Wand, O., Pasmanik-Chor, M., Fernandez, I.E., Itan, M., Frenkel, R., **Herbert, D.R.**, Finkelman, F.D., Eickelberg, O., Munitz, A. *Mucosal Immunol*. 2015 Jul 8. PMID: 26153764

32. Myeloid expression of the AP-1 transcription factor JUNB modulates outcomes of type 1 and type 2 parasitic infections. Fontana, M.F., Baccarella, A., Kellar, D., Oniskey, T.K., Terinate, P., Rosenberg, S.D., Huang, E.J., **Herbert, D.R.**, Kim, C.C. *Parasite Immunol*. 2015 Jul 14.PMID: 26178310

33. Myeloid-Restricted AMPKα1 Promotes Host Immunity and Protects against IL-12/23p40-Dependent Lung Injury during Hookworm Infection. Nieves, W., Hung, L.Y., Oniskey, T.K., Boon, L., Foretz, M., Viollet, B., **Herbert, D.R.** *J Immunol*. 2016 Jun 1;196(11):4632-40. PMID: 27183598

34. Perusal of parasitic nematode 'omics in the post-genomic era. Stoltzfus, J.D., Pilgrim, A.A., **Herbert, D.R**. *Mol Biochem Parasitol*. 2016 Nov 22. PMID: 27887974

35. The TAM family receptor tyrosine kinase TYRO3 is a negative regulator of type 2 immunity Chan, P., Carrera-Silva, E., Joannas, L.D., Hu, D., Hunstmann, S., Eng, C., Licona-Limon, P., Weinstein, J.S., **Herbert D.R**, Craft, J.E., Flavell, F., Torgerson, D.G., Burchard, E.G., and Rothlin, C.V. *Science*. 2016 Apr 1;352(6281):99-103. PMID: 27034374

36. Immune polarization by hookworms: taking cues from T helper type 2, type 2 innate lymphoid cells and alternatively activated macrophages. Nair, M.G., **Herbert, D.R**. *Immunology*. 2016 Jun;148(2):115-24. PMID: 26928141

37. Trefoil Factor 2 Promotes Type 2 Immunity and Lung Repair through Intrinsic Roles in Hematopoietic and Nonhematopoietic Cells. Hung, L.Y., Oniskey, T.K., Sen, D., Krummel, M.F., Vaughan, A.E., Cohen, N.A., and **Herbert, D.R**. *Am J Pathol*. 2018 May;188(5):1161-1170. PMID: 29458008

38. Solitary chemosensory cells producing interleukin-25 and group-2 innate lymphoid cells are enriched in chronic rhinosinusitis with nasal polyps. Patel, N.N., Kohanski, M.A., Maina, I.W., Triantafillou, V., Workman, A.D., Tong, C.L., Kuan, E.C., Bosso, J.V., Adappa, N.D., Palmer, J.N., **Herbert, D.R**, and Cohen, N.A. *Int Forum Allergy Rhinol*. 2018 May 9. PMID: 29742315

39. Solitary chemosensory cells are a primary epithelial source of IL-25 in patients with chronic rhinosinusitis with nasal polyps. Kohanski, M.A., Workman, A.D., Patel, N.N., Hung, L.Y., Shtraks, J.P., Chen, B., Blasetti, M., Doghramji, L., Kennedy, D.W., Adappa, N.D., Palmer, J.N., **Herbert, D.R.,** and Cohen, N.A. *J Allergy Clin Immunol*. 2018 May 17. PMID: 29778504

40. Sentinels at the wall: epithelial-derived cytokines serve as triggers of upper airway type 2 inflammation. Patel, N.N., Kohanski, M.A., Maina, I.W., Workman, A.D., **Herbert, D.R.,** and Cohen, N.A. *Int Forum Allergy Rhinol*. 2018 Sep 10 PMID: 30260580

41. Macrophages promote epithelial proliferation following infectious and non-infectious lung injury through a Trefoil factor 2-dependent mechanism. Hung, L.Y., Sen, D., Oniskey, T.K., Katzen, J., Cohen NA, Vaughan AE, Nieves W, Urisman A, Beers MF, Krummel MF, **Herbert DR**. *Mucosal Immunol*. 2019 Jan;12(1):64-76. doi: 10.1038/s41385-018-0096-2. PMID: 30337651
******Featured on Front cover of issue*******

42. Group 2 Innate Lymphoid Cells (ILC2): Type 2 Immunity and Helminth Immunity. **Herbert, D.R.**, Douglas, B., Zullo, K. *Int J Mol Sci*. 2019 May 8;20(9). pii: E2276. doi: 10.3390/ijms20092276. Review. PMID: 31072011

43. Fungal extracts stimulate solitary chemosensory cell expansion in noninvasive fungal rhinosinusitis. Patel, N.N., Triantafillou, V., Maina, I.W., Workman, A.D., Tong, C.C.L., Kuan, E.C., Papagiannopoulos P, Bosso, J.V., Adappa, N.D., Palmer, J.N., Kohanski, M.A., **Herbert, D.R.**, Cohen, N.A. *Int Forum Allergy Rhinol*. 2019 Jul;9(7):730-737. doi: 10.1002/alr.22334. PMID: 30892837

44. Development of solitary chemosensory cells in the distal lung after severe influenza injury. Rane, C.K., Jackson, S.R., Pastore, C.F., Zhao, G., Weiner, A.I., Patel, N.N., **Herbert, D.R.**, Cohen, N.A., Vaughan, A.E.. *Am J Physiol Lung Cell Mol Physiol*. 2019 Jun 1;316(6):L1141-L1149. doi: 10.1152/ajplung.00032.2019. PMID: 30908939

45. Cell-Intrinsic Wnt4 Influences Conventional Dendritic Cell Fate Determination to Suppress Type 2 Immunity. Hung, L.Y., Johnson, J.L., Ji, Y., Christian, D.A., Herbine, K.R., Pastore, C.F., **Herbert, D.R.** *J Immunol*. 2019 Jul 15;203(2):511-519. doi: 10.4049/jimmunol.1900363. Epub 2019 Jun 7.PMID: 31175162 ******Featured on Front cover of issue*******

46. TFF3 interacts with LINGO2 to regulate EGFR activation for protection against colitis and gastrointestinal helminths Belle, N.M., Ji, Y., Herbine, K., Wei, Y., Park, J., Zullo, K., Hung, L.Y., Srivatsa, S., Young, T., Oniskey, T., Pastore, C., Nieves, W., Somsouk, M., **Herbert, D.R.** *Nat Commun.* 2019 Sep 27;10(1):4408. doi: 10.1038/s41467-019-12315-1.PMID: 31562318

47. R-spondin 2 mediates neutrophil egress into the alveolar space through increased lung permeability. Jackson, S.R., Costa, M.F.D.M., Pastore, C.F., Zhao, G., Weiner, A.I., Adams, S., Palashikar, G., Quansah, K., Hankenson, K., **Herbert, D.R.**, Vaughan, A.E. *BMC Res Notes*. 2020 Feb 4;13(1):54. doi: 10.1186/s13104-020-4930-8. PMID: 32019591

48. Tuft cells in the pathogenesis of chronic rhinosinusitis with nasal polyps and asthma. Sell EA, Ortiz-Carpena JF, **Herbert DR**, Cohen NA. *Ann Allergy Asthma Immunol*. 2020 Oct 26:S1081-1206(20)31144-3. doi: 10.1016/j.anai.2020.10.011. PMID: 33122124 Review

49. Cellular context of IL-33 expression dictates impact on anti-helminth immunity. Hung LY, Tanaka Y, Herbine K, Pastore C, Singh B, Ferguson A, Vora N, Douglas B, Zullo K, Behrens EM, Li Hui Tan T, Kohanski MA, Bryce P, Lin C, Kambayashi T, Reed DR, Brown BL, Cohen NA, **Herbert DR**. *Sci Immunol*. 2020 Nov 13;5(53):eabc6259. doi: 10.1126/sciimmunol.abc6259. PMID: 33188058

********Featured in PennToday*********

50. Myeloid-derived interleukin-33 limits the severity of dextran sulfate sodium (DSS)-induced colitis. Hung LY, Pastore CF, Douglas B, **Herbert DR.** *Am J Pathol*. 2020 Nov 24:S0002-9440(20)30505-8. doi: 10.1016/j.ajpath.2020.11.004. PMID: 33245913

51. Non-hematopoietic IL-4Rα expression contributes to fructose-driven obesity and metabolic sequelae.
Damen MSMA, Stankiewicz TE, Park SH, Helsley RN, Chan CC, Moreno-Fernandez ME, Doll JR, Szabo S, **Herbert DR**, Softic S, Divanovic S. Int J Obes (Lond). 2021 Nov;45(11):2377-2387. doi: 10.1038/s41366-021-00902-6. Epub 2021 Jul 23. PMID: 34302121

52. LINGO3 regulates mucosal tissue regeneration and promotes TFF2 dependent recovery from colitis.
Zullo KM, Douglas B, Maloney NM, Ji Y, Wei Y, Herbine K, Cohen R, Pastore C, Cramer Z, Wang X, Wei W, Somsouk M, Hung LY, Lengner C, Kohanski MH, Cohen NA, **Herbert DR**. Scand J Gastroenterol. 2021 Jul;56(7):791-805. doi: 10.1080/00365521.2021.1917650. Epub 2021 May 3. PMID: 33941035

53. Transgenic expression of a T cell epitope in *Strongyloides ratti* reveals that helminth-specific CD4+ T cells constitute both Th2 and Treg populations. Douglas B, Wei Y, Li X, Ferguson A, Hung LY, Pastore C, Kurtz JR, McLachlan JB, Nolan TJ, Lok J, **Herbert DR**. PLoS Pathog. 2021 Jul 8;17(7):e1009709. doi: 10.1371/journal.ppat.1009709. eCollection 2021 Jul. PMID: 34237106

54. Parasitic helminth infections in humans modulate Trefoil Factor levels in a manner dependent on the species of parasite and age of the host. Adewale B, Heintz JR, Pastore CF, Rossi HL, Hung LY, Rahman N, Bethony J, Diemert D, Babatunde JA, **Herbert DR**. PLoS Negl Trop Dis. 2021 Oct 18;15(10):e0009550. doi: 10.1371/journal.pntd.0009550. eCollection 2021 Oct. PMID: 34662329

55. Schistosome TRPML channels play a role in neuromuscular activity and tegumental integrity.
Bais S, Norwillo A, Ruthel G, **Herbert DR**, Freedman BD, Greenberg RM.
Biochimie. 2022 Jan 3;194:108-117. doi: 10.1016/j.biochi.2021.12.018 PMID: 34990770

56. Schistosoma mansoni infection induces plasmablast and plasma cell death in the bone marrow and accelerates the decline of host vaccine responses. Musaigwa F, Kamdem SD, Mpotje T, Mosala P, Abdel Aziz N, **Herbert DR**, Brombacher F, Nono JK. PLoS Pathog. 2022 Feb 14;18(2):e1010327. doi: 10.1371/journal.ppat.1010327. eCollection 2022 Feb. PMID: 35157732

57. Oncolytic Myxoma virus infects and damages the tegument of the human parasitic flatworm Schistosoma mansoni.
Rahman MM, McFadden G, Ruthel G, **Herbert DR**, Freedman BD, Greenberg RM, Bais S.
Exp Parasitol. 2022 May 19;239:108263. doi: 10.1016/j.exppara.2022.108263. Online ahead of print.

PMID: 35598646

58. The ubiquitin ligase Cul5 regulates CD4+ T cell fate choice and allergic inflammation.
Kumar B, Field NS, Kim DD, Dar AA, Chen Y, Suresh A, Pastore CF, Hung LY, Porter N, Sawada K, Shah P, Elbulok O, Moser EK, **Herbert DR**, Oliver PM. Nat Commun. 2022 May 19;13(1):2786. doi: 10.1038/s41467-022-30437-x.
PMID: 35589717

59. Hookworms dynamically respond to loss of Type 2 immune pressure.
Ferguson AA, Inclan-Rico JM, Lu D, Bobardt SD, Hung L, Gouil Q, Baker L, Ritchie ME, Jex AR, Schwarz EM, Rossi HL, Nair MG, Dillman AR, **Herbert DR**.PLoS Pathog. 2023 Dec 11;19(12):e1011797. doi: 10.1371/journal.ppat.1011797. eCollection 2023 Dec.
PMID: 38079450

60. MrgprA3 neurons drive cutaneous immunity against helminths through selective control of myeloid-derived IL-33.
Inclan-Rico JM, Napuri CM, Lin C, Hung LY, Ferguson AA, Liu X, Wu Q, Pastore CF, Stephenson A, Femoe UM, Musaigwa F, Rossi HL, Freedman BD, Reed DR, Macháček T, Horák P, Abdus-Saboor I, Luo W, **Herbert DR**.
Nat Immunol. 2024 Nov;25(11):2068-2084. doi: 10.1038/s41590-024-01982-y. Epub 2024 Oct 1.
PMID: 39354200

61. A Trefoil factor 3-Lingo2 axis restrains proliferative expansion of type-1 T helper cells during GI nematode infection.
Ethgen LM, Pastore C, Lin C, Reed DR, Hung LY, Douglas B, Sinker D, **Herbert DR**, Belle NM. Mucosal Immunol. 2024 Apr;17(2):238-256. doi: 10.1016/j.mucimm.2024.02.003. Epub 2024 Feb 8. PMID: 38336020

62. The Secretome of Adult Murine Hookworms Is Shaped by Host Expression of STAT6.
Ferguson AA, Rossi HL, **Herbert DR.**Parasite Immunol. 2024 Jul;46(7):e13056. doi: 10.1111/pim.13056. PMID: 39073185

63. Myeloid-derived IL-33 drives γδ T cell-dependent resistance against cutaneous infection by Strongyloides ratti.
Jean EE, Rossi HL, Hung LY, Inclan-Rico JM, **Herbert DR.**J Immunol. 2025 Mar 4;214(3):502-15. doi: 10.1093/jimmun/vkae038.
PMID: 40073150

64. Perforin-2 is dispensable for host defense against *Aspergillus fumigatus* and *Candida albicans*.
Aufiero MA, Hung LY, **Herbert DR**, Hohl TM. mSphere. 2025 Jan 28;10(1):e0080324. doi: 10.1128/msphere.00803-24. PMID: 39386632

T cell intrinsic LINGO2 expression regulates and IFN-gamma dependent susceptibility to GI nematode infection
Ethgen, L.M., Pastore, C. F., Lin,C., Reed, D.R. **Herbert, D.R**. and Belle, N.M. (*Currently In Press at Mucosal Immunology*)

Review Articles (Peer-Reviewed):

Tuft cells in the pathogenesis of chronic rhinosinusitis with nasal polyps and asthma.
Sell EA, Ortiz-Carpena JF, Herbert DR, Cohen NA.
Ann Allergy Asthma Immunol. 2021 Feb;126(2):143-151. doi: 10.1016/j.anai.2020.10.011. Epub 2020 Oct 26.
PMID: 33122124

Neuroimmune regulatory networks of the airway mucosa in allergic inflammatory disease.
Jean EE, Good O, Rico JMI, Rossi HL, Herbert DR. J Leukoc Biol. 2021 Apr 15. doi: 10.1002/JLB.3RU0121-023R. Online ahead of print.
PMID: 33857344

Trefoil Factor Family: A Troika for Lung Repair and Regeneration.
Rossi HL, Ortiz-Carpena JF, Tucker D, Vaughan AE, Mangalmurti NS, Cohen NA, Herbert DR.
Am J Respir Cell Mol Biol. 2021 Nov 16. doi: 10.1165/rcmb.2021-0373TR.
PMID: 34784491

Every cell is an immune cell; contributions of non-hematopoietic cells to anti-helminth immunity.
Inclan-Rico JM, Rossi HL, Herbert DR.
Mucosal Immunol. 2022 May 10. doi: 10.1038/s41385-022-00518-7. Online ahead of print.
PMID: 35538230

Is *Strongyloides stercoralis* hyperinfection induced by glucocorticoids a result of both suppressed host immunity and altered parasite genetics?
Herbert DR, Stoltzfus JDC, Rossi HL, Abraham D.
Mol Biochem Parasitol. 2022 Sep;251:111511. doi: 10.1016/j.molbiopara.2022.111511. Epub 2022 Aug 22.
PMID: 36007683

Books: N/A

Book Chapters and Reviews: N/A

Editorials: T regulatory cells influence decisions between concomitant immunity versus sterile cure Inclan-Rico, J and Herbert DR
J Immunol. 2021 Jul 1;207(1):3-4. doi: 10.4049/jimmunol.2100338. PMID: 34935628

Submitted Research Papers:

ILC2 serve a critical role in host immunity and tissue repair during helminth infection
Nichols, I., Femoe, U, Hung, L.Y., and Herbert, D.R. (*Submitted to Mucosal Immunology*)

Perforin-2 expression in cDC1 controls IL-12 release and Type 1 immunity against *Toxoplasma gondii*
Annamalai, P., Hung, LY, Inclan-Rico J, and Herbert, D.R. (*Submitted to Infection and Immunity)*

TRPV1 neurons promote cutaneous immunity against *Schistosoma mansoni*.. Inclan-Rico, J., Stephenson, A., Napuri, C.M., Hung, LY., Pastore, C.F., Luo, W., and Herbert, D.R.. (*Submitted to The Journal of Immunology)*

Research Papers in preparation:

Nociceptive neurons initiate sinonasal allergic Type 2 inflammation via Substance P
Femoe, U, Rossi, H.L., and Herbert, D.R.

Intestinal epithelial cell-derived IL-33 augments susceptibility to oral *Toxoplasma gondii* infection
Pastore, C. F., Inclan-Rico, J.M., and Herbert, D.R.

Perforin-2 expressing APC control IL-17 production from $\gamma\delta$ T cells to control parasite-induced lung damage
Hung, L.Y., Inclan-Rico, J.M., and Herbert, D.R.

Mature antigen-specific memory CD4+T cell responses require interleukin 33 signaling during helminth infection
Musaigwa, F., Femoe, U., Akinkuotu, O., and Herbert, D.R.

Mrgprd neurons control the severity of murine psoriasis through control of IL-17 production
Napuri, C., Inclan Riso, J., , Rossi, H.L., and Herbert, D.R.

Published Abstracts:
Dienger, K.M., Herbert, D.R., Rani, R., Roloson, A., Curt-Jones, E.A., Wang, T.C., Wills-Karp, M. Trefoil Factor 2 Mediates IL-13 – induced Allergic Asthma via IL-33 specific T_H2 initiation *American Journal of Respiratory and Critical Care Medicine* 183;2011:A4270

Cul5 E3 ubiquitin ligase limits Th2 and Th9 differentiation by regulating IL4 receptor level in CD4 T cells
Kumar, B., Field, N., Herbert, DR and Oliver, P *J Immunol* May 1, 2020, 204 (1 Supplement) 147.17;

Epithelial versus myeloid-derived IL-33 controls different aspects of pathogen-specific immunity
Herbert, D.R., Herbine, K., Hung, L-Y., Pastore, C., Singh, B., Tanaka, Y., Bryce, P.J., and Kambayashi, T
J Immunol May 1, 2019, 202 (1 Supplement) 126.1;

Wnt4 controls early cDC1 commitment to suppress Type 2 immunity
Hung, L-Y., Johnson, J.L., Ji, Y., Christian, D.A., Herbine, K.R., Pastore, C.F., and **Herbert, D.R.**
J Immunol May 1, 2019, 202 (1 Supplement) 190.44;

GRANT PAGES

Past

Name of Grant & sponsor number	Funding Agency	Period of Grant	Type of Grant***	Role in Grant and percent effort	Annual Direct Cost	Annual Indirect Cost	Additional Comments
Alternative macrophage activation limits immuno-pathology GM083204	NIH	09/30/2007-03/31/2020	R01	PI 20%	$86,493	$49,405	
Trefoil factors regulate Type 2 immunity AI095289	NIH	04/01/2016-03/31/2018	R01	PI 20%	$16,287	$9,772	
Using transgenic parasitic nematodes to investigate Type 2 immunity A1144572	NIH	01/15/2019-12/31/2020	PP - R21	Co-PI 5%	$125,000	$76,250	
Trefoil factor proteins regulate inflammation and immunity AI125940-05S1	NIH	08/01/2016-07/31/2021	PP-U01	PI 20%	$275,697	$168,175	Based on identifying LINGO proteins as putative Trefoil receptors
Deep sequencing human and mouse nasal architecture	NIH	07/01/2020-06/30/2021	PP	PI 5%	$53,611		U01 supplement for sc-RNAseq. technologies
Trefoil factor proteins regulate inflammation and immunity 3U01AI125940-05W1	NIH	08/01/2020-07/31/2021	PP	PI 0%	$50,000	$31,021	U01 supplement for caregiver support
Cross-species COVID 19 transmission PennVet		07/01/20 – 06/30/21	PG	PI 0%	$50,000	$0	

Physiological roles of schistosome TRP ion channels with atypical pharmacology	NIH	1/17/2017 – 12/31/2022	R01	PI 20%	$250,000	$148,180	

Current

Name of Grant & sponsor number	Funding Agency	Period of Grant	Type of Grant ***	Role in Grant and percent effort	Annual Direct Cost	Annual Indirect Cost	Additional Comments
Myeloid derived IL-33 controls Treg responses during parasite infection	NIH	A1144572	R01	PI 20%	$250,000	$145,683	Based on work recently published in Science Immunology
Perforin 2 controls unconventional cytokine release from mucosal APC	NIH	08/20/2021 -05/31/2026	PP-U01	PI 20%	$299,042	$155,958	Based on work recently published in Science Immunology
A Cul5 E3 ubiquitin ligase complex that prevents TH2/TH17 differentiation and allergic asthma HL153539	NIH	05/01/20 - 04/30/24	R01	Co-investigator 5%	$250,000	$148,180	This grant helps to support development of an airway physiology core for pulmonary function testing.
Solitary chemosensory / tuft cells in lung regeneration and inflammation HL153539	NIH	06/01/2020- 05/31/2025	R01	Co-investigator 5%	$250,000	$148,180	
Neuronal regulation of sinonasal Type 2 inflammation	NIH	09/01/2022 08/31/2024	R21	co-PI 5%	$150,000	$93,750	SRI Heather Rossi in my lab is the co-PI

Central role for skin sensory neurons in anti-helminth immunity 10085790	NIH	07/01/2022-06/30-2024	R21	co-PI 5%	$125,000	$78,125	SRI Heather Rossi in my lab is the co-PI
Neuronal regulation of sinonasal Type 2 inflammation	NIH	09/01/2022 08/31/2024	R21	co-PI 5%	$150,000	$93,750	
Neuro-Immune mechanisms against skin-penetrating helminths	NIH	07/01/2024-06/30/2029	R01	PI 15%	486,621	316,303	

***For **Type of Grant,** use code in bold from the following menu:

R01 NIH R01
PP NIH Program Project, Center or Core Grants
FG Federal Grants - Other (including other individual NIH grants and grants from VA, NSF, Dept. of Energy, etc.)
F Fellowship
CT Clinical Trials
TG Training Grants
IG Industrial Grants (including pharmaceutical)
PG Private Foundation Grants (including internal Penn grants)
O Other

** For program projects, specify whether PI, co-leader or project leader. For center, core and training grants, similarly specify your role. *** Include any additional, brief information. For clinical trials, for example, specify if multicenter or single center and indicate role of Penn site. Explain any grants in "**Other"** category.
If space is needed for more entries, use an additional sheet.

ACADEMIC COMMITTEES AT TULANE UNIVERSITY

2024- Meghan Mouton Tulane University Biomedical Sciences graduate student thesis committee member
2024- Jordan Scott Tulane University Biomedical Sciences graduate student thesis committee member

ACADEMIC COMMITTEES AT UNIVERSITY OF PENNSYLVANIA:

DEPARTMENT COMMITTEES:

2017 Pathobiology Chair Recruitment committee member
2021 Pathobiology Tenure Track faculty search committee

SCHOOL COMMITTEES:

2017 PennVet Dean Recruitment committee member
2019 PennVet Committee for Academic status of students (CASS)
2020 PennVet Clinical Pathology search committee chair
2021 CHMI review committee

UNIVERSITY COMMITTEES:

2016 UCSF School of Medicine Adjunct Faculty Search Committee
2017 URF study section, committee member
2018 UPenn IGG, Diversity Chair
2018 URF study section, committee member
2020 ULAR Executive Search Committee
2020 Academic Planning and budget committee
2020 Faculty Senate Committee on the Institutional Response to the Climate Emergency (CIRCE)
2017 Antonia Bass UPenn MVP graduate student thesis committee member
2021- Ceire Hey UPenn MVP graduate student thesis committee chair
2021- Eric Rodriguez-Lopez UPenn IGG graduate student thesis committee member
2021- Siera Rosen UPenn DSRB graduate student thesis committee chair
2021 IDEAL student recruitment ambassador
2021 SPATT-IFI faculty search committee

UNIVERSITY SERVICE

2018 Lead Organizer IFI Inflammation symposium: Bench to Bedside
2019 Lead Organizer IFI-PennSAM Nutrition and Immunity Symposium

2020	Faculty Senate	Representative for School of Veterinary Medicine
2020	Climate Week	Organizer for School of Veterinary Medicine
2021	Climate Week	Co-organizer for School of Veterinary Medicine
2021	Co-director	IGG admissions
2022	Director	UPenn Airway Physiology core

ACADEMIC COMMITTEES OUTSIDE OF UNIVERSITY OF PENNSYLVANIA:

2012-16	Benjamin L. Cohn	UCSF Biomedical Sciences student thesis committee member
2021-	Jorden Lane	University of Chicago student thesis committee member
2016-2021		Scientific Advisory Board of Keystone Symposia
2020-		Scientific advisory Board for American Institute of Biological Sciences

FORMAL FACULTY MENTORING:

Faculty Mentees (Assistant Professor level) at Univ. Penn:

2017 -	Nicole Belle MD/PhD	Instructor	UPenn Dept. of Medicine
2017 -	Andrew Vaughan Ph.D.	Assistant Professor	Dept. of Biomedical Sciences
2018 -	Elizabeth Lennon Ph.D.	Assistant Professor	Dept. of Clinical Sciences
2018 -	Carla Scanzello, MD/PhD	Assistant Professor	Rheumatology, VA Medical Center

STUDENT TRAINING:

Predoctoral:

2008 - 2012	Cortez McBerry	Cincinnati Children's Immunobiology	Rotation Supervisor
2011 - 2011	Michael Horwath	Cincinnati Children's Immunobiology	Rotation Supervisor
2011 - 2011	Lisa Heitmann	University of Luebeck	Rotation Supervisor
2011 - 2011	Upasana Kulkarni	University of Luebeck	Rotation Supervisor
2012 - 2012	Aude Bouagnon	UCSF Biomedical Sciences Program	Rotation Supervisor
2013 - 2013	James Jung	UCSF Biomedical Sciences Program	Rotation Supervisor
2017	Gregory Sousa	CAMB graduate program	Rotation Supervisor
2016 - 2020	Kelly Zullo	UPenn Immunology	Ph.D. mentor
2017 - 2021	Bonnie Douglas	UPenn Immunology	Ph.D. mentor
2018	Sarah Maddux	UPenn Immunology	Rotation Supervisor
2019	Andrea Wong	UPenn Immunology	Rotation Supervisor
2019 - 2023	Jorge Ortiz-Carpena	UPenn Immunology	Ph.D. mentor
2020 - current	Erin Jean	UPenn Immunology	Ph.D. mentor

2020 - current	Annabel Ferguson	CAMB graduate program	Ph.D. mentor
2022-current.	Adriana Stevenson	Biology program	Ph.D. mentor

Postdoctoral:

2012 - current	Li Yin Hung	Postdoctoral Fellow
2013 - 2016	Wildaliz Nieves	Postdoctoral Fellow
2014 - 2015	Koshika Yadava	Postdoctoral Fellow
2016 - 2018	Yingbiao Ji	Postdoctoral Fellow
2016 - 2018	Sriram Srivasta	Postdoctoral Fellow
2017 - 2021	Ray Saunders	Postdoctoral Fellow
2020 - 2021	Olivia Lenz	Postdoctoral Fellow
2020 -2022.	Marilena Gentile	Postdoctoral Fellow
2020 -2024.	Juan Inclan-Rico	Postdoctoral Fellow
2021-	Fungai Musaigwa	Postdoctoral Fellow
2022-	Ulrich Femoe	Postdoctoral Fellow
2022-2024.	Olufemi Akinkuotu	Postdoctoral Fellow
2023-	Parvathi Annamalai	Postdoctoral Fellow

SEMINARS AND ORAL PRESENTATIONS BY INVITATION: (Poster presentations not included)

INTERNATIONAL

2010 Tokyo Medical University Tokyo, Japan seminar entitled, "Trefoil factors drive Type 2 immunity"
2010 Chiba University, Japan seminar entitled, "Trefoil factors drive Type 2 immunity"
2012 CNRS-Orleans Immunologie et Embryologie Moleculaires, France seminar entitled, "Trefoil factors regulate Type 2 immunity"
2014 University of Cape Town, IIDMM, South Africa seminar entitled, "More than M2: role of macrophages in tissue repair"
2015 Hydra Helminth meeting, Hydra, Greece seminar entitled, "IL-33 regulates helminth immunity"
2018 NYU Abu Dhabi Nematode biology meeting
2018 CNRS-Orleans Immunologie et Embryologie Moleculaires, France seminar entitled, "Type 2 immunity in health and disease"
2019 Nigerian Institute for Medical Research seminar entitled, "Role of Trefoil factor proteins in Human helminth infection"
2019 Malaghan Institute, New Zealand seminar entitled, "Cell-specific role for IL-33 in anti-parasite Immunity"
2022 VIB Conference on Type 2 immunity Ghent, Belgium seminar entitled, "Perforin 2 controls IL-33 release from dendritic cells"
2023 British Society for Parasitology conference, Edinburgh, Scotland, seminar entitled, "Perforin 2 controls IL-33 release from dendritic cells"
2023 University of Toronto Charles Gould Easton lecture entitled, seminar entitled, "Perforin 2 pokes its way into Type 2 immunity"
2023 NIAID sponsored EID conference lecture Manila, Philippines, seminar entitled, "Perforin 2 pokes its way into Type 2 immunity"
2023 Hydra Helminth meeting, Hydra, Greece seminar entitled, "IL-33 regulates cutaneous immunity against *Schistosoma mansoni*"
2024 University of Salta, Salta City, Buenos Aires, Argentina " STAT6 independent but IL-33 dependent cutaneous Immunity"
2024 ECI2024 - 7TH EUROPEAN CONGRESS OF IMMUNOLOGY, Dublin, Ireland, "Myeloid derived Interleukin 33 regulates host immunity"
2024 Department of Parasitology, Faculty of Science, Charles University, Prague Czechoslovakia "Schistosoma species would infect thee if not

for itchy immunity through Interleukin 33”

NATIONAL

2010 Keystone Symposia, The Macrophage: Intersection of Pathogenic and Protective Inflammation (Plenary speaker and session chair)
2011 Keystone Symposia, Mucosal Biology: A Fine Balance between Tolerance and Immunity
2013 Keystone Symposia, Type 2 Immunity: Initiation, Maintenance, Homeostasis and Pathology
2015 AAI Major Symposia: Mechanisms of Host Immunity, speaker and chair
2021 AAI Vanguard Lecturer
2022 Society for Mucosal Immunology invited lecture entitled, ”Control of myeloid-derived IL-33 by nociceptive skin neurons”
2023 Keystone Symposia, Myeloid Cells: Development, Diversity & Distinct Biological Roles
2024 Lecturer, Biology of Acute Respiratory Infection Gordon Research Conference

REGIONAL AND OTHER SELECTED INVITED PRESENTATIONS

2009 University of Louisville " Role of M2 macrophages in protective immunity against helminths"
2009 Amgen, Seattle Washington seminar entitled, "M2 vs. regulatory macrophages control distinct aspects of infection-induced immunopathology"
2009 St. Jude Children's Hospital seminar entitled, "M2 vs. regulatory macrophages control distinct aspects of infection-induced immunopathology"
2009 University of California San Francisco seminar entitled, "Trefoil factor 2 controls Type 2 immunity"
2010 College of Veterinary Medicine Cornell University seminar entitled, "Arginase 1-drives host protective immunity"
2010 University of Lexington seminar entitled, "Alternatively activated macrophages control inflammation through Arginase I"
2011 Biology of Parasitism course, Marine Biological Laboratory seminar entitled, "Role of IL-4R signaling in GI nematode immunity"
2011 Trudeau Institute seminar entitled, "Trefoil factor 2 regulates IL-33 dependent immunity against parasites"
2011 Johns Hopkins Bloomberg School of Public Health seminar entitled, "Trefoil factor 2 drives IL-33 dependent mucosal inflammation"
2011 Louisiana Vaccine Center at LSUHSC seminar entitled, "Trefoil factor 2 drives IL-33 dependent mucosal inflammation"
2011 University of Washington seminar entitled, "Trefoil factor 2 drives IL-33 dependent mucosal inflammation"
2012 Rush University Medical Center seminar entitled, Trefoil factor 2 drives IL-33 dependent mucosal inflammation"
2014 UC Davis seminar entitled, "Trefoil factor 2 controls IL-33 driven host protection against gastrointestinal parasites"
2014 University of North Dakota seminar entitled, "Alternatively activated macrophages in health and disease"
2014 Biogen Idec seminar entitled, "Trefoil factor proteins regulate immunity through LINGO family receptors"
2015 UC Irvine seminar entitled, "LINGO proteins: new language of the mucosal barrier"
2015 UC Riverside seminar entitled, "LINGO proteins: new language of the mucosal barrier"
2015 Biology of Parasitism course, Marine Biological Laboratory seminar entitled, "Type 2 immunity and helminth responses"
2016 Rutgers School of Medicine seminar entitled, "LINGO proteins: new language of the mucosal barrier"
2016 Emory School of Medicine seminar entitled, "LINGO proteins: new language of the mucosal barrier"
2016 UPenn Immunology Retreat speaker seminar entitled, "Trefoil factors and Type 2 immunity"
2017 NYU School of Medicine seminar entitled, "Discovery of a new class of receptors for Trefoil factor family proteins"

2017 NIH Laboratory of Parasitic Disease Seminar Series seminar entitled, "Using parasites to understand tissue repair and host immunity"
2017 Cornell University Baker Institute seminar entitled, "Trefoil factors promote host protective immunity"
2017 NIH Special Interest Focus Group seminar series seminar entitled, “LINGO proteins: new language of the mucosal barrier"
2017 Boston College seminar entitled, "Wnt 4 regulates cDC1 differentiation"
2018 NIH WALS Lecture seminar entitled, "Wnt 4 regulates cDC1 differentiation"
2019 Emory University School of Medicine seminar entitled, "Wnt 4 regulates cDC1 differentiation"
2020 University of Texas San Antonio seminar entitled, "IL-33 regulates inflammation or immunosuppression depending on cellular context"
2020 Columbia University seminar entitled, "IL-33 regulates inflammation or immunosuppression depending on cellular context"
2020 Tulane University School of Medicine seminar entitled, "IL-33 regulates inflammation or immunosuppression depending on cellular context"
2021 University of California San Francisco seminar entitled, "IL-33 regulates inflammation or immunosuppression depending on cellular context"
2021 Stanford University Center for Human Systems Immunology seminar entitled, "Perforin-2 pokes its way into Type 2 mucosal immunity"
2021 University of California San Francisco ImmunoX seminar series seminar entitled, DC-specific role for IL-33 expression in host protection"
2021 McGill University Institute of Parasitology seminar entitled, "Perforin-2 pokes its way into Type 2 mucosal immunity"
2021 University of Maryland Immunology series seminar entitled, "Perforin-2 pokes its way into Type 2 mucosal immunity"
2021 UCSF ImmunoDiverse Colloquia seminar entitled, "Path of a immunoparasitologist"
2021 University of Chicago seminar entitled, "Revising the dogma on IL-33 biology in health and disease"
2021 Johns Hopkins seminar entitled, "Revising the dogma on IL-33 biology in health and disease"
2021 University of New Mexico seminar entitled, "Perforin-2 pokes its way into Type 2 mucosal immunity"
2021 Cincinnati Children's Research Foundation seminar entitled, "Revising the dogma on IL-33 biology in health and disease"
2021 Global Immunotalk seminar entitled, "Alarming controversies in IL-33 biology https://www.youtube.com/watch?v=RBqUfMuCQXI
2021 University of Washington seminar entitled, "Perforin-2 pokes its way into Type 2 mucosal immunity"
2021 University of Minnesota seminar entitled, "Perforin-2 pokes its way into Type 2 mucosal immunity"
2021 Drexel University seminar entitled, "Revising the dogma on IL-33 biology in health and disease"
2021 Emory University seminar entitled, "Perforin-2 pokes its way into Type 2 mucosal immunity"
2021 Memorial Sloan Kettering Cancer Center seminar entitled, "Perforin-2 pokes its way into Type 2 mucosal immunity"
2021 University of Texas Southwestern seminar entitled, "Perforin-2 pokes its way into Type 2 mucosal immunity"
2021 University of Massachusetts Zapworms seminar entitle, “Adaptations of hookworms to host immunity”
2022 NYU Langhorne seminar entitled, "Perforin-2 pokes its way into Type 2 mucosal immunity"
2022 UT Southwestern seminar entitled, “Perforin-2 pokes its way into Type 2 mucosal immunity”
2022 Reddit AMA Neglected Tropical Diseases webinar
2022 Canadian Digestive Disease Week “Perforin-2 pokes its way into Type 2 mucosal immunity”
2022 University of Washington seminar entitled, “Perforin-2 pokes its way into Type 2 mucosal immunity”
2022 UMass Amherst VACSI keynote lecture entitled, “Perforin-2 pokes its way into Type 2 mucosal immunity”
2022 Broad Institute Food allergy initiative, entitled, “Perforin-2 pokes its way into Type 2 mucosal immunity”
2022 University of Chicago Rising Stars symposium invited speaker
2022 Society for Mucosal Immunology invited lecturer entitled, “Perforin-2 pokes its way into Type 2 mucosal immunity”
2022 Upstate New York Immunology retreat keynote lecture entitled, “Perforin-2 pokes its way into Type 2 mucosal immunity”
2023 National Jewish Health, Denver, CO lecture entitled, “Perforin-2 pokes its way into Type 2 mucosal immunity”

2023 Cincinnati Children's Immunobiology Division lecture entitled, "Perforin-2 pokes its way into Type 2 mucosal immunity"
2023 Texas Biomed Seminar series lecture entitled, "Role of STAT6 in transcriptional regulation of parasitic helminths"
2023 Dartmouth Immunology Retreat, lecture entitled, "Neuronal control of cutaneous immunity against parasite invasion"
2023 Indiana University Microbiology Immunology Retreat Keynote lecture entitled, "Mechanisms of neuronal immunity at the skin barrier"
2023 Harvard Immunology retreat Keynote lecturer entitled, "Neuronal regulation of host immunity"
2024 Midwinter Conference of Immunologists invited lecture entitled, Itch drives inflammation through myeloid IL-33
2024 Gordon Research Conference: Acute Respiratory infection
2024 UCLA invited lecture entitled, "Hookworm infections adapt to host selective pressure"

TEACHING RESPONSIBILITIES:

Course Lecturer:

2016	BGS Workshop Facilitator: Responsible Conduct of Research
2016-	Veterinary Parasitology
2017-	Veterinary Immunology
2017-	CAMB 706: MVP Core Course (lectures 2 h)
2017-	IMUN 506: Immune Mechanisms (2 h)
2017	BGS Workshop Facilitator: Responsible Conduct of Research
2022	Defense and Barriers introductory course on Dendritic cells

Course Director:

2018	Course co-Director CAMB 510 Immunology
2019	Course co-Director CAMB 510 Immunology

U PENN TEACHING CHRONICLE
De'Broski R. Herbert

Academic Year	Semester	Course #	Course Name	Student Number	Topic	Lecture Hours	Lab Hours
2016	Spring	VPTH 604	Veterinary Immunology	~175	Immunology	2	0
	Fall	VPTH 603	Veterinary Parasitology	~175	Parasitology	2	3
	Fall	IMUN 599	Faculty Research Seminar	15	Immunology	.5	0
	Spring	CAMB 706	MVP Core Course	12	Parasitology	2	0
	Spring	N/A	BGS Workshop - Facilitator	20	Responsible Conduct of Research	1	0
2016 Total = 7.5 lecture hours, 3 lab hours.							
2017	Fall	N/A	BGS Workshop - Facilitator	20	Responsible Conduct of Research	1	
	Spring	VPTH 604	Veterinary Immunology	~175	Immunology	2	
	Fall	VPTH 603	Veterinary Parasitology	~175	Parasitology	2	
	Fall	IMUN 599	Faculty Research Seminar	15	Immunology	.5	
	Spring	CAMB 706	MVP Core Course	12	Parasitology	2	
	Spring	CAMB 549	MVP Core Course	12	Parasitology	2	

	Fall	IMM 506	Basic Immunology	20	Immunology	2	
	Spring	VPTH604	Veterinary Immunology	~175	Immunology	3	4
2017 Total = 14.5 Lecture hours, 4 lab hours.							
Academic Year	**Semester**	**Course #**	**Course Name**	**Student Number**	**Topic**	**Lecture Hours**	**Lab Hours**
2018	Spring	VPTH 604	Veterinary Immunology	~175	Immunology	2	
	Fall	VPTH 603	Veterinary Parasitology	~175	Parasitology	2	
	Fall	IMUN 599	Faculty Research Seminar	~10	Immunology	.5	
	Spring	CAMB 706	MVP Core Course	~10	Parasitology	2	
	Spring	CAMB 549	MVP Core Course	~12	Parasitology	2	3
	Fall	IMM 506	Basic Immunology	~20	Immunology	2	
	Fall	VPTH603	Veterinary Parasitology	~175	Parasitology	3	4
	Fall	CAMB 510	Immunology for CAMB	Immunology	Course Director with Scott Worthen	3	
2018 Total = 16.5 Lecture hours, 7 lab hours.							
2019		VPTH 604	Veterinary Immunology	~175	Immunology	2	

	Fall	VPTH 603	Veterinary Parasitology	~175	Parasitology	2	
	Fall	IMUN 599	Faculty Research Seminar	~10	Immunology	.5	
	Spring	CAMB 706	MVP Core Course	~10	Parasitology	2	
	Spring	CAMB 549	MVP Core Course	~12	Parasitology	2	
	Fall	IMM 506	Basic Immunology	20	Immunology	2	
		CAMB 510	Basic Immunology	~35	Course Director Hours in preparation 24 hrs.	3	
	Fall	VPTH603	Veterinary Parasitology	~175	Parasitology	3	4
2019 Total = 16.5 Lecture hours, 14 lab hours.							
2020	Fall	VPTH 603	Veterinary Parasitology	~175	With Dr. Lok and Dr. Nolan	2	4
	Fall	VPTH 604	Veterinary Immunology	~175	Immunology	2	
	Fall	IMUN 599	Faculty Research Seminar	~12	Immunology	.5	
	Spring	CAMB 706	MVP Core Course	~12	Parasitology	2	
	Fall	VPTH603	Veterinary Parasitology	~175	Parasitology	3	4
2020 Total = 9.5 Lecture							

hours, 4 lab hours.							
	Fall	VPTH 603	Veterinary Parasitology	~175	With Dr. Lok and Dr. Nolan	2	4
	Fall	VPTH 604	Veterinary Immunology	~175	Immunology	2	
	Spring	IMUN 599	Faculty Research Seminar	~12	Immunology	.5	
	Spring	CAMB 706	MVP Core Course	~12	Parasitology	2	
2021 Total = 6.5 Lecture hours, 4 lab hours.							