



CURRICULUM VITAE

I. PERSONAL INFORMATION

Name: Matthew E. Poynter, Ph.D.

Date and Place of Birth: December 25, 1971
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II. EDUCATION and PROFESSIONAL EXPERIENCE

1989: Graduated Cum laude
Stillwater Senior High School
Stillwater, MN

1989-1991: University of Minnesota, Duluth, MN

1991-1993: Montana State University, Bozeman, MT
Department of Microbiology
Research in the laboratory of Gordon McFeters, Ph.D.
B.S. with honors in Microbiology, May 1993

1993-1998: University of Utah, Salt Lake City, UT
Department of Pathology, Division of Cell Biology and Immunology
Dissertation Professor: Raymond A. Daynes, Ph.D.
Ph.D. in Experimental Immunopathology, December 1998

1998-2002: Department of Pathology, University of Vermont, Burlington, VT
Environmental Pathology Postdoctoral Fellow

Laboratory of Yvonne M.W. Janssen-Heininger, Ph.D.

- 2002-2003: Department of Medicine, Division of Pulmonary Disease and Critical Care, University of Vermont, Burlington, VT
Research Assistant Professor
- 2003-2009: Department of Medicine, Division of Pulmonary Disease and Critical Care, University of Vermont, Burlington, VT
Assistant Professor
- 2009-2015: Department of Medicine, Division of Pulmonary Disease and Critical Care, University of Vermont, Burlington, VT
Associate Professor with tenure
- 2011-2025: Associate Director, Vermont Lung Center, University of Vermont, Burlington, VT
- 2015-2025: Director, Cellular, Molecular, and Biomedical Sciences Graduate Program, University of Vermont, Burlington, VT
- 2015-present: Department of Medicine, Division of Pulmonary Disease and Critical Care, University of Vermont, Burlington, VT
Professor with tenure
- 2025-present: Director, Vermont Lung Center, University of Vermont, Burlington, VT

III. PUBLICATIONS

[H index = 55; I10 index = 131; total citations = 10,255; Google scholar, 04/21/2026]

Complete bibliography:

<https://www.ncbi.nlm.nih.gov/myncbi/1BMKHUrieLpQk/bibliography/public/>

Peer-reviewed original research publications:

1. Hennebold, J.D., **Poynter, M.E.**, and R.A. Daynes. DHEA and immune function: activities and mechanism of action. *Seminars in Reproductive Endocrinology* 13(4): 257-269 (1995).
2. Spencer, N.F.L., **Poynter, M.E.**, Hennebold, J.D., Mu, H-H., and R.A. Daynes. Does DHEAS restore immune competence in aged animals through its capacity to function as a natural modulator of peroxisome activities? *Annals of the New York Academy of Sciences* 774: 200-215 (1996), PMID 8597460.
3. Hennebold, J.D., Mu, H-H., **Poynter, M.E.**, Chen, X-P., and R.A. Daynes. Active catabolism of glucocorticoids by 11 β -hydroxysteroid dehydrogenase *in vivo* is a necessary requirement for natural resistance to infection with *Listeria monocytogenes*. *International Immunology* 9(1): 101-111 (1997), PMID 9043952.
4. **Poynter, M.E.**, Mu, H-H., Chen, X-P., and R.A. Daynes. Activation of NK1.1⁺ T cells *in vitro* and their role in age-associated elevations in inducible IL-4 production. *Cellular Immunology* 179: 22-29 (1997), PMID 9259768.

5. Spencer, N.F.L., **Poynter, M.E.**, Im, S-Y., and R.A. Daynes. Constitutive activation of NF- κ B in an animal model of aging. *International Immunology* 9(10): 1581-1588 (1997), PMID 9352364.
6. **Poynter, M.E.** and R.A. Daynes. Peroxisome proliferator-activated receptor α activation modulates cellular redox status, represses nuclear NF- κ B signaling, and reduces inflammatory cytokine production in aging. *The Journal of Biological Chemistry* 273(49): 32833-32841 (1998), PMID 9830030.
7. **Poynter, M.E.** and R.A. Daynes. Age-associated alterations in splenic iNOS regulation: influence of constitutively-expressed IFN- γ and correction following supplementation with PPAR α activators or vitamin E. *Cellular Immunology* 195(2): 127-136 (1999), PMID 10448012.
8. **Poynter, M.E.**, Irvin, C.G., and Y.M.W. Janssen-Heininger. Rapid activation of nuclear factor- κ B in airway epithelium in a murine model of allergic airway inflammation. *American Journal of Pathology* 160(4): 1325-1334 (2002), PMC1867226.
9. Janssen-Heininger, Y.M.W., Persinger, R.L., Korn, S.H., Pantano, C., McElhinney, B., Reynaert, N., Langen, R., Ckless, K., Ranjan, P., and **M.E. Poynter**. Reactive nitrogen species and cell signaling: implications for death or survival of lung epithelium. *American Journal of Respiratory and Critical Care Medicine*, 166(12 Pt 2): S9-S16 (2002), PMID 12471083.
10. **Poynter, M.E.**, Irvin, C.G., and Y.M.W. Janssen-Heininger. A prominent role for airway epithelial NF- κ B activation in lipopolysaccharide-induced airway inflammation. *Journal of Immunology*, 170: 6257-6265 (2003), PMID 12794158.
11. McAllister, R.D., Singh, Y., du Bois, W.D., Potter, M., Boehm, T., Meeker, N.D., Anderson, L.A., **Poynter, M.E.**, and C. Teuscher. Susceptibility to anthrax lethal pathology is controlled by three linked quantitative trait loci. *American Journal of Pathology*, 163: 1735-1741 (2003), PMC1892420.
12. McElhinney, B., **Poynter, M.E.**, Shrivastava, P., Hazen, S.L., and Y.M.W. Janssen-Heininger. Eosinophil peroxidase catalyzes JNK-mediated membrane blebbing in a Rho kinase-dependent manner. *Journal of Leukocyte Biology*, 74(5): 897-907 (2003), PMID 12960269.
13. Teuscher, C., **Poynter, M.E.**, Offner, O., Zamora, A., Watanabe, T., Fillmore, P.D., Zachary, J.F., and E.P. Blankenhorn. Attenuation of Th1 effector cell responses and susceptibility to experimental allergic encephalomyelitis in histamine H2 receptor knockout mice is because of dysregulation of cytokine production by antigen-presenting cells. *American Journal of Pathology*, 164: 883-892 (2004), PMC1614706.
14. **Poynter, M.E.**, Cloots, R., van Woerkom, T., Butnor, K.J., Vacek, P., Taatjes, D.J., Irvin, C.G., and Y.M.W. Janssen-Heininger. NF- κ B activation in airways modulates allergic inflammation but not hyperresponsiveness. *Journal of Immunology*, 173: 7003-7009 (2004), PMC2830271.
15. Shrivastava, P., Pantano, C., Watkin, R., McElhinney, B., Guala, A., **Poynter, M.E.**, Persinger, R.L., Budd, R., and Y. Janssen-Heininger. Reactive nitrogen species-induced cell death requires Fas-dependent activation of c-Jun N-terminal kinase. *Molecular and Cellular Biology*, Vol. 24, No. 15: 6763-6772 (2004), PMC444859.
16. Lundblad, L.K.A., Thompson-Figueroa, J., Leclair, T., **Poynter, M.E.**, Irvin, C.G., and J.H.T. Bates. Tumor necrosis factor-alpha over-expression in lung disease: a single

cause behind a complex phenotype. *American Journal of Respiratory and Critical Care Medicine*, 171(12):1363-70 (2005), PMC2718479.

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19. Allard, J.B., **Poynter, M.E.**, Marr, K.A., Cohn, L., Rincon, M., and L.A. Whittaker. *Aspergillus fumigatus* generates an enhanced Th2-biased immune response in mice with defective cystic fibrosis transmembrane conductance regulator. *Journal of Immunology*, 177(8):5186-5194 (2006), PMID 17015704.
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21. Paveglio, S.A., Allard, J., Mayette, J., Whittaker, L.A., Juncadella, I., Anguita, J., and **M.E. Poynter**. The tick salivary protein, Salp15, inhibits the development of experimental asthma. *Journal of Immunology*, 178(11): 7064-7071 (2007), PMC4140411.
22. Petty, J.M., Sueblinvong, V., Lenox, C.C., Jones, C.C., Cosgrove, G.P., Cool, C.D., Rai, P.R., Brown, K.K., Weiss, D.J., **Poynter, M.E.**, and B.T. Suratt. Pulmonary stromal derived factor-1 (SDF-1) expression and effect on neutrophil recruitment during acute lung injury. *Journal of Immunology*, 178(12): 8148-8157 (2007), PMID 17548653.
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29. Amiel, E., Alonso, A. Uematsu, S., Akira, S., **Poynter, M.E.**, and B. Berwin. Pivotal Advance: Toll-like receptor regulation of scavenger receptor-A-mediated phagocytosis. *Journal of Leukocyte Biology* 85(4): 595-605 (2009), PMC2656429.
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32. Ather, J.L., Alcorn, J.F., Brown, A.L., Guala, A.S., Suratt, B.T., Janssen-Heininger, Y.M.W., and **M.E. Poynter**. Distinct functions of airway epithelial NF- κ B activity regulate nitrogen dioxide-induced acute lung injury. *American Journal of Respiratory Cell and Molecular Biology* 43(4): 443-51 (2009), PMC2951874.
33. Paveglio, S.A., Allard, J., Foster Hodgkins, S.R., Ather, J., Bevelander, M., Mayette, J., Whittaker, L.A., McCarthy, S.M., van der Vliet, A., Suratt, B.T., Boyson, J.E., Uematsu, S., Akira, S., and **M.E. Poynter**. Airway epithelial indoleamine 2,3-dioxygenase inhibits CD4⁺ T cells during *Aspergillus fumigatus* antigen exposure. *American Journal of Respiratory Cell and Molecular Biology*, 44(1):11-23 (2011), PMC3028254.
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43. Riesenfeld, E., Allen, G.B., Bates, J.H.T., **Poynter, M.E.**, Wu, M., Aimi, S., and L.K.A. Lundblad. The temporal evolution of airways hyperresponsiveness and inflammation. *Journal of Allergy & Therapy*, S1-005 (2012), PMC3060863.
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45. Saligrama, N., Noubade, R., Case, L.K., **Poynter, M.E.**, and C. Teuscher. H₁R expression by CD11b⁺ cells is not required for susceptibility to experimental allergic encephalomyelitis. *Cellular Immunology*, 278(1-2): 27-34 (2012), PMC3490133.
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56. Martin, R.A., Ather, J.L., Daggett, R., Hoyt, L., Lundblad, L.K.A., Suratt, B.T., Weiss, D.J., Alcorn, J.F., and **M.E. Poynter**. The endogenous Th17 response in NO₂-promoted allergic airway disease is dispensable for airway hyperresponsiveness and qualitatively distinct from Th17 adoptive transfer. *PLoS ONE*, 8(9):e74730 (2013), PMC3778003.
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IV.ABSTRACTS and PRESENTATIONS

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43. Alcorn, J.E., Guala, A.S., Brown, A.L., McElhinney, B., **Poynter, M.E.**, Irvin, C.G., and Y.M.W. Janssen-Heininger. c-jun n-terminal kinase is required for allergen and transforming growth factor- β -induced airway epithelial remodeling. Abstract presented at the 102nd International Conference of the American Thoracic Society, San Diego, CA, May 20-24, 2006.
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48. **Poynter, M.E.**, Whittaker, L.A., Paveglio, S.A., and J. Mayette. Nitrogen Dioxide (NO₂)-Induced allergic sensitization to inhaled antigens requires toll-like receptor (TLR)2. Abstract presented at the 46th Annual Meeting of the Japanese Respiratory Society, Tokyo, JAPAN, June 1-3, 2006.
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53. **M.E. Poynter**. Nitrogen dioxide (NO₂)-induced allergic sensitization to inhaled antigen. Talk presented at the 32nd Annual New England Immunology Conference, Woods Hole, MA, October 27-29, 2006.
54. **M.E. Poynter**. Anti-inflammatory effects of albuterol-induced 11 β -hydroxysteroid dehydrogenase type 1 (11 β -HSD1) activity in airway epithelial cells. Talk presented at the Sepracor, Inc. Scientific Research Forum, Naples, FL, February 2-3, 2007.
55. **Poynter, M.E.**, Mayette, J.D., Foster, S.R., Whittaker, L.A., Allard, J.B., and J.E. Boyson. Genetic background affects the sensitivity to α GalCer-induced airway hyperreactivity. Abstract presented at the 103rd International Conference of the American Thoracic Society, San Francisco, CA, May 18-23, 2007.
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57. Ather, J.L., Pantano, C., Alcorn, J.F., Brown, A.L., **Poynter, M.E.**, and Y.M.W. Janssen-Heininger. Constitutive activation of NF-kappaB in airway epithelium enhances allergic airway disease in the mouse. Abstract presented at the 103rd International Conference of the American Thoracic Society, San Francisco, CA, May 18-23, 2007.
58. **Poynter, M.E.**, Mayette, J., and L.A. Whittaker. Nitrogen Dioxide (NO₂)-Induced Antigen Sensitization in the promotion of allergic asthma. Talk presented at the National

Institutional Development Award (IDeA) States Northeast Region Meeting, Burlington, VT, August 15-17, 2007.

59. Foster, S.R. and **M.E. Poynter**. Nitrogen dioxide promotion of allergic sensitization via innate immune sensing of lung damage. Poster presented at the Keystone Symposia on Innate Immunity: Signaling Mechanisms, Keystone, CO, February 24-29, 2008.
60. **Poynter, M.E.**, Jones, C.C., Lundblad, L.K., Barone, L.M., and S.R. Foster. Increased 11 β -hydroxysteroid dehydrogenase 1 (11 β -HSD1) expression does not explain the NF- κ B inhibitory effects of levalbuterol in murine airway epithelial cells. Abstract presented at the 104th International Conference of the American Thoracic Society, Toronto, ON, Canada, May 16-21, 2008.
61. Haegens, A., Vernooy, J.H.J., Cloots, R.H.E., Drummen, N., **Poynter, M.E.**, Mossman, B.T., and E.F.M. Wouters. Myeloperoxidase -/- mice show increased morphological emphysema and MMP expression without lung function alterations in a model of chronic LPS exposure. Abstract presented at the 104th International Conference of the American Thoracic Society, Toronto, ON, Canada, May 16-21, 2008.
62. Kasahara, D.I., **Poynter, M.E.**, Othman, Z., and A. van der Vliet. Acrolein suppresses alveolar macrophage IL-12p40 production by activation of JNK. Abstract presented at the 104th International Conference of the American Thoracic Society, Toronto, ON, Canada, May 16-21, 2008.
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64. Ather, J.L., Foster, S.R., and **M.E. Poynter**. Airway epithelial activation of NF- κ B is sufficient to promote allergic sensitization to an innocuous inhaled antigen. Abstract and talk presented at Keystone Symposia on Allergy and Asthma, Keystone, CO, January 20-24, 2009.
65. **Poynter, M.E.**, Janssen-Heininger, Y., Ather, J.L., and S.R. Foster. Airway epithelial activation of NF- κ B is sufficient to promote allergic sensitization to an innocuous inhaled antigen. Abstract presented at the 105th International Conference of the American Thoracic Society, San Diego, CA, May 15-20, 2009.
66. **Poynter, M.E.** and S.A. Pavaglio. Indoleamine 2,3-Dioxygenase activity in airway epithelial cells reduces antigen-specific CD4⁺ T cell cytokine production after *Aspergillus fumigatus* exposure. Abstract presented at the 105th International Conference of the American Thoracic Society, San Diego, CA, May 15-20, 2009.
67. Lundblad, L.K.A., **Poynter, M.E.**, Wu, M., Aimi, S., Riesenfeld, E., Irvin, C.G., and J. H.T. Bates. The effect of acute and protracted inflammation on airway hyperresponsiveness. Abstract presented at the 105th International Conference of the American Thoracic Society, San Diego, CA, May 15-20, 2009.
68. Lundblad, L.K.A., Rinaldi, L., Norton, R.J., Riesenfeld, E., **Poynter, M.E.**, Barone, L.M., and C.G. Irvin. Albuterol isomers amplify airway hyperresponsiveness in an allergic asthma model. Abstract presented at the 105th International Conference of the American Thoracic Society, San Diego, CA, May 15-20, 2009.
69. Ckless, K., Ather, J.L., Fitzgerald, K.A., and **M.E. Poynter**. Reactive oxygen species are necessary for inflammasome activation induced by serum amyloid A (SAA) in mouse macrophages. Abstract and oral presentation at the 16th Annual Meeting of the Society

for Free Radical Biology and Medicine, Hyatt Regency Embarcadero, San Francisco, CA, November 18-22, 2009.

70. Martin, R., Ather, J.L.; Foley, K., Lundblad, L., and **M.E. Poynter**. Nitrogen dioxide (NO₂)-induced-serum amyloid A3 (SAA3) is a locally produced endogenous adjuvant in Th17-polarized allergic sensitization. Abstract and poster presented at the 49th Annual Meeting of the Society of Toxicology, Bethesda, MD, March 7-11, 2010.
71. Ather, J.L., Ckless, K., Foley, K.L., Martin, R.A., Fitzgerald, K.A., and **M.E. Poynter**. Serum amyloid A (SAA) activates NLRP3 and promotes Th17 allergic asthma in mice. Abstract and poster presented at the Keystone Symposia on Innate Immunity: Mechanisms Linking with Adaptive Immunity, Dublin, Ireland, June 7-12, 2010.
72. Kien, C.L., Bunn, J.Y., **Poynter, M.E.**, Koves, T.R., Ikayeva, O., Champagne, C.M., Everingham, K., and D.M. Muoio. Lowering the palmitic acid content of the typical north american diet improved insulin sensitivity in women. Abstract and poster presented at the 28th Annual Scientific Meeting of the Obesity Society, San Diego, CA, October 8-12, 2010.
73. Ckless, K., Ather, J.L., and **M.E. Poynter**. NLRP3 is a target for redox regulation of SAA-induced inflammasome activation. Abstract and talk at the 17th Annual Meeting of the Society for Free Radical Biology and Medicine, Orlando, FL, November 15-19, 2010.
74. Kordonowy, L.L., Burg, E., Lenox, C.C., Petty, J.M., Vernooy, J., Dixon, A.E., Fessler M.B., **Poynter, M.E.**, and B.T. Suratt. Obesity-associated neutrophil dysfunction and the attenuation of murine acute lung injury. Abstract and poster presented at the 107th International Conference of the American Thoracic Society, Denver, CO, May 13-18, 2011.
75. Palvinskaya, T.N., Lenox, C.C., Antkowiak, M., Burg, E., Dixon, A.E., Fessler, M.B., Boyson, J.E., **Poynter, M.E.**, and B.T. Suratt. Low density lipoprotein activates neutrophils. Abstract and poster presented at the 107th International Conference of the American Thoracic Society, Denver, CO, May 13-18, 2011.
76. **Poynter, M.E.**, Ather, J.L., and R. Martin. Serum amyloid A (SAA) activates the TLR2/NLRP3 axis and promotes IL-1 receptor-dependent Th17 allergic asthma in mice. Abstract and poster presented at the 4th Northeast Regional IDeA Meeting, Salve Regina University, Newport, RI, August 10-12, 2011.
77. Dixon, A., Pratley, R., Kaminsky, D., Whittaker-Leclair, L., Griffes, L., Garudathi, J., Raymond, R., **Poynter, M.E.**, Irvin, C., and J. Bunn. Effects of obesity and weight loss on airways hyperresponsiveness, asthma control, and inflammation. Abstract and oral presentation at 4th Northeast Regional IDeA Meeting, Salve Regina University, Newport, RI, August 10-12, 2011.
78. Tourville, T.W., **Poynter, M.E.**, Johnson, R.J., Slauterbeck, J.R., Naud, S.J., and B.D. Beynnon. Relationship between synovial fluid cytokines, MMP's & TIMP's and joint space width narrowing one year post-ACL reconstruction. Abstract and poster presentation at the OARSI World Congress, San Diego, CA, September 15-18, 2011.
79. Ather, J.L., Martin, R.A., and **M.E. Poynter**. Serum amyloid A (SAA) activates Nlrp3 and promotes Th17 allergic asthma in mice. Abstract and poster presented at the New England Regional Center for Excellence in Biodefense and Emerging Infectious Diseases Innate Immunity Workshop, MIT Endicott House, Dedham, MA, September 22-23, 2011.

80. Lundblad, L.K.A, Bates, J.H.T., Riesenfeld, E., and **M.E. Poynter**. The temporal evolution of the phenotype of allergic airways hyperresponsiveness and airway inflammation. Abstract submitted to the Annual Meeting of the Biomedical Engineering Society, Hartford, CT, October 12-15, 2011.
81. Jabaut, J., Ather, J.L., **Poynter, M.E.**, and K. Ckless. Mitochondrial ROS induce NLRP3 S-glutathionylation in SAA-stimulated macrophages. Abstract presented at the 18th Annual Meeting of the Society for Free Radical Biology and Medicine, Atlanta, GA, November 16-20, 2011.
82. Muyao Li, M., **Poynter, M.E.**, Palmer, B.C., Parker, E., Mossman, B.T., Holmén, B.A., and N.K. Fukagawa. Are biodiesel emissions less harmful than petrodiesel? Abstract presented at the 18th Annual Meeting of the Society for Free Radical Biology and Medicine, Atlanta, GA, November 16-20, 2011.
83. **M.E. Poynter**. Airway epithelial control of asthma severity. Abstract presented at the Flight Attendant Medical Research Institute 11th Scientific Symposium, Miami, FL, April 30-May 2, 2012.
84. Lundblad, L.K.A., Li, S., Aliyeva, M., Daphtary, N., van der Velden, J.L.J., Hoffman, S.M., Lahue, K.G., Janssen-Heininger, Y.M.W., **Poynter, M.E.**, Bates, J.H.T., Stevenson, C., and J. Phillips. Bronchoconstriction in mice allergic to house dust mite; a role for mast cells? Abstract and poster discussion at the 108th International Conference of the American Thoracic Society, San Francisco, CA, May 18-23, 2012.
85. Palvinskaya, T., Antkowiak, M., Burg, E., Dixon, A.E., Fessler, M.B., Zemans, R.L., Downey, G.P., **Poynter, M.E.**, and B.T. Suratt. Obesity-associated elevation of low density lipoprotein levels affects neutrophil function. Abstract and poster discussion at the 108th International Conference of the American Thoracic Society, San Francisco, CA, May 18-23, 2012.
86. Sideleva, O., Garudathri, J., Pratley, R.E., Griffes, L.A., Black, K.E., Suratt, B.T., **Poynter, M.E.**, Irvin, C.G., and A.E. Dixon. Airway disease is significantly related to visceral adipose tissue inflammation in obese asthmatics. Abstract and poster discussion at the 108th International Conference of the American Thoracic Society, San Francisco, CA, May 18-23, 2012.
87. Kien, C.L., Bunn, J.Y., **Poynter, M.E.**, Stevens, R., Bain, J., Ikayeva, O., Fukagawa, N.K., Champagne, C.M., Crain, K., Koves, T.R., and D.M. Muoio. Diet oleic acid (OA) improves metabolic risk factors in young adults: lipidomic analysis of sexually dimorphic responsiveness. Abstract presented at the 72nd Scientific Sessions of the American Diabetes Association, Philadelphia, Pennsylvania, June 8-12, 2012.
88. Kostin, S., Clas, D., Suratt, B.T., **Poynter, M.E.**, and G. Osol. Uterine myometrial stretch augments production of angiogenic and proinflammatory factors. Abstract submitted to the Society for Gynecologic Investigation 60th Annual Scientific Meeting, Orlando, Florida, March 20-23, 2013.
89. Kien, C.L., Bunn, J.Y., **Poynter, M.E.**, Fukagawa, N.K., and K. Crain. Substituting dietary monounsaturated fat for saturated fat lowers inflammasome activation observed on a high saturated fat diet. Abstract and oral presentation at Experimental Biology, Boston, MA, April 20-24, 2013.
90. Ather, J.L. and **M.E. Poynter**. Serum amyloid A modulates dendritic cell apoptosis to induce glucocorticoid resistance in CD4⁺ T cells. Abstract and poster presented at the

Keystone Symposia on Pathogenic Processes in Asthma and COPD, Sante Fe, NM, January 10-15, 2013.

91. Ather, J.L. and **M.E. Poynter**. Serum amyloid A modulates dendritic cell apoptosis to induce glucocorticoid resistance in CD4⁺ T cells. Poster presented at the Flight Attendant Medical Research Institute 12th Scientific Symposium, Miami, FL, May 6-8, 2013.
92. Burg, E., Liu, M., Palvinskaya, T., Antkowiak, M., Hayes, C., Ubags, N., Dixon, A.E., Rincon, M., Fessler, M.B., **Poynter, M.E.**, and B.T. Suratt. Low density lipoprotein activates neutrophils through the TLR4 complex and the MAPK pathways. Abstract submitted to the 109th International Conference of the American Thoracic Society, Philadelphia, PA, May 17-22, 2013.
93. Ubags, N.D.J., Burg, E., Vernooij, J.H.J., Cramer, A., Bement, J., Hayes, C., Martin, C., Tavernier, J., **Poynter, M.E.**, Rincon, M., Wargo, M.J., Wouters, E.F.M., and B.T. Suratt. Abstract submitted to the 109th International Conference of the American Thoracic Society, Philadelphia, PA, May 17-22, 2013.
94. Lundblad, L.K.A., Li, S., Boyson, J., **Poynter, M.E.**, Ailyeva, M., Daphtary, N., Stevenson, C., and J. Phillips. NKT-cell activation is sufficient for airways hyperresponsiveness induction but not for antigen induced bronchoconstriction. Abstract submitted to the 109th International Conference of the American Thoracic Society, Philadelphia, PA, May 17-22, 2013.
95. Tully, J.E., Hoffman, S.M., Lahue, K.G., Nolin, J.D., Lundblad, L.K.A., Daphtary, N., **Poynter, M.E.**, Irvin, C.G., and Y.M.W. Janssen-Heininger. Activation of classical and alternative Nuclear Factor-kappaB in lung epithelium orchestrates chronic house dust mite-induced inflammation, airways hyper responsiveness, and fibrotic airways remodeling. Abstract submitted to the 109th International Conference of the American Thoracic Society, Philadelphia, PA, May 17-22, 2013.
96. Schott, B., Martin, R.A., Ather, J.L., and **M.E. Poynter**. Segmented filamentous bacteria colonization does not alter responses to allergic sensitization and challenge. Abstract submitted to the 56th Annual Meeting of the Aspen Lung Conference, Aspen, CO, June 5-8, 2013.
97. Burgess, E.J., Boyson, J.E., and **M.E. Poynter**. Marker or mediator? Discerning the function of serum amyloid A during inflammatory disease. Poster presented at the Northern New York Local Section of the American Chemical Society 5th Annual Undergraduate and Graduate Chemistry and Biology Research Symposium, SUNY, Plattsburgh, NY, April 26th, 2014.
98. Ather, J.L., and **M.E. Poynter**. Serum amyloid A3 modulates obesity, inflammation, and airway hyperresponsiveness. Poster presented at the Flight Attendant Medical Research Institute 13th Scientific Symposium, Miami, FL, May 5-7, 2014.
99. Chapman, D.G., van der Velden, J., Hoffman, S.M., Lahue, K.G., Tully, J.E., Tracy, R.P., Worthen, G.S., **Poynter, M.E.**, Janssen-Heininger, Y.M., and C.G. Irvin. Increased expression of duffy antigen receptor for chemokines in a murine model of allergic airways disease is associated with persistence of airway hyperresponsiveness. Abstract presented at the 110th International Conference of the American Thoracic Society, San Diego, CA, May 16-21, 2014.
100. Ather, J.L., Dixon, A.E., Suratt, B.T., Lundblad, L.K., and **M.E. Poynter**. Serum amyloid A3 modulates weight gain and obesity-induced airways hyperresponsiveness in mice.

Abstract presented at the 110th International Conference of the American Thoracic Society, San Diego, CA, May 16-21, 2014.

101. Nolin, J.D., Tully, J.E., Hoffman, S.M., Guala, A., Van Der Velden, J., **Poynter, M.E.**, Van Der Vliet, A., Anathy, V., and Y.M.W. Janssen-Heininger. Regulation of interleukin 17A-induced pro-inflammatory responses in lung epithelial cells via glutaredoxin-controlled S-glutathionylation of inhibitory kappa B kinase alpha. Abstract submitted to the 110th International Conference of the American Thoracic Society, San Diego, CA, May 16-21, 2014.
102. Anathy, V., Hoffman, S.M., Tully, J.E., Nolin, J.D., Lahue, K.G., Dixon, A.E., Irvin, C.G., and **M.E. Poynter**. Endoplasmic reticulum stress mediates house dust mite-induced airway epithelial apoptosis and fibrosis. Abstract presented at the 110th International Conference of the American Thoracic Society, San Diego, CA, May 16-21, 2014.
103. Burg, E., Ubags, N.D.J., Bement, J., Hayes, C., Wargo, M., **Poynter, M.E.**, and B.T. Suratt. Obesity-associated neutrophil dysfunction. Abstract presented at the 110th International Conference of the American Thoracic Society, San Diego, CA, May 16-21, 2014.
104. Ubags, N.D.J., Burg, E., Hayes, C.M., Martin, C., Sayarath, M., **Poynter, M.E.**, Wouters, E.F.M., Vernooy, J.H.J., and B.T. Suratt. Leptin-induced neutrophil migration in acute lung injury: an important role for alternate signaling pathways. Abstract presented at the 110th International Conference of the American Thoracic Society, San Diego, CA, May 16-21, 2014.
105. Kien, C. L., Bunn, J.Y., Matthews, D.E., Fukagawa, N.K., **Poynter, M.E.**, Crain, K.I., and D.B. Ebenstein. Higher intake of palmitic acid (PA) leads to higher whole body PA balance, PA accumulation in skeletal muscle, but not incomplete β -oxidation of PA. Poster presented at the 74th Scientific Sessions of the American Diabetic Association, San Francisco, CA, June 13-17, 2014.
106. Fukagawa, N.K., Jetton, T.L., Peshavaria, M., Bonney, E.A., **Poynter, M.E.**, and B.A. Holmen. Sex-specific metabolic alterations in offspring of mice exposed prenatally to particulate matter (PM) from petrodiesel (PD) combustion. Poster presented at the 2015 Experimental Biology Meeting, Boston, MA, March 28-April 1, 2015.
107. **Poynter, M.E.**, Schott, B., Kostin, S.F., and J.L. Ather. Airway epithelial control of allergic sensitization and asthma severity. Abstract and talk presented at the Flight Attendant Medical Research Institute 14th Scientific Symposium, Miami, FL, May 13-15, 2015.
108. Hoffman, S.M., Nolin, J.D., Jones, J.T., Lahue, K.G., Chapman, D.G., Aliyeva, M., Daphtary, N., Lundblad, L.K.A., Abdalla, S., Ather, J.L., Ho, Y-S., Irvin, C.G., Anathy, V., Wouters, E.F.M., **Poynter, M.E.**, and Y.M.W. Janssen-Heininger. Ablation of the thiol transferase, glutaredoxin-1, augments protein S-glutathionylation and modulates type 2 inflammatory responses and IL-17 in a house dust mite model of allergic airways disease in mice. Abstract and talk presented at the 58th Annual Thomas L. Petty Aspen Lung Conference on Asthma 2015: Mechanisms to Personalized Medicine, Aspen, CO, June 10-13, 2015.
109. Randall, M.J., Dixon, A.E., Kien, C.L., and **M.E. Poynter**. Targeting S-acylation via dietary intervention in obese asthmatics. Abstract and poster presented at the Keystone Symposia on Obesity and Adipose Tissue Biology, Banff, Alberta, Canada, February 15-19, 2016.

110. Ather, J.L., Van Der Vliet, K., Dixon, A.E., and **M.E. Poynter**. Obesity induces altered patterns of protein citrullination and cytokine secretion in the mouse lung. Abstract and poster presented at the Keystone Symposia on Immunometabolism in Immune Function and Inflammatory Disease, Banff, Alberta, Canada, February 21-25, 2016.
111. Frodella, C.M., Smith, B.J., Hellman, L.T., **Poynter, M.E.**, Van Der Vliet, A., Daphtary, N., Hristova, M., and L.K.A. Lundblad. Elimination of IL-33 inhibits airways hyperresponsiveness. Abstract presented at the American Thoracic Society International Conference, San Francisco, CA, May 13-18, 2016.
112. Van Der Vliet, A., Hristova, M., Habibovic, A., Heppner, D., Janssen-Heininger, Y., Irvin, C.G., **Poynter, M.E.**, Lundblad, L.K.A., Dixon, A.E., and M. Geiszt. Airway epithelial DUOX1 mediates EGFR activation, mucus metaplasia, and remodeling during allergic asthma. Abstract presented at the American Thoracic Society International Conference, San Francisco, CA, May 13-18, 2016.
113. Pothén, J.J., **Poynter, M.E.**, Lundblad, L.K.A., and J.H.T. Bates. The twitch and the refractory period: testing the allergic inflammatory response in the lung. Abstract presented at the American Thoracic Society International Conference, San Francisco, CA, May 13-18, 2016.
114. Anathy, V., Mariswamy, S., Nakada, E., Mihavics, B., Hoffman, S.M., Chapman, D.G., Bhakta, N.R., Woodruff, P.G., Irvin, C.G., Dixon, A.E., and **M.E. Poynter**. Allergen-induced unfolded protein response regulates lung inflammation and fibrosis. Abstract presented at the American Thoracic Society International Conference, San Francisco, CA, May 13-18, 2016.
115. Anathy, V., Hoffman, S.M., Ather, J.L., Mihavics, B., Nakada, E., Fortner, K., and **M.E. Poynter**. Adaptive and innate lymphocytes are dispensable for house dust mite induced airways epithelial endoplasmic reticulum (ER) stress and fibrosis in mice/Abstract presented at the American Thoracic Society International Conference, San Francisco, CA, May 13-18, 2016.
116. Antkowiak, M.C., Dilli, E., Wallace, A., Distafano, D., Lalire, L.P., Ubags, N., **Poynter, M.E.**, and B.T. Suratt. Dyslipidemia is associated with increased markers of endothelial activation following lung injury. Abstract presented at the American Thoracic Society International Conference, San Francisco, CA, May 13-18, 2016.
117. Dixon, A.E., Subramanian, M., Black, K.E., Van Der Vliet, M., Anathy, V., Kaminsky, D.A., **Poynter, M.E.**, and A. Van Der Vliet. Increased mucosal responses to allergen in obese compared with lean asthmatics. Abstract presented at the American Thoracic Society International Conference, San Francisco, CA, May 13-18, 2016.
118. Nakada, E.M., Siddesha, J.M., Mihavics, B., Chamberlain, N., Bruno, S., Chapman, D.G., Ather, J.L., Irvin, C.G., Dixon, A.E., **Poynter, M.E.**, and V. Anathy. The unfolded protein response is an essential regulator of airway inflammatory responses in a murine model of allergic asthma.). Abstract and poster presented at the American Thoracic Society International Conference, Washington, DC, May 19-24, 2017.
119. Parikh, R., Bates, J.H.T., Suratt, B.T., **Poynter, M.E.**, and R.D. Stapleton. Pharmacokinetics of omega-3 fatty acids in patients with sepsis compared with healthy controls. Abstract and poster presented at the American Thoracic Society International Conference, Washington, DC, May 19-24, 2017.
120. Qian, X., Chia, S., Aboushousha, R., Schneider, R.W., Van Der Velden, J.L., Lahue, K.G., Hoagland, D.A., Casey, D.T., Chapman, D.G., Lundblad, L.K., Daphtary, N.,

- Ather, J.L., Randall, M.J., Aliyeva, M., Black, K.E., Dixon, A.E., McMillan, D.H., Anathy, V., Irvin, C.G., **Poynter, M.E.**, Van Der Vliet, A., and Y.M. Janssen-Heininger. Interleukin-1 β (IL-1 β)/ Inhibitor of κ B Kinase ϵ (IKK ϵ)-mediated increases in glycolysis promote the pathogenesis of house dust mite-induced allergic airways disease. Abstract and poster presented at the American Thoracic Society International Conference, Washington, DC, May 19-24, 2017.
121. Ather, J.L., Norman, A.E., Van der Vliet, K., Dixon, A.E., and **M.E. Poynter**. Adipose tissue-derived exosomes modulate pro- and anti-inflammatory responses of mouse airway epithelial cells. Abstract and poster presented at the American Thoracic Society International Conference, Washington, DC, May 19-24, 2017.
122. Randall, M.J., Ather, J.L., Lam, Y-W., Dixon, A.E., and **M.E. Poynter**. The palmitoylome in obesity and allergic asthma. Abstract and poster presented at the American Thoracic Society International Conference, Washington, DC, May 19-24, 2017.
123. Ather, J.L., Randall, M.J., Norman, A.E., Bivona III, J.J., Dixon, A.E., Rincon, M., and **M.E. Poynter**. IL-6 promotes airway neutrophilia in a mouse model of Asthma-COPD Overlap Syndrome (ACOS). Abstract and poster presented at the American Thoracic Society International Conference, Washington, DC, May 19-24, 2017.
124. Scott, S.N., Brown, L.Y., Jetton, T., McQuesten, J.E., Hoyt, L.R., Huber, S.A., **Poynter, M.E.**, Townson, D.H., and E.A. Bonney. Effects of pregnancy on cardiovascular disease risk biomarkers in mice fed a high fat diet. Abstract presented at the Society for Reproductive Investigation Conference, San Diego, CA, March 7-10, 2018.
125. Anathy, V., Nakada, E., Korwin-Mihavics, B., van der Vliet, A., **Poynter, M.E.**, Suratt, B.T., Irvin, C.G., Black, K.E., Janssen-Heininger, Y.M.W., and A.E. Dixon. Mitochondrial reactive oxygen species (mROS) signaling contributes to obese allergic airway disease. Abstract presented at the American Thoracic Society International Conference, San Diego, CA, May 18-24, 2018.
126. Hoyt, L.R., Bivona III, J.J., **Poynter, M.E.**, Dixon, A.E., and B.T. Suratt. Storage conditions of mouse high-fat chow alter diet-mediated effects on the pulmonary inflammatory response. Abstract presented at the American Thoracic Society International Conference, San Diego, CA, May 18-24, 2018.
127. Ather, J.L., Van der Vliet, K., Dixon, A.E., and **M.E. Poynter**. Adipose tissue-derived microvesicles modulate the inflammatory responses of airway epithelial cells. Abstract and poster presented at the Keystone Symposia on Exosomes/Microvesicles: Heterogeneity, Biogenesis, Function and Therapeutic Developments, Breckenridge, CO, June 4-8, 2018.
128. Villalba, N., Sackheim, A.M., Haines, L., Ma, Y-T., Li, J., Ather, J.L., **Poynter, M.E.**, Collier, D.M., Nelson, N.T., and K. Freeman. Prevention of endothelial injury, edema, and death in a mouse model of acute inflammation with a therapeutic drug that binds and neutralizes histones. Abstract and poster presented at the North American Vascular Biology Organization, Newport, RI, October 14-18, 2018.
129. Mense, K.E., Mank, M.M., Reed, L.F., Walton, C.J., Ather, J.L., and **M.E. Poynter**. Interleukin-6 qualitatively regulates airway inflammation but not methacholine hyperresponsiveness in a model of neutrophilic severe allergic asthma. Abstract and poster presented at the Keystone Symposia on Origins of Allergic Disease: Microbial, Epithelial and Immune Interactions, Tahoe City, CA, March 24-27, 2019.

130. Menson, K.E., Mank, M.M., Reed, L.F., Ather, J.L., and **M.E. Poynter**. Classic Interleukin-6 signaling qualitatively regulates airway inflammation but not methacholine hyperresponsiveness in a model of neutrophilic severe allergic asthma. Abstract submitted to the American Thoracic Society International Conference, Dallas, TX, May 17-22, 2019.
131. van der Vliet, A., Hristova, M., Habibovic, A., Janssen-Heininger, Y.M.W., Irvin, C.G., Geiszt, M., Anathy, V., **Poynter, M.E.**, and A.E. Dixon. Obesity enhances DUOX1-mediated innate allergen responses and type 2 inflammation in allergic asthma. Abstract submitted to the American Thoracic Society International Conference, Dallas, TX, May 17-22, 2019.
132. Villalba, N., Sackheim, A.M., Haines, L., Ma, Y-T, Li, J., Ather, J.L., **Poynter, M.E.**, Sonkusare, S.K., Hennig, G., Nelson, M.T., and K. Freeman. Suramin neutralizes cytotoxic histones and prevents vascular injury, edema, and death. Abstract and poster presented at the 42nd Annual Conference of the Shock Society, Coronado, CA, June 8-11, 2019.
133. Menson, K.E., Mank, M.M., Reed, L.F., Ather, J.L., and **M.E. Poynter**. Restraining IL-6 in an IL-6-high mouse model of severe allergic asthma does not confer corticosteroid sensitivity. Abstract and poster presented at the Asthma: Making New Discoveries into Better Therapies Keystone Symposia, Snowbird, Utah, April 2-6, 2020. Cancelled due to COVID-19.
134. Ather, J.L., Van der Vliet, K., Mank, M.M., Reed, L.F., Dixon, A.E., and **M.E. Poynter**. Obese adipose tissue modulates proinflammatory responses of mouse airway epithelial cells. Abstract and poster presented at the Asthma: Making New Discoveries into Better Therapies Keystone Symposia, Snowbird, Utah, April 2-6, 2020. Cancelled due to COVID-19.
135. Mank, M.M., Reed, L.F., Ather, J.L., and **M.E. Poynter**. Ketone body augmentation decreases methacholine hyperresponsiveness in mouse models of house dust mite-induced allergic asthma and inherent obese asthma. Abstract, poster, and talk presented at the Asthma: Making New Discoveries into Better Therapies Keystone Symposia, Snowbird, Utah, April 2-6, 2020. Cancelled due to COVID-19.
136. **Poynter, M.E.**, Reed, L.F., Barup, M.L.T., Ather, J.L., and M.M. Mank. Ketone body augmentation decreases methacholine hyperresponsiveness in a mouse model of house dust mite-induced allergic asthma. Abstract and talk presented at the American Thoracic Society International Conference, Philadelphia, PA, May 16-20, 2020. Cancelled due to COVID-19.
137. **Poynter, M.E.**, Reed, L.F., Ather, J.L., Dixon, A.E., and M.M. Mank. Ketogenic diet decreases methacholine hyperresponsiveness in a mouse model of inherent obese asthma. Abstract and talk presented at the American Thoracic Society International Conference, Philadelphia, PA, May 16-20, 2020. Cancelled due to COVID-19.
138. Duchene, B., Johnson, O., Ather, J., Black, K., Caffry, S., Mank, M.M., Reed, L.F., **Poynter, M.E.**, and A.E. Dixon. Increased airway oxidative stress is associated with small airway dysfunction in obese late onset non-allergic asthma. Abstract and talk presented at the American Thoracic Society International Conference, Philadelphia, PA, May 16-20, 2020. Cancelled due to COVID-19.
139. Villalba, N., Sackheim, A.M., Bouchard, B.A., Miller, Z.D., Ma, Y-T., Li, J., Ather, J.L., **Poynter, M.E.**, Okamura, K., Smith, B., Sonkusare, S.K., Hennig, G., Nelson, M.T., and

- K. Freeman. A novel mechanism to neutralize circulating histones and prevent pulmonary endothelial cell ICAM-1 expression, neutrophil infiltration, and edema in histone infusion and acute lung injury models. Abstract submitted to the 43rd Annual Conference of the Shock Society, Toronto, ON, Canada, June 6-9, 2020. Cancelled due to COVID-19.
140. Krall, J.T., Belfield, L., Purcell, L.D., Stapleton, R.D., **Poynter, M.E.**, Toth, M., Liu, C., Gibbs, K., and D. Files. Leukocyte Kinetics in Acute Lung Injury (ALI)-Associated Skeletal Muscle Wasting and Recovery. Abstract and thematic poster presented at the American Thoracic Society International Conference, online, May 14-19, 2021.
141. Duchene, B., Ventrone, S., Johnson, O., Ather, J., Caffry, S., Chandrasekaran, R., Mank, M., Reed, L., Anathy, V., **Poynter, M.E.**, and A.E. Dixon. Obese Late Onset Non-Allergic Asthmatics Have Peripheral Airway Abnormalities and Mitochondrial Dysfunction. Abstract and thematic poster presented at the American Thoracic Society International Conference, online, May 14-19, 2021.
142. Freeman, K., Villalba, N., Sackheim, A.M., Haines, L., Lawson, M., Bouchard, B.A., Li, J., Ather, J.L., **Poynter, M.E.**, Smith, B., Sonkusare, S.K., Majumdar, D., and M.T. Nelson. The polyanionic drug suramin prevents endothelial dysfunction by neutralizing histones. Abstract submitted to the 44th Annual Conference of the Shock Society, Toronto, ON, Canada, October 12-15, 2021.
143. Branfield, S., **Poynter, M.E.**, and V. Washington. TLT-1, a Potential Regulator of Inflammatory Pathogenesis in Obesity and Non-Alcoholic Fatty Liver Disease (NAFLD). Abstract submitted to the 63rd Annual Meeting & Exposition of the American Society of Hematology, Atlanta, GA, December 11-14, 2021.
144. Fastiggi, V.A., Mank, M.M., Peña-García, P.E., Ather, J.L., and **M.E. Poynter**. Ketone Bodies Attenuate Aeroallergen-Induced Responses by Bronchial Smooth Muscle. Abstract, poster, and talk presented at the 24th Annual Upstate New York Immunology Conference, Cooperstown, NY, October 17-20, 2022.
145. Peña-García, P.E., Mank, M.M., Johnson, O., Dixon, A.E., and **M.E. Poynter**. Plasma and Adipocyte-Conditioned Media from Obese Asthmatic and Non-Asthmatic Patients Undergoing Bariatric Surgery Induce Augmented Secretion of Inflammatory Cytokines by Human Bronchial Airway Epithelial Cells. Abstract and poster presented at the SACNAS National Diversity in STEM Conference, San Juan, PR, October 27-29, 2022.
146. Fastiggi, V.A., Mank, M.M., Peña-García, P.E., Ather, J.L., Piffard, S.H., Freeman, K., and **M.E. Poynter**. Beta-Hydroxybutyrate Attenuates Aeroallergen-Induced Responses by Bronchial Smooth Muscle. Abstract and poster presented at the American Thoracic Society International Conference, Washington, DC, May 19-24, 2023.
147. Peña-García, P.E., Fastiggi, V.A., Mank, M.M., Garrow, O.J., Dixon, A.E., and **M.E. Poynter**. The Effects of Circulating and Adipocyte-Derived Factors from Allergic and Non-Allergic Obese Asthmatics on Airway Epithelium Following Bariatric Surgery. Abstract and poster presented at the American Thoracic Society International Conference, Washington, DC, May 19-24, 2023.
148. Taormina, V.M., Eisendardt, S., Devine, D., Kien, C.L., Gilbert, M., **Poynter, M.E.**, and J. Kraft. Randomized controlled pilot trial investigating the effect of full-fat yogurt on glucose and lipid homeostasis in individuals with prediabetes. Abstract presented at the American Physiology Summit, Long Beach, CA, April 20-23, 2023.

149. Snoke, D.B., Rehman, H.T., Dittus, K.L., Carson, J.A., **Poynter, M.E.**, and M.J. Toth. Longitudinal Examination of Skeletal Muscle Structure and Function from the Tissue to the Cellular Level in Lung Cancer Patients Undergoing Treatment. Abstract submitted to the Advances in Skeletal Muscle Biology in Health and Disease Conference, University of Florida, March 15-17, 2023.
150. Fastiggi, V.A., Mank, M.M., Peña-García, P.E., Ather, J.L., Piffard, S.H., Freeman, K., and **M.E. Poynter**. Beta-hydroxybutyrate attenuates bronchial smooth muscle allergen-induced responses. Abstract and poster presented at the 2023 Aspen Lung Conference, Aspen, CO, June 6-9, 2023.
151. Fastiggi, V.A., Mank, M.M., Peña-García, P.E., Ather, J.L., Piffard, S.H., Freeman, K., and **M.E. Poynter**. Beta-hydroxybutyrate attenuates allergen-induced responses in bronchial smooth muscle. Abstract and poster presented at the 2023 Stem Cells, Cell Therapies, and Bioengineering in Lung Biology and Diseases Conference, UVM, July 17-20, 2023.
152. Peña-García, P.E., Fastiggi, V.A., Mank, M.M., Ather, J.L., Garrow, O.J., Dixon, A.E., and **M.E. Poynter**. Plasma and adipocyte-derived factors from allergic and non-allergic obese asthmatics modulate inflammatory responses in human bronchial epithelial cells. Abstract and poster presented at the 2023 Stem Cells, Cell Therapies, and Bioengineering in Lung Biology and Diseases Conference, UVM, July 17-20, 2023.
153. Peña-García, P.E., Fastiggi, V.A., Mank, M.M., Ather, J.L., Garrow, O.J., Dixon, A.E., and **M.E. Poynter**. Beta-hydroxybutyrate attenuates house dust mite-induced airway epithelial cell pro-inflammatory responses in vitro. Abstract and oral presentation at the SACNAS National Diversity in STEM Conference, Portland, OR. October 26-28, 2023.
154. Taormina, V.M., Eisenhardt, S., Devine, D., Gilbert, M.P., Kien, C.L., **Poynter, M.E.**, and J. Kraft. Short-term Consumption of Full-fat Yogurt Does Not Affect Circulating Inflammatory Biomarkers in Individuals with Prediabetes. Abstract submitted to the American Society for Nutrition annual conference, Boston, MA, July 22-25, 2023.
155. Snoke, D.B., Rehman, H.T., Dittus, K.L., Carson, J.A., **Poynter, M.E.**, and M.J. Toth. Longitudinal examination of skeletal muscle structure and function from the tissue to the cellular level in lung cancer patients undergoing treatment. Abstract submitted to the Cancer Cachexia Society 7th Cancer Cachexia Conference, Edinburgh, Scotland, September 28-30, 2023.
156. Snoke, D.B., van der Velden, J., Ather, J.L., Bellefleur, E., Lenahan, S.M., Sarausky, H., Majumdar, D., **Poynter, M.E.**, Seward, D.J., and M.J. Toth. Early adipose tissue wasting in a novel model of lung cancer cachexia. Abstract submitted to the Cancer Cachexia Society 7th Cancer Cachexia Conference, Edinburgh, Scotland, September 28-30, 2023.
157. Fastiggi, V.A., Mank, M.M., Peña-García, P.E., Ather, J.L., and **M.E. Poynter**. Beta-Hydroxybutyrate Attenuates Allergen-Induced Responses by Bronchial Smooth Muscle. Abstract and poster presented at the 25th Annual Upstate New York Immunology Conference, Cooperstown, NY, October 16-19, 2023.
158. Peña-García, P.E., Fastiggi, V.A., Mank, M.M., Ather, J.L., Garrow, O.J., Dixon, A.E., and **M.E. Poynter**. Beta-hydroxybutyrate attenuates house dust mite-induced airway epithelial cell pro-inflammatory responses in vitro. Abstract and oral presentation at the SACNAS National Diversity in STEM Conference, Portland, OR, October 26-28, 2023.

159. Fatima, A., Files, D.C., Toth, M.J., **Poynter, M.E.**, Gibbs, K.W., Purcell, L.D., Needham, D., and R. Stapleton. NEXIS FLAME Study Protocol for Understanding Mechanisms of Early ICU Rehab & Protein Supplementation. Abstract and poster presented at the 12th Annual Johns Hopkins Critical Care Rehabilitation Conference, Baltimore, MD, November 8-11, 2023.
160. Kumar, A., Mark, Z., Janssen-Heininger, Y.M., **Poynter, M.E.**, Dela Cruz, C., Britto-Leon, C.J., Alcorn, C.F., Jegga, A., and V. Anathy. Inhibition of Protein Disulfide Isomerase A3 and Osteopontin Attenuates Influenza-induced Lung Fibrosis. Abstract and poster presented at the American Thoracic Society International Conference, San Diego, CA, May 19-24, 2024.
161. Ley, I.C., Snyder, J.P., **Poynter, M.E.**, Hennig, G.W., Mawe, G.M., and B. Lavoie. Gallbladder Smooth Muscle Dysfunction Occurs Independently of Inflammation in Gallstone Disease. Abstract submitted to the Meeting of the Federation of Neurogastroenterology and Motility, Bangkok, Thailand, November 6-8, 2024.
162. Taormina, V.M., Eisenhardt, S., Gilbert, M.P., Kien, C.L., **Poynter, M.E.**, and J. Kraft. Evaluating Inflammatory Tone Following Consumption of Full-fat or Non-fat Yogurt: Peripheral Blood Mononuclear Cell Inflammatory Response. Abstract submitted to the American Heart Association Scientific Sessions, Chicago, IL, November 16-18, 2024.
163. Miko, C., Michado de Santa'Anna, F., Akili, I-S. Sherman, A., Filosa, C., Wan, M., Orłowski, M., Mank, M.M., **Poynter, M.E.**, and R.C. Skinner. The Role of IL-6 in Modulating Gut Microbiome Diversity and Hepatic Health. Abstract and poster presented at the 2025 American Physiology Summit, Baltimore, MD, April 24-27, 2025.

V. FINANCIAL SUPPORT for RESEARCH ACTIVITIES

Active Funding

R21 AI086022 (Poynter)	04/01/2025 - 03/31/2027	1.20 calendar
NIH/NIAID	ADC: \$135,625	

Modulation of Airway Epithelial Syndecan-1 in a Preclinical Model of Steroid-Resistant Asthma

Role: PI

This proposal uses cell culture and mouse model approaches to address the protective role of dietary capsaicin supplementation on severe, steroid-resistant asthma, and will determine whether these beneficial effects are mechanistically exerted through the inhibition of syndecan-1 cleavage from the surface of airway epithelial cells.

58-8040-3-022 (Poynter)	09/15/2023 - 04/30/2028	0.50 calendar
US Department of Agriculture	ADC: \$91,266	

Biological Effects of Particles Generated by Biodiesel Fuels and Wildfires

Role: PI

This project will 1) investigate the impact of diesel exhaust combustion particles generated from petrodiesel and biodiesel, as well as particles and ash from wood smoke, on inflammation and risk for asthma and allergy, 2) determine dietary components that may mitigate adverse effects of particulate matter exposure in vitro and in vivo, and 3) determine the consequences of diesel and wood combustion particle inhalation on exacerbation of allergic airway disease.

GAANN (Poynter)	10/01/2022 - 09/30/2026	0.60 calendar
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Department of Education
CMB-GAANN Fellowship Program
Role: PI

ADC: \$253,650

The goal of the CMB-GAANN Program is to train the next generation of scientific leaders and educators to address the national need for doctoral-level training in cell and molecular biology research and teaching. We propose to expand and diversify the CMB Program's highly meritorious research training program with a supervised, inclusive, and evaluated experience in teaching pedagogy for highly-qualified individuals who are eligible to receive federal financial aid (FAASTA-eligible) and striving to target students from underrepresented minority populations.

R33 HL155160 (Ma) 09/20/2021 – 08/31/2026 0.52 calendar
NIH/NHLBI (prime institution: Univ of IL) UVM ADC: \$53,706
The ALOHA Trial: DASH Diet, Weight Loss and Physical Activity Combination Interventions for Obese Adults with Uncontrolled Asthma
Role: Co-I

The purpose of this proposal is a randomized controlled trial of a healthy diet and/or exercise intervention for the treatment of poorly controlled asthma in obese patients. The R61 phase (1 year) will focus on finalizing trial planning and preparation and begin early enrollment; in the R33 phase (4 years) we will conduct a 2-arm randomized clinical trial over 12 months.

Research Contract 04/01/2025-03/30/2026 0.92 calendar
Novo Nordisk ADC: \$175,376
Cannabinoid Receptor 1 Pathway in Obese Asthma
Role: Co-I

We propose using genetically obese, inherently or allergically asthmatic, mice administered the peripheral CB1R inverse agonist (signaling blocker), JD-5037, to examine the effects on weight loss, airway reactivity, inflammation, and lipidomics.

2. Pending Funding

R01 HL181166-01A1 (Poynter) 12/01/2026 – 11/30/2031 5.40 calendar
NIH/NHLBI ADC: \$494,578
Affectors and Effectors of Therapeutic Ketosis in Mouse Models of Obese and Allergic Asthma
Role: PI

This proposal uses mouse models and cell culture approaches to address the source of ketone bodies generated during dietary interventions that provide benefit to obese and allergic asthma, determine whether airway smooth muscle is a target of ketone bodies, and define the relative contributions of ketone body-elicited receptor signaling versus intracellular metabolism to enable their function in these cells.

1 R01 HL191977-01 (Poynter) 04/01/2027 – 03/31/2032 3.60 calendar
NIH/NHLBI ADC: \$437,056
Ketone Monoester Supplementation in Adults with Asthma
Role: PI

This proposal will test, in a placebo-controlled clinical trial, whether a naturally occurring molecule, delivered as an oral ketone supplement for 12 weeks to adults with asthma, is well-tolerated, improves lung function, and induces biomarkers that indicate therapy compliance and provide mechanistic insight. The results will provide early evidence for a new, metabolism-based approach to treating asthma and inform larger future clinical trials.

R01 HLXXXXXX-01 (Mori) 07/01/2025 – 06/30/2030 0.6 (year 1) or 1.20
(years 2-5) calendar
NIH/NHLBI ADC: \$458,179
Pressure-Guided Control of Intratumoral Drug Delivery
Role: Co-I

The studies will leverage real-time pressure monitoring during intratumoral lung cancer nodule injection to assess pathway recruitment so that an injection can be terminated before significant amounts of an anti-cancer agent have escaped from the tumor, thereby allowing the remainder of a prescribed dose of agent to be delivered at an alternative injection site(s), thereby maximizing drug retention and distribution within the tumor.

R01 CA313426-01 (Toth, Seward, Poynter) 04/01/2026 – 03/31/2031 1.80 calendar
NIH/NHLBI ADC: \$509,324
Multi-Organ Systemic Reprogramming of Lipid Metabolism in Lung Cancer Cachexia
Role: MPI

The proposed studies will use a novel mouse model of lung cancer cachexia (CC) to decipher the multi-organ pathoetiology of adipose and skeletal muscle wasting, with the broad goal of identifying therapeutic targets for CC and systemic metabolic vulnerabilities that could be exploited as adjuvants to standard cancer treatment.
Impact Score: 35, Percentile: 25.0, January 9, 2026.

3. Completed Funding

Senator Proctor Award (Poynter) 07/01/2000 – 06/30/2001 <0.60 calendar
American Lung Association of VT TDC: \$50,000

NCRR-BRIN Start-up (van Houten) 02/01/2001 – 01/31/2003 <0.60 calendar
NIH P20 RR16462 TDC: \$75,000

New Research Initiative Grant (Poynter) 06/01/2005 - 05/31/2006 <0.60 calendar
UVM, College of Medicine TDC: \$15,000
Asthma Modulation by Airway Epithelial Indoleamine 2,3-Dioxygenase

The goal of this grant is to provide preliminary data supporting a role for airway epithelial indoleamine 2,3-dioxygenase in the modulation of allergic airway disease in a mouse model.

K22-ES011652 (Poynter) 09/01/2003 - 08/31/2007 1.56 calendar
NIH/NIEHS ADC: \$100,000

Airway Epithelial NF-κB Activation by CpG DNA

The focus of this project is to evaluate the recognition of bacterial CpG DNA by Toll like receptor (TLR)9 on airway epithelium and the intracellular signaling events subsequently evoked. Particular emphasis will be placed on NF-κB and its regulation of the polymeric immunoglobulin receptor (pIgR) in airway epithelium and how CpG DNA can be used as an adjuvant for inhaled delivery of vaccines.

P20-RR15557 CoBRE (Irvin) 07/01/05 - 06/30/10 6.00 calendar
NIH/NCRR Project 3 ADC: \$186,846
Translational Research in Lung Biology & Disease

The major goals of this project are to test the hypotheses that NO₂-promoted sensitization to inhaled antigen evokes cardinal features of allergic airway disease, that TLR2 or TLR4, MyD88, and NF-κB are necessary and sufficient for NO₂-promoted sensitization to inhaled antigen and that NO₂ inhalation induces dendritic cell recruitment and/or maturation.

R01-HL079331 (Janssen-Heininger) 12/01/2004 - 11/30/2009 1.80 calendar
NIH ADC: \$250,000

Redox-Based Fas Signaling in Allergic Airway Disease

The hypothesis to be tested in this proposal is that hydrogen peroxide- mediated activation of the mitogen-activated protein kinase, cJun N-terminal kinase (JNK), in lung epithelium of mice with allergic airways disease contributes airways hyperresponsiveness and remodeling, through oxidative activation of the cell surface receptor, Fas.

R01-HL068865 (van der Vliet) 04/01/2003 - 03/31/2008 1.20 calendar
NIH/NHLBI ADC: \$250,000

Toxic Aldehydes as Modulators of Lung Inflammation

The main goal of this grant is to investigate the molecular mechanisms by which unsaturated aldehydes affect the constitutive apoptosis pathway of neutrophils, and the significance of such effects on inflammatory processes within the airways. Proteomics approaches will be used to identify cellular targets for these aldehydes.

SRC212 (Poynter) 06/01/2006 - 05/31/2008 1.20 calendar
Sepracor Corporation ADC: \$44,597

Anti-Inflammatory Effects of Albuterol-Induced 11 β -Hydroxysteroid Dehydrogenase Type I (11 β -HSD1) Activity in Airway Epithelial Cells

Our overall goal is to test whether racemic or single isomers of albuterol modify NF- κ B activation and pro-inflammatory mediator secretion through the augmentation of 11 β -HSD-1 expression and/or activity in airway epithelial cells in vitro.

R01-AI058052 (Teuscher) 03/01/2004 - 02/28/2009 0.60 calendar
NIH/NIAID ADC: \$250,000

Genetics of Susceptibility to Anthrax Toxin in vivo

The focus of this project is to identify the gene responsible for conferring susceptibility to or protection from anthrax toxin-induced lethality in BALB/c and DBA/2 mice, respectively.

Research grant (van der Vliet) 07/01/2008 - 06/30/2011 0.60 calendar
Flight Attendant Medical Res. Inst. ADC: \$108,500

Tobacco Aldehydes and Allergic Airway Inflammation

The goals of this project are to evaluate the impact of acrolein inhalation on allergen sensitization and inflammatory responses to allergen challenge in mice, determine the signaling mechanisms by which acrolein affects Th1/Th2 polarizing cytokine production by antigen presenting cells (APC) *in vitro*, and evaluate the importance of acrolein-induced modification of TrxR, a major cellular target for acrolein and a critical regulator of NF- κ B and JNK signaling, on redox regulation of Th1/Th2 responses.

RC1 Challenge Grant (Fukagawa) 09/30/2009 - 09/29/2011 1.80 calendar
NIH ADC: \$500,000

Mechanisms for Cardiovascular Effects of Air Pollutants: Effect of Age and Sex

The hypothesis to be tested is that particulate and gaseous emissions from biodiesel combustion compared to petrodiesel combustion will differ in the extent of lung injury and adverse systemic inflammatory responses that lead ultimately to different degrees of atherosclerosis. The specific aims are to 1) produce and characterize production of engine emissions to be used in inhalation studies, 2) identify key signaling pathways and cellular inflammatory responses in the lung after 3- and 9-day exposures of mouse models to engine

exhaust and specific gaseous and particulate size fractions, and 3) determine the effects of chronic exposure to emissions from the combustion of different fuels or fuel blends on the development of atherosclerosis, with a specific focus on modulation of the responses by the age and the sex of the animals.

R01-HL089177 (Poynter) 08/01/2007 - 04/30/2012 5.69 calendar
NIH ADC: \$250,000

Nitrogen Dioxide in the Sensitization to Allergic Airway Disease

The central hypothesis of this proposal is that NO₂ exposure facilitates the sensitization to inhaled antigen through the stimulation of pulmonary epithelial TLR2 or TLR4, MyD88, and NF- κ B, promoting dendritic cell recruitment and maturation. This hypothesis will be tested in three specific aims in which allergic sensitization and the generation of cardinal features of allergic airway disease will be measured in mice deficient (TLR2, TLR4 or MyD88) or inhibited (airway and/or alveolar type 2 epithelial NF- κ B) in members of these signaling pathways, as well as in bone marrow chimeric mice, in order to distinguish the importance of these molecules in cells of hematopoietic origin (DCs) versus structural lung cells (epithelium).

R01 Admin. Supplement (Poynter) 07/01/2009 - 04/30/2012 <0.60 calendar
NIH/NHLBI ADC: \$134,074

Nitrogen Dioxide in the Sensitization to Allergic Airway Disease

The objectives of this Administrative Supplement are to employ a Postdoctoral Associate to establish the role of serum amyloid A3 (SAA3) in NO₂-induced allergic sensitization.

VLC Pilot Project (Poynter & Ckless) 03/01/2011 – 06/30/2012 0.60 calendar
Vermont Lung Center TDC: \$50,000

Biphasic Redox Regulation of NLRP3 by Serum Amyloid A

The hypothesis to be addressed is that alterations in ROS production induced by Serum Amyloid A (SAA) participate in inflammasome activation via redox modulation of NLRP3. Primary mouse monocytes, macrophages and dendritic cells will be treated with ROS inhibitors before or after (prior to IL-1 β secretion) the addition of SAA. IL-1 β secretion, intracellular NLRP3, caspase-1, and pro-IL-1 β will be analyzed by ELISA and immunoprecipitation and/or Western blot, respectively. A reduced cysteine labeling approach will be used to measure NLRP3 oxidation and site-directed NLRP3 mutants will be evaluated for their capacity to be modulated by cellular redox status. Finally, the level at which ROS intersect with inflammasome assembly will be evaluated using co-immunoprecipitation approaches.

VLC Pilot Project (Poynter & Weiss) 01/04/2012 - 07/30/2012 0.29 calendar
Vermont Lung Center TDC: \$50,000

Investigating the Effects of Human Mesenchymal Stromal Cell (MSC) Administration in a Model of Severe, Th17-Mediated Steroid-Resistant Asthma

The hypothesis to be addressed is that MSCs will inhibit severe, glucocorticoid-resistant, Th17-mediated airways inflammation. We will adoptively transfer Th17-polarized ova-specific CD4 T cells from OTII mice into C57BL6/J recipients and administer human MSCs, with or without systemic glucocorticoids, during inhalation of ovalbumin. Assessments will include methacholine responsiveness, Th2/Th17 immune response, serum immunoglobulin profile, and airways inflammation. We will also assess whether MSCs or MSC conditioned media alter glucocorticoid receptor expression, subcellular localization, and activity in CD4⁺ T cells and airway epithelial cells. These cross-disciplinary studies will lead to future

mechanistic investigations anticipated to provide insight into novel cell-based therapy for glucocorticoid-insensitive asthma.

Research Agreement (Lundblad) 11/22/2010 – 11/21/2012 0.24 calendar
Hoffman-LaRoche TDC: \$248,764
Bronchoconstriction and the Role of Mast Cells

The overarching hypothesis of this proposal is that allergically induced bronchoconstriction depends on mast cell activation and on the route of sensitization and challenge.

NIH P20RR021905 - CoBRE (Poynter) 01/01/2013 - 06/30/2013 <0.60 calendar
VCIID Pilot Project TDC: \$20,000

Lymphotoxin β Receptor Signaling in Influenza Virus-Induced Asthma Exacerbation

Pilot project support for developing a mouse model of influenza virus infection exacerbation of house dust mite-induced allergic asthma in collaboration with Dr. Lennart Lundblad from UVM and Dr. Alexei Tumanov from the Trudeau Institute.

R01-NS061014 (Teuscher) 12/01/2007-12/31/2013 0.60 calendar
NIH/NINDS TDC: \$572,271

Histamine Receptor Signaling in CNS Autoimmune Disease

The objectives of these studies are to 1) delineate the H1R signaling pathway regulating IFN γ secretion in CD4 T-cells, 2) test the hypothesis that H2R and H4R signaling in naïve CD4 T-cells directly regulates encephalitogenic effector T-cell functions in EAE, and 3) test the hypothesis that H3R signaling regulates MOG₃₅₋₃₃-specific CD4 memory T-cell responses.

VCIID Pilot Project (Boyson & Poynter) 01/01/2010 - 12/31/2012 <0.60 calendar
VCIID TDC: \$20,000

CD1d and NKT Cell in the Lung

The objective of this proposal is to investigate cross-talk between lung airway epithelium and lung NKT cells and to investigate whether this cross-talk influences the generation and/or maintenance of inhalational tolerance in the lung.

NASA EPSCoR (Lakin & Hill) 07/01/2009-06/30/2014 1.92 calendar
NASA EPSCoR ADC: \$250,000

The Impact of Microgravity-Grown *Pseudomonas aeruginosa* and *Haemophilus influenzae* on Human Lung Cells: Integration of Virulence, Lung Cell Immune Responses, and the Volatile Metabolome

The overarching scientific goals of this proposal are to determine the impact of simulated microgravity on the production of virulence factors by *Pseudomonas aeruginosa* and *Haemophilus influenzae* under relevant growth conditions via physical, biochemical, and transcriptome assessments as well as volatile metabolome assessments and to determine the inflammatory and immune responses of human alveolar epithelial cells to simulated microgravity-grown *Pseudomonas aeruginosa* and *Haemophilus influenzae* via the measurement of cell transcriptomes, production of inflammatory and antibacterial mediators, and co-incubated volatile metabolome fingerprint.

R01-DK082803 (Kien) 04/01/2010 - 03/31/2014 1.20 calendar
NIH NIDDK ADC: \$427,730

Palmitate Metabolism and Insulin Resistance

The major goal of this project is to determine the metabolic fate of dietary fats and potential metabolic regulation induced by the intake of different fatty acids in humans. Specifically, the effect of saturated palmitic acid versus monounsaturated oleic acid intake will be varied in humans, and the effect on metabolism ranging from whole body insulin sensitivity and insulin signaling in skeletal muscle to the kinetics of dietary palmitate and oleate disposal in the body, will be studied.

NIHP20RR021905 - COBRE (Budd) 07/01/2011 - 06/30/2014 0.12 calendar
VCIID CoBRE

Salary support is provided for mentoring junior investigator Project leaders.

VCIID CoBRE Pilot Project (Poynter) 10/01/2013 – 06/30/2014 <0.60 calendar
NIH TDC: \$20,000

Supporting Drs. Poynter (UVM), Lundblad (UVM), and Tumanov (Trudeau Institute)
Lymphotoxin β Receptor Signaling in Influenza Virus-Induced Asthma Exacerbation

Our approach for this Pilot Project is to establish mouse models of influenza-induced asthma exacerbation using acute and chronic inhalational exposure to house dust mite (HDM). We will further explore the potential for therapeutic manipulation of the LT β R pathway to prevent lung immunopathology and asthma exacerbation using an LT β R inhibitor.

VCIID CoBRE Pilot Project (Poynter) 10/01/2013 – 06/30/2014 <0.60 calendar
NIH \$26,103

IL-1 Antagonism in Severe Asthma

Our objective for this Pilot Project is to determine whether IL-1R blockade (using an IL-1 trap from Regeneron) during antigen challenge will inhibit Th17-mediated pulmonary inflammation, AHR, and confer glucocorticoid sensitivity in NO₂- and HDM-promoted allergic airway disease.

Unrestricted Research Grant (Anathy) 12/01/2012-11/30/2014 0.12 calendar
American Thoracic Society ADC: \$40,000
Allergen-Induced Disulfide Isomerase ERp57 Regulates Epithelial Cell Death and Airway Fibrosis

The goal of this research project is to characterize the role of allergen induced PDI, ERp57, in airway fibrosis, by using complementary genetic as well as pharmacological strategies in mouse models of asthma. In Aim 1, we will determine the impact of epithelial specific deletion of ERp57 using a CCSPrtetA/TetopCre/ERp57^{flx/flx} mice to determine effect on airway epithelial apoptosis and fibrosis. In Aim 2, we will evaluate pharmacological inhibitors of ERp57 in mouse models of asthma to determine the impact on airway fibrosis.

Research Grant (Anathy) 7/1/2014 - 12/31/2014 0.60 calendar
Asthma & Allergy Found. of America ADC: \$20,000
Endoplasmic reticulum stress signaling in allergen induced airway remodeling

The over-arching objective of this project is to elucidate the role of the endoplasmic reticulum (ER) in activating allergen mediated death of airway epithelial cells, development of scar in the lung and subsequent decrease in lung function.

Clinical Innovator Award (Poynter) 07/01/2012 – 12/31/2015 2.90 calendar
FAMRI ADC: \$100,000
Airway Epithelial Control of Asthma Severity

The objective is to explore how airway epithelial NF- κ B-regulated products, including SAA (SAA3 in mice), affect pulmonary DC activities that not only facilitate allergic sensitization but also break inhalational tolerance, manifesting in mixed Th2/Th17 responses and the development of severe disease. We will a) determine the cellular patterns of pulmonary SAA production in response to airway epithelial NF- κ B activation, b) establish whether pulmonary SAA resulting from airway epithelial NF- κ B activation is necessary and sufficient for the development of severe allergic asthma and breaking inhalational tolerance, and c) evaluate the anti-apoptotic effects upon DCs and identify the pulmonary DC phenotype elicited by airway epithelial NF- κ B activation.

Internal Grant Program (Poynter) 09/01/2014 – 08/30/2015 <0.60 calendar
UVM College of Medicine \$75,000 (\$50k CoM, \$12.5k Path, \$12.5k Med)
Redox Signaling in Allergic Airways Disease

The objective of this proposal is to generate preliminary data using mouse asthma models, mouse and human primary airway epithelial cells, and targeted antioxidant interventions in support of a 2015 PPG application. Project #3 focuses on oxidative modifications to 11 β -HSD1 and depletion of its cofactor, NADPH, both of which will diminish the oxidoreductase activity of this glucocorticoid-activating enzyme.

VLC Pilot Project (Poynter) 03/01/2014 – 12/30/2015 <0.60 calendar
Vermont Lung Center \$50,000

Mouse models to mechanistically address the impact of weight loss on asthma

The hypothesis to be addressed in this Pilot Project is that a mouse model of bariatric surgery-induced weight loss can be developed at UVM, with the input of established experts in their respective fields, which will yield mechanistic insight into the obese asthma phenotype and the manner in which weight loss alters lung physiology and immune function.

R21 AI112804 (Lundblad) 07/01/2014 – 06/30/2016 1.00 calendar
NIH/NIAID ADC: \$137,500

iNKT cells regulating lung mast cells: new treatment opportunity for asthma

The objective of the proposed studies is to evaluate the effectiveness of a murineized NTK cell-depleting antibody in a house dust mite model of allergic asthma and to determine the contribution of NKT cells to mast cell metaplasia.

R01-ES021476 (van der Vliet) 06/07/2012 - 02/28/2017 1.20 calendar
NIH/NIEHS ADC: \$250,000

Cigarette smoke-derived electrophilic aldehydes and airway inflammation

The objectives are to explore the impact of acrolein exposure on allergic sensitization and inflammation and to identify protein targets for alkylation that may relate to these functional alterations. Secondly, we aim to determine the importance of two endogenous detoxification mechanisms (GSTP and hydrogen sulfide) in mitigating these responses.

R01-HL107291 (Poynter) 04/01/2012 – 02/28/2016 3.00 calendar
No cost extension until 02/28/2017

NIH/NHLBI ADC: \$250,000

Serum Amyloid A3 in Allergic Asthma: An Endogenous Mediator of Disease Severity

The goal of this project is to determine mechanisms by which pulmonary SAA3 functions to polarize tissue-destructive Th17 responses in severe allergic asthma. In Specific Aim (SA) 1 we will determine quantitative and qualitative patterns of SAA3 expression during the development of allergic asthma in mouse models of disease. In SA2 we will measure the effect of SAA3 on the antigen-specific CD4⁺ T cell adaptive immune response using wildtype

and inducible airway epithelial SAA3-expressing mice, as well as TLR2-, Nlrp3-, IL-1Ra-, and FPR2-deficient mice to determine whether SAA3 promotes Th17 polarization, which receptors are involved, whether the activity is directly upon T cells, and whether the effect of SAA3 is glucocorticoid-sensitive. In SA3 we will establish *in vivo* the sufficiency and necessity of SAA3 for augmentation of allergic asthma severity, addressing mechanisms implicated from the previous specific aims by which SAA3 worsens lung physiologic and structural allergic asthma phenotypes, including the roles of IL-1, IL-17, and glucocorticoid responsiveness.

VCIID Pilot Project (Poynter) 10/01/2015 – 06/30/2017 0.00 calendar
NIH ADC: \$49,091
A relevant environmental allergen exposure model for the sensitization to house dust mite and exacerbation of allergic asthma
Role: PI

Our principle objective is to develop an improved mouse model of allergic sensitization that better reflects the natural route, dosing, and duration of allergen exposure experienced by approximately one half of all asthmatics worldwide (house dust mite), with which we can mechanistically dissect its consequences on the most important phenotypes of asthma, specifically methacholine responsiveness, lung remodeling, and immune function, as well as to expose the mice to a battery of asthma-relevant challenges representative of the types that cause disease exacerbation in asthmatic patients.

UVM Discoveries (Poynter) 11/01/2015 – 06/30/2017 0.00 calendar
VT Agency of Commerce TDC: \$20,000
Short-Chain Alcohol Inhibition of NLRP3 Inflammasome Activation
Role: PI

Our objectives are to further refine the structural requirements for our alcohol-based NLRP3 inflammasome inhibitors and to test the hypothesis that it is through phosphatase activation that this inhibition is elicited.

T32-HL076122 (Irvin) 05/01/2014 - 04/09/2019 0.60 calendar
NIH/NHLBI ADC: \$364,962
Multidisciplinary Training in Lung Biology
Role: Co-Director (predoctoral training)

This program supports a group of collaborative and productive pre (4) and postdoctoral (3) trainees who are investigating the causes, diagnosis and cures of debilitating lung disease such as asthma, interstitial lung disease, cystic fibrosis, acute lung injury and infections of the lung.

R01 HL122383-01A1 (Anathy) 01/01/2015 - 12/31/2019 0.94 calendar
NIH/NHLBI ADC: \$250,000
Endoplasmic reticulum stress signaling in allergen induced airway remodeling
Role: Co-I

The over-arching objective of this project is to elucidate the role of the endoplasmic reticulum (ER) in activating allergen mediated death of airway epithelial cells, development of scar in the lung and subsequent decrease in lung function.

P20 GM125498 (Kirkpatrick) 09/15/2018 - 07/31/2023 0.60 calendar
Centers of Biomedical Research Excellence (COBRE)
NIH/NIGMS
Total direct COBRE budget: \$7,515,013 (direct costs); Total direct project budget: \$750,000

Translational research to prevent and control global infectious diseases

Role: Senior Mentor

Toward the prevention and control of globally important infectious diseases, we propose the development of the Translational Global Infectious Diseases Research (TGIR) Center at the University of Vermont. The TGIR Center will pair biomedical advances in human immunology and infectious diseases with improved quantitative methods and computational modeling to analyze and integrate big data throughout the translational research spectrum.

R56 AG062105 (Dumas) 09/15/2019 - 08/31/2020 1.20 calendar
NIH/NIA ADC: \$395,491

Fatty Acid Effects on Brain Functioning in Normal Aging

Role: Co-I

The goal of this project is to bring new understanding about how normal cognitive aging is affected by a short term manipulation of the principal saturated fat and monounsaturated fat in the diet (palmitic acid and oleic acid).

NDC 2777 (Kraft) 11/01/2017 – 12/31/2020 0.96 calendar
National Dairy Council ADC: \$171,505

Full-Fat Yogurt and Glucose Tolerance

Role: Co-I

The overall objective of this proposal is to determine if substituting full-fat yogurt (i.e., whole, 3.25% fat) for non-fat yogurt in the diet can reduce the risk of type 2 diabetes and inflammation in association with changes in the composition of the gastrointestinal bacteria.

R01 HL138708 (van der Vliet) 08/03/2017-06/30/2021 0.60 calendar
NIH/NHLBI ADC: \$341,282

DUOX1 and Mitochondria in Obese Asthma

Role: Co-I

This project will address the importance of the NADPH oxidase DUOX1, a major oxidant source within the respiratory epithelium, combined with mitochondrial dysfunction, as an important feature of metabolic disease in mediating redox-dependent processes leading to altered or exaggerated allergic inflammation due to obesity.

R03 AI151525 (Wargo) 4/23/2020-4/22/2022 0.40 calendar
NIH/NIAID ADC: \$100,000

Klebsiella pneumoniae pathogenesis in the obese lung

Role: Co-I

The goal of this project is to understand the bacterial physiologic changes that take place during infection of the obese lung to both understand important bacterial genes for this response and use the bacteria as a probe to uncover unappreciated physiologic changes in the obese lung.

2 R01 HL085646-09 (van der Vliet) 09/01/2017 - 08/31/2022 0.60 calendar
NIH/NHLBI ADC: \$265,225

Dual Oxidase in Airway Epithelial Injury and Inflammation

Role: Co-I

This renewal application will extend ongoing studies towards the role of the NADPH oxidase homolog DUOX1 within the respiratory epithelium. In the previous funding cycle, we discovered that DUOX1 plays a critical role in innate airway responses to airborne allergens and contributes to various important features of allergic asthma. This proposal seeks to further understand the molecular mechanisms by which DUOX1 controls these processes, and to

develop pharmacological approaches to selectively inhibit DUOX1 for potential clinical development in treatment of severe asthma.

VLC Pilot Project (Poynter) 05/01/2021-04/30/2023 0.12 calendar
Vermont Lung Center TDC: \$50,000
Exploiting Exercise Enhanced Protein Synthesis to Augment mRNA Vaccine Translation
Role: PI

Using *in vivo* mouse models and *in vitro* cell culture systems, we will determine whether appropriately timed concentric exercise (or electrical stimulation *in vitro*) will increase lipid nanoparticle (LNP)-delivered mRNA translation through increased muscle protein synthesis, thereby increasing antigen presentation and elicit more robust antibody production than in sedentary controls.

VCC Pilot Project (Toth) 01/02/2022-12/31/2022 <0.60 calendar
Vermont Cancer Center ADC: \$50,000
A Novel in vitro System to Determine the Role of Macrophages in Cancer Cachexia
Role: Co-I

The proposed studies address the critical barrier of translating the wealth of data on cancer cachexia from animal models into human cancer using novel cell culture models designed in our laboratories using materials from both mouse models and human patients.

1 R01 HL142081 (Poynter) 04/01/2018 – 09/30/2023 0.12 calendar
NIH/NHLBI ADC: \$293,984
Ketone Body Supplementation in Obese Asthma
Role: PI

We will evaluate using *in vivo* mouse models whether therapeutic augmentation of ketone body concentrations in the circulation elicits improvements in obese inherent and allergic asthma. We will also conduct mechanistic studies using tissues and *in vitro* primary cell culture systems to assess whether the intrinsic differences in cytokine secretion, glycolysis, mitochondrial oxidative stress, and endoplasmic reticulum stress between cells from lean and obese mice are modulated by ketone bodies and examine candidate receptors for these effects.

R01-HL133920 (Poynter & Dixon) 08/15/2016 – 01/31/2024 0.12 calendar
NIH ADC: \$497,229
Obese allergic asthma and the impact of weight loss on airway epithelial function
Role: MPI

Our objective is to explore the contribution of the specific cells and their secreted mediators that are released from visceral adipose tissue of obese allergic asthmatics to the mitochondrial function of airway epithelial cells and their activation by allergen, which then cause the structural alterations and methacholine hyperresponsiveness that manifest in severe disease in obese allergic asthmatics. The ultimate purpose of this work is to understand why allergic asthma is so much more severe in patients with obesity, and to develop therapies specifically targeted for such patients.

R01 HL122383-06 (Anathy) 05/01/2020 – 10/30/2024 0.60 calendar
NIH/NHLBI ADC: \$250,000
Endoplasmic Reticulum Stress Signaling in Allergen Induced Airway Remodeling
Role: Co-I

The over-arching objective of this project is to elucidate the role of the endoplasmic reticulum (ER) stress in activating allergen mediated pro-inflammatory/pro-fibrotic

responses, death of airway epithelial cells, and lung remodeling leading to subsequent decrease in lung function.

R01 HL143452 (Stapleton, Toth, Files, & Poynter)

09/15/2018-06/30/2024 0.12 calendar

NIH/NHLBI

ADC: 595,143

Effects of Exercise on Inflammation-Induced Lung and Muscle Injury in Critical Illness (NEXIS-FLAME)

Role: MPI

The goal of this award is to investigate the local, pulmonary, and systemic effects of exercise during critical illness in animal models and in patients participating in the NEXIS RCT.

T32 HL076122 (Poynter & Irvin)

05/01/2019 - 04/30/2025 0.60 calendar

NIH/NHLBI

ADC: \$574,615

Multidisciplinary Training in Lung Biology

Role: MPI

This training program for 4 predoctoral and 3 postdoctoral researchers seeks to train a group of collaborative and productive scientists to investigate the causes, diagnosis, and cures of debilitating lung diseases such as asthma, interstitial lung disease, cystic fibrosis, acute lung injury, and infections of the lung.

R21 CA283492 (Toth)

07/01/2023-06/30/2025 0.36 calendar

NIH/NCI

ADC: \$137,500 (\$150,000 yr 1, \$125,000 yr 2)

Development of a Clinically Relevant Mouse Model of Lung Cancer Cachexia to Study Pathoetiology and Therapeutic Strategies

Role: Co-I

This project will use a club cell-specific *Kras*^{G12D} adenocarcinoma mouse model and *in vitro* modeling consisting of tumor organoids from these mice, along with skeletal muscle and adipocyte cell cultures, to study the pathophysiology of cancer cachexia and test therapeutic interventions.

VI. HONORS and AWARDS

National Institutes of Health Developmental Biology Training Grant (5T32 HD07491) Predoctoral Fellowship. June 1996-October 1998.

Environmental Pathology Postdoctoral Fellowship (T32 ES07122). Department of Pathology, University of Vermont. October 1998-October 2000.

Department of Health and Human Services NHLBI National Research Service Award (1F32 HL10357-01) Individual Postdoctoral Fellowship. October 2000-October 2002.

Young Investigator Travel Award. 98th International Conference of the American Thoracic Society, May 2002.

Travel Award. 100th International Conference of the American Thoracic Society, May 2004.

American Thoracic Society Young Investigator Delegate to the 46th Annual Meeting of the Japanese Respiratory Society, Invited lecturer, "Nitrogen Dioxide (NO₂)-Induced Allergic Sensitization to Inhaled Antigens Requires Toll-Like Receptor (TLR)2", Tokyo, JAPAN, June 2006.

Abstract selected for special recognition, First Biennial National Institutional Development Award (IDeA) Symposium of Biomedical Research Excellence (NISBRE), Washington, D.C., July 2006.

University of Vermont Faculty Fellow in Sustainability, 2013-2014.

University of Vermont College of Medicine, Department of Medicine Distinguished Research Mentor Award, May 2014.

LCMI "Ball of Rubber Bands" award for wittiest comment made during study section meeting, May 4, 2014.

University of Vermont Larner College of Medicine Dean's Excellence in Research Award for Research Mentorship, October 2019.

VII. TEACHING

Cell and Molecular Biology 381A: Cell and Molecular Biology Seminar (course director 2009-2025; up to 50 participants)

Cell and Molecular Biology 301: Cell and Molecular Biology

02/24/2004	Nucleus: Transcriptional Regulation, (approx. 10 students)
02/26/2004	Nucleus: Transcriptional Regulation Part 2, (approx. 10 students)
09/16/2004	Gene Organization and Transcription, (approx. 20 students)
09/21/2004	Transcriptional Regulation, (approx. 20 students)
09/23/2004	mRNA Processing, (approx. 20 students)
09/20/2005	Gene Organization & Transcription (approx. 25 students)
09/22/2005	Transcriptional Regulation (approx. 25 students)
09/27/2005	mRNA Processing (approx. 25 students)
09/21/2006	Gene Organization and Transcriptional Regulation (approx. 30 students)
09/28/2006	Transcriptional Regulation and mRNA Processing (approx. 30 students)
09/18/2007	Gene Organization & Transcription (approx. 25 students)
09/20/2007	Transcriptional Regulation (approx. 25 students)
09/25/2007	mRNA Processing (approx. 25 students)
08/31/2011	Gene Organization & Transcriptional Regulation (16 students)
08/27/2012	Gene Organization & Transcriptional Regulation (32 students)
08/29/2012	Lab Techniques in the Study of Transcriptional Regulation (32 students)
08/28/2013	Gene Organization & Transcriptional Regulation (16 students)
08/30/2013	mRNA Processing & Laboratory Techniques (16 students)

Cell and Molecular Biology 302: Cell and Molecular Biology

03/24/2009	Contemporary Concepts in Innate Immunity, (approx. 15 students)
03/16/2010	Historical and Contemporary Concepts in Innate Immunity (14 students)
03/15/2011	Historical and Contemporary Concepts in Cellular Innate Immunity (6 students)
03/17/2011	Cellular Innate Immunity primary literature discussion (6 students)
03/13/2012	Historical and Contemporary Concepts in Cellular Innate Immunity (7 students)
03/15/2012	Cellular Innate Immunity primary literature discussion (7 students)

Cell and Molecular Biology 295F: Basic Principles of Lung Biology (course director 2005, 2007, and 2009, Cellular and Molecular Pulmonology (co-course director 2016, 8 students and several postdoctoral attendees)

08/31/2005	Fetal Lung Development
09/21/2005	Lung Epithelium and Basement Membrane
09/28/2005	Pulmonary Endothelium and Vasculature
11/09/2005	Pulmonary Adaptive Immunity
12/07/2005	Radical and Emerging Concepts in Pulmonology
09/12/2007	Fundamentals of Molecular Lung Embryogenesis
10/17/2007	Lung Epithelium and Basement Membrane
10/24/2007	Cellular Adaptive Pulmonary Immunity
09/02/2009	Lung Development
09/30/2009	Lung Epithelium
10/21/2009	Cellular Adaptive Pulmonary Immunity
12/16/2009	Final Oral Examinations
08/31/2016	Fetal Lung Development
09/21/2016	Pulmonary Adaptive Immunity
11/02/2016	The Microbiome and Metabolic Factors in Lung Health and Disease

Cell and Molecular Biology 295: Innate Immunity and Antigen Processing (course co-director, 6 students and several postdoctoral attendees)

02/06/2006	Cellular Components of Innate Immunity
02/08/2006	Langerhans Cells
02/13/2006	Mast Cells
02/15/2006	Eosinophils
02/27/2006	Pattern Recognition Receptors and Signaling
03/01/2006	Toll-Like Receptor 4 and Endotoxin Sensing
03/03/2006	IRAK-4
05/03/2006	Pandemic Disease and Vaccinology

Cell and Molecular Biology 295 (CRN 60580): Advanced Seminar in Adaptive Immunity (12 students and several postdoctoral attendees)

07/30/2007	Allergy
08/02/2007	Allergy

Cell and Molecular Biology 295: Writing and Reviewing Manuscripts (16 students)

06/19/2006	Small group moderator: Methods section
06/20/2006	Small group moderator: Results section
06/22/2006	Small group moderator: Discussion section
06/09/2008	Small group moderator: Results section
06/11/2008	Small group moderator: Methods section
06/18/2008	Small group moderator: Discussion section
06/23/2008	Small group moderator: Abstract section
06/25/2008	Small group moderator: Reviewing manuscripts

Cell and Molecular Biology 395: Immunologic Basis of Disease (12 students)

10/17/2008	Allergic Asthma
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Cell and Molecular Biology 395: Independent Research (course director 2012-2025, 1-5 students per semester); ongoing

Clinical and Translational Sciences 301: Design Clin & Translational Res (13 students):

10/23/2013	From There to Here: A Professional Journey
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Microbiology and Molecular Genetics 223: Immunology (50 students)

11/14/2005 Allergy and Hypersensitivity
11/16/2005 Asthma and Airway Hyperresponsiveness

Biomedical & Health Sciences 242: Immunology (30 students)

01/31/2012 Cytokines
02/23/2012 The Principles and Practice of Immunoassays
04/21/2022 Allergies and Asthma

Pathology 305: Pathobiology of Environmental Diseases

11/22/2004 Mechanisms of Nongenotoxic Hepatocarcinogenesis via PPAR α (6 students)
09/26/2012 The Airway Epithelium in Innate and Adaptive Immune Responses (9 students)

Pathology 306: Techniques and Translational Research in the Study of Environmental Diseases (8 students)

09/18/2006 Cytokine Expression in Lung Diseases - Principles of ELISA and Bio-Plex Analysis
09/22/2008 Cytokine Expression in Lung Disease: The Principles of Immunoassays
09/27/2010 Cytokine Detection in Lung Disease: *The Principles and Practice of Immunoassays*
09/24/2012 Cytokines and the Principles & Practice of Immunoassays (6 students)

Surgery 301: Immunity and Host Defense (course co-director; 16 students)

08/26/2014 Basic Concepts in Immunology and in Host Defense
08/28/2014 Cellular Innate Immunity
09/02/2014 Cellular Innate Immunity paper discussion
09/04/2014 Innate Lymphoid Cells
09/09/2014 Innate Lymphoid Cells paper discussion
11/11/2014 Segmented Filamentous Bacteria Induction of Th17 Responses
11/13/2014 Immune Responses to Parasites
11/18/2014 Immune Responses to Parasites paper discussion
12/02/2014 Infection Prophylaxis

Biochemistry 1011: Modern Perspectives II (13 students)

03/27/2026 Medicinal Nutrition / Nutrients as Medicines: Prevention and Treatment of Acute and Chronic Disease,

Medical Laboratory Science 310: Advanced Immunobiology (10 students)

11/27/2018 Allergy
11/29/2018 Allergy paper discussion

Biomedical Health Sciences 310: Advanced Immunobiology (10 students)

11/10/2020 Allergy and Hypersensitivity
11/12/2020 Allergy and Hypersensitivity paper discussion
11/15/2021 Allergy and Hypersensitivity
11/17/2021 Allergy and Hypersensitivity paper discussion
11/07/2022 Allergy and Hypersensitivity
11/09/2022 Allergy and Hypersensitivity paper discussion

Biomedical Health Sciences 242: Immunobiology (50 students)

11/15/2021 Allergy and Hypersensitivity

Biomedical Health Sciences 3420: Immunobiology (50 students)

04/23/2024 Hypersensitivity Reactions I-IV

Medical Laboratory Sciences 6100: Advanced Immunobiology (8 students)

11/06/2023 Allergy and Hypersensitivity

11/08/2023 Allergy and Hypersensitivity paper discussion

11/04/2024 Allergy and Hypersensitivity

11/06/2024 Allergy and Hypersensitivity paper discussion

Vermont Integrated Curriculum (Medical Students):

01/27/2011 Recurrent Infections, Attacks and Defenses Small Group facilitator

Attacks and Defenses:

01/11/2024 The Innate Immune System lecture (124 students)

01/22/2024 Hypersensitivity Reactions lecture (124 students)

01/24/2025 Mechanisms of Innate Immunity lecture (124 students)

01/27/2025 Autoinflammatory Diseases case-based learning (124 students)

01/28/2025 Type I and Type IV Hypersensitivity Reactions case-based learning (124 students)

01/30/2025 Facilitate Small Group Discussion (8 students)

01/26/2026 Inflammatory Response and Sepsis workshop (124 students)

01/28/2026 Allergy & Asthma: Type I and Type IV Hypersensitivity Reactions case-based learning (124 students)

01/29/2026 Facilitate Immunology Small Group Discussion (11 students)

Pulmonary Fellow's Conference:

01/13/2006 Overview of Pulmonary Immunology

04/24/2009 Inflammasome Activation in Pulmonary Disease

10/29/2010 IL-17-Producing CD4⁺ T_H2 Memory/Effector Cells in Allergic Asthma

09/30/2011 An Unexpected Role for Uric Acid as an Inducer of T Helper 2 Cell Immunity to Inhaled Antigens and Inflammatory Mediator of Allergic Asthma

10/25/2012 Epigenetic Modifications and Improved Regulatory T-Cell Function in Subjects Undergoing Dual Sublingual Immunotherapy

06/26/2014 Dupilumab in Persistent Asthma with Elevated Eosinophil Levels

10/27/2016 Mechanism of Th2/Th17-Predominant and Neutrophilic, Th2/TH17-Low Subtypes of Asthma

06/23/2017 Immunological Underpinnings of Pulmonary Diseases and Their Treatments

08/30/2018 Epithelial IL-6 Trans-Signaling Defines a New Asthma Phenotype with Increased Airway Inflammation

02/07/2022 Immunological Underpinnings of Pulmonary Diseases and their Treatments

11/25/2024 Mechanisms of Innate Immunity in Lung Health and Disease

Vermont Lung Center Seminar Series:

03/18/2003 Airway Epithelial NF- κ B in Asthma

04/29/2003	Reduced Allergic Airway Inflammation in a Transgenic Mouse Expressing Dominant-Negative I κ B α Exclusively in Airway Epithelium
09/07/2004	Is Nitrogen Dioxide Inhalation DANGEROUS?
06/28/2005	If Mast Cells are the Answer, What is the Question?
09/09/2005	VLC Retreat: Independent Development Plan
03/07/2006	You, Me, and NKT
01/22/2008	Modulation of the Polymeric Immunoglobulin Receptor by CpG DNA
12/16/2008	There Goes the Neighborhood: Promotion of Allergic Sensitization through Airway Epithelial NF- κ B Activation
04/06/2010	Beyond a Biomarker: Serum Amyloid A (SAA) in Allergic Airway Disease
04/19/2011	The Influence of Airway Epithelial NF-kappaB Activity on Allergic Sensitization
08/06/2013	Serum Amyloid A and the Gut-Lung Axis in Allergic Airway Disease
11/26/2013	Uric Acid: Too Much of a Good Thing in NO ₂ -Promoted Allergic Airway Disease?
07/08/2014	Introduction to the VLC T32 Interdisciplinary Research Workshop
08/04/2015	The Impact of Weight Loss in Mouse Models of Obese Asthma
10/25/2016	Making Fat Pay Back – Ketone Bodies as Immunometabolic Regulators
02/06/2018	Me, You, and the VLC-T32: Reflections from a Noob on Preparing a T32 Competitive Renewal
03/24/2020	Promoting 'Therapeutic Ketosis' in Mouse Models of Asthma
12/16/2022	Reflections on Preparing the VLC-T32 Competitive Renewal
03/11/2025	Challenges and Opportunities to Define, Measure, and Achieve Flow
12/09/2025	Translational Journal Club - Epithelial Extrusion in Asthma

Immunobiology Seminar Series:

12/02/2004	Mechanisms of Sensitization to Allergic Airway Disease by Nitrogen Dioxide Exposure and Antigen Inhalation
06/08/2005	An Update on Mechanisms of Sensitization to Allergic Airway Disease by Nitrogen Dioxide Exposure and Antigen Inhalation
09/29/2005	pIgR, TLR9, and Airway Ig
02/02/2006	Environmental Nitrogen Dioxide in the Sensitization to Allergic Airway Disease
04/26/2007	Nitrogen Dioxide in the Sensitization to Allergic Airway Disease
09/22/2009	Inflammasome Activation
03/03/2011	SAA-Induced DC Survival via Downregulation of Bim
06/26/2014	IL-1 Antagonism in Asthma SURGE Grant Update
12/11/2014	Immunomodulatory Effects of Uricase in NO ₂ -Promoted Allergic Airway Disease
09/03/2015	The Impact of Ethanol on Nlrp3 Inflammasome Activation
08/13/2020	'Therapeutic Ketosis' in Mouse Models of Asthma

Vermont Center for Immunology and Infectious Disease Lab Meeting:

03/30/2023	The Involvement of Acidosis in the NLRP3 Inflammasome-Inhibiting Effects of Ketone Bodies
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Department of Medicine Fellows' Summer Lecture Series:

08/16/2013	Overview of Important Events in Cell Signaling
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Invited Lectures:

- 03/27/2003 *Nitrogen Dioxide-Induced Exacerbation of Allergic Airway Disease Pathology*, Vermont Lung Center CoBRE Annual Retreat, Bolton, VT
- 09/05/2003 *Airway Epithelium in Innate and Adaptive Immunity*, UVM Cell and Molecular Biology Program Annual Retreat, Grand Isle, VT
- 08/13/2003 *Airway Epithelial NF- κ B Activation by CpG DNA*, Vermont Genetics Network Annual Retreat, Burlington, VT
- 11/04/2003 *Inflammatory Aspects of COPD*, Astra Zeneca Course, Burlington, VT
- 03/25/2004 *Dead Cells Do Tell Tales: Tall Tales or Toll Tales?* Vermont Lung Center CoBRE Annual Retreat, Bolton, VT
- 09/18/2004 *Sensitization to Allergic Airway Disease by Nitrogen Dioxide Exposure and Antigen Inhalation*, New England Immunology Mountain Society Annual Meeting, Bolton, VT
- 11/02/2004 *Mentoring: From the Mentee's Perspective*, IDeA Centers of Biomedical Research Excellence (CoBRE) Program, 2004 Annual Principal Investigators Meeting, National Institutes of Health, Bethesda, MD
- 04/07/2006 *Toll-Like Receptor (TLR)2 is Necessary for Nitrogen Dioxide (NO₂)-Induced Allergic Sensitization to Inhaled Antigen*, Keystone Symposia on Allergy, Allergic Inflammation and Asthma, Breckenridge, CO
- 06/02/2006 *Nitrogen Dioxide (NO₂)-Induced Allergic Sensitization to Inhaled Antigens Requires Toll-Like Receptor (TLR)2*, 46th Annual Meeting of the Japanese Respiratory Society, Tokyo, JAPAN
- 10/29/2006 *Nitrogen Dioxide-Induced Allergic Sensitization to Inhaled Antigen*, The 32nd Annual New England Immunology Conference, Marine Biological Laboratory, Woods Hole, MA
- 05/29/2007 *Asthma and the Environment: Anthropogenic and Arthropod-Mediated Regulation of Atopic Lung Disease*, University of Utah, Department of Experimental Pathology Seminar Series, Salt Lake City, UT
- 07/27/2007 *Asthma and the Environment: Anthropogenic and Arthropod-Mediated Regulation of Atopic Lung Disease*, The Trudeau Institute, Saranac Lake, NY
- 10/04/2007 *Asthma and the Environment: Anthropogenic and Arthropod-Mediated Regulation of Atopic Lung Disease*, University of Connecticut Health Center, Immunology Graduate Program Seminar Series, Farmington, CT
- 02/14/2008 *Sensors, Signals, and Techniques in Innate Immunity*, Sepracor Corporation, Marlborough, MA
- 10/07/2008 *Promotion of and Protection from Allergic Asthma*, University of Pittsburgh Medical Center, Division of Pediatric Pulmonology Grand Rounds, Pittsburgh, PA
- 01/21/2009 *Airway Epithelial Activation of NF- κ B is Sufficient to Promote Allergic Sensitization to an Innocuous Inhaled Antigen*, Keystone Symposia on Allergy and Asthma, Keystone, CO
- 03/17/2009 *Inflammasome Activation in Pulmonary Disease*, 48th Annual Meeting of the Society of Toxicology, Symposium Session: The Good, the Bad, and the Ugly of Toxicant-Induced Pulmonary Inflammation, Bethesda, MD
- 04/06/2010 *Beyond a Biomarker: Serum Amyloid A (SAA) in Allergic Airway Disease*, University of Vermont, Department of Chemistry, Burlington, VT

- 04/23/2010 *Inflammasomes in Cancer Initiation, Progression, and Treatment*, Vermont Cancer Center Retreat, Burlington, VT
- 10/04/2010 *Serum Amyloid A (SAA) Activates the TLR2/NLRP3/IL-1R α Axis and Promotes Th17 Allergic Asthma*, UVM Environmental Pathology seminar series, Burlington, VT
- 10/24/2010 *Serum Amyloid A (SAA) Activates the TLR2/NLRP3/IL-1R α Axis and Promotes Th17 Allergic Asthma*, Upper New York Immunology Conference, Bolton Landing, NY
- 05/16/2011 *The Influence of Airway Epithelial NF- κ B Activity on Allergic Sensitization*, Department of Microbiology and Immunology seminar series, Dartmouth College, Hanover, NH
- 06/03/2011 *The Influence of Airway Epithelial NF- κ B Activity on Allergic Sensitization*, Pulmonary Research Group Symposia on The Role of Epithelium in Chronic Inflammatory Lung Disease, Temple University, Philadelphia, PA
- 03/19/2012 *The Influence of Airway Epithelial NF- κ B Activity on Allergic Sensitization*, Meakins-Christie Laboratories seminar series, McGill University, Montreal, Quebec, Canada
- 01/24/2013 *Historical and Contemporary Concepts in Cellular Innate Immunity*, Middlebury College J-term Immunology course, Middlebury, VT.
- 04/12/2013 *The Influence of Airway Epithelial NF- κ B on Allergic Sensitization*, Department of Laboratory Medicine seminar series, Yale University, New Haven, CT
- 06/06/2013 *Segmented Filamentous Bacteria Colonization Does Not Alter Responses to Allergic Airway Sensitization and Challenge*, 56th Annual Thomas L. Petty Aspen Lung Conference, Aspen, CO
- 08/29/2013 *Serum Amyloid A in Allergic Airway Disease*, seminar series, Trudeau Institute, Saranac Lake, NY
- 02/13/2014 *The Airway Epithelium in Asthma*, Emerging Concepts in Asthma Symposia, Maastricht University, Faculty of Health, Medicine and Life Sciences, Maastricht, The Netherlands
- 05/14/2015 *Airway Epithelial Control of Allergic Sensitization and Asthma Severity*, Fourteenth Scientific Symposium of the Flight Attendant Medical Research Institute, Miami, FL
- 09/05/2015 *Asthma of the Obese and the impact of Weight Loss*, UVM Multidisciplinary Obesity Research Enquiries (MORE) Retreat, Burlington, VT
- 10/06/2015 *The Impact of Weight Loss and Lifestyle on Asthma of the Obese*, Obesity & Metabolism: An Emerging Frontier in Lung Health and Disease Conference, Burlington, VT
- 12/10/2015 *The Airway Epithelium in Allergic and Intrinsic Asthma*, Department of Comparative Veterinary Sciences seminar series, Louisiana State University School of Veterinary Medicine, Baton Rouge, LA
- 01/08/2016 *An Adipose/Airway Epithelial Axis in Obese Asthma*, Vermont Center for Immunology and Infectious Disease retreat, Shelburne, VT
- 08/18/2016 *Modeling the Causes and Complexities of Asthma*, University of Utah, Department of Pathology seminar series, Salt Lake City, UT

- 08/19/2016 *Fourteen Things You'll Learn in Graduate School (without being taught)*, Keynote Speaker, University of Utah Biosciences (Molecular Biology & Biological Chemistry) Graduate Programs annual retreat, Midway, UT.
- 03/27/2017 *Asthma, Obesity, and Weight Loss: Fat as an Immunometabolic Regulator*, Immunology Seminar Series, Genentech, South San Francisco, CA.
- 05/12/2017 *Modeling the Causes and Complexities of Asthma*, University of Vermont, Department of Medicine Grand Rounds, Burlington, VT
- 10/12/2017 *Modeling Causes and Complexities of Asthma*, University of New Mexico, Cellular and Molecular Basis of Disease Seminar Series, Albuquerque, NM
- 11/08/2017 *NIH Biosketches*, University of Vermont College of Medicine Research Tapas, Burlington, VT
- 05/15/2018 *Reflections on Preparing the VLC-T32 Competitive Renewal*, University of Vermont Sponsored Programs Administration All-Hands Staff Meeting, Burlington, VT
- 05/08/2019 *Managing Laboratory Finances*, University of Vermont College of Medicine Research Tapas, Burlington, VT
- 09/12/2019 *Modeling Severe Asthma to Provide Insights into a Complex Disease*, Pulmonary, Allergy, and Critical Care Medicine Grand Rounds, University of Alabama, Birmingham, AL
- 10/20/2020 *Approaches to Understanding the Impact of Obesity on Asthma*, Ob/Gyn Grand Rounds, University of Vermont
- 10/21/2021 *'Therapeutic Ketosis' in Mouse Models of Asthma*, 23rd Annual Upstate New York Immunology Conference, Otesaga Resort, Cooperstown, NY
- 04/18/2022 *Conflict Resolution, Negotiation, and Communication*, Department of Microbiology & Molecular Genetics Faculty Career Development Workshop, University of Vermont
- 02/16/2023 *Eat, Sleep, Pipette, Repeat: Fitting Work into Life*, University of Vermont College of Medicine Research Tapas, Burlington, VT
- 05/30/2023 *Acidosis Licenses the Inflammasome-Inhibiting Effects of Ketone Bodies*, UVM Redox Biology and Medicine Retreat, Burlington, VT
- 09/19-20/2024 *Metabolic Reprogramming Underlying Nutritional and Dietary Impacts On Respiratory Health and Diseases*, NIH/NHLBI Workshop on Advancing Nutrition Research to Promote Respiratory Health in Adults, online
- 11/01/2024 *'Therapeutic Ketosis' for the Alleviation of Respiratory Disease*, Inaugural First Fridays in Firestone RiP, Burlington, VT
- 10/08/2025 *Optimizing Flow for Research Success and Satisfaction*, Department of Medicine Research Skills Meet-Up, Burlington, VT

VIII. SERVICE

UVM

- 2007-2010 Inhalation Facility Design Committee
- 2009-2012 Senator, Faculty Senate (representing Department of Medicine)
- 2009-2010 Member of the Environmental Health Sciences working group that contributed to the "Environment" Transdisciplinary Research Initiative (Spire) proposal

2010	Dept. of Animal Science faculty search committee member
2010	Vermont Cancer Center Director of Basic Science Research search committee member
2010	Vermont Cancer Center / Lake Champlain Cancer Research Organization Ad hoc reviewer of Bridge Support grants
2010	Dept. of Pathology faculty search committee member
2011-2012	VCIID CoBRE Mucosal Immunologist (MD) faculty search committee member
2011-2012	Dept. of Pathology Chairperson search committee member
2012-2013	Dept. of Animal Science faculty search committee member
2012-2013	Envisioning Environment at UVM work group
2012-2014	VCIID CoBRE Mucosal Immunologist faculty search committee member
2014-2015	College of Nursing & Health Sciences, Medical Laboratory Science Program faculty search committee member
2017-2018	Dept. of Animal Science faculty search committee member
2020-2021	Dept. of Medicine faculty search committee member
2024-2025	Dept. of Medicine tenure-track faculty search committee chairperson
2025	UVMHN, Dept. of Medicine, Pulmonary and Critical Care Medicine Network Division Chief committee member

UVM, Graduate College

2015-2025	Director of the Cellular, Molecular, and Biomedical Sciences doctoral program
2025	Member of the Research Institutes and Interdisciplinary Graduate Programs working group

UVM, Larner College of Medicine

2013-2014	Core Review Committee
2014	Allbee Professor Nominating Committee member
2015	Research Advisor to Michael Chung, Medical Student and COM research grant awardee
2016	Participant in faculty promotion and tenure panel
2016-2018	Research Incentive Committee
2017-2022	Academic Structure & Funding of Basic Science Research: Faculty Committee

UVM, Department of Medicine

2005-present	Research Committee
2024-2025	Pulmonary and Critical Care Medicine Division Chief search committee member

UVM, Department of Medicine, Division of Pulmonary Disease and Critical Care

2003-2023	Interview Fellowship Applicants
2003-2016	Fellowship Research Committee
2008-2016	Chair, Fellowship Research Committee
2017-2019	Fellowship Research Mentor, Katherine Menson, DO
2020	Faculty Scientist search committee
2024	Chair, Tenure Track Associate/Full Professor search
2024-present	VLC Strategic Planning Committee

2025 Chair, Tenure Track Assistant/Associate/Full Professor search

UVM, Vermont Cancer Center, DNA Analysis Facility
2002-2008 User Oversight Committee

UVM, Vermont Lung Center CoBRE Program

2004-2008 Annual Retreat Organization Committee
2005 wrote CoBRE equipment supplement to purchase Bio-Plex
2006-2008 Organizer, *Lunch at the Lung* Journal Club

UVM, Cellular, Molecular, and Biomedical Sciences Graduate Program

2004-present Interview CMB Program Student Applicants
2004-2010 Seminar and Student Progress Committee
2009-2010 Chair, Seminar and Student Progress Committee
2009-2025 CMB Steering Committee
2010-2015 Chair, Education Committee
2004-2007 Dissertation Committee, Peter Bove (van der Vliet advisee)
2004-2007 Dissertation Committee, Rajkumar Noubade (Teuscher advisee)
2004-2009 Dissertation Advisor, Sara A. Pavaglio
02/09/2005 Christy Barlow Preliminary Examination Committee
08/03/2005 Organizer of CMB Annual Retreat, Grand Isle, VT
2005-2006 First Year Mentor – Deniz Gur
02/13/2006 Steven Blumen Preliminary Examination Committee
09/06/2006 Rajkumar Noubade Preliminary Examination Committee
2006-2009 Dissertation Committee, Wendy Neveu (Rincon advisee)
2006-2009 Dissertation Committee, Matthew Held (Bosenberg advisee)
2006-2007 First Year Mentor – Samantha Foster
2007 Dissertation Committee, Michael Doire (Weiss advisee)
01/29/2007 Matthew Held Preliminary Examination Committee
2007-2009 Thesis Advisor, Samantha R. Foster
2008-2011 Dissertation Committee, Meagan Goodwin (Weiss advisee)
2008-2011 Dissertation Committee, Ingrid Curril (Spees advisee)
05/08/2008 Samantha Foster Preliminary Examination Committee
06/09/2008 Wendy Neveu Preliminary Examination Committee
2008-2009 First Year Mentor – Graham Lilley
2009-2010 First Year Mentor – Andrew Menke
2008-2013 Dissertation Committee, Naresha Saligrama (Teuscher advisee)
2009-2013 Dissertation Advisor, Rebecca A. Martin
2010-2013 Thesis Committee, Graham Lilley (Boyson advisee)
2011-2014 Dissertation Committee Chair, Jane Tully (Janssen-Heininger advisee)
2011-2015 Dissertation Committee Chair, James Nolin (Janssen-Heininger advisee)
2012 CMB Transitional Steering Committee
2013-2015 Dissertation Advisor, Edward Burgess (passed away 09/20/2015)
2013-2016 Dissertation Committee, Rui Yang (Rincon Advisee)
2013-2017 Dissertation Committee, Andrew Little (van der Vliet advisee)
2013-2018 Dissertation Committee Chair, Filiz Korkmaz (Kerr advisee)
2013-2018 Dissertation Committee, Drew Barber (Hondal advisee)
2014-2016 Thesis Committee Chair, Robert Bauer (van der Vliet advisee)
2014-2018 Dissertation Committee, Victoria DeVault (Boyson advisee)

2014	Interviewed applicants for CMB Program Administrator position
2015	Thesis Committee, Yan Xing (Mintz advisee)
2015-2016	Thesis Committee, Laura Solomon (Spees advisee)
2015-2018	Dissertation Committee Chair, Phyu Thwe (Amiel advisee)
2015-2019	Dissertation Committee, Abbas Raza (Teuscher advisee)
2015-2025	Director of the CMB program
2016-2020	Dissertation Committee Chair, Wyatt Chia (Janssen-Heininger advisee)
2016-2020	Dissertation Committee, Nicholas Chamberlain (Anathy advisee)
2016-2020	Dissertation Committee, Huy Tu (Diehl advisee)
2017-2021	Dissertation Committee Chair, Evan Elko (Janssen-Heininger advisee)
2017-2021	Dissertation Committee Chair, Michael Mariani (Frietze advisee)
2017-2022	Dissertation Committee, Sierra (Bruno) White (Anathy advisee)
2018-2020	Dissertation Committee, JJ Bivona III (Suratt advisee)
2018-2023	Dissertation Committee Chair, Bristy Sabikunnahar (Krementsov advisee)
2018-2022	Dissertation Committee, Julia Snyder (Amiel advisee)
2020-2021	Dissertation Advisor, JJ Bivona III; Zymo Research grant recipient (2021), LCOM Dean's Research Excellence Presentation Award (2021), CMB Alpert Award (2022)
2021-2024	Dissertation Committee, Bay Vagher (Amiel advisee)
2021-2022	Thesis Committee Chair, Emily (Giddings) Whitcomb (Stafford advisee)
2021-2025	Dissertation Advisor, Vivia (Amanda) Fastiggi, UVM Graduate Mini Grant (\$300), November 2022 American Association of Immunologists/NYIC Trainee Award (2022), VLC-T32 Fellow (2021-2023), NASA Vermont Space Grant Consortium Graduate Fellowship (2023-2024), CMB-GAANN Fellow (2024-2025)
2021-2025	Dissertation Advisor, Paola Pena-Garcia, President of UVM SACNAS chapter (2022-2023), VLC-T32 Fellow (2023-2025), American Thoracic Society Trainee Development Scholarship (2023), CMB-GAANN Fellow (2025)
2021-present	Dissertation Committee, Jayita (Joy) Barua (Weiss advisee)
2022-2025	Dissertation Committee Chair, Soyeon Gullickson (Amiel advisee)
2022-present	Dissertation Committee, Brianna Hilton (Boyson advisee)
2023-present	Dissertation Committee, Katherine Horrigan (Boyson Advisee)
2023-present	Dissertation Committee, Will Dowell (Majumdar advisee)
2023-present	Dissertation Committee, Mona Ruban (Anathy advisee)
2024-present	Dissertation Committee Chair, Joseph Walzer (Anathy advisee)
2024-present	Dissertation Committee, Israel Odekunle (Cunniff advisee)
2025-present	Dissertation Committee, Tyler Hogan (Krementsov advisee)
2025-2026	Admissions Committee member
2026-present	Dissertation Committee, Hector Granela (Diehl advisee)
2026-present	Dissertation Advisor, Kasey Minakin

UVM, Department of Pharmacology Graduate Program

11/15/2006	Phaini Garimella Preliminary Examination Committee
2006-2009	Thesis Committee Chair, Phani Garimella (Lounsbury advisee)
2025-2026	Thesis Committee Member, Harrison Morse (Lavoie advisee)

UVM, Department of Pathology & Laboratory Medicine Graduate Program

2008-2010	Thesis Committee Member, Mohamad Moussawi (Huber advisee)
09/02/2010	Timothy Perkins Preliminary Examination Committee
2010-2011	Thesis Committee Member, Timothy Perkins (Mossman advisee)
09/18/2012	Benjamin Schott Preliminary Examination Committee
2011-2014	Thesis Committee Member, Benjamin Schott (Poynter advisee)
2012-2014	Thesis Committee Member, Catherine Westbom (Shukla advisee)
2021-2022	Thesis Committee Chair, Amelia Lamberty Peterson (Cunniff Advisee)
2026-present	Thesis Committee Member, Emma Dillsaver (Anathy advisee)

UVM, Clinical and Translational Science Graduate Program

2010-2011	Dissertation Committee Member, Timothy Tourville (Beynnon advisee)
2010-2013	Dissertation Committee Chair, William Tharp (Pratley/Tracey advisee)
2024-present	Dissertation Committee Member, Olivia J. Garrow (Dixon advisee)

UVM, Department of Animal Sciences Graduate Program

2008-2011	Dissertation Committee Chair, Sukumar Kandasamy (Kerr advisee)
2010-2014	Dissertation Committee Chair, Benjamin Green (Kerr advisee)
2011-2016	Dissertation Committee Chair, Aimee Benjamin (Kerr advisee)
2022-2024	Dissertation Committee Member, Victoria Taormina (Kraft advisee)
2026-present	Dissertation Committee Member, Kusum Raj Tamang (Kraft advisee)

UVM, Department of Biomedical Engineering Graduate Program

2011-2016	Dissertation Committee Member, Joshua Pothen (Bates advisee)
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UVM, Department of Civil and Environmental Engineering Graduate Program

11/20/2012	Jaime Jiminez-Diaz Preliminary Examination Committee
2012-2013	Thesis Committee Chair, Jaime Jiminez-Diaz (Hill advisee)

UVM, Experimental Pathology Training Grant

2011-2013	Member of Internal Steering Committee
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UVM, MD/PhD Program

2004-2007	Conduct tours of Vermont Lung Center laboratories for applicants
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UVM Master of Medical Science Program

2024-2025	Research advisor, Samuel Yang
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UVM Honor's College

05/01/2013	Thesis Committee Chair, Susan Leggett (Janssen-Heininger advisee; 2012 Goldwater Scholar)
2013-2015	Thesis Advisor, Laura Hoyt
2015-2016	Thesis Advisor, Susan Kostin
04/27/2015	Patrick Bonson (Boyson advisee)

05/04/2016	Gurkiranjit K. Rattu (Anathy advisee)
05/04/2017	Thesis Committee Chair, Murisa Malagic (Boyson advisee)
2020	Thesis Advisor, Hannah Crymble
2021-2022	Thesis Advisor, Aliceson Drollette
2022-2023	Thesis Advisor, Emma Bryant
2022-2024	Thesis Advisor, Kate Zoller

External Dissertation Committee Membership

2007	William F. Carson, IV, PhD candidate, University of Connecticut (Thrall advisee)
2012-2014	Jennifer Ather, PhD candidate, Maastricht University (Poynter advisee)
2014-2016	Sidra Hoffman, PhD candidate, Maastricht University (Janssen-Heininger advisee)

External Advisory Committees

2023-	Member of the EAC for the Dartmouth College Cystic Fibrosis T32 (PI: O'Toole)
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Laboratory Advisor for High School, Undergraduate, and Other Students

2003	Ashley Robie	UVM HELIX Program
2003	Tiest van Woerkom	Hogeschool Brabant, Holland
2004	Marie-Louise van Leest	Hogeschool Brabant, Holland
2005	Ilse de Vrije	Hogeschool Brabant, Holland
2004-2005	Jacob Lynn	Essex High School, Essex, VT
2005-2006	Elise Vincelette	UVM, Biology major
2006-2007	Emily Milbank	Champlain Valley Union High School, Hinesburg, VT
2006-2007	Erik Jansen	Hogeschool Brabant, Holland
2007-2008	Debby Krom	Hogeschool Brabant, Holland
2007-2008	Khong Trang	UVM, Post-Bac
2008-2009	Sarah Whiteside	Champlain Valley Union High School, Hinesburg, VT
2008	Lorenzo Renne	Universita degli Studi di Milano, Italy
2008-2010	Lindsey Blaisdell-Weger	UVM, Biochemistry and German major
2009-2010	Shannon Li	University of North Carolina, Chapel Hill
2009-2010	Elizabeth Landell	University of Vermont, Biology major
2010	Sarah Whiteside	Elon University, VCIID CoBRE-supported
2010	Elizabeth Alnemy	UVM, German major
2010-2011	Erik Jansen	Radboud University, Nijmegen, Holland
2010-2012	Jaime Jimenez-Diaz	University of Vermont, NASA-supported
2010-2012	James Durham	Amherst University
2011-2012	Joshua Jabot	MS in Biochemistry candidate, Plattsburgh State University
2012	Emily Reynolds	UVM, Biochemistry major
2012-2014	Rebecca Daggett	UVM, Biological Science major (recipient of a UVM 2013 Fall Undergraduate Research Mini Grant)
2013-2015	Laura Hoyt	UVM, Biology major, chemistry minor (recipient of a UVM 2013 Fall Undergraduate Research Mini Grant and a

		Summer 2014 Research Award), Honors College
2014-2015	Maddie Mank	UVM, Biology major
2014-2015	Alexandra Kohut	UVM, Biology major, chemistry minor
2015	Connor Payne	UVM, Biochemistry major
2014-2016	Susan Kostin	UVM, Biochemistry major, Honors College
2015-2021	Kate van der Vliet	Mount Mansfield Union High School, Jericho, VT, Cornell University, Ithaca, NY
2015-2016	Anna Gerogsdottir	Champlain Valley Union High School, Hinesburg, VT
2015-2016	Rebecca DeCamp	Champlain Valley Union High School, Hinesburg, VT
2016	Lindsey McCarron	UVM, Biochemistry and Gender, Sexuality, and Women's Studies dual major
2017	Amelia Gagliuso	Claremont McKenna College, Claremont, CA
2017-2018	Leah Reed	UVM, Biology major
2018	Riley Forbes	UVM, Biology major
2018-2020	Camille Walton	UVM, History major / chemistry minor, Honors College
2019	Madison Trutor Barup	Champlain Valley Union High School, Hinesburg, VT
2019	Aidan May	UVM, Biochemistry major, Honors College
2019-2020	Hiba Ali	South Burlington High School, South Burlington, VT (recipient of a 2020 Vermont STEM Fair gold medal and the U.S. Air Force Award for the four top projects in the areas of math, science and engineering)
2020	Loa Georgsdottir	Champlain Valley Union High School, Hinesburg, VT
2020	Hanna Crymble	UVM, Biochemistry Major, Honors College
2020	Ethan Brooks	UVM, Biology Major
2020-2021	Bradi Berhorst	UVM, Biology Major, 2021 SURF recipient
2020-2021	Anna Brooks	UVM, Biology Major
2020-2022	Aliceson Drollette	UVM, Biology Major, Honors College, 2022 Department of Biology Joan M. Herbers award
2021-2023	Jonas Spaulding	UVM, Biological Sciences Major, Nutrition Minor
2022-2023	Emma Bryant	UVM, Molecular Genetics Major, Honors College, College of Agriculture and Life Sciences Distinguished Undergraduate Research Honors
2022-2024	Kate Zoller	UVM, Molecular Genetics Major, Honors College, 2023 SURF recipient, 2024 Bernd Heinrich Department of Biology Outstanding Research and Academics Award recipient
2024-2026	Lilly Acker	UVM, Neuroscience Major, Health & Society Minor

2024	Selma Alhassan	Norwich University, Nursing Major, 2024 Vermont Biomedical Research Network Summer Undergraduate Research Fellow
2025-present	Gwenyth Lister	UVM, Nursing Major
2025-present	Calum Gillies	UVM, Biochemistry Major, Statistics Minor
2026-present	Foster Eddy	Landmark College, Biology Major, 2026 Vermont Biomedical Research Network Summer Undergraduate Research Fellow
2026-present	Neave Cothren	UVM, Neuroscience Major, Chemistry Minor
2026-present	Mollyana McGuire	UVM, Secondary Education Major with a concentration in Biology
2026-present	Camryn Hoffman	Smith College, Biochemistry Major, Summer 2026 PRAXIS Fellow
2026-present	Thea Andersen	University of Ottawa, Biomedical Science Major
2026-present	Natalia Gonzalez	UVM, Biology Major, Global Health and Spanish Minors
2026-present	Margaret Parker	UVM, Public Health Major

Postdoctoral Trainees

2003	Christine C. Jones, PhD	Postdoctoral Research Assistant
2009-2010	Nimjat Monga, PhD	Postdoctoral Research Assistant
2014-2017	Matthew J. Randall, PhD	VLC-T32 Postdoctoral Fellow
2017-2019	Katherine Menson, DO	PCCM Research Fellow
2022	Joseph J. Bivona, III, PhD	Postdoctoral Research Assistant

Current Positions of Past Trainees

<u>Name and degree (dates)</u>	<u>Current Position</u>
Tiest van Woerkom, BS (2003)	Event Manager at Veronicaschip (media production company), Amsterdam, Netherlands
Marie-Louise van Leest, BS (2004)	Infectious Diseases Medical Technician, Amphia Hospital, Tilburg, Netherlands
Sara A. Paveglio, PhD (2004-09)	Assistant Professor/Research Scientist, University of Connecticut Health Center
Ilse de Vrije, BS (2005)	Molecular Biology Analyst, Jeroen Bosch Ziekenhuis, Tilburg en omgeving, Netherlands
Jacob Lynn, BS (2004-05)	CEO / Co-Founder at Joule Frontier LLC, Director of Operations at FGI Deportes: Advanced International Multitech, Orange County, CA
Elise Vincelette, DMD (2005-06)	Dental Residency, Boston University
Emily Milbank, BS (2006-07)	Assistant Coach, Women's Soccer, St. Michaels College, Colchester, VT
Erik Jansen, MS (2006-10)	Research Technician, Hubrecht Institute for Developmental Biology, Utrecht, Holland
Debby Krom, BS (2007-08)	Senior Analyst, Sanquin Pharmaceuticals, Amsterdam, Netherlands
Khong Trang, BS (2007-08)	UVM, Post-Bac candidate

Samantha Hodgkins, MS, DVM (2007-09)	Veterinarian, Pine Tree Veterinary Hospital, Augusta, ME
Sarah Whiteside, PhD (2008-10)	Postdoctoral scholar, Cambridge University, London, England
Lorenzo Renne, MS (2008)	European Institute of Oncology, Milan, Italy
Lindsey Blaisdell-Weger, BS (2008-10)	PhD candidate in Chemistry, Aachen University, Aachen, Germany
Shannon Li, MS (2009-10)	MD student, University of Vermont
Elizabeth Landell, MD (2009-10)	General Surgery Resident, Lehigh Valley, PA
Rebecca Martin, MD, PhD (2009-13)	Emergency Medicine faculty, U Tennessee Health Science Center, Chattanooga, TN
Jaime Jimenez-Diaz, MS (2010-12)	PhD candidate, University Pablo de Olavide, Seville, Spain
James Durham, BS (2010-12)	MS in Biomedical Sciences candidate, Tufts University
Joshua Jabaut, MS (2011-12)	Internal medicine intern, George Washington School of Medicine and Health Sciences
Benjamin Schott, BS (2011-13)	Kayak Guide, Vermont Paddlers Club
Jennifer Ather, PhD (2012-14)	Research Specialist, Poynter lab, Department of Medicine, University of Vermont
Rebecca Daggett, BS (2012-14)	Quality Assurance Analyst, Seventh Generation, Burlington, VT; Nurse's Assistant, UVMMC; applying to PA school
Laura Hoyt, BA (2013-15)	MD/PhD student, Yale University recipient of two undergraduate research awards, a UVM Ventures grant, and the Joan M. Herbers award in the Department of Biology
Susan Kostin, BS (2014-16)	Medical Student, University of Connecticut
Amelia Gagliuso (2017)	Undergraduate Biology major, Claremont McKenna College, Claremont, CA
Madeleine Mank, BS (2014-15)	Research Technician, Poynter lab, UVM, MPH awardee (2016-present)
Michael Chung, MD (2015)	Family Medicine Resident, Rutgers-RW Johnson Medical School, New Brunswick, NJ
Matthew J. Randall, PhD (2015-17)	Associate Clinical Biomarker Scientist, Galapagos NV, Basel, Switzerland
Leah Reed, BS (2017-18)	Research Technician, Poynter lab, UVM (2018-2020)
Katherine Menson, DO (2017-19)	Faculty, Pulmonary and Critical Care Medicine, UVM/UVMMC
Camille Walton (2018-2020)	Medical student, University of Louisville
Madison Trutor (2019)	Undergraduate, U Maryland
Aliceson Drollette (2020-22)	Dental school, McGill University

Faculty Mentoring

Eyal Amiel, PhD, UVM Department of Biomedical & Health Sciences
Katherine Menson, DO, UVM Department of Medicine
Sean Diehl, PhD, UVM Department of Microbiology & Molecular Genetics
Jeffrey Kirkland, PhD, Norwich University
Gabe Tharp, MD, PhD, UVM Department of Anesthesiology
R. Chris Skinner, PhD, UVM Department of Nutrition & Food Sciences

American Thoracic Society

2005-2006	Allergy, Immunology, and Inflammation Planning Committee
2006	Poster Session Facilitator, ATS Conference, San Diego, CA
2014	Poster Session Facilitator, ATS Conference, San Diego, CA
2015	Committee Member, Advancing Airway Remodeling as a Therapeutic Target

Ad hoc Reviewer of Submitted Manuscripts

Acta Physiologica
AIMS Allergy and Immunology
Allergy: European Journal of Allergy and Clinical Immunology
American Journal of Pathology
American Journal of Physiology-Lung Cellular and Molecular Physiology
American Journal of Respiratory Cell and Molecular Biology
American Journal of Respiratory and Critical Care Medicine
Arabian Journal of Chemistry
Biochimica et Biophysica Acta
Brain Sciences
Cellular Immunology
Chemosphere
Chest
Clinical and Experimental Allergy
Clinical and Experimental Immunology
Clinical Immunology
Communications Biology
Environmental Health Perspectives
Environmental Pollution
European Journal of Immunology
Experimental Cell Research
Experimental Lung Research
Experimental and Molecular Pathology
Expert Review of Clinical Immunology
Exploration of Asthma & Allergy
Free Radical Biology and Medicine
Frontiers in Immunology
Immunity, Inflammation and Disease
Immunology and Cell Biology
Immunology Letters
Inflammation
Inflammation Research
Innate Immunity
International Immunopharmacology
International Journal of Biological Sciences
JCI Insight

Journal of Allergy
Journal of Allergy and Clinical Immunology
Journal of Cellular Biochemistry
Journal of Cellular Physiology
Journal of Clinical Investigation
Journal of Immunology
Journal of Hazardous Materials
Journal of Histochemistry and Cytochemistry
Journal of Leukocyte Biology
Journal of Nanomaterials
Journal of Toxicology and Environmental Health
Laboratory Investigation
Molecules
Nutrients
Neoplasia
Neuropharmacology
Nutrition & Metabolism
Oncotarget
Pediatric Allergy and Immunology
Proceedings of the National Academy of Science of the USA
Public Library of Science (PLOS) ONE
Respiratory Research
Science Translational Medicine
Scientific Reports
Sensors
Sensors: Medicinal Chemistry
Thorax
World Allergy Organization Journal

Ad hoc Reviewer of Book Chapters

Bentham Science Publishers

Editorial Board member

2012-2023 American Journal of Respiratory Cell and Molecular Biology

Ad hoc Grant Reviewer

Meningitis Research Foundation
Health Research Board (Ireland)
NIH NHLBI SCCOR on Host Factors in Lung Disease (2007)
Mandat d'Impulsion Scientifique du F.N.R.S. (Belgium)
Austrian Science Fund (FWF)
NIH LCMI Study Section (2010, 2011, 2012)
NIH CounterAct, MDCN J(50) Scientific Review (2010, 2013)
Deutsche Forschungsgemeinschaft (German Research Foundation)
Research Foundation - Flanders (Fonds Wetenschappelijk Onderzoek - Vlaanderen, FWO)
Swiss National Science Foundation
Vermont Cancer Center/Lake Champlain Cancer Research Organization (2010)
NIH NIAID Asthma and Allergic Diseases Cooperative Research Centers Scientific Review (2012)
Dutch Lung Foundation

American Institute of Biological Sciences / Flight Attendant Medical Research Institute
(2015, 2017, 2019, 2020)
NHLBI PrecISE Asthma Networks Clinical Centers (2017)
NIH Hypersensitivity, Allergies and Mucosal Immunology (HAMI) IMM-T57 Special
Emphasis Panel (2018, 2019)
Wellcome Trust (2018)
NIH Member Conflict: Respiratory Sciences Special Emphasis Panel (ZRG1 CVRS-H
03), Co-chair (11/15-16/2018)
NIAID Special Emphasis Panel, Immune Tolerance Network (2020/10 ZAI1 TC-I (S3) R)
(07/28/2020)
NHLBI Institutional Training Mechanism Study Section, NITM OA 1 (06/04-05/2021)
NHLBI Institutional Training Mechanism Study Section, NITM OA 1 (06/02-03/2022)
NIGMS Maximizing Opportunities for Scientific and Academic Independent Careers
(MOSAIC) K99/R00 Study Section (11/16/2022)
UVM internal selection for grant application submissions (2023, 2024, 2025, 2026)
UVM VCCBH Fire grant applications reviewer (2024)
NIH Member Conflict: Co-Chair, NIAID Special Emphasis Panel (2025/10 ZRG1 IIDB-Y
(02) M) Topics in Bacterial-Host Interactions, Hypersensitivity and Allergy
(07/16/2025)
UVM / Northern New England-Clinical & Translational Research Network (NNE-CTR)
Pilot Project Proposal Review Committee (03/16 2026)

Standing Member, NIH Special Emphasis Panel
2006-2010 NHLBI K08/K02/K22

Standing Member, NIH Study Section
2013-2017 NIH Lung Cellular, Molecular, and Immunobiology (LCMI)

Reviewer for Grant Applications or Tenure & Promotion
2016 Louisiana State University, School of Veterinary Medicine
2017 University of South Carolina, School of Medicine
2025 University of Pittsburgh

Professional Memberships
American Association for the Advancement of Science
American Association of Immunologists
American Physiological Society
American Society for Microbiology
American Thoracic Society
International Society for Free Radical Research
Society for Free Radical Biology and Medicine
Society of Toxicology

IX. PROFESSIONAL DEVELOPMENT

08/16/2012 Attended seminar and luncheon by Dr. John Estrada, PhD, LSU Health
Science Center, entitled "Mentoring: Is There Room for Evidence Based
Methodologies".
04/05/2013 Attended seminar by Dr. Charles Irvin, entitled "Reappointment, Promotion,
and Tenure at the UVM CoM: Tips and Strategies for a Successful
Promotion/Tenure Decision".

04/06/2013	Attended workshop by Dr. John D. Robertson, the Grant Writers' Seminars and Workshops, entitled "Write Winning NIH Grant Proposals".
09/13/2013	Attended seminar by Dr. Jeremy Boss, Emory University and former Editor-in-Chief of the Journal of Immunology on "Responding to Negative Reviews of Manuscripts".
01/25/2016	Attended (as CMB Director) UVM Preventing Sexual Harassment and Bias Training.
02/16/2016	Attended (as CMB Director) UVM Mandatory Clerly Act / Title IX Reporter Training.
09/23/2016	Attended UVM COM Teaching Academy "Essentials of Teaching and Assessment" One-Day Course.
12/19/2017	Attended 8-hour UVM COM training on "Mentoring the Mentor" based on the University of Wisconsin curriculum.
11/06/2018	Completed (as CMB, VLC, and T32 Director) UVM/EverFi Harassment & Discrimination Prevention training.
01/27/2022	Completed (as CMB, VLC, and T32 Director) UVM/EverFi Harassment & Discrimination Prevention recertification.
02/01/2022	Attended "Optimizing Inclusive and Culturally Responsive Mentoring Practices": Workshop with Kelly Diggs-Andrews, Ph.D.
03/21/2024	Attended and led a session (7: Professionalism) in an 8-hour UVM LCOM training on "Mentoring the Mentor" based on the University of Wisconsin curriculum.
10/23/2024	Led a session (7: Professionalism) in an 8-hour UVM LCOM training on "Mentoring the Mentor" based on the University of Wisconsin curriculum.
11/29/2024	Completed (as CMB, VLC, and T32 Director) UVMVector Solutions Managing Bias recertification.
05/09/2025	Completed The National Center for the Replacement Refinement & Reduction of Animals in Research, and the 3 Rs Collaborative "Refined Mouse Handling Course"
07/22/2025	Completed the "3 Rs Certificate Course", Collaborative Institutional Training Initiative (CITI)
09/17/2025	Completed (as VLC Director) UVM Reporter training
01/30/2026	Completed UVM Reporter training