

## **CURRICULUM VITAE**

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Present Positions: Senior Investigator, Immunity, Inflammation and Disease Laboratory,  
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### **EDUCATION AND TRAINING**

B.Sc., 1983	McGill University, Montreal, Canada	Microbiology & Immunology
Ph.D. 1990	McGill University, Montreal, Canada	Microbiology & Immunology
1990 - 1996	Postdoctoral Fellow, Laboratory of Oliver Smithies.	Department of Pathology, University of North Carolina

### **PROFESSIONAL EXPERIENCE**

2013-present Senior Investigator, Immunogenetics Group, Immunity, Inflammation and Disease Laboratory (IIDL), NIEHS, NIH, Research Triangle Park, NC.

2009-present Adjunct Assistant Professor, Department of Immunology, School of Medicine, Duke University, Durham, NC.

2005-2013 Tenure track Investigator, Immunogenetics Group, Laboratory of Respiratory Biology, NIEHS, NIH, Research Triangle Park, NC.

2001-2005 Assistant Professor, Division of Pulmonary and Critical Care Medicine, Department of Medicine, Duke University, Durham, NC.

1998-2001 Principal Scientist, Schering-Plough Research Institute

1996-1998 Associate Principal Scientist, Schering-Plough Research Institute

### **PUBLICATIONS**

#### **A. RESEARCH ARTICLES**

1. **Donald N. Cook**, Nadine Pavloff and John A. Hassell (1990) Simultaneous expression of pp60<sup>c-src</sup> and polyomavirus middle T antigen in mammalian cells. *Journal of Virology* **64**:2392-2395.
2. **Donald N. Cook** and John A. Hassell (1990) The amino terminus of polyomavirus middle T antigen is required for transformation. *J. Virol.* **64**: 1879-1887.

3. Heather J. Sutherland, D.E. Hogg, **Donald N. Cook**, and Connie J. Eaves (1993) Alternative mechanisms with and without steel factor support primitive human hematopoiesis. *Blood* **81**:1465-1470.
4. **Donald N. Cook**, Melinda A. Beck, Thomas M. Coffman, Suzanne L. Kirby, John H. Sheridan, Ian B. Pragnell and Oliver Smithies. (1995) Requirement of MIP-1 $\alpha$  for an inflammatory response to viral infection. *Science* **269**: 1583-1585.
5. Cathy G. Miller, **Donald N. Cook** and Girish Kotwal. (1996) Two chemotactic factors, C5a and MIP-1 $\alpha$  dramatically alter the mortality from zymosan-induced multiple organ dysfunction syndrome(MODS): C5a contributes to MODS while MIP-1 $\alpha$  has a protective role. *Mol. Immunol.* **33**: (14) 1135-1137.
6. Suzanne L. Kirby, **Donald N. Cook**, William Walton and Oliver Smithies. (1996) Proliferation of multipotent hematopoietic stem cells controlled by a truncated erythropoietin receptor transgene. *Proc. Natl. Acad. Sci. USA.* **93**: 9402-9407.
7. JT Terrence M. Tumpey, Hao Cheng, **Donald N. Cook**, Oliver Smithies, John E. Oakes and Robert N. Lausch. (1998) Absence of macrophage inflammatory protein-1 $\alpha$  prevents the development of blinding Herpes stromal keratitis. *J. Virol.*, **72** (5): 3705-3710.
8. Beatriz E. Brito, Leslie M. O'Rourke, Yuezhen Pan, Jong Moon Park, David Zamora, **Donald N. Cook**, Stephen R Planck, James T Rosenbaum. (1999). Murine endotoxin-induced uveitis, but not immune complex-induced uveitis, is dependent on the IL-8 receptor homolog. *Curr. Eye Res.* 19 (1); 76-85.
9. Jonathan S. Serody, **Donald N. Cook**, Kirby SL, Reap E, Shea TC, Jeffrey A Frelinger. (1999) Murine T lymphocytes incapable of producing macrophage inhibitory protein-1 are impaired in causing graft-versus-host disease across a class I but not class II major histocompatibility complex barrier. *Blood.* 1999 Jan 1;93(1):43-50. PubMed PMID: 9864144.
10. **Donald N. Cook**, Smithies O, Strieter RM, Frelinger JA, Jonathan S Serody. CD8+ T cells are a biologically relevant source of macrophage inflammatory protein-1 alpha in vivo. *J Immunol.* 1999 May 1;162(9):5423-8. PubMed PMID: 10228020.
11. **Donald N. Cook**, Dina M. Prosser, Reinhold Forster, Jiwen Zhang, Nelly A. Kuklin, Susan J. Abbondanzo, Xiao-Da Niu, Shu-Cheng Chen, Denise J. Manfra, Maria T. Wiekowski, Lee M. Sullivan, Sidney R. Smith, Harry B. Greenberg, Satwant K. Narula, Martin Lipp, Sergio A. Lira. (2000) CCR6 mediates dendritic cell localization, lymphocyte homeostasis and immune responses in mucosal tissue. *Immunity* 12 (5) 495-503.
12. Mark J. Cameron, Guillermo A. Arreaza, Marsha Grattan, Craig Meagher, Marie D. Burdick, Robert M. Strieter, **Donald N. Cook**, Oliver Smithies, and Terry Delovitch. (2000) Differential intra-pancreatic expression of CC chemokines mediates the pathogenesis of type 1 diabetes. *J. Immunol.*;165(2):1102-1110.
13. Jonathan S. Serody, Susan E. Burkett, A. Panoskaltis-Mortari, Judith Ng-Cashin, Eileen McMahon, Glenn K Matsushima, Sergio A. Lira, **Donald N. Cook** and Bruce Blazar. (2000) T lymphocyte production of MIP-1 $\alpha$  is critical to CD8+ T cell recruitment during graft-versus-host disease. *Blood* 96 (9) 2973-2980.

14. Michael A. Olszewski, Gary B. Huffnagle, R.A. McDonald, B.B. Moore, **Donald N. Cook** and Galen B. Toews. (2000) The role of macrophage inflammatory protein-1 $\alpha$ /CCL3 in regulation of T cell-mediated immunity to *Cryptococcus neoformans* infection. *J. Immunol.*; 165(11):6429-36.
15. Denise Manfra, Shu-Cheng Chen Tong-Yuan Yang, Lee Sullivan, Maria Wiekowski, Susan Abbondanzo, **Donald N. Cook**, Sergio A. Lira. (2000) GFP+ leukocytes as novel reagents for adoptive cell transfer and bone marrow transplantation studies. *Am. J. Pathol.* 158, 1:41-47.
16. Shu-Cheng Chen, Borna Mehrad, Jane C. Deng, Galya Vassileva, Denise J. Manfra, **Donald N. Cook**, Maria T. Wiekowski, Albert Zlotnik, Theodore J. Standiford, and Sergio A. Lira (2001). Impaired pulmonary host defense in mice lacking expression of the CXC chemokine lungkine. *J. Immunol.*, 166(5):3362-8.
17. Steven W. Chensue, Nickolas W. Lukacs, Tong.-Yuan. Yang, X. Shang, K.A. Frait, Steven L. Kunkel, Ted Kung, Maria T. Wiekowski, Joseph A. Hedrick, **Donald N. Cook**, Andrea Zingoni, Satwant K. Narula, Albert Zlotnik, F.J. Barrat, Anne O'Garra, Monica Napolitano, and Sergio A. Lira. (2001) Aberrant in vivo T helper type 2 cell response and impaired eosinophil recruitment in CC chemokine receptor 8 knockout mice. *J. Exp. Med.*. 193: 5
18. **Donald N. Cook**, Shu-Cheng Chen, Lee M. Sullivan, Denise J. Manfra, Maria T. Wiekowski, Dina M. Prosser, Galya Vassileva and Sergio A. Lira. (2001) Generation and analysis of mice lacking the chemokine fractalkine. *Mol. Cell. Biol.* 21(9):3159-65.
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20. Quentin E. H. Low, Iulia A. Drucea, Lisa A. Duffner, Daniel G. Quinn, **Donald N. Cook**, Barrett J. Rollins, Elizabeth J. Kovacs and Luisa A. DiPietro (2001). Wound healing in MIP-1alpha (-/-) and MCP-1 (-/-) mice. *Am. J. Pathol.* 159(2):457-463.
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23. Katrin Ottersbach, **Donald N. Cook**, William A. Kuziel, Alison Humbles, Bao Lu, Craig Gerard, Amanda E.I Proudfoot and Gerard J. Graham (2001). MIP-1 $\alpha$  utilizes a novel receptor for transiently engrafting stem cell inhibition. *Blood* 98(12):3476-3478.
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- on the Development of Immunity to *Cryptococcus neoformans* Depend on Expression of Early Inflammatory Cytokines. *Infection and Immunity* 69(10):6256-63.
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  33. Thomas Jamison\*, **Donald N. Cook**\*, Robert J. Nibbs, Antal Rot, Colin Nixon, Pauline McLean, Antonio Alcamí, Sergio A. Lira, Maria Wiekowski, and Gerard J. Graham. (2005) The chemokine receptor D6 limits the inflammatory response in vivo. *Nature Immunol.* (4):403-11. \*both authors contributed equally.
  34. Yeny Martinez de la Torre, Massimo Locati, Chiara Buracchi, Jana Dupor, **Donald N. Cook**, Raffaella Bonecchi, Manuela Nebuloni, Daniel Rukavina, Luca Vago, Annunziata Vecchi, Sergio A. Lira, Alberto Mantovani. (2005) Increased inflammation in mice deficient for the chemokine decoy receptor D6. *Eur J Immunol.* 5(5):1342-6
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- CCR5 interaction provides antiapoptotic signals for macrophage survival during viral infection. *Nature Med.* 11(11):1180-7.
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  41. Yeny Martinez de la Torre, Chiara Buracchi, Elena M. Borroni, Jana Dupor, Raffaella Bonecchi, Manuela Nebuloni, Fabio Pasqualini, Andrea Doni, Eleonora Lauri, Chiara Agostinis, Roberta Bulla, **Donald N. Cook**, Bodduluri Haribabu, Pierluigi Meroni, Daniel Rukavina, Luca Vago, Francesco Tedesco, Annunciata Vecchi, Sergio A. Lira, Massimo Locati, and Alberto Mantovani. (2007) Protection against inflammation- and autoantibody-caused fetal loss by the chemokine decoy receptor D6. *Proc Natl Acad Sci U S A.* 2007 104(7):2319-24.
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  45. Rhonda H. Wilson, Gregory S. Whitehead, Hideki Nakano, Meghan E. Free, Jay K. Kolls and **Donald N. Cook**. (2009). Allergic sensitization through the airway primes Th17-

- dependent neutrophilia and airway hyperresponsiveness. *Am J Respir Crit Care Med*;180(8):720-30.
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  47. Xuebin Yang, William W. Walton, **Donald N. Cook**, Xiaoyang Hua, Stephen Tilley, Christopher Haskell, Richard Horuk, A. William Blackstock, and Suzanne L. Kirby. (2010) The chemokine, CCL3 and its receptor, CCR1, mediate thoracic radiation-induced fibrosis. *Am J Resp Cell Mol Biol*. Jul;45(1):127-35.
  48. Samir N. P. Kelada, Mark S. Wilson, Urraca Tavarez, Kari Kubalanza, Danielle E. Carpenter, Greg S. Whitehead, Bhavesh Borate, Shuichiro Maruoka, David M. Brass, Thomas A. Wynn, **Donald N. Cook**, Christopher M. Evans, Deepak A. Deshpande, David A. Schwartz and Francis S. Collins. (2011) Identification of Strain-Dependent Genomic Responses to Allergen Challenge Associated with Changes in Airway Responsiveness in a Mouse Model of Asthma. *Am J Resp Cell Mol Biol*.;45: 817–824.
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  51. Hideki Nakano, Meghan E. Free, Rhonda H. Wilson, Shuichiro Maruoka, Gregory S. Whitehead and **Donald N. Cook**. (2012) Pulmonary CD103<sup>+</sup> dendritic cells prime Th2 responses to inhaled antigens. *Mucosal Immunol*. (1):53-65.
  52. David W. Draper, Kim M. Gowdy, Jennifer H. Madenspacher, Rhonda H. Wilson, Hideki Nakano, Arun R. Pandiri, Julie F. Foley, Alan T Remaly, **Donald N. Cook** and Michael B. Fessler. (2012) ATP Binding Cassette Transporter G1 Deletion Induces IL-17-Dependent Dysregulation of Pulmonary Adaptive Immunity. *J. Immunol*. 188(11)5327.
  53. Rhonda H. Wilson, Shuichiro Maruoka, Gregory S. Whitehead, Julie F. Foley, Gordon P. Flake, Michelle L. Sever, Darryl C. Zeldin, Monica Kraft, Stavros Garantziotis, Hideki Nakano and **Donald N. Cook**. (2012) The TLR5 ligand, bacterial flagellin, promotes asthma by priming allergic responses to indoor allergens. *Nat Med*. Nov;18(11):1705-10. PMID: 23064463
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62. Hideki Nakano, Miranda R. Lyons-Cohen, Gregory Whitehead, Keiko Nakano and **Donald N. Cook** (2017). Distinct functions of CXCR4, CCR2 and CX3CR1 direct dendritic cell precursors from the bone marrow to the lung. *Journal of Leukocyte Biology.* 2017 May;101(5):1143-1153. PMID 28148720.
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76. Tadeusz P. Karcz, Gregory S. Whitehead, Keiko Nakano, Hideki Nakano, Sara A. Grimm, Jason G. Williams, Leesa J. Deterding, Kenneth A. Jacobson, **Donald N. Cook**. 2021 UDP-glucose and P2Y<sub>14</sub> receptor amplify allergen-induced airway eosinophilia. *Journal of Clinical Investigation*, Apr 1;131(7):e140709. doi: 10.1172/JCI140709
77. Young-Hwan Jung, Veronica Salmaso, Zhiwei Wen, John Bennett, Ngan Phung, David Lieberman, Varun Gopinath, John Randle, Zhoumou Chen, Daniela Salvemini, Tadeusz Karcz, **Donald N. Cook**, Kenneth A. Jacobson. Structure-activity relationship of heterocyclic P2Y<sub>14</sub> receptor antagonists: Removal of the Zwitterionic Character with Piperidine Bioisosteres. *Journal of Medicinal Chemistry*. 2021 Apr 22;64(8):5099-5122. doi: 10.1021/acs.jmedchem.1c00164. Epub 2021 Mar 31.
78. Sky W. Reece, Sanjay Varikuti, Brita Kilburg-Basnyat, Katelyn Dunigan-Russell, Myles X. Hodge, Bin Luo, Jennifer H. Madenspacher, Seddon Y. Thomas, Debra A Tokarz, Robert M. Tighe, **Donald N. Cook**, Michael B. Fessler, Kymberly M. Gowdy. 2021. Scavenger receptor BI attenuates IL-17A-dependent neutrophilic inflammation in asthma. *American Journal of Respiratory Cell and Molecular Biology*. 2021. Jun;64(6):698-708. doi: 10.1165/rcmb.2020-0007OC.
79. Gentaro Izumi, Hideki Nakano, Keiko Nakano, Gregory S. Whitehead, Sara A. Grimm, Michael B. Fessler, Peer W. Karmaus and **Donald N. Cook**. 2021. CD11b<sup>+</sup> lung dendritic cells at different stages of maturation induce Th17 or Th2 differentiation. *Nature Communications* Aug 19;12(1):5029. doi: 10.1038/s41467-021-25307.
80. Hsin-I Huang, Mark L. Jewell, Nourhan Youssef, Min-Nung Huang, Brian E. Fee, Nathan P. Rudemiller, Jamie R. Privratsky, Junyi J. Zhang, Estefany Reyes, Donghai Wang, Gregory A. Taylor, Michael D. Gunn, Dennis C. Ko, **Donald N. Cook**, Vidyalakshmi Chandramohan, Steven D. Crowley, and Gianna E. Hammer. 2021. Th17 immunity in the colon is controlled by two novel subsets of colon-specific mononuclear phagocytes. *Frontiers Immunol*. Apr 28;12:661290. doi: 10.3389/fimmu.2021.661290.
81. Shanu Jain, Sai Pydi, Young-Hwan Jung, Mirko Scortichini, Efrat L. Kesner, Tadeusz P. Karcz, **Donald N. Cook**, Oksana GavriloVA, Jürgen Wess, Kenneth A. Jacobson. 2021.

- Adipocyte P2Y<sub>14</sub> receptors play a key role in regulating whole-body glucose and lipid homeostasis. *JCI Insight* May 24;6(10):e146577. doi: 10.1172/jci.insight.146577.
82. Jonathan T. Busada, Kylie N. Peterson, Stuti Khadka, Xiaojiang Xu, Robert H. Oakley, **Donald N. Cook**, and John A. Cidlowski. 2021. Glucocorticoids and androgens protect from gastric metaplasia by suppressing group 2 innate lymphoid cell activation. *Gastroenterology* 2021 Aug;161(2):637-652.e4. doi: 10.1053/j.gastro.2021.04.075.
83. Gregory S. Whitehead, Seddon Y. Thomas, Keiko Nakano, Derek J. Royer, Catherine G. Burke, Hideki Nakano and **Donald N. Cook**. 2022. A neutrophil/TGF- $\beta$  axis limits the pathogenicity of allergen-specific CD4<sup>+</sup> T cells. *JCI Insight* 7(4):e150251.doi: 10.1172. **NIEHS paper of the month.**
84. Zhiwei Wen, Veronica Salmaso, Young-Hwan Jung, Ngan B. Phung, Varun Gopinath, Qasim Shah, Alexandra T. Patterson, John C. R. Randle, Zhoumou Chen, Daniela Salvemini, David I. Lieberman, Gregory S. Whitehead, Tadeusz P. Karcz, **Donald N. Cook**, and Kenneth A. Jacobson. 2022. Bridged Piperidine Analogues of a High Affinity Naphthalene-Based P2Y<sub>14</sub>R Antagonist. *Journal of Medicinal Chemistry*. 2022 (65)4:3434-3459.)

## B REVIEWS and COMMENTARIES

1. **Donald N. Cook** (1996) The role of macrophage inflammatory protein (MIP)-1 $\alpha$  in inflammation and hematopoiesis. *J. Leukoc. Biol.* **59**: 61-66.
2. **Donald N. Cook** (1997) Gene targeting strategies to study chemokine function *in vivo*. *Meth. in Enzymol.* **287**:(13) 186-206).
3. **Donald N. Cook**, David Brass, David A. Schwartz. (2002) A matrix for new ideas in pulmonary fibrosis. *Am. J. Resp. Cell and Mol. Biol.*. (2):122-4.
4. **Donald N. Cook**, John W. Hollingsworth II and David A. Schwartz (2003). Toll-like receptors and the genetics of innate immunity. *Curr Opin Allergy Clin Immunol.* 2003 Dec;3(6):523-9.
5. **Donald N. Cook**, Shuibang Wang, Gabriel P. Howles, Marcy Speer, Gary Churchhill, John Quackenbush and David A. Schwartz (2003). The genetics of innate immunity in the lung. *Chest.* 2003 Mar;123(3 Suppl):369S.
6. **Donald N. Cook**, David S. Pisetsky, David A. Schwartz. (2004) Toll-like receptors and the pathogenesis of human disease. *Nature Immunol.* 5(10):975-9. **Donald N. Cook** and Kim Bottomly. (2007) Innate immune control of pulmonary dendritic cell trafficking. *Proc. Am. Thorac Soc.* 4(3):234-9.
7. **Donald N. Cook** and Kim Bottomly. (2007) Innate immune control of pulmonary dendritic cell trafficking. *Proc. Am. Thorac Soc.* 4(3):234-9.
8. **Donald N. Cook**, Hong-Soon Kang and Anton M Jetten (2015). Retinoic Acid-Related Orphan Receptors (RORs): Regulatory Functions in Immunity, Development, Circadian Rhythm, and Metabolism. *Nuclear Receptor Research*. 2015;2 PMID 26878025
9. Miranda R. Lyons-Cohen, Seddon Y. Thomas, **Donald N. Cook\*** and Hideki Nakano\* (2017). Precision Cut Mouse Lung Slices to Visualize Live Pulmonary Dendritic Cells.

*Journal of Visualized Experiments*. 2017 Apr. 5;(122). \* Equal contributions. PMID: 28448013

10. Hideki Nakano, Keiko Nakano and **Donald N. Cook** (2018). Isolation and purification of epithelial and endothelial cells from mouse lung. *Methods in Molecular Biology*; 1799:59-69. Doi: 10.1007/978-1-4939-7896-0\_6. PMID 29956144
11. Miranda R. Lyons-Cohen, Hideki Nakano, Seddon Y. Thomas and **Donald N. Cook** (2018). Imaging precision-cut lung slices to visualize leukocyte localization and trafficking. *Methods in Molecular Biology*; 1799:237-246. Doi: 10.1007/978-1-4939-7896-0\_18. PMID: 29956156
12. **Donald N. Cook**. Role of environmental adjuvants in asthma development *Curr Allergy Asthma Rep*. 2020 Jun 16;20(9):42. doi: 10.1007/s11882-020-00935-3. PMID: 32548663.
13. Derek J. Royer and **Donald N. Cook**. Regulation of immune responses by nonhematopoietic cells in asthma. *J. Immunol*. 2021 Jan 15;206(2):292-301. PMID 33397743.
14. **Donald N. Cook** and Hideki Nakano. A new wrinkle for skin dendritic cell migration. *Blood*. 2021.
15. **Donald N. Cook** and Jennifer Martinez. What's the deal with efferocytosis and asthma? *Trends Immunol*. 2021 Oct;42(10):904-919.  
(This review was featured in *Medpage Today* (<https://www.medpagetoday.com/resource-centers/asthma-peer-to-peer/qa-efferocytosis-and-asthma/3589>))

## C BOOK CHAPTERS

1. **Donald N. Cook** and Sergio A. Lira (1996) Genetic approaches to the study of chemokine function *in vivo*. In: *Leukocyte recruitment in inflammatory disease*. (1996) Gary Peltz, editor. Molecular Biology Intelligence Unit, R. G. Landis Company, Austin, TX. 259-266.
2. Sergio A. Lira, Galya Vassileva, Shu-Cheng Chen, Nicholas W. Lukacs, Stephen W. Chensue, Theodore J. Standiford, Borna Mehrad and **Donald N. Cook**. Genetic models to study chemokine biology in the lung. In: *Chemokines in the lung* (2003) Robert Strieter and Stephen Kunkel (Ed.) Marcel Dekker, Inc., NY, NY.
3. John W. Hollingsworth, **Donald N. Cook**, and David A. Schwartz (2005). Toll-like receptors and airway disease. In: *Toll-like Receptors in Inflammation*, Luke A.J. O'Neill, Elizabeth Brint (Ed.) *Birkhauser Verlag, Basel, Switzerland*.
4. **Donald N. Cook** and Hideki Nakano. (2011) Effects of air pollutants on allergic sensitization through the airway. In: *Allergens and respiratory pollutants: the role of innate immunity*, Mark Williams (Ed.) *Oxford; New York: Biohealthcare*.
5. **Donald N. Cook** and Hideki Nakano (2015). Pulmonary Dendritic Cell Function. In: Richard A. Parent (Ed.) *Comparative Biology of the Normal Lung, 2nd Edition, Section II*, pp. 651. Academic Press, Cambridge, Massachusetts.

6. Hideki Nakano and **Donald N. Cook**. (2013) Pulmonary antigen presenting cells; isolation, purification, and culture. *Mouse Models of Allergic Disease*. Volume 1032, pp 19-29. PMID 23943441

## SELECTED ORAL PRESENTATIONS

### A. National and International Meetings

*The amino terminus of polyomavirus middle T antigen is required for transformation*. DNA Tumor Virus Conference, August, 1988, Cold Spring Harbor, NY.

*Mutational analysis of Polyomavirus Middle T antigen*. DNA Tumor Virus Conference, June, 1989, Cambridge, England.

*Role of c-kit protein in embryonic development*, Keystone Symposium, "Transgenes, Development and Disease". Tamarron, Colorado, January 1991.

*Targeting of the gene encoding macrophage inflammatory protein-1 $\alpha$* , Keystone Symposium, "Hematopoiesis", Breckenridge, Colorado, January 1993

*Functional analysis of MIP-1 $\alpha$  gene targeted mice* (oral presentation). International Conference on Chemokines, June, 1994. Bath, England.

*Role of MIP-1 $\alpha$  in pulmonary inflammation during an influenza viral infection: analysis in a MIP-1 $\alpha$  knockout mouse model* (oral presentation). International Congress of Immunology, July, 1995, San Francisco, California.

*Role of MIP-1 $\alpha$ -expressing cell types in response to viral and bacterial infection*. Gordon Conference on Chemokines. June, 1996, Plymouth, New Hampshire.

*Analysis of inflammatory responses in MIP-1 $\alpha$ -deficient mice*. (invited speaker) 12th Annual New England Immunology Conference. November, 1996, Woods Hole, Massachusetts.

*Hematopoietic cell cross-transplantation studies between wild type and MIP-1 $\alpha$ -deficient mice*. (invited speaker, oral presentation) NMHCC conference, "Chemokine receptors and host cell interaction". January, 1997, Baltimore, Maryland.

*Humoral immune responses in mucosal tissue of CCR6-deficient mice*. Keystone Symposium, "Innate and acquired immune responses at mucosal surfaces" (oral presentation). Taos, New Mexico, January, 2000.

*CCR6, dendritic cell migration and mucosal immune responses*. Gordon Research Conference on chemotactic cytokines, July, 2000 (oral presentation). Meriden, Hew Hampshire.

*The genetics of the LPS response Pathway; studies of BXD recombinant inbred mice*. American Thoracic Society Conference, May, 2002, Atlanta, Georgia.

*The genetics of innate immunity in the lung* (oral presentation). Thomas L. Petty Aspen Lung Conference. June, 2002, Aspen, Colorado.

*Innate immune response genes*. Keystone Symposium. Molecular and Cellular Basis of Septic Shock, May 2003. Tahoe City, California.

*Genetic approaches to studying asthma* (invited speaker). Center for Rodent Genetics Annual Meeting, 2005, NIEHS, Research Triangle Park, NC.

*The chemokine receptor D6 regulates allergic responses in the mouse*. Keystone Symposium. Chemokines. January, 2006. Snowbird, Utah.

*Genetics of inflammatory response in the lung* (oral presentation). EPA Science Forum. April, 2006, Washington, DC.

*The role of TLR4 in human disease* (invited speaker), July, 2006. Annual meeting of the Association of Medical Laboratory Immunologists, Washington, DC.

*The chemokine receptor CCR6 is required to maintain allergic responses in the lung.* International Conference on Dendritic Cells, September, 2006, Edinburgh, Scotland.

*Innate immune control of pulmonary dendritic cell trafficking* (invited speaker) Transatlantic Airway Conference, January, 2007, Lucerne, Switzerland.

*The chemokine receptor D6 has opposing effects on allergic pulmonary inflammation and airway reactivity.* American Thoracic Society International Conference, May 2007, San Francisco, CA.

*Requirement of CCR2 for Pulmonary Dendritic Cell Migration and Allergen Sensitization Through the Airway* (oral presentation). American Thoracic Society International Conference, May 2007, San Francisco, CA.

*Allergic Sensitization through the Airway Primes an IL-17-Dependent Immune Response, Including Neutrophil Accumulation and Robust AHR* (oral presentation). American Thoracic Society International Conference, May 2008, Toronto, Canada.

*Allergic sensitization and tolerance through the airway* (invited speaker). Gordon Research Conference on Chemotactic Cytokines, September 21, 2008, Aussois, France.

*Role of Dendritic Cells in Pulmonary Inflammation.* (invited speaker) mini-symposium, *Current Concepts in Allergic and Inflammatory Dendritic Cell Activation.* American Thoracic Society International Conference, May 2009, San Diego, CA.

*Trafficking and function of pulmonary dendritic cells.* (invited speaker). Gordon Conference on Chemotactic cytokines, May, 2010, Il Ciocco, Italy.

*LPS promotes IL-35-dependent suppression of allergen-induced airway disease.* Keystone Symposia Immunity in the Respiratory Tract: Challenges of the Lung Environment (oral presentation). Feb, 2011, Vancouver, Canada.

*ICOS-B7h interactions reversibly suppress allergen-induced IL-17 secretion and airway hyperresponsiveness.* (oral presentation) American Thoracic Society International Conference. May, 2011, Denver, CO.

*Migratory properties of pulmonary dendritic cells are developmentally programmed.* (oral presentation) American Association of Immunologists Annual (AAI) Meeting. May, 2012, Boston, MA.

*Immune Responses to Inhaled Allergens are Modulated by Interactions of Microbial Products with Different Cell Types in the Lung* (invited speaker). American Thoracic Society International Conference. May, 2014, San Diego, CA.

*Finding the molecular links between house dust and asthma* (invited speaker). American Association of Immunologists (AAI) Annual Meeting. May, 2014, Pittsburgh, PA.

*Modulation of adaptive immune responses by microbial products* (invited speaker). Indoor Environment and Childhood Asthma Workshop, June, 2014, Bethesda, MD.

*Regulation of allergic airway inflammation through CD4 T cell plasticity.* (invited speaker) American Academy of Allergy, Asthma and Immunology (AAI) Annual Meeting. February, 2019, San Francisco, CA.

*Defining open chromatin using ATAC-seq: Applications to pulmonary immune responses.* (invited speaker). A researcher's guide to integrating the pulmonary 'omicsverse. American Thoracic Society (ATS) Annual Meeting. May, 2019, Dallas, TX.

*A novel dendritic cell type in the lung drives Th17 responses to inhaled allergens.* (invited speaker) Southeastern Immunology Conference, June, 2019, Emory University, Atlanta, GA.

*Allergic sensitization through the airway reveals functional diversity in lung DC2s.* American Thoracic Society 2022 International Conference, San Francisco, CA.

## **B. Universities and Research Institutions**

East Carolina University, Greenville, NC. 1993. *The role of MIP-1 $\alpha$  in hematopoiesis.*

Duke University, Durham, NC, Department of Nephrology, 1994. *Functional Analysis of MIP-1 $\alpha$  using gene targeted mice.*

University of Louisville, Louisville, KY., 1995, *Functional Analysis of MIP-1 $\alpha$  using gene targeted mice.*

University of Western Ontario, London, Ontario, Canada. 1995. A gene targeting approach to study the function of the chemokine, MIP-1 $\alpha$ .

Duke University, Department of Immunology, 1995. *Gene targeting to study chemokine function in vivo.*

The University of Alabama, Birmingham, 1996. *Gene targeting to study chemokine function in vivo.*

University of Washington, Seattle WA. 1996. *The role of MIP-1 $\alpha$  in pulmonary inflammation.*

McMaster University, Hamilton, Ontario, Canada. 1996. *The role of MIP-1 $\alpha$  in pulmonary inflammation.*

University of Virginia, Charlottesville, VA. 1996. *A gene targeting approach to study chemokine function in vivo.*

Albert Einstein College of Medicine, Yeshiva University, Bronx, NY. 1996. *A gene targeting approach to study chemokine function in vivo.*

University of Missouri, Columbia, MO., 1996. *A gene targeting approach to study chemokine function in vivo.*

Schering Plough Research Institute, Kenilworth, NJ, 1996. *Gene targeting to study chemokine function in vivo.*

University of North Carolina, Dept. of Nutrition, 2002. *CCR6 controls dendritic cell migration and immune responses in mucosal tissue.*

University of Washington, Seattle WA. 2002. *Genetic approaches to studying endotoxin-induced airway disease.*

Environmental Protection Agency, Research Triangle Park, NC, 2002. *The role of the chemokine receptor CCR6 in immune responses.*

NIEHS, Laboratory of Respiratory Biology, 2003. *Genetic regulation of endotoxin-induced airway disease.*

North Carolina Biotechnology Institute, Research Triangle Park, NC, 2003. *Combining microarrays with positional cloning to identify disease genes.*

University of North Carolina, Center for Environmental Medicine, Asthma and Lung Biology, 2006. *The function of TLR4 in allergic pulmonary inflammation.*

NIEHS, Laboratory of Molecular Carcinogenesis, 2006, *Innate immune control of pulmonary dendritic cell trafficking.*

Duke University, Visiting Pulmonary Scholar series, 2006. *CCR2 is required for dendritic cell migration and allergic sensitization through the airway.*

Duke University, Airway Biology Seminar Series, 2007. *Allergic Sensitization through the Airway.*

North Carolina State University, Department of Environmental and Molecular Toxicology. January, 2008. *Allergic Sensitization through the Airway.*

NIH, Laboratory of Molecular Immunology, National Institute of Allergy and Infectious Diseases, Bethesda, MD, April, 2008. *Allergic Sensitization and Tolerance to Inhaled Antigens.*

Trudeau Institute, Saranac Lake, NY, June, 2008. *Allergic Sensitization and Tolerance to Inhaled Antigens.*

The Hamner Institute, Research Triangle Park, NC, July, 2008. *Selective induction of Th17 immune responses to inhaled allergens.*

Duke University, Department of Immunology, October, 2008. *Allergic Sensitization and Tolerance to Inhaled Antigens.*

Duke University, Airway Biology Series, December, 2008. *Allergic Sensitization through the airway primes acute, IL-17-dependent AHR.*

University of Rochester Medical Center, Rochester, NY, January, 2009. *Allergic Sensitization through the airway primes Th17-dependent airway neutrophilia and acute AHR.*

NIH, Immunology Interest Group Seminar Series, Bethesda, MD. March, 2009. *Induction and regulation of Th17-dependent airway hyperresponsiveness.*

North Carolina State University, Department of Microbiology. April, 2009. *Induction and regulation of Th17-dependent airway hyperresponsiveness.*

NIH, Mucosal Immunology Interest Group Seminar Series, Bethesda, MD. March, 2010. *Lung resident CD103<sup>+</sup> dendritic cells prime allergic responses to inhaled antigens.*

Duke University, Pulmonary, Allergy, and Critical Care Research Conference, April, 2010. *Lung resident CD103<sup>+</sup> dendritic cells prime allergic responses to inhaled antigens.*

University of Michigan, Department of Pathology, Oct. 2010. *Induction and regulation of Th17-dependent airway hyperresponsiveness.*

Johns Hopkins University, School of Public Health, December, 2010. *Induction and regulation of Th17-dependent airway hyperresponsiveness.*

Triangle Immunology Interest Group, Feb., 2011. *Induction and regulation of Th17-dependent airway hyperresponsiveness.*

NIEHS, Laboratory of Toxicology and Pharmacology, Nov., 2011. *Induction and regulation of allergic pulmonary inflammation.*

University of Virginia, Beirne B. Carter Center for Immunology Research, Feb., 2012. *Functional specialization of dendritic cell subsets in the lung.*

Duke University, Pulmonary Biology Forum, September 14, 2012. *Pulmonary dendritic cells and allergic sensitization through the airway.*

Vanderbilt University, School of Medicine, Division of Division of Allergy, Pulmonary, and Critical Care Medicine, Pulmonary Grand Rounds, October 8, 2012. *Allergic sensitization through the airway; the interplay of dendritic cells, allergens and bacterial products.*

University of North Carolina at Chapel Hill, Microbiology and Immunology Seminar Series, October 30, 2012. *Functional specialization of dendritic cell subsets in the lung.*

University of North Carolina at Chapel Hill, Pulmonary Diseases and Critical Care Medicine, January 18, 2013. *Pulmonary dendritic cells and allergic sensitization through the airway.*

NIEHS, Laboratory of Molecular Carcinogenesis, Nov. 29, 2012. *Induction and regulation of allergic pulmonary inflammation.*

NIEHS, National Advisory Environmental Health Sciences Council, Sept. 10, 2013. *Finding the molecular links between house dust and asthma.*

Ocular Immunity and Inflammation Focus Group, Duke University. Feb. 4, 2014. *Functional specialization of dendritic cell subsets in the lung.*

Grand Rounds, Allergy, Immunology and Rheumatology, University of North Carolina at Chapel Hill. Sept. 9, 2016. *Pulmonary dendritic cells; gatekeepers to allergic sensitization through the airway.*

NIEHS, Embryonic Stem Cell and Chromatin Biology Laboratory, Oct. 13, 2016. *Pulmonary dendritic cells; gatekeepers to allergic sensitization through the airway.*

Innate Immunity Group, Duke University. Nov. 3, 2016. *Orchestration of immune responses to inhaled allergens by dendritic and epithelial cell crosstalk.*

Duke Department of Immunology Seminar Series. Apr. 10, 2018. *To each their own; towards targeted therapies for distinct asthma endotypes.*

Visiting Pulmonary Scholar Seminar Series. Keynote Speaker. Friday Center, Chapel Hill, NC. May, 2019. *To each their own; towards targeted therapies for distinct asthma endotypes.*

Marsico Lung Institute. University of North Carolina at Chapel Hill. Chapel Hill, NC. January, 2020. *Digging up the roots of asthma endotypes.*

University of Montana, November 18, 2021. *UDP-glucose and P2Y14 receptor amplify allergen-induced airway eosinophilia.*