**CURRICULUM VITAE**

**University of Alabama at Birmingham**

**School of Medicine Faculty**

Date: 9/17/2020

**PERSONAL INFORMATION**

Name: Miranda Curtiss

Citizenship: US

Foreign Languages(s): none

Home address: 1852 Montclaire Dr Vestavia AL 35216

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**RANK/TITLE**

Instructor

Department of Medicine

Division of Pulmonary, Allergy and Critical Care Medicine

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**HOSPITAL AND OTHER (NON ACADEMIC) APPOINTMENTS:**

2018-present Instructor, UAB, Birmingham AL

**PROFESSIONAL CONSULTANTSHIPS:** none

**EDUCATION:**

Year Degree Institution

2003 BA and BS University of Nebraska-Lincoln

2004 NIH/NIAID, LIG pre-IRTA postbac program

2012 MD University of Iowa Carver College of Medicine

2012 PhD University of Iowa Graduate College

2014 Internal Medicine residency University of Alabama - Birmingham

2017 Pulmonary Medicine fellowship University of Alabama - Birmingham

2018 Allergy/Immunology fellowship University of Alabama - Birmingham

**MILITARY SERVICE:** none

**LICENSURE:** Alabama MD

**BOARD CERTIFICATION:**

2015 Internal Medicine

2017 Pulmonary

2018 Allergy and Immunology

**POSTDOCTORAL TRAINING:**

Year Degree Institution

2014 Residency UAB

2017 Pulmonary Fellowship UAB

2018 Allergy and Immunology UAB

Fellowship

2016-current Frances Lund Lab UAB

**ACADEMIC APPOINTMENTS:** (In reverse chronological order)

Year Rank/Title Institution

2018 Instructor UAB

**AWARDS/HONORS:**

1999 National Merit Scholarship Finalist

1999 – 2003 Peter Kiewit Scholarship

1999 – 2003 UNL Regent’s Scholarship

1999 – 2003 UNL Honors Program Scholarship

1999 – 2000 Chancellor’s Leadership Award Scholarship

2003 Phi Beta Kappa induction

2003 UNL - graduation with honors and high distinction

2005 UI College of Medicine annual medical student research day outstanding

poster presentation award

2012 American Academy of Allergy, Asthma, and Immunology (AAAAI)

Chrysalis Award

*Travel awards*

2014, 2015, American College of Asthma Allergy and Immunology (ACAAI) Travel Grant

2016 Awardee

2015, 2016, AAAAI Travel Grant Awardee

2017, 2018

**PROFESSIONAL SOCIETIES:** AAAAI, ACAAI, ASAI, ATS, CHEST, FOCIS, Alabama Medical Society (Jefferson County)

**MEMBERSHIPS:**

2003 Phi Beta Kappa

**COUNCILS AND COMMITTEES:** none

**UNIVERSITY ACTIVITIES:**

2019 Poster session facilitator for Internal Medicine Research Day

**EDITORIAL BOARD MEMBERSHIPS:** none

**MAJOR RESEARCH INTERESTS:** (2-3 sentences)

I am interested in mechanisms by which dendritic cells prime Th2 cells with the intent of identifying pathways to target to reduce the morbidity of allergic diseases. We have identified a key mediator expressed not only by dendritic cells but also by CD4+ T cells critical to this process and have been characterizing the mechanisms that this mediator regulates.

**TEACHING EXPERIENCE:**

2002, 2003 Teaching assistant for Introduction to Genetics

2003 Teaching assistant for Introduction to Biology

2005 Tutor for Medical Genetics

2006-2007, Tutor for Medical Immunology

2009-2011

2007 Teaching assistant for Graduate Immunology I

2009-2011 Small Group Facilitator for Medical Immunology

*Invited educational lectures:*

2011 Medical Immunology

2012 MSTP Grand Rounds

2013-2016 PRIME (Pre-Matriculation in Medical Education) summer program

2013 Internal Medicine Residency Noon Conference

2019 SHPEP (Summer Health Professions Education Program)

2019 GBS742 Dendritic Cell Biology

2020 Pulmonary Fellowship Master Clinician Series – Asthma (*scheduled fall 2020*)

2020 GBS742 Dendritic Cell Biology (*scheduled for Nov 2020*)

**MAJOR LECTURES AND VISITING PROFESSORSHIPS: none**

**GRANT SUPPORT: (PAST AND CURRENT):**

2001 – 2003 UCARE grant *“Alcohol Dehydrogenase Mutants in Maize”*

2006 – 2009 Pulmonary Pre-doctoral Training Grant (PI Gary Hunninghake)

2016 – 2017 Pulmonary Training Grant T32 2T32HL105346 (PI Victor Thannickal)

2017 – 2019 Walter B. Frommeyer, Jr., Fellowship in Investigative Medicine

2017 – 2018 Dixon Fellowship Training award

2020 – current ALA/AAAAI Allergic Respiratory Disease Award

**OTHER: none**

**BIBLIOGRAPHY:**

**MANUSCRIPTS:**

1. Hough, K.P., **Curtiss, M**., Blain T.J., Liu, R-M., Trevor J., Deshane, J.S., and V.J. Thannickal. Airway remodeling in Asthma. Frontiers in Medicine, Invited Review. 2020;7:191. PMID: 32509793.
2. Hough KP, Wilson LS, Trevor JL, Strenkowski JG, Maina N, Kim YI, Spell ML, Wang Y, Chanda D, Dager JR, Sharma NS, **Curtiss M**, Antony VB, Dransfield MT,Chaplin DD, Steele C, Barnes S, Duncan SR, Prasain JK, Thannickal VJ, Deshane JS. Unique Lipid Signatures of Extracellular Vesicles from the Airways of Asthmatics. Sci Rep. 2018 Jul 9;8(1):10340. doi: 10.1038/s41598-018-28655-9. PubMed PMID: 29985427; PubMed Central PMCID: PMC6037776.
3. **Curtiss ML**, Gorman JV, Businga TR, Traver G, Singh M, Meyerholz DK, Kline JN, Murphy AJ, Valenzuela DM, Colgan JD, Rothman PB, Cassel SL. Tim-1 regulates Th2 responses in an airway hypersensitivity model. Eur J Immunol. 2012 Mar;42(3):651-61. doi: 10.1002/eji.201141581. PubMed PMID: 22144095; PubMed

Central PMCID: PMC3528103.

1. **Curtiss ML**, Hostager BS, Stepniak E, Singh M, Manhica N, Knisz J, Traver G, Rennert PD, Colgan JD, Rothman PB. Fyn binds to and phosphorylates T cell immunoglobulin and mucin domain-1 (Tim-1). Mol Immunol. 2011 Jul;48(12-13):1424-31. doi: 10.1016/j.molimm.2011.03.023. Epub 2011 Apr 21. PubMed PMID: 21513984; PubMed Central PMCID: PMC3109159.
2. Collins M, Tremblay M, Chapman N, **Curtiss M**, Rothman PB, Houtman JC. The T cell receptor-mediated phosphorylation of Pyk2 tyrosines 402 and 580 occurs via a distinct mechanism than other receptor systems. J Leukoc Biol. 2010 Apr;87(4):691-701. doi: 10.1189/jlb.0409227. Epub 2009 Dec 22. PubMed PMID: 20028775.
3. **Curtiss M**, Colgan J. The role of the T-cell costimulatory molecule Tim-1 in the immune response. Immunol Res. 2007;39(1-3):52-61. Review. PubMed PMID:17917055.
4. Botta D., Schultz, M.D.,  Peng R., Tyagi G., Dadali T.,  **Curtiss M.L.**, Phillips J.E., Harris P., Renteria L., Burns L., Thannickal V.J., André Ballesteros-Tato A., Stevenson C.S., Lund F.E., and C.M.T. Bauer. Calcium regulation of TGFß-driven fibroblast activation is dependent on TRPM2. Journal of Clinical Investigation, *manuscript in preparation.*
5. Mackel, J.J., J.M. Garth, J.P. Blackburn, Z. Yu, S. Matalon, **M. Curtiss**, F.E. Lund and C. Steele. The chitinase-like protein breast regression protein-39 (BRP-39) is required for limiting airway hyperreactivity during allergic fungal asthma. Journal of Immunology. *Manuscript in preparation.*
6. **Curtiss, M.L.**, Ballesteros Benavides, N., Rosenberg A., Ptacek T., Humbles A., Steele C., León B., Ballesteros-Tato A., Randall T.D., Lund F.E. T cell and dendritic cell expression of Chi3l1 regulates immunity to helminths. Cell Host and Microbe. *Manuscript in preparation*
7. **Curtiss, M.L.**, Ballesteros Benavides, N., Rosenberg A., Ptacek T., Scharer, C., León B., Ballesteros-Tato A., Randall T.D., Lund F.E. DC transcriptome analysis in host defense reveals Cxcr5-dependent Chi3l1 expression in Th2-priming pathogenic infections. Journal of Immunology. *Manuscript in preparation*

**Published abstracts:**

1. **Curtiss ML,** Anderson JT, Hwangpo T. Infection as the culprit in angioedema. Annals of Allergy, Asthma & Immunology. 2014;113(5,Supplement):A83-4.
2. **Curtiss ML,** Mooney JH, Coomer C, Minnich D, Jaber W. Streptococcal lymphadenitis as a mimic of fibrosing mediastinitis. Am J Respir Crit Care Med 191;2015:A1809.
3. **Curtiss ML**, Hopper SP, Atkinson TP. Management of cutaneous mastocytosis with systemic tacrolimus. Annals of Allergy, Asthma & Immunology. 2015;115(5,Supplement):A78-9.
4. **Curtiss ML**, Szymanska E, Hwangpo T *et al*. The danger of vaccination by autopilot. Journal of Allergy and Clinical Immunology. 2016;137(2,supplement):AB170.
5. **Curtiss ML**, Wang Y, Zhi D, Wang F, Anderson JT, Dransfield MT, Deshane JS, Trevor J. Clinical symptom burden in severe asthmatics one year after completion of bronchial thermoplasty. Am J Respir Crit Care Med 2016;193:A1317.
6. Trevor J, Zhi D , Wang F, Dransfield MT, **Curtiss M**, Deshane J. Longitudinal Changes In Proportions Of Regulatory T Cell And Myeloid Cell Populations Following Bronchial Thermoplasty. Am J Respir Crit Care Med 2016;193:A1335.
7. Deshane JS, Trevor J, Wang Y, Zhi D, **Curtiss M**, Wang F, Eipers PG, William V, Morrow C, Dransfield MT. Longitudinal Changes In Airway Microbiome Signatures And Immunoregulatory Cell Dynamics Following Bronchial Thermoplasty. Am J Respir Crit Care Med 2016;193:A1057
8. Hough KP, Chanda D, Trevor J, Wang Y, **Curtiss M**, Antony VB, Dransfield MT, Steele C, Duncan SR, Thannickal VJ, Deshane JS. Exosomes And T Helper Cell Polarization In Asthma. Am J Respir Crit Care Med 2016;193:A2601.
9. **Curtiss ML**, Maina N, Bonner JR. Importance of oral food challenge in diagnosis of adult food allergy. Annals of Allergy, Asthma & Immunology. 2016;117(5,Supplement):S110.
10. **Curtiss ML**, Descartes M, Korf B, Atkinson TP. A child with hyper-IgM syndrome and multiple endocrinopathies with mutations in signal transducer and activator 5B (*STAT5B*), phosphatidylinositol 3-kinase catalytic subunit delta (*PIK3CD*) and phosphatidylinositol 3-kinase regulatory subunit 1 (*PIK3R1*). Journal of Allergy and Clinical Immunology 2017;139(2,supplement):AB172.
11. **Curtiss ML,** Ptacek T, Leon B, Ballesteros-Tato A, Randall TD, Lund FE.Location Dependent Signals Fine-tune Dendritic Cell Control of Th2 Responses. Am J Respir Crit Care Med 2017, 195:A6993.
12. **Curtiss ML,** Ptacek T, Rosenberg, A, Scharer C, Silberger D, Weaver CT, Lund FE.Transcriptional features of Th2 and Th17-priming dendritic cells. Journal of Allergy and Clinical Immunology 2018;141(2,supplement):AB125.
13. Botta D, Peng R, Tyagi G, Schultz MD, **Curtiss ML**, Dadali T, phillips JE, Harris P, Renteria L, Burns L, Stevenson CS, Lund FE, Bauer CM. The Redox-Sensitive cation Channel TRPM2 Regulates TGF-b-Induced Fibroblast Activation and Protects Against Bleomycin-Induced Pulmonary Fibrosis. Am J Respir Crit Care Med 2018, 197:A1046.
14. **Curtiss ML,** Leon B, Ballesteros-Tato A, Randall TD, Lund FE. Location Dependent Signals Fine-tune Dendritic Cell Control of Th2 Responses. Am J Respir Crit Care Med 2018, 197:A1269.
15. **Curtiss ML,** Benavides Ballesteros N, Mosseau B, Leon B, Ballesteros-Tato A, Steele C, Humbles A, Randall T, Lund FE. Hematopoetic expression of Chi3l1 (BRP-39) is required for helminth immunity. Journal of Allergy and Clinical Immunology 2020, 145(2 supplement):AB342.

**Poster Exhibits:**

1. **Curtiss ML,** Anderson JT, Hwangpo T. Infection as the culprit in angioedema. ACAAI 2014 Atlanta, GA
2. **Curtiss ML,** Mooney JH, Coomer C, Minnich D, Jaber W. Streptococcal lymphadenitis as a mimic of fibrosing mediastinitis. ATS 2015 Denver CO
3. **Curtiss ML**, Hopper SP, Atkinson TP. Management of cutaneous mastocytosis with systemic tacrolimus. ACAAI 2015 San Antonio, TX
4. **Curtiss ML**, Szymanska E, Hwangpo T *et al*. The danger of vaccination by autopilot. AAAAI 2016 Los Angeles CA
5. **Curtiss ML**, Wang Y, Zhi D, Wang F, Anderson JT, Dransfield MT, Deshane JS, Trevor J. Clinical symptom burden in severe asthmatics one year after completion of bronchial thermoplasty. ATS 2016 San Francisco CA
6. Trevor J, Zhi D , Wang F, Dransfield MT, **Curtiss M**, Deshane J. Longitudinal Changes In Proportions Of Regulatory T Cell And Myeloid Cell Populations Following Bronchial Thermoplasty. ATS 2016 San Francisco CA
7. Deshane JS, Trevor J, Wang Y, Zhi D, **Curtiss M**, Wang F, Eipers PG, William V, Morrow C, Dransfield MT. Longitudinal Changes In Airway Microbiome Signatures And Immunoregulatory Cell Dynamics Following Bronchial Thermoplasty. ATS 2016 San Francisco CA
8. Hough KP, Chanda D, Trevor J, Wang Y, **Curtiss M**, Antony VB, Dransfield MT, Steele C, Duncan SR, Thannickal VJ, Deshane JS. Exosomes And T Helper Cell Polarization In Asthma. ATS 2016 San Francisco CA
9. **Curtiss ML**, Szymanska E, Hwangpo T *et al*. The danger of vaccination by autopilot. UAB/Vanderbilt Pulmonary Update 2016 Nashville TN
10. **Curtiss ML**, Wang Y, Zhi D, Wang F, Anderson JT, Dransfield MT, Deshane JS, Trevor J. Clinical symptom burden in severe asthmatics one year after completion of bronchial thermoplasty. UAB/Vanderbilt Pulmonary Update 2016 Nashville TN
11. **Curtiss ML,** Ptacek T, Leon B, Ballesteros-Tato A, Randall TD, Lund FE.Location Dependent Signals Fine-tune Dendritic Cell Control of Th2 Responses. UAB/Vanderbilt Pulmonary Update 2016 Nashville TN
12. **Curtiss ML,** Ptacek T, Leon B, Ballesteros-Tato A, Randall TD, Lund FE.Location Dependent Signals Fine-tune Dendritic Cell Control of Th2 Responses. Southeast Medical Scientist Symposoium 2016 Birmingham AL
13. **Curtiss ML**, Maina N, Bonner JR. Importance of oral food challenge in diagnosis of adult food allergy. ACAAI 2016 San Francisco CA
14. **Curtiss ML,** Ptacek T, Leon B, Ballesteros-Tato A, Randall TD, Lund FE.Location Dependent Signals Fine-tune Dendritic Cell Control of Th2 Responses. UAB Internal Medicine Trainee Research Symposium 2017 Birmingham AL
15. **Curtiss ML,** Ptacek T, Leon B, Ballesteros-Tato A, Randall TD, Lund FE.Location Dependent Signals Fine-tune Dendritic Cell Control of Th2 Responses. UAB Pulmonary Update 2017 Birmingham AL
16. **Curtiss ML**, Maina N, Elmagboul N, Leisch L, Holland S, Hwangpo T. A patient with GATA-2 deficiency presenting with pancytopenia, vasculitis and fever of unknown origin. WAO 2018 Orlando FL
17. **Curtiss ML,** Ptacek T, Rosenberg, A, Scharer C, Silberger D, Weaver CT, Lund FE.Transcriptional features of Th2 and Th17-priming dendritic cells. AAAAI 2018 Orlando FL
18. **Curtiss ML,** Leon B, Ballesteros-Tato A, Randall TD, Lund FE. Location Dependent Signals Fine-tune Dendritic Cell Control of Th2 Responses. ATS 2018 San Diego CA
19. **Curtiss ML,** Ptacek T, Leon B, Ballesteros-Tato A, Randall TD, Lund FE.Location Dependent Signals Fine-tune Dendritic Cell Control of Th2 Responses. UAB Internal Medicine Trainee Research Symposium 2018 Birmingham AL
20. **Curtiss ML,** Ptacek T, Rosenberg, A, Scharer C, Silberger D, Weaver CT, Lund FE.Transcriptional features of Th2 and Th17-priming dendritic cells. UAB Pediatric Science Day 2018 Birmingham AL
21. **Curtiss ML,** Benavides Ballesteros N, Mosseau B, Leon B, Ballesteros-Tato A, Steele C, Humbles A, Randall T, Lund FE. Hematopoetic expression of Chi3l1 (BRP-39) is required for helminth immunity. AAAAI 2020 Philadelphia PA (e-poster) late-breaking abstract session.

**ORAL PRESENTATIONS:**

*Scientific papers presented at national and international meetings*

1. **Curtiss, Miranda L**. “A child with hyper-IgM syndrome and multiple endocrinopathies with mutations in signal transducer and activator 5B (*STAT5B*), phosphatidylinositol 3-kinase catalytic subunit delta (*PIK3CD*) and phosphatidylinositol 3-kinase regulatory subunit 1 (*PIK3R1*)”. AAAAI Atlanta, GA. 2017
2. **Curtiss, Miranda L.** “Location dependent signals fine-tune dendritic cell antigen presentation and regulate Th2 development”. ATS mini-symposium Washington, D.C. 2017

*Scientific papers presented at local and regional meetings*

1. **Curtiss, Miranda L.** Location Dependent Signals Fine-tune Dendritic Cell Control of Th2 Responses. UAB Pulmonary Update 2017 Birmingham AL

*Invited workshops, etc. at national postgraduate courses and meetings and at other universities*

*Invited lectures at local and regional courses and meetings*

1. **Curtiss, Miranda L.** Location Dependent Signals Fine-tune Dendritic Cell Control of Th2 Responses. UAB Pulmonary Grand Rounds 2018 Birmingham AL
2. **Curtiss, Miranda L.** A Case of Bronchiectasis. ASAI 2018 Destin FL
3. **Curtiss, Miranda L.** Treatment of Asthma and Allergic Conditions in Alpha-1. Alpha-1 Education Day (Alpha-1 Foundation) 2020 Birmingham AL
4. **Curtiss, Miranda L.** Role of Chi3l1 in host defense and allergic disease. UAB Program in Immunology seminar *(schedule for 10/22/2020, rescheduled from April 2020 due to COVID 19)*

**MISCELLANEOUS:**

**Proxy attendee to the 6/28/2017 PICORI meeting on the PREPARE trial in Boston, MA**