

Benyam Muluneh, PharmD, BCOP, CPP
301 Pharmacy Lane, CB 7569
University of North Carolina Eshelman School of Pharmacy
Office Phone: (919) 962-0070
Email: bmuluneh@unc.edu

Education and Training

ASHP Accredited PGY2 Hematology/Oncology Specialty Residency July 2011- June 2012

University of North Carolina Hospitals
Chapel Hill, North Carolina

ASHP Accredited PGY1 Pharmacy Practice Residency June 2010 – July 2011

University of North Carolina Hospitals
Chapel Hill, North Carolina

Doctor of Pharmacy August 2006 – May 2010

University of North Carolina Eshelman School of Pharmacy
Chapel Hill, North Carolina

College of Arts and Sciences August 2004 - May 2006

Pre-Pharmacy Undergraduate Coursework
University of North Carolina
Chapel Hill, North Carolina

Licensure and Certification

Mental Health First Aid August 2021 – Present

Lean Six Sigma Certification October 2017 – Present
Purple Belt, Yellow Belt

Board Certified Oncology Pharmacist December 2013 – Present
Credential number: 5130125

Clinical Pharmacist Practitioner December 2012 - Present
License number: 0070-00323

North Carolina Pharmacy Licensure July 2010 - Present
License number: 21097

Pharmacy Based Immunization Delivery Certification 2008 - 2010
Provided by American Pharmacists Association

Basic Life Support 2007 – 2009
American Heart Association

Professional Development

Mentored Research Investigator Training (MeRIT) June 2018 – October 2019
Provided by American College of Clinical Pharmacy
Mentors: Jennifer Elston-Lafata, PhD; Alan Zillich, PharmD, FCCP

Teaching Certificate Program

University of North Carolina Eshelman School of Pharmacy
Mentor: Christine Walko, PharmD, BCOP

July 2011-June 2012

Professional Experience and Appointments

Associate Member, Cancer Prevention and Control

University of North Carolina Lineberger Comprehensive Cancer Center
Chapel Hill, North Carolina

November 2020 – Present

Assistant Professor

Division of Pharmacotherapy and Experimental Therapeutics
University of North Carolina Eshelman School of Pharmacy
Chapel Hill, North Carolina

July 2019 - Present

Assistant Professor of Clinical Education

Division of Practice Advancement and Clinical Education
University of North Carolina Eshelman School of Pharmacy
Chapel Hill, North Carolina

May 2018 – June 2019

Clinical Pharmacist Practitioner

Malignant Hematology Clinic
University of North Carolina Medical Center
Chapel Hill, North Carolina

October 2012 - Present

Adjunct Assistant Professor

Division of Practice Advancement and Clinical Education
University of North Carolina Eshelman School of Pharmacy
Chapel Hill, North Carolina

January 2013 - April 2018

Clinical Instructor

Division of Practice Advancement and Clinical Education
University of North Carolina Eshelman School of Pharmacy
Chapel Hill, North Carolina

June 2010 – June 2012

Staff Pharmacist

University of North Carolina Hospitals
Chapel Hill, North Carolina

June 2010–Sept 2012

Pharmacy Intern

CVS Pharmacy #1832, 1391, 3880
Woodbridge, Virginia & Greensboro, North Carolina

June 2007 - May 2010

Lab Assistant

University of North Carolina Eshelman School of Pharmacy
PIs: Roy Hawke, PharmD, PhD; PI: Kim Brouwer, PharmD, PhD

August 2004 - May 2005;
August 2005 - May 2006

Awards and Honors

Quality Research Certificate Winner

Hematology Oncology Pharmacy Association (HOPA)

March 2023

Worthy of Recognition for Teaching

PHCY 631, PHCY 502

2021 – 2022

Academic Excellence Award – Research UNC Eshelman School of Pharmacy	August 2022
ASHP Best Practices Award (Senior Author) <i>Pharmacist-Led Program Leads to Safe and Efficient Outpatient Initiation of AML Venetoclax-Based Regimen</i> American Society of Health-System Pharmacists	December 2021
Worthy of Recognition for Teaching PHCY 502, PHCY 510, PHCY 631, PHCY 822 UNC Eshelman School of Pharmacy Chapel Hill, NC	2020 – 2021
Worthy of Recognition for Teaching PHCY 502, PHCY 611, PHCY 510, PHCY 631, PHCY 822 UNC Eshelman School of Pharmacy Chapel Hill, NC	2019 – 2020
Best Paper Award - Research International Society of Oncology Pharmacist Practitioners London, United Kingdom	October 2019
UNC Pharmacy Residency Preceptor of the Year University of North Carolina Medical Center Chapel Hill, NC	June 2019
UNC Oncology Excellence Award Nominee University of North Carolina Cancer Hospital Chapel Hill, NC	September 2017
HOPA Patient Advocacy Award Hematology Oncology Pharmacists Association, Chicago, IL	March 2016
HOPA Travel Grant Hematology Oncology Pharmacists Association	January 2016
ASHP Best Practices Award (Lead) <i>Impact of an Integrated, Closed-loop, Pharmacy-led Oral Chemotherapy Program on Clinical and Financial Outcomes</i> American Society of Health-System Pharmacists	December 2015
Buxton Williams Hunter Award University of North Carolina Eshelman School of Pharmacy	May 2010
Howard and Mescal Ferguson Scholarship University of North Carolina Eshelman School of Pharmacy	August 2008, August 2009
Kappa Epsilon Award University of North Carolina Eshelman School of Pharmacy	April 2009
Student National Pharmaceutical Association Scholarship University of North Carolina Eshelman School of Pharmacy	April 2009

Kroger “Future Pharmacists, Future Leaders” Endowed Scholarship

Student National Pharmaceutical Association

July 2008, July 2009

Phi Lambda Sigma

University of North Carolina Eshelman School of Pharmacy
Chapel Hill, North Carolina

Inducted April 2008

National Pharmaceutical Association Presidential Scholarship

Student National Pharmaceutical Association
Fort Lauderdale, Florida

July 2007

Peer-Reviewed Publications

(*contributed equally)

1. Zunich R, Roberts MC, Blanchard C, **Muluneh B**, Carlson RB, Helms T. Scoping Review to Inform the Future Development of a Measure for Team-Based Care in Oncology. *JCO Oncol Pract*. 2023 Jan;19(1):e43-e52. doi: 10.1200/OP.22.00308. Epub 2022 Dec 7.
2. Harris V, Borlagdan J, **Muluneh B**. Oral oncolytic treatment for chronic lymphocytic leukemia. *J Oncol Pharm Pract*. 2022 Jun;28(4):935-944. doi: 10.1177/10781552211073906. Epub 2022 Jan 27
3. Belcher SM*, Mackler E*, **Muluneh B***, Ginex PK, Anderson MK, Bettencourt E, DasGupta RK, Elliott J, Hall E, Karlin M, Kostoff D, Marshall VK, Millisor VE, Molnar M, Schneider SM, Tipton J, Yackzan S, LeFebvre KB, Sivakumaran K, Waseem H, Morgan RL. ONS Guidelines™ to Support Patient Adherence to Oral Anticancer Medications. *Oncol Nurs Forum*. 2022 Jun 17;49(4):279-295. doi: 10.1188/22.ONF.279-295.
4. Levy S, Fentie AM, Buhlinger K, Clark SM, Korones DN, Miller V, Alexander TB, Weitzman S, Bekele W, Broas J, Shad A, Roberts M, Chargualaf M, Fufa D, Hailu T, Yimer MA, Mustefa M, Said Gidey AM, Dinkiyie AM, Adam H, Hailu D, **Muluneh B**. Ethiopian paediatric oncology registry progress report: documentation practice improvements at tertiary care centre in Addis Ababa, Ethiopia. *Arch Dis Child*. 2021 Dec;106(12):1244-1245. doi: 10.1136/archdischild-2021-322485.
5. Sun Y, Hendrix A, **Muluneh B**, Ozawa S. Online Pharmacy Accessibility of Imatinib, An Oral Chemotherapy Medication. *J Natl Compr Canc Netw*. 2022 Jul;20(7):808-814. doi: 10.6004/jnccn.2022.7007.
6. **Muluneh B**. Enhancing the Design and Evaluation of Care Delivery for Patients on Oral Anticancer Agents. *J Natl Compr Canc Netw*. 2022 Oct;20(10):1185-1187. doi: 10.6004/jnccn.2022.7076.
7. Cozad M, Stump SE, Buhlinger K, Collins J 4th, Muir M, Coombs CC, **Muluneh B**. Evaluation of an interdisciplinary venetoclax initiation process in minimizing risk of tumor lysis syndrome. *Leuk Lymphoma*. 2022 Aug;63(8):1831-1838. doi: 10.1080/10428194.2022.2047963. Epub 2022 Mar 9.
8. Richardson DR, Parish PC, Tan X, Fabricio J, Andreini CL, Hicks CH, Jensen BC, **Muluneh B***, Zeidner JF*. Association of QTc Formula With the Clinical Management of Patients With Cancer. *JAMA Oncol*. 2022 Nov 1;8(11):1616-1623. doi: 10.1001/jamaoncol.2022.4194.

9. Stocker KJ, Tiemann A, Brunk KM, Agegnehu B, Buhlinger K, Amerine L, Roberts MC, McLaughlin JE, Clark SM, Rose R, Mekonnen B, Bhakta N, Fentie AM, Alexander TB, Ozawa S, Chargualaf M, **Muluneh B**. Processes and perceptions of chemotherapy supply chain in Ethiopia: A mixed-method study. *J Oncol Pharm Pract*. 2022 Oct 27;10781552221134254. doi: 10.1177/10781552221134254.
10. Collins J 4th, Stump SE, Heiling H, Muir M, Deal A, Proco D, Nguyen C, Cozad M, Mato A, Coombs CC, **Muluneh B**. Impact of adherence to ibrutinib on clinical outcomes in real-world patients with chronic lymphocytic leukemia. *Leuk Lymphoma*. 2022 Aug;63(8):1823-1830. doi: 10.1080/10428194.2022.2045597. Epub 2022 Mar 6.
11. Elston Lafata J, Nguyen B, Staresinic C, Johnson M, Gratie D, **Muluneh B**. Interpersonal communication-, education- and counselling-based interventions to support adherence to oral anticancer therapy: a systematic review. *J Oncol Pharm Pract*. 2022 Jan 20;10781552211073576. doi: 10.1177/10781552211073576.
12. Fentie AM, Mekonen ZT, Gizachew Z, Hailemariam M, Clark SM, Richardson J, **Muluneh B**. Chemotherapy supply chain management, safe-handling and disposal in Ethiopia: the case of Tikur Anbessa specialized hospital. *Pediatr Hematol Oncol*. 2022 Oct 29;1-9. doi: 10.1080/08880018.2022.2139028.
13. Ochs MA, Marini BL, Benitez LL, Stump SE, Weis TM, Buhlinger KM, Diaz T, Reid JH, **Muluneh B**, Pettit K, Burke P, Bixby DL, Perissinotti AJ. Multicenter comparison of first salvage chemotherapy versus novel therapy regimens in adult relapsed/refractory acute lymphoblastic leukemia. *Leuk Lymphoma*. 2022 Aug;63(8):1839-1848. doi: 10.1080/10428194.2022.2053530. Epub 2022 Mar 28.
14. **Muluneh B**. Virtues of Ruth. *J Clin Oncol*. 2021 Oct 14;:JCO2101909. doi: 10.1200/JCO.21.01909.
15. Szeto AH, Bucci T, Deal A, Zhu A, Ahmad M, Cass AS, Sketch MR, Kemper R, Zeidner JF, Foster MC, **Muluneh B**, Crona DJ. Response to Tyrosine Kinase Inhibitors in Real-World Patients With Chronic Myeloid Leukemia. *Ann Pharmacother*. 2021 Sep 18;:10600280211044160. doi: 10.1177/10600280211044160.
16. Palmer S, Chen A, Dennison T, Czech C, Auten J, Buhlinger K, **Muluneh B**. Impact of Oncology Pharmacists on the Knowledge, Attitude, and Practices of Clinicians to Enhance Patient Engagement of Self-Administered Oral Oncolytics. *Pharmacy (Basel)*. 2021 Jul 23;9(3). doi: 10.3390/pharmacy9030130. Review. PubMed PMID: 34449698.
17. Dennison T, Deal A, Foster M, Valgus, J, Deal A, **Muluneh B**. A Pharmacist-Led Oral Chemotherapy Program Impact on Chronic Myeloid Leukemia Patient Satisfaction, Adherence, and Outcomes. *Journal of the Advanced Practitioner in Oncology*. *J Adv Pract Oncol*. 2021 Mar;12(2):148-157. doi: 10.6004/jadpro.2021.12.2.3.
18. **Muluneh B**. Financial Toxicity in Cancer Patients: What a Tangled Web We Weave. *J Natl Compr Canc Netw*. 2021 Jan 6;19(1):3-5. doi: 10.6004/jnccn.2020.7649
19. Garner LM, Kline T, Miller J, Deal A, Zhu A, Sketch M, Coombs C, **Muluneh B**. Impact of adherence to ibrutinib on clinical outcomes in real-world patients with chronic lymphocytic leukemia. *J Adv Pract Oncol* 2021;12(1):20–28. doi: 10.6004/jadpro.2021.12.1.2

20. Dusetzina S, **Muluneh B**, Keating N, Huskamp H. Broken Promises: How Medicare Part D Has Failed to Deliver Savings to Older Adults.” *New England Journal of Medicine*. *N Engl J Med*. 2020 Dec 10;383(24):2299-2301. doi: 10.1056/NEJMp2027580
21. Buhlinger KM, Borlagdan J, Agegnehu B, Fentie AM, Bernstein AT, Urick BY, Roberts M, Weitzman S, Bekele W, Korones D, Alexander TB, Broas J, Shad A, Dinkiyie AM, Clark SM, Adam H, Hailu D, **Muluneh B**. Results of a pre-implementation analysis of Ethiopia's National Pediatric Cancer Registry. *J Oncol Pharm Pract*. 2020 Dec 20;1078155220980051. doi: 10.1177/1078155220980051
22. Wind L, Knight T, Auten J, Bates J, Marucci L, Creedle C, Foster M. **Muluneh B**. Evaluation and Optimization of a Clinical Pharmacist Driven Transitions of Care Model for Malignant Hematology. *J Oncol Pharm Pract*. 2020 Apr 14;1078155220916516. doi: 10.1177/1078155220916516.
23. Chen KY, Brunk KM, Patel BA, Stocker KJ, Auten JJ, Buhlinger KM, **Muluneh B**. Pharmacists' Role in Managing Patients with Chronic Lymphocytic Leukemia. *Pharmacy (Basel)*. 2020 Mar 27;8(2):52. doi: 10.3390/pharmacy8020052.
24. Cole AL, Wood WA Jr, **Muluneh B**, Lund JL, Elston Lafata J, Dusetzina SB. Comparative Safety and Health Care Expenditures Among Patients with Chronic Myeloid Leukemia Initiating First-Line Imatinib, Dasatinib, or Nilotinib. *JCO Oncol Pract*. 2020 May;16(5):e443-e455. doi: 10.1200/JOP.19.00301.
25. Mulu Fentie A, Buhlinger K, Borlagdan J, Bernstein A, Weitzman, S, Bekele W, Korones D, Alexander TB, Broas J, Shad A, Dinkiyie AM, Hailu D, **Muluneh B**. Pre-implementation assessment of a national Ethiopian pediatric cancer registry. *Blood Adv*. 2019;3(Suppl 1):16–19. doi:10.1182/bloodadvances.2019GS121614
26. Esparza S, **Muluneh B**, Galeotti J, Matson M, Richardson DR, Montgomery ND, Coombs CC, Jamieson K, Foster MC, Zeidner JF. Venetoclax-induced tumour lysis syndrome in acute myeloid leukaemia. *Br J Haematol*. 2020;188(1):173–177. doi:10.1111/bjh.16235
27. Trantham T, Auten J, **Muluneh B**, Van Deventer H. Ruxolitinib for the treatment of lymphoma-associated hemophagocytic lymphohistiocytosis: A cautionary tale [published online ahead of print, 2019 Oct 1]. *J Oncol Pharm Pract*. 2019; doi:10.1177/1078155219878774
28. **Muluneh B**, Richardson DR, Hicks C, Jensen BC, Zeidner JF. Trials and Tribulations of Corrected QT Interval Monitoring in Oncology: Rationale for a Practice-Changing Standardized Approach. *J Clin Oncol*. 2019;37(30):2719–2721. doi:10.1200/JCO.19.00922.
29. Mackler E, Segal EM, **Muluneh B**, Jeffers K, Carmichael J. 2018 Hematology/Oncology Pharmacist Association Best Practices for the Management of Oral Oncolytic Therapy: Pharmacy Practice Standard. *J Oncol Pract*. 2019 Apr;15(4):e346-e355.
30. Bates J, Auten J, Sketch MR, Patel T, Clark SM, Morgan KP, **Muluneh B**, McLaughlin JE, Pinelli NR, Foster MC, Amerine LA. Patient engagement in first cycle comprehensive chemotherapy consultation pharmacist services and impact on patient activation. *J Oncol Pharm Pract*. 2019 Jun;25(4):896-902.
31. Copeland AC, Foster MC, **Muluneh B**, Xenakis JG, Ivanova A, Frankfurt O, Clayton M, Black A, Rapchak B, Wehbie RS. The utility of a telemedicine platform to monitor adherence and adverse effects of tyrosine kinase inhibitors. *Leuk Lymphoma*. 2019 Jul;60(7):1842-1844.

32. Chargualaf MJ, Giao TT, Abrahamson AC, Steeb D, Law M, Bates J, Nedi T, **Muluneh B**. Layered learning pharmacy practice model in Ethiopia. *J Oncol Pharm Pract*. 2019;25(7):1699–1704.
33. **Muluneh B**, Schneider M, Faso A, Amerine L, Daniels R, Crisp B, Valgus J, Savage S. Improved Adherence Rates and Clinical Outcomes of an Integrated, Closed-Loop, Pharmacist-Led Oral Chemotherapy Management Program. *J Oncol Pract*. 2018;14(6):e324-e334.
34. Yogarajah M, Montgomery N, Matson M, Blanchard L, Frank C, Gallagher S, Pepin K, Vaught L, **Muluneh B**, Foster M, Zeidner J. Clonal evolution of Philadelphia chromosome in acute myeloid leukemia after azacitidine treatment. *Leukemia & Lymphoma*. 2018 May 11:1-3. 9. [Epub ahead of print], doi: 10.1080/10428194.2018.1459614.
35. **Muluneh B**, Buhlinger K, Deal AM, Zeidner JF, Foster MC, Jamieson KJ, Bates J, Van Deventer HW. A Comparison of Clofarabine-based (GCLAC) and Cladribine-based (CLAG) Salvage Chemotherapy for Relapsed/Refractory AML. *Clin Lymphoma Myeloma Leuk*. 2018;18(1):e13-e18. Epub 2017 Sep 22, doi: 10.1016/j.clml.2017.09.016.
36. Mitchell A, **Muluneh B**, Patel R, Basch E. Pharmaceutical assistance programs for cancer patients in the era of orally administered chemotherapeutics. *J Oncol Pharm Pract*. 2018;24(6):424-432. Epub 2017 Jul 17, doi: 10.1177/1078155217719585.
37. Morgan KP, **Muluneh B**, Deal AM, Amerine LB. Impact of an integrated oral chemotherapy program on patient adherence. *J Oncol Pharm Pract*. 2018;24(5):332-336. Epub 2017 Apr 5, doi: 10.1177/1078155217703792.
38. **Muluneh B**, Deal A, Alexander MD, Keisler MD, Markey JM, Neal JM, Bernard S, Valgus J, Dressler LG. Patient perspectives on the barriers associated with medication adherence to oral chemotherapy. *J Oncol Pharm Pract*. 2018;24(2):98-109. Epub 2016 Nov 30, doi: 10.1177/1078155216679026
39. Arnall J, **Muluneh B**. Loss of Pregnancy in a Patient with Chronic Myeloid Leukemia During Treatment with Nilotinib. *J Hematol Oncol Pharm*. 2016;6(1):Mar;6(1):22-27.
40. Roth ME, **Muluneh B**, Jensen BC, Madamanchi C, Lee CB. Left Ventricular Dysfunction After Treatment with Ipilimumab for Metastatic Melanoma. *Am J Ther*. 2016 ;23(6):e1925-e1928.
41. Dusetzina SB, **Muluneh B**, Khan T, Richards K, Keating N. Obstacles to Affordable Cancer Treatments. *N C Med J*. 2014;75(4):257-260.
42. **Muluneh B**, Buie LW, Collichio F. Vemurafenib-Associated Pancreatitis: Case Report. *Pharmacotherapy*. 2013 Apr;33(4):e43-4. Epub 2013 Feb 22, doi: 10.1002/phar.1208.
43. **Muluneh B**, Dean A, Armistead P, Khan T. Successful clearance of cutaneous acyclovir-resistant, foscarnet-refractory herpes virus lesions with topical cidofovir in an allogeneic hematopoietic stem cell transplant patient. *J Oncol Pharm Pract*. 2013;19(2):181-5. Epub 2012 May 25, doi: 10.1177/1078155212448408.
44. Bottiglieri S, **Muluneh B**, Sutphin S, Iacovelli L, Adams V. Optimal Blood Pressure Control in Patients Receiving Angiogenesis Inhibitors in an Outpatient Cancer Center. *J Oncol Pharm Pract*. 2011;17(4):333-8. Epub 2010 Sept 3.

Book Chapters

1. **Muluneh, B.**, Conti, R.M., Nguyen, J., Cole, A., Larson, R.A. and Dusetzina, S.B., 2021. Pharmacoeconomic Considerations for Tyrosine Kinase Inhibitors in the Treatment of Chronic Myeloid Leukemia. In *Chronic Myeloid Leukemia* (pp. 93-104). Springer, Cham.
2. Martin KE, Alexander M, **Muluneh B.** "Extended-spectrum triazole antifungals: posaconazole and voriconazole." *Casebook in clinical pharmacokinetics and drug dosing*. New York: McGraw-Hill, 2015.
3. Alexander M, **Muluneh B.** "Accomplishing from Within: Defining Your Own Success in a Professional Environment." *Nourishing the Soul of Pharmacy: Stories of Reflection*. Ed. Zlatic TD, Zellmer WA. Lenexa, KS: American College of Clinical Pharmacy, 2011. 257-261.

Non-Peer Reviewed Publications

1. Day J, **Muluneh B.** Initiation Checklist for a New Start Oral Chemotherapy. Hematology Oncology Pharmacist Association (HOPA). *Published Online in July 2017*. URL: http://www.hoparx.org/images/hopa/resource-library/guidelines-standards/Oral_Chemo_Resources_Web_Outline.pdf
2. Savage SW, Bates JS, **Muluneh B.** Challenges Continue for True Patient-Centered Access. *Specialty Pharmacy Times*. 2016 Jun 02.
3. **Muluneh B**, Luter DN, Rowe E. "Metastatic Breast Cancer Updates." *Pharmacy Times*, 2013 September.

Abstracts and Posters (presenter underlined)

1. Collins JB, Muir MA, Mackler E, Bryant AL, Wood WA, Wheeler S, Zullig L, Lafata JE, **Muluneh B.** Strategies for Implementing an Oral Medication Adherence Intervention in Academic and Community Cancer Settings. [Abstract]. Presented at the 2022 American Society of Hematology Annual Meeting, December 2022.
2. Gleaton AM, Loop MS, Coombs CC, Rodgers JE, **Muluneh B.** Strategies for Implementing an Oral Medication Adherence Intervention in Academic and Community Cancer Settings. [Abstract]. Published online for the 2022 American Society of Hematology Annual Meeting, December 2022.
3. **Muluneh B**, Muir M, Hailu D, Hailu A, Fufa D, Hailu T, Dinkiyie AM, Ayalew M, Alexander T, Bonilla M, Abdella K, Chargualaf M, Buhlinger K, Miller VA, Gidey A, Fentie AM, Roberts MC. Design of implementation strategies for a national pediatric cancer registry in Ethiopia: an implementation mapping approach. [Abstract]. Presented at Academy Health Dissemination and Implementation Annual Meeting, December 2022.
4. Danos A, Deal A, Ong E, Tobben D, Richardson D, Bryant AL, Lafata JE, **Muluneh B.** The impact of health-related quality of life and associations with adherence in real-world leukemia patients. [Poster]. Presented at the International Society for Medication Adherence Annual Meeting, September 2022.
5. Muir MA, Proco D, Mackler E, Bryant AL, Wood WA, Gatwood J, Wheeler SB, Zullig LL, Lafata JE, **Muluneh B.** Barriers and facilitators of implementing an oral medication adherence intervention in academic and community cancer settings. Presented at the 2022 Hematology Oncology Pharmacists Association Annual Meeting. April 2022.

6. Muir M, Johnson J, Shu S, Chen HH, Ozawa S, **Muluneh B**. Evaluating Real-World Effectiveness and Safety of Generic and Brand-Name Imatinib in Chronic Myeloid Leukemia. [Abstract]. Presented at the 2020 American Society of Hematology Annual Meeting, December 2021.
7. **Muluneh B**, Muir M, Mackler E, Bryant A, Wood W, Wheeler S, Zullig L, Elston-Lafata J. The impact of health-related quality of life and associations with adherence in real-world leukemia patients. International Society for Medication Adherence Research, October 2021.
8. Collins JB, Stump S, Heiling H, Deal A, Proco D, Nguyen C, Cozad M, Mato A, Coombs C, **Muluneh B**. *Impact of Adherence to Ibrutinib on Clinical Outcomes in Real-World Patients with Chronic Lymphocytic Leukemia: Final Results*. Presented at the 2021 International Workshop on Chronic Lymphocytic Leukemia (iwCLL). September 2021.
9. Cozad, M, Stump S, Buhlinger K, Collins JB, Coombs C, **Muluneh B**. *Evaluation of Venetoclax Initiation Process at University of North Carolina Medical Center*. Presented at the 2021 International Workshop on Chronic Lymphocytic Leukemia (iwCLL). September 2021.
10. Werner T, Bates J, Roberts MC, Cipriani A, Shu SiTong, Valgus J, **Muluneh B**. *Evaluation of Actionable Germ Line Drug/Gene Pairs in the Leukemia and GI Oncology Populations*. Presented at the 2021 Hematology Oncology Pharmacists Association Annual Meeting. April 2021.
11. Fuller, ME, Moynihan M, Okoroike H, Burton L, Jang C, Peery M, Proco D, Veeder J, Rodgers JE, Morgan KP, **Muluneh B**. *Incidence and Severity of Hypertension and Effectiveness of Antihypertensive Agents in Renal Cell Carcinoma Patients Receiving Vascular Endothelial Growth Factor Inhibitors*. Presented at the 2021 Hematology Oncology Pharmacists Association Annual Meeting. April 2021.
12. Pollyea DA, Stahl M, Talati C, Asghari H, Lai C, Abedin S, Zeidner J, **Muluneh B**, Xavier M, Edwards W, Wolach O, Moshe Y, Lavie D, Zuckerman T, Choi M, Guerin CA, Ma E, Montez M, Goldberg AD. *Characteristics and Outcomes of Newly Diagnosed Acute Myeloid Leukemia Patients Receiving Venetoclax Combinations Vs Other Therapies: Results from the AML Real World Evidence (ARC) Initiative*. [Abstract]. Presented at the 2020 American Society of Hematology Annual Meeting, December 2020.
13. **Muluneh B**, Deal A, Tobben D, Danos A, Richardson D, Leak Bryant A, Elston-Lafata, J. The impact of health-related quality of life and associations with adherence in real-world leukemia patients. International Society for Medication Adherence Research, October 2020.
14. Talati C, Asghari H, Abedin S, Lai C, Pollyea D, Xavier M, Edwards W, Zeidner J, **Muluneh B**, Choi M, Bui CN, Svensson A, Kye S, Marshall T, Cloutier M, Ma E, Montez M, Goldberg A. *Characteristics and Outcomes of Newly Diagnosed Acute Myeloid Leukemia Patients Receiving Venetoclax Combinations vs Other Therapies: Results from the AML Real world evidence (ARC) Initiative*. European Hematology Association, July 2020.
15. Mulu Fentie A, Buhlinger K, Borlagdan J, Bernstein A, Weitzman, S, Bekele W, Korones D, Alexander TB, Broas J, Shad A, Dinkiyie AM, Hailu D, **Muluneh B**. Pre-implementation assessment of a national Ethiopian pediatric cancer registry. *Blood Adv*. 2019;3(Suppl 1):16–19. Presented at the 2019 American Society of Hematology Annual Meeting Global Capacity Showcase, Orlando, FL, December 2019.
16. Yazdy MS, Mato A, Roeker L, Jarral U, Ujjani C, Shadman M, Skarbnik A, Whitaker K,

Deonarine I, Kabel C, Stump S, Goodfriend J, Pagel J, Bailey N, Patel K, Jacobs R, Feldman T, Leslie L, Goy A, Coombs C, **Muluneh B**, Khajavian S, Lamanna N, Weissbrot H, Weiss J, Cheson B. *Toxicities and Outcomes of Acalabrutinib-Treated Patients with Chronic Lymphocytic Leukemia: A Retrospective Analysis of Real-World Patients*. Blood, 134(Supplement_1), 4311. [Abstract]. Presented at the 2019 American Society of Hematology Annual Meeting, Orlando, FL, December 2019.

17. Yin S, Zhu A, Deal A, Faso A, **Muluneh B**, Van Deventer H, Lucas AT. *A Retrospective Analysis of the Use of Pregabalin or Gabapentin on the Incidence of Pegfilgrastim-Induced Bone Pain*. Presented at the 2019 American College of Clinical Pharmacy (ACCP), New York, NY. October 2019
18. **Muluneh B**, Deal A, Virparia R, Garcia S, Elston-Lafata J. *The impact of health-related quality of life and associations with adherence in real-world leukemia patients*. Presented at the 2019 American College of Clinical Pharmacy (ACCP), New York, NY. October 2019
19. Drawdy L, Kline T, Miller J, Deal A, Zhu A, Sketch M, Coombs C, **Muluneh B**. *Impact of Adherence to Ibrutinib on Clinical Outcomes in Real-World Patients with Chronic Lymphocytic Leukemia*. Presented at the 2019 International Workshop on Chronic Lymphocytic Leukemia (iwCLL), Edinburgh, Scotland. September 2019.
20. Cole AL, Wood WA, **Muluneh B**, Lund JL, Lafata JE, Dusetzina SB. *Comparative Safety and Healthcare Expenditures Associated with Frontline Therapy for Chronic Myeloid Leukemia*. Presented at the 35th annual International Conference on Pharmacoepidemiology and Therapeutic Risk Management. Philadelphia, PA. August 2019.
21. Cole AL, Wood WA, **Muluneh B**, Lund JL, Lafata JE, Dusetzina SB. *Comparative Safety and Healthcare Expenditures Associated with Frontline Therapy for Chronic Myeloid Leukemia*. Presented at the 2019 Annual Research Meeting of Academy Health. Washington, DC. June 2019.
22. Bucci T, Szeto A, Deal A, Zhu A, Ahmad M, Cass A, Sketch M, Foster M, **Muluneh B**, Crona D. *Response to Tyrosine Kinase Inhibitors in Real World Patients with Chronic Myeloid Leukemia*. Presented at the 2019 Hematology Oncology Pharmacists Association Annual Meeting. Fort Worth, TX. April 2019.
23. Dennison T, Zhu A, Deal A, Foster M, Valgus J, **Muluneh B**. *A Pharmacist-led Oral Chemotherapy Program Impact on Chronic Myeloid Leukemia Patient Satisfaction, Adherence, and Outcomes*. Presented at the 2019 Hematology Oncology Pharmacists Association Annual Meeting. Fort Worth, TX. April 2019.
24. Day J, Lena R, Lucas A, Walker J, Foster M, Crona D, **Muluneh B**. *A Systematic Literature Review of POMP Maintenance Therapy Dosing and Dose Intensity in Adult Acute Lymphoblastic Leukemia*. Presented at the 2019 Hematology Oncology Pharmacists Association Annual Meeting. Fort Worth, TX. April 2019.
25. Morgan KP, Sellers JB, **Muluneh B**, Carlson M, Wood WA, Shea TC. *Feasibility of Medication Coordination with Lay Navigators in Outpatient Oncology Clinics*. Presented at the American Society of Clinical Oncology Quality Care Symposium, Phoenix, AZ, September 2018.
26. Cole AL, Wood WA, **Muluneh B**, Lund JL, Lafata JE, Dusetzina SB. *Predictors of First-Line Tyrosine Kinase Inhibitor Treatment for Chronic Myeloid Leukemia*. Presented at the 24th Annual Agency for Healthcare Research and Quality (AHRQ) NRSA Trainees Research Conference, Seattle, WA, June 2018.
27. Samanas L, Auten J, **Muluneh B**, Van Deventer H. *Dose Intensity of HyperCVAD in Patients*

with *Acute Lymphocytic Leukemia (ALL)*. Presented at the 2016 Research in Education and Practice Symposium, Chapel Hill, NC, May 2016.

28. Abrahamson A, Chargualaf M, Giao T, **Muluneh B**. *Needs Assessment and Gap Analysis of Clinical Pharmacy in Addis Ababa During an International Advanced Pharmacy Practice Experience*. Presented at the 2016 American Society of Health Systems Pharmacy Midyear Meeting, Las Vegas, NV, December 2016.
29. **Muluneh B**, Buhlinger K, Deal AM, Zeidner JF, Foster MC, Jamieson KJ, Bates J, Van Deventer HW. *A Comparison of Clofarabine-Based (GCLAC) and Cladribine-Based (CLAG) Salvage Chemotherapy for Relapsed/Refractory AML*. *Blood*, 126(23), 1342. [Abstract]. Presented at the 2015 American Society of Hematology Annual Meeting, Orlando, FL, December 2015.
30. **Muluneh B**, Schneider M, Faso A, Valgus J, Amerine L, Daniels R, Crisp B, Savage S. *Impact of an Integrated, Closed-loop, Pharmacy-led Oral Chemotherapy Program on Clinical and Financial Outcomes*. Presented at the 2015 American Society of Health-System Pharmacists Annual Meeting, New Orleans, NO, December 2015.
31. Blomberg BA, Van Deventer HW, Gold S, Jamieson KJ, Zeidner JF, **Muluneh B**, Moore D, Foster MC. *A Single-Center Retrospective Analysis of a Pediatric Salvage Chemotherapy Regimen for Adults with Relapsed/Refractory Acute Lymphoblastic Leukemia*. *Blood*, 126(23), 4919. [Abstract]. Presented at the 2015 American Society of Hematology Annual Meeting, Orlando, FL, December 2015.
32. Thorne A, **Muluneh B**, Bates JS. *Acute kidney injury in patients treated with high-dose cisplatin, dexamethasone, and cytarabine (DHAP): a retrospective study*. Presented at the 2015 American Society of Health-System Pharmacists Annual Meeting, New Orleans, NO, December 2015
33. Wind LS, Knight TG, Auten JJ, Bates JS, **Muluneh B**. *Evaluation of a Transitions of Care Model for Malignant Hematology*. Presented at the 2016 Research in Education and Practice Symposium, Chapel Hill, NC, May 2015.
34. Morgan KP, **Muluneh B**, Deal A, Burgess HC, Schneider M, Poppe L. *Evaluation of an institutional specialty pharmacy's impact on adherence to oral chemotherapy*. Presented at the 2014 Hematology Oncology Pharmacists Association annual meeting, New Orleans, LA, March 2014.
35. **Muluneh B**, Alexander M, Deal A, Keisler M, Markey J, Neal J, Bernard S, Valgus J, Dressler L. *Prospective evaluation of perceived barriers to medication adherence by patients on oral antineoplastics*. Presented at the 2012 American Society of Clinical Oncology Annual Meeting, Chicago, IL, June 2012.
36. **Muluneh B**, Redding R, Rao K, Nyirenda M, Hosseinipour M. *Successful competency training in safe handling of chemotherapy in Malawi*. *Journal of Oncology Pharmacy Practice*, June 2012. Vol. 18, Number 2, Supplement, Page 15 Abstract. Presented at the 2012 International Society of Oncology Pharmacy Practitioners Annual Meeting, Melbourne, Australia, May 2012.
37. Khan T, **Muluneh B**, Alexander M, Lasater K, Hoang V, Olson L, Patel R, Mark N, Smith K, Savage S, Poppe L. *Model to Improve Patient and Learner Outcomes: A Partnership in Patient Care Initiative (PIPC) in the HSCT Population*. *Biology of Blood and Marrow Transplant*, February 2012. Vol. 18, Issue 2, Supplement, Page S240 Abstract.

38. **Muluneh B**, Alexander M, Deal M, Valgus J, Dressler L, Deal A, Markey J. *Prospective evaluation of perceived barriers to medication adherence by patients on oral antineoplastics*. Presented at the 2011 University Health System Consortium Pharmacy Council Annual Meeting, New Orleans, LA, December 2011.

Invited Presentations

The Anatomy of a Collaborative Practice Agreement Platform Presentation National Community Oncology Dispensing Association Orlando, FL	November 2022
Beyond Blood Counts and Chemistries: The Clinical Significance of those "other" labs Webinar Presentation Oncology Nursing Society San Antonio, TX	September 2022
"Take Your Meds": Medication Adherence in Cancer Treatment Cancer Outcomes Seminar UNC Lineberger Cancer Center Chapel Hill, NC	September 2022
Optimizing care for patients taking oral anti-cancer agents: how HOPA's OCC (Oral Chemotherapy Collaborative) is moving practice forward Platform Presentation Co-Presenters: Karen Ferris, Justin Gatwood Hematology Oncology Pharmacy Association Boston, MA	April 2022
Health Disparities in Cancer Care: Racism as a Risk Factor Platform Presentation Co-Presenters: Maurice Alexander, Britny Rogala Hematology Oncology Pharmacy Association Encore: May 2021 (Atlanta, GA, Philadelphia, PA); July 2021 (Scottsdale, AZ); August 2021 (New York, NY), September 2021	April 2021
Workshop Defining a Research Agenda to Address Barriers and Solutions to Oral Anticancer Agent Adherence Food and Drug Administration (FDA) American Society of Clinical Oncology (ASCO) Washington, DC	February 2021
Management of Oral Chemotherapy Services: A Pharmacist-Led Model North Carolina Association of Pharmacists Chapel Hill, NC	March 2020
Implementation of Clinical Pharmacy Services Addis Ababa University Addis Ababa, Ethiopia	March 2019

<p>Precision Dosing: A Clinician's Perspective Platform Presentation American College of Clinical Pharmacy (ACCP) Seattle, WA</p>	<p>October 2018</p>
<p>Managing Financial Toxicity When Facing Cancer Webinar Presentation University of North Carolina Cancer Network (UNCCN) Chapel Hill, NC</p>	<p>September 2017</p>
<p>Oral Chemotherapy: Overcoming the Challenge to Adherence Webinar Presentation University of North Carolina Cancer Network (UNCCN) Chapel Hill, NC</p>	<p>April 2017</p>
<p>Adherence Concepts for the Cancer Patient Webinar Continuing Education Presentation ProCE, Inc., <i>ACPE number: 0221-9999-17-097-H01-P</i></p>	<p>January 2017</p>
<p>Management of Oral Chemotherapy Services: A Pharmacist-Led Model Platform Presentation American Community Cancer Centers (ACCC) Regional Meeting Austin, TX</p>	<p>March 2017</p>
<p>Management of Oral Chemotherapy Services: A Pharmacist-Led Model Platform Presentation American Community Cancer Centers (ACCC) Regional Meeting Costa Mesa, CA</p>	<p>December 2016</p>
<p>Management of Oral Chemotherapy Services: A Pharmacist-Led Model Platform Presentation Hematology Oncology Pharmacists Association (HOPA) Chicago, IL, <i>ACPE number: 0465-0000-16-060-L04-P</i></p>	<p>September 2016</p>
<p>Anemia: Considerations for the Elderly Oral Presentation NC Association of Pharmacists Chronic Care Practice Forum Meeting Greensboro, NC, <i>ACPE number: 0046-9999-15-012-L01-P</i></p>	<p>March 2015</p>
<p>Pharmacy Perspectives in Multiple Myeloma: Sequencing Therapy Speakers: Harvey D, Muluneh B. Webinar Continuing Education Presentation Medscape (WebMD LLC), <i>ACPE number: 0461-0000-14-090-H01-P</i></p>	<p>December 2014</p>
<p>Successful Oncology Collaborative Practice Agreements: Outpatient Oncology Oral Presentation American College of Clinical Pharmacy Austin, TX</p>	<p>October 2014</p>

Establishing a Collaborative Practice Workshop October 2014
Speakers: **Muluneh B**, Byar KL, Gallo M, Hylton HM.
Panel Discussion
Advanced Practitioner Society for Hematology and Oncology
Orlando, FL

Oral Chemotherapy Considerations August 2013
Oral Presentation
North Carolina Oncology Pharmacists Association
Cary, NC, *ACPE number*: 0088-9999-13-093-L01-P

Safe Handling of Hazardous Drugs, UNC Project Malawi October 2011
Tidziwe Centre (UNC and Kamuzu Central Hospital collaboration)
Lilongwe and Blantyre, Malawi

Teaching Experience 2010 – Present

School of Pharmacy, University of Rhode Island

Lectures

Treatment of Leukemias, Spring 2021 (2 hours)

School of Pharmacy, University of North Carolina

Faculty Advisor, Professional Program

Hager House (2019-2021)

Mentor, Teaching Certificate Program

Jordan Wallace, Davon Townsend (2020-2021), Kelly Brunk, Riddhi Virparia (2019-2020)

Major Advisor, DPET Industry-Sponsored Fellowship Program

JB Collins (2022-2023) Michele Muir (2021-2022); Darrian Proco (2020-2021); Christine Chong, Catherine Nguyen, Sheel Patel (2019-2020)

Faculty Advisor, Resident Research

Erin Dark (2022-Present), Henry Okoroike, Madeline Fuller, Meghin Moynihan, Shannon Palmer (2020-2021), Kurtis Stocker, Kelly Brunk (2019-2020), Lauren Drawdy, Theresa Kline, Tyler Bucci, Sarah Stump (2018-2019), Lisa Samanas (2015-2016), Lucas Wind (2014-2015), Katherine Morgan (2013-2014), Amber Proctor (2012-2013)

Dissertation Committee Member, PhD in Pharmaceutical Sciences Graduate Program

Jessica Beers (2021-Present), Hui-Han Chen (2020-Present), Ashley Cole (2017-2019)

Faculty Advisor, Professional Student Research

Melissa Maas, Allison Yang, Abigail Danos, Emily Ong, Casey Eisnger, Solomea Asfaw, Gaith Hajeh, Drhumi Patel (2022-Present), Ashley Gleaton (2020 – Present), Christopher Parish, JB Collins, Monica Cozad, Daniel Tobben, Abigail Danos, Mariela Burgos, Viraj Barot, Toneth Sang (2020-2022), Taylor Werener, Sheila Garcia (2019-2020), Rana Rhone (2018-2019), Bemnat Agegnehu, Shengmei Yin (2017-2019), Jacki Day, Taylor Dennison, Robert Lena (2016-2019), Andrew Thorne (2014-2017), Kaitlyn Buhlinger (2014-2015)

Course Coordinator

Integrative Pharmacotherapy I (PHCY 631), Spring 2020 – Present [100 contact hours]

Lectures (Required Courses)

Biology of Cancer (PHCY 502), Fall 2022 [4 contact hours]

Anticoagulants and Antiplatelets (PHCY 510), Spring 2019-Spring 2021 [4 contact hours per year]

Opioid and Analgesics Pharmacology (PHCY 611), Fall 2019, Fall 2020 [8 contact hours per year]

Hematology, Hemostasis, Thrombosis (PHCY 502), Fall 2018 – Present [8 contact hours per year]

Introduction to Hematology (PHCY 203), 2013-2015

Chronic Leukemias (PHCY 447), 2013-2015

Rate Control in Atrial Fibrillation (PHCY 446), Spring 2010

Facilitator

Patient Care Experience (PHCY 617), Fall 2019 – Fall 2020 [20 contact hours per year]

Integrative Pharmacotherapy II (PHCY 732), Fall 2019 [28 contact hours]

Lectures (Electives)

Implementation Strategies (PHRS 815), Spring 2022 – Present [2 contact hours]

Chronic Lymphocytic Leukemia (PHCY 822), Spring 2019 – Spring 2021 [2 contact hours]

Chronic Leukemias (PHCY 822), Spring 2015 – Spring 2018

Chemotherapy Induced Nausea and Vomiting (PHCY 447), Spring 2013

Primary Brain Tumors (PHCY 812), Spring 2013

Supportive Care in Oncology (PHCY 812), Fall 2012

Tumor Lysis Syndrome (PHCY 802), Fall 2011

Teaching Assistant

Pharmacy Care Laboratory (PHCY 404, 405), 2010

Primary Preceptor

Global Pharmacy Scholars in Ethiopia, August 2016 – Present

Longitudinal Leukemia Clinic, August 2016 – June 2019

Malignant Hematology Clinic, August 2013 – June 2019

Gillings School of Public Health, University of North Carolina

Dissertation Committee Member, PhD in Epidemiology

Courtney Schlusser (2022-Present)

Dissertation Committee Member, PhD in Health Policy and Management

Wendi Elkins (2020-Present)

Lecture

Financial Toxicity (HBEH/HPM765), 2022 – Present [2 contact hours]

School of Nursing, University of North Carolina

Lecture, Adherence to Oral Chemotherapy (NURS 720), 2012 – 2016

School of Dentistry, University of North Carolina

Lecture, Management of Dental Pain (OMSU 220), 2010-2011

School of Pharmacy, Addis Ababa University, Ethiopia

Course Coordinator

Advanced Therapeutics IV (MS, Clinical Pharmacy Program), 2015 – 2019

Lectures (2015-2019)

Acute Leukemias

Breast Cancer

Cancer Overview and Prevention

Chronic Leukemias

Colorectal Cancers

Gynecological Malignancies

Lung Cancer

Management of Pain in Cancer Patients

Chemotherapy Toxicities (Cytotoxic and Targeted agents)

Ophthalmology

Skin Disorders

Research Funding

Extramural

St. Jude – WashU Implementation Science Collaborative (ISC)

Title: SJ Cares Registry Implementation Evaluation

Sponsor: St. Jude Children's Research Hospital

Dates: January 2023 – December 2024 (\$50,000)

Role: Principal Investigator, 5% effort (no salary support)

NIH/NCI (U01)

Title: Adapting a point-of-use test card, the ChemoPAD, for protecting chemotherapy drug quality in sub-Saharan Africa.

Sponsor: National Institutes of Health (U01CA269195)

Dates: September 2022 – August 2027 (\$2.74 Million)

Role: Co-investigator, 6% effort

Principal Investigator: Marya Lieberman, PhD

HOPA Research Grant

Title: Evaluation of pharmacist-driven first cycle chemotherapy consultation

Sponsor: Hematology Oncology Pharmacists Association (HOPA)

Dates: December 2021 – November 2023 (\$50,000)

Role: Co-investigator, 5% effort (no salary support)

Principal Investigator: Angela Stover, PhD, Mary-Haston Vest, PharmD, MS

HOPA Early Career Research Grant

Title: Precision Dosing of TKIs for Real World Patients with Chronic Myelogenous Leukemia

Sponsor: Hematology Oncology Pharmacists Association (HOPA)

Dates: August 2019 – August 2021 (\$47,500)

Role: Co-investigator, 5% effort (no salary support)

Principal Investigator: Daniel Crona, PharmD, PhD, CPP

Fulbright Specialists Program

Title: Innovative didactic and experiential teaching in hematology/oncology pharmacotherapy of MS pharmacy students in Addis Ababa University (Addis Ababa, University)

Sponsor: Fulbright Program (United States Department of State)

Dates: May 2017 (\$3,100) (on Fulbright specialist roster from 2015-2020)

Role: Principal Investigator, 80% effort during May 2017 (no salary support)

HOPA Research Grant

Title: Evaluation of pharmacist-driven first cycle chemotherapy consultation
Sponsor: Hematology Oncology Pharmacists Association (HOPA)
Dates: August 2016 – August 2018 (\$18,950)
Role: Co-investigator, 5% effort (no salary support)
Principal Investigator: Jill S. Bates, PharmD, MS, BCOP, CPP

Pfizer Investigator-Initiated Research (IIR) Grant

Title: A phase I/II, placebo-controlled, randomized, trial of pregabalin for the prophylaxis of granulocyte colony stimulating factor (GCSF)-induced bone pain
Sponsor: Pfizer Inc. (investigational drug and placebo)
Dates: January 2014 – December 2017
Role: Principal Investigator, 5% effort (no salary support)

Novartis Investigator-Initiated Research (IIR) Grant

Title: The Feasibility of a Telemedicine Platform to Monitor Adherence and Adverse Effects of ABL Kinase Inhibitors
Dates: January 2013 – December 2015
Sponsor: Novartis Pharmaceuticals, Leap of Faith Technologies (handheld device)
Role: Co-investigator, 5% effort (no salary support)
Principal Investigator: Robert Wehbie, MD

Intramural

Junior Faculty Development Award

Title: Evaluating Treatment Among Older Adults with Chronic Lymphocytic Leukemia
Sponsor: UNC Office of the Provost
Proposed Dates: 07/01/2021 – 02/28/2023 (\$10,000)
Role: Principal Investigator

North Carolina Translational and Clinical Sciences Institute

Title: "Implementation of a medication adherence intervention in chronic leukemia patients on oral anticancer agents."
Sponsor: The North Carolina Translational and Clinical Sciences Institute (KL2TR002490)
Proposed Dates: 07/01/2021 – 06/30/2023
Role: Principal Investigator, 75% effort

North Carolina Translational and Clinical Sciences Institute

Title: "Phenotypic Biomarkers of Cytochrome P450 3A to Improve Precision Dosing in Chronic Lymphocytic Leukemia (CLL)"
Sponsor: The North Carolina Translational and Clinical Sciences Institute
Proposed Dates: 03/01/2020 – 02/28/2022 (\$50,000)
Role: Co-investigator, 5% effort (no salary support)
Principal investigator: Klarissa Jackson, PhD

EII Tier 1 Award

Title: "Precision Dosing of TKIs for Patients with CML"
Sponsor: UNC Eshelman Institute for Innovation
Proposed Dates: 06/01/2018-05/31/2019 (\$50,000)
Role: Co-investigator, 5% effort (no salary support)
Principal Investigator: Daniel Crona, PharmD, PhD, CPP

Additional Research Experience

Cost Effectiveness Analysis of Ibrutinib in Ethiopia

University of North Carolina Eshelman School of Pharmacy
Role: Principal Investigator

December 2019 – June 2021

<p>Scoping Review of Clinical Pharmacy Consortia for Generation of Real-World Evidence University of North Carolina Eshelman School of Pharmacy Role: Principal Investigator</p>	December 2019 – Present
<p>Evaluation of Actionable Germ Line Drug/Gene Pairs in the Leukemia, BMT, and GI Oncology Populations. University of North Carolina Eshelman School of Pharmacy Role: Principal Investigator</p>	October 2019 – April 2021
<p>Antifungal Prophylaxis in FLT3+ AML Induction University of North Carolina Eshelman School of Pharmacy Role: Co-Investigator</p>	July 2019 – January 2020
<p>Venetoclax and Azole Antifungal Interaction in Real World AML Patients University of North Carolina Eshelman School of Pharmacy Role: Co-Investigator</p>	July 2019 – June 2020
<p>The impact of health-related quality of life and associations with adherence in real-world leukemia patients University of North Carolina Eshelman School of Pharmacy Role: Principal Investigator</p>	January 2019 – Present
<p>Evaluation of Venetoclax Initiation Process at University of North Carolina Medical Center University of North Carolina Medical Center Role: Principal Investigator</p>	January 2018 – April 2022
<p>Impact of adherence to ibrutinib on clinical outcomes in real-world patients with chronic lymphocytic leukemia University of North Carolina Medical Center Role: Principal Investigator</p>	July 2018 – April 2022
<p>Development of a pediatric cancer registry Black Lion Medical Center in Addis Ababa, Ethiopia Role: Principal Investigator</p>	December 2017 – Present
<p>Comparative Safety and Healthcare Resource Utilization Associated with First-Line Treatments for CML University of North Carolina Medical Center Role: Co-Investigator</p>	October 2017 – May 2019
<p>Retrospective analysis of the use of pregabalin or gabapentin on the rates of pegfilgrastim-induced bone pain University of North Carolina Medical Center Role: Co-Investigator</p>	October 2017 – June 2019
<p>Macrocytosis as a predictive indicator of clinical outcomes in patients treated with oral TKIs: a retrospective review University of North Carolina Medical Center Role: Co-Investigator</p>	May 2017 – April 2021

<p>Direct Oral Anticoagulants as Secondary Prophylaxis in Classical Myeloproliferative Neoplasms: A Retrospective Review University of North Carolina Medical Center Role: Co-Investigator</p>	<p>November 2016 – May 2019</p>
<p>A scoping review on acute lymphoblastic leukemia maintenance University of North Carolina Medical Center Role: Principal Investigator</p>	<p>August 2016 – May 2019</p>
<p>The feasibility of using high-dose methotrexate during interim maintenance for young adults with acute lymphoblastic leukemia University of North Carolina Medical Center Role: Co-Investigator</p>	<p>January 2016 – July 2016</p>
<p>Dose intensity of Hyper-CVAD in Acute Lymphoblastic Leukemia University of North Carolina Medical Center Role: Co-Investigator</p>	<p>August 2015 – June 2016</p>
<p>Acute Kidney Injury in Patients Treated with DHAP Chemotherapy Regimen: A Retrospective Study University of North Carolina Medical Center Role: Co-Investigator</p>	<p>December 2014 – May 2017</p>
<p>Efficacy and toxicity of the GCLAC and CLAG regimens for relapsed/refractory acute myeloid leukemia University of North Carolina Medical Center Role: Principal Investigator</p>	<p>November 2014 – June 2015</p>
<p>Comprehensive Oral Chemotherapy Program to Improve Adherence and Outcomes to Oral Chemotherapy University of North Carolina Medical Center Role: Co-Investigator</p>	<p>Sept 2014 – Dec 2017</p>
<p>Evaluation of a transitions of care model for malignant hematology University of North Carolina Medical Center Role: Principal Investigator</p>	<p>August 2014 – June 2015</p>
<p>Comprehensive Oral Chemotherapy Program to Improve Adherence and Outcomes to Oral Chemotherapy University of North Carolina Medical Center Role: Principal Investigator</p>	<p>August 2013 – June 2014</p>
<p>Identification of risk factors associated with 30-day readmissions in patients with cancer at a university-health system University of North Carolina Medical Center Role: Co-Investigator</p>	<p>September 2012 – June 2013</p>

Prospective evaluation of patient perceived barriers to adherence to oral antineoplastic agents in metastatic renal Cell Carcinoma, Breast Cancer, and Chronic Myelogenous Leukemia Aug 2010 – Aug 2012

University of North Carolina Hospitals
Mentors: John Valgus, PharmD, BCOP, CPP and Lynn Dressler, Dr.P.H

Drug Use Evaluation: Accuracy of Heparin Nomogram Aug 2010-June 2011

University of North Carolina Hospitals
Mentor: Maryann Oertel, PharmD, BCPS

Optimal Blood Pressure Control in Patients Receiving Angiogenesis Inhibitors in an Outpatient Cancer Center Sept 2009 – March 2010

Moses Cone Regional Cancer Center
University of Kentucky Markey Cancer Center
Mentor: Lew Iacovelli, PharmD, BCOP, CPP

Professional Service

Hematology Research & Outcomes Consortium (HERO) January 2022 – Present
Founder and Chair

Lineberger Equity Council August 2021 – Present
UNC Lineberger Cancer Center

Oncology Nursing Society February 2021 – April 2022
Co-Lead: Oral Chemotherapy Adherence Guidelines Panel

University of North Carolina Cancer Network December 2019 – Present
Speaker Selection Committee

Pharmacotherapy Stream Committee July 2019 – June 2022
UNC Eshelman School of Pharmacy

American Society of Hematology January 2020 – Present

Partnership in Patient Care v2.0 February 2018 – July 2021
Research Committee
UNC Medical Center and UNC Eshelman School of Pharmacy

Precision Dosing Initiative Nov 2017 - Present
Division of Pharmacotherapy and Experimental Therapeutics
UNC Eshelman School of Pharmacy

Global Engagement Advisory Committee (GEAC) Nov 2016 – June 2019
Primary Preceptor, Ethiopia Site
UNC Eshelman School of Pharmacy

Residency Progression Committee (RPC) July 2015 – June 2016
PGY1 and PGY2 Mentor
UNC Medical Center

- Leukemia Lymphoma Society Man/Woman of the Year Campaign** January 2015 – Present
 2018: “\$5000 Club” Recognition (Raised over \$5000)
 2017: Team Member, (Raised over \$5000)
 2016: Mentor to Candidate Joshua Zeidner, MD; Team Member, (Raised over \$5000)
 2015: Lead Candidate Representing UNC Healthcare; Top Fundraiser Recognition (Raised over \$62,000)
- Specialty Pharmacy Advisory Committee (SPAC)** September 2014 – June 2016
 Clinical Subcommittee Co-Chair (2014-2016)
 UNC Medical Center
- Reviewer, Journal of Oncology Pharmacy Practice** August 2013 – Present
- Hematology Oncology Pharmacists Association (HOPA)** October 2012 – Present
 Oral Chemotherapy Taskforce: July 2017 – July 2019
 Vice Chair, Global Health Taskforce: August 2018 – July 2020
 Vice Chair, Oral Chemotherapy Collaborative: August 2021 – Present
- American College of Clinical Pharmacy (ACCP)** January 2009 – Present
- American Society of Health-System Pharmacists (ASHP)** December 2006 – December 2016

References available upon request.

Last updated in April 2023