# **Personal information**

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# **Education**

Fellowship	Medical Oncology University of North Carolina at Chapel Hill Chapel Hill, North Carolina	7/2010-6/2012
	Infectious Diseases University of North Carolina at Chapel Hill Chapel Hill, North Carolina	7/2009-6/2011
Chief Residency	Internal Medicine and Pediatrics University of Michigan Ann Arbor, Michigan	7/2004-6/2005
Residency	Internal Medicine and Pediatrics University of Michigan Ann Arbor, Michigan	7/2002-6/2005
Internship	Internal Medicine and Pediatrics University of Michigan Ann Arbor, Michigan	7/2001-6/2002
Doctoral	University of North Carolina at Chapel Hill School of Public Health Chapel Hill, North Carolina MPH	8/1999-5/2000
	Duke University School of Medicine Durham, North Carolina MD	8/1997-5/2001
Undergraduate	University of North Carolina at Chapel Hill BA (Music, Biology)	8/1993-5/1997

# <u>Professional experience — employment history</u>

Director, Center for Global Health
U.S. National Cancer Institute
Rockville, Maryland

Associate Professor of Medicine 6/2017-2/2020

Department of Medicine

University of North Carolina at Chapel Hill

Chapel Hill, North Carolina

2/2020-present

Adjunct Associate Professor	6/2017-2/2020
Department of Epidemiology	
University of North Carolina at Chapel Hill	
Chapel Hill, North Carolina	

Assistant Professor of Medicine

Department of Medicine

School of Medicine

University of North Carolina at Chapel Hill

Chapel Hill, North Carolina

Adjunct Assistant Professor 3/2016-5/2017
Department of Epidemiology
Gillings School of Public Health

University of North Carolina at Chapel Hill Chapel Hill, North Carolina

Honorary Senior Lecturer 1/2013-2/2020 University of Malawi College of Medicine

Blantyre, Malawi

Pediatric AIDS Corps 7/2007-5/2009

Baylor International Pediatric AIDS Initiative

Moshi, Tanzania

Hospitalist Clinician-Educator 7/2005-5/2007

Internal Medicine Residency Program (Yale affiliate)

Norwalk Hospital Norwalk, Connecticut

# **Honors**

NCI AIDS Malignancy Consortium Associate Chair for African International Sites University of North Carolina Sponsored Programs and Research Council Keynote Speaker American Medical Student Association Invited Speaker	2019-2020 2019 2018	
Association of American Cancer Institutes Annual Meeting Global Oncology Panelist	2018	
Fogarty International Center 50 <sup>th</sup> Anniversary Scientific Symposium Panelist	2018	
NCI Advisory Board Ad Hoc Global Health Working Group Co-Chair	2018	
Winter Commencement Speaker, University of North Carolina at Chapel Hill	2017	
MacArthur Foundation 100&Change Top 200 Applicant	2017	
North Carolina Cancer Hospital Endowment Fund Award	2013	
AIDS Malignancy Consortium Fellowship Program Award (inaugural year)	2013	
Fogarty International Research Scientist Development Award		
UNC Lineberger Clinical Fellows Award	2012	
Fogarty Global Health Fellows Award	2012	
Bristol Myers-Squibb Virology Fellows Research Training Program Award	2011	
Chief Resident, University of Michigan Internal Medicine-Pediatrics	2004-2005	
Hippocratic Oath Ceremony Student Speaker, Duke University School of Medicine		
Intern of the Month, University of Michigan Department of Internal Medicine		
Davie Scholar, University of North Carolina at Chapel Hill	1993-1997	

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# Refereed papers (published or in press)

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- 2. Kimani SM, Painschab MS, Horner M-J, Muchengeti M, Fedoriw Y, Shiels MS, **Gopal S**. Epidemiology of hematologic malignancies in persons living with HIV. Lancet HIV. 2020. (In press.)
- 3. Youngblood VM, Nyirenda R, Nyasosela R, Zuze T, Yang Y, Kudowa E, Moses A, Kincaid J, Kajombo C, Kampani C, Chimzimu F, Mulenga M, Chilima C, Ellis GK, Seguin R, Chagomerana M, Maine R, Jordan S, Charles A, Lee C, **Gopal S**, Tomoka T. A prospective study of breast cancer at a national teaching hospital in Malawi. Cancer Causes Control. 2019. (In press.)
- 4. Montgomery ND, Randall C, Painschab M, Seguin R, Kaimila B, Kasonkanji E, Zuze T, Krysiak R, Sanders MK, Elliott A, Miller MB, Kampani C, Chimzimu F, Mulenga M, Damania B, Tomoka T, Fedoriw Y, Dittmer DP, Gopal S. High pretreatment plasma Epstein-Barr Virus (EBV) DNA level is a poor prognostic marker in HIV-associated, EBV-negative Diffuse Large B-cell Lymphoma in Malawi. Cancer Med. 2019 Nov 29. doi: 10.1002/cam4.2710. PMID: 31782984.
- 5. Zuze T, Ellis GK, Kasonkanji E, Kaimila B, Nyasosela R, Nyirenda R, Tomoka T, Mulenga M, Chikasema M, Tewete B, Mtangwanika A, Chiyoyola S, Chimzimu F, Kampani C, Mhango W, Nicholas S, Randall C, Montgomery N, Fedoriw Y, Westmoreland K, Painschab M, **Gopal S**. Modified EPOCH for high-risk non-Hodgkin lymphoma in sub-Saharan Africa. Cancer Med. 2019. doi: 10.1002/cam4.2631. PMID: 31705618.
- 6. Hill J, Seguin R, Phanga T, Manda A, Chikasema M, **Gopal S**, Smith JS. Facilitators and Barriers to Traditional Medicine Use Among Cancer Patients in Malawi. PLoS One. 2019 Oct 21;14(10):e0223853. PMID: 31634355.
- 7. Mvalo T, Topazian HM, Kamthunzi P, Chen JS, Kambalame I, Mafunga P, Mumba N, Chiume M, Paseli K, Tegha G, Kumwenda W, Heimlich JB, Ellis G, Key N, **Gopal S**, Hoffman I, Ataga KI, Westmoreland KD. Real-world experience using hydroxyurea in children with sickle cell disease in Lilongwe, Malawi. Pediatr Blood Cancer. 2019 Nov;66(11):e27954. doi: 10.1002/pbc.27954. PMID: 31397075.
- 8. van Oosterhout JJ, Hosseinipour M, Muula AS, Amberbir A, Wroe E, Berman J, Maliwichi-Nyirenda C, Mwapasa V, Crampin A, Makwero M, Singogo E, **Gopal S**, Baker U, Phiri S, Gordon SB, Tobe S, Chiwanda J, Masiye J, Parks J, Mitambo C, Gondwe A, Dullie L, Newsome B, Nyirenda M. The Malawi NCD BRITE Consortium: Building Research Capacity, Implementation, and Translation Expertise for Noncommunicable Diseases. Glob Heart. 2019 Jun;14(2):149-154. PMID: 31324369.
- 9. Painschab MS, Kohler RE, Kasonkanji E, Zuze T, Kaimila B, Nyasosela R, Nyirenda R, Krysiak R, **Gopal S**. Microcosting analysis of diffuse large B-cell lymphoma treatment in Malawi. J Glob Oncol. 2019 Jul;(5):1-10. PMID: 31322992.
- 10. **Gopal S**, Loehrer PJ Sr. Global Oncology. JAMA. 2019 Jun 27. doi: 10.1001/jama.2019.7081. [Epub ahead of print]. PMID: 31246238.
- 11. Mulenga M, Montgomery ND, Chagomerana M, Mzumala T, Tomoka T, Kampani C, Fedoriw Y, **Gopal S**, Sviland L. Epidemiological and histopathological profile of malignant melanoma in Malawi. BMC Clin Pathol. 2019 Apr 2;19:5. PMID: 30976195. PMCID: PMC6444452.
- 12. Tomoka T, Painschab MS, Montgomery ND, Seguin R, Mulenga M, Kaimila B, Kasonkanji E, Zuze T, Nyasosela R, Nyirenda R, Chikasema M, Tewete B, Mtangwanika A, Chiyoyola S, Chimzimu F, Kampani

- C, Fedoriw Y, **Gopal S**. A prospective description of HIV-associated multicentric Castleman disease in Malawi. Haematologica. 2019 May;104(5):e215-e217. PMID: 30442726.
- 13. Painschab MS, Kasonkanji E, Zuze T, Kaimila B, Tomoka T, Nyasosela R, Nyirenda R, Dhungel BM, Mulenga M, Chikasema M, Tewete B, Mtangwanika A, Chiyoyola S, Mhango W, Chimzimu F, Kampani C, Krysiak R, Shea TC, Montgomery ND, Fedoriw Y, **Gopal S**. Mature outcomes and prognostic indices in diffuse large B-cell lymphoma in Malawi: a prospective cohort. Br J Haematol. 2019 Feb;184(3):364-372. PMID: 30450671.
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- Hamer DH, Hansoti B, Prabhakaran D, Huffman MD, Nxumalo N, Fox M, Gopal S, Oberhelman R, Mwananyanda L, Vwalika B, Rispe LC. Global Health Research Mentoring Competencies for Individuals and Institutions in Low- and Middle-Income Countries. Am J Trop Med Hyg. 2018 Nov 14. doi: 10.4269/ajtmh.18-0558. PMID: 30430976. PMCID: PMC6329357.
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#### **Teaching activities**

#### Lectures to students

HIV-associated malignancies; University of Malawi College of Medicine; Lilongwe, Malawi; recurring lecture every three months during internal medicine rotation, November 2012 to July 2019.

Oncologic emergencies; University of Malawi College of Medicine; Lilongwe, Malawi; recurring lecture every three months during internal medicine rotation, November 2012 to July 2019.

Antineoplastic therapy; University of Malawi College of Medicine; Lilongwe, Malawi; recurring lecture every three months during internal medicine rotation, November 2012 to July 2019.

Palliative care; University of Malawi College of Medicine; Lilongwe, Malawi; recurring lecture every three months during internal medicine rotation, November 2012 to July 2019.

#### Lectures at NIH

How Fogarty catalyzed a cancer care & research revolution in Malawi in 8 years; Fogarty International Center 50<sup>th</sup> Anniversary Scientific Symposium; Bethesda, Maryland; May 2018.

Perspectives from Malawi; NCI Global Cancer Research Symposium; Rockville, Maryland; February 2018.

Treating common lymphoproliferative disorders in sub-Saharan Africa; NCI Sub-Saharan African Collaborative HIV & Cancer Symposium; Eldoret, Kenya; March 2017.

Malawi Regional Center of Research Excellence Overview; NCI Center for Global Health P20 Regional Center of Research Excellence Launch Meeting; National Cancer Institute; Bethesda, Maryland, February 2017.

Malawi Cancer Consortium Progress Update; NCI Sub-Saharan African Collaborative HIV & Cancer Symposium; Kampala, Uganda; January 2016.

Developing an academic global health career; Fogarty International Center Global Health Fellows Program Orientation: Bethesda MD; July 2014.

Early experience after developing a pathology laboratory in Malawi; Fogarty International Center Global Health Fellows Program Orientation; Bethesda MD; July 2014.

#### Other Lectures

Patient-centered progress toward lymphoma cures in Malawi; Institute for Global Health and Infectious Disease Friday Conference; Chapel Hill, North Carolina; November 2019.

Malawi research overview; Hematology-Oncology Divisional Conference; Chapel Hill, North Carolina; September 2019.

Why cancer in Malawi matters to UNC and the world; Institute for Global Health and Infectious Diseases 10<sup>th</sup> Anniversary Symposium; Chapel Hill, North Carolina, April 2019.

Advance HIV Care Conferences: HIV-associated malignancies; UNC Infectious Disease Fellowship Program; Chapel Hill, North Carolina, February 2019.

Why cancer research in Malawi is important for Malawi, UNC, and the world; Office of Sponsored Research; Chapel Hill, North Carolina, July 2018.

Cancer in Malawi: opportunities for global medicosurgical collaboration; Department of Surgery Grand Rounds; Chapel Hill, North Carolina, June 2016.

Cancer in Malawi and what UNC is doing about it; Institute for Global Health and Infectious Diseases Friday Conference; Chapel Hill, North Carolina, April 2016.

A newly arrived oncologist in Malawi; Global Oncology Symposium; Lineberger Comprehensive Cancer Center; Chapel Hill NC; December 2013.

HIV-associated lymphoma in the US & cancer in sub-Saharan Africa; Institute for Global Health and Infectious Disease Friday Conference; Chapel Hill NC; June 2012.

HIV-associated lymphoproliferative disorders in Africa; African Organization for Research and Training in Cancer; Maputo, Mozambique; November 2019.

Burkitt lymphoma in adolescents and young adults in Africa; African Organization for Research and Training in Cancer; Maputo, Mozambique; November 2019.

Career development in global oncology; International Cancer Expert Corps Young Investigators' Conference; Washington DC; February 2019.

Global oncology; American Medical Students Association; November 2018.

Cancer is a global issue: partnerships with the developing world; Association of American Cancer Institutes Annual Meeting; Chicago, Illinois; September 2018.

HIV-associated malignancies in sub-Saharan Africa; Conference on Retroviruses and Opportunistic Infections; Boston, Massachusetts; March 2018.

Rethinking lymphoma clinical trials for Africa; African Organization for Research and Training in Cancer; Kigali, Rwanda; October 2017.

HIV & lymphoma in sub-Saharan Africa; African Organization for Research and Training in Cancer; Marrakesh, Morocco; November 2015.

HIV-associated malignancies in the current era; European Congress on Tropical Medicine and International Health; Basel, Switzerland; September 2015.

HIV-associated lymphoma treatment in Africa; AIDS Malignancy Consortium sub-Saharan Africa meeting; Cape Town, South Africa; July 2015.

Cancer in Malawi and opportunities for collaboration; Uganda Cancer Institute; Kampala, Uganda; February 2015.

Breast cancer in Malawi; Novartis Breast Cancer Advisory Group of Southern Africa Meeting; Cape Town, South Africa; August 2014.

Applying lessons from the US to advance lymphoma care and research in Malawi; Fred Hutchinson Cancer Center; Seattle WA; June 2014.

HIV-associated lymphoma in CNICS; Centers for AIDS Research Network of Integrated Clinical Systems Investigators Meeting; Boston MA; March 2014.

HIV and cancer in Malawi; Kilimanjaro Christian Medical Center; Moshi, Tanzania; May 2013.

# Lab or Research Teaching/Mentorships

Research mentor, Fogarty Global Health Fellows Program, Fulbright-Fogarty Fellowships in Public Health, Malawi Cancer Consortium Mentoring Core

- Jenny Morgan MD, UNC hematology-oncology fellow, 2019-present (breast cancer)
- Steve Kimani MBBS, UNC hematology-oncology fellow, 2018-present (cancer survivorship)
- Tamiwe Tomoka MBBS MMed, UNC Department of Pathology adjunct faculty, 2015-present (lymphoma, breast cancer)
- Nate Montgomery MD PhD, UNC Departments of Pathology and Genetics faculty, 2014-present (lymphoma)
- Takondwa Zuze MBBS, UNC Project-Malawi medical officer, 2016-present (lymphoma, breast cancer)
- Matt Painschab MD, UNC Division of Hematology-Oncology faculty, 2016-present (lymphoma, health outcomes, cost-effectiveness)
- Bongani Kaimila MBBS MS, UNC Project-Malawi medical officer, 2015-present (lymphoma, esophageal squamous cell carcinoma)
- Lameck Chinula, MBBS MMed, UNC Global Women's Health faculty, 2015-present (cervical cancer)
- Kate Westmoreland MD, UNC Division of Pediatric Hematology-Oncology faculty, 2015-present (pediatric lymphoma)
- Victoria Youngblood PhD, Duke University nurse practitioner student and cancer biologist, 2018-2019 (breast cancer)
- Cara Randall MD, UNC hematopathology fellow, 2018-2019 (hematologic malignancies)

- Jacob Hill ND MS, UNC epidemiology post-doctoral fellow, 2017-2019 (traditional, complementary, and alternative medicine)
- Agnes Moses MBBS MMed, UNC Project-Malawi medical consultant, 2015-2017 (breast cancer, Kaposi sarcoma)
- Graham Ellis, Howard University MS IV, 2015-2016 (sickle cell disease)
- Kurt Host, UNC MD PhD candidate, 2016 (Kaposi sarcoma)
- Steady Chasimpha MS, Malawi National Cancer Registry registrar, 2014-2018 (cancer epidemiology)
- Christopher Stanley MS, UNC Project-Malawi biostatistician, 2014-2016 (pediatric lymphoma)
- Brett Heimlich PhD, Medical College of Georgia, 2014-2015 (sickle cell disease)
- Lily Gutnik MD MPH, Montefiore Medical Center surgery resident, 2014-2015 (breast cancer screening)
- Michelle Eckerle MD MPH, University of Cincinnati Department of Pediatrics faculty, 2014-2015 (pediatric acute respiratory illness)
- Claire Kendig Faggons, UNC MSIV, 2012-2013 (HPV, head and neck cancer)

# Student Preceptorships

Site Supervisor, UNC Department of Medicine Lilongwe Clinical Elective, 2013-2020 Site Supervisor, UNC IGHID summer medical student internship program, 2017-2020

# Attending on Clinical Service

Inpatient Hematology-Oncology Service Teaching Attending, 2013-2020

# Graduate Supervision, Committees

Marie-Josephe Horner, PhD UNC SPH Epidemiology, 2018; An HIV-cancer record linkage study using the Malawi National Cancer Registry

R. Kelly Kohler, PhD UNC SPH Health Policy & Management, 2015; Enhancing breast cancer prevention services in Malawi: Understanding knowledge and preferences

#### **Grants (active)**

NIH/NCI U54CA190152 Gopal, Ph

Gopal, Phiri, Damania (MPI)

9/15/2014-8/31/2020

# Addressing herpesvirus-associated cancers through the Malawi Cancer Consortium

This award is to develop the Malawi Cancer Consortium, comprised of the University of North Carolina at Chapel Hill, Lighthouse Trust, Malawi Ministry of Health, and University of Malawi College of Medicine. Our consortium includes three support cores (Administrative/Coordinating, Mentoring/Career Development, Applied Analytics) and three research projects. The three research projects are (1) a record linkage study between the Malawi National Cancer Registry and large HIV cohorts in Lilongwe and Blantyre to clarify changing patterns of cancer risk in the ART era; (2) a cohort study to elucidate HIV-associated Kaposi sarcoma subsets in Lilongwe to improve outcomes; and (3) a cohort study to develop risk-adapted, response-guided treatment of HIV-associated lymphoma in Lilongwe. A principal focus is to develop sufficient internal capacity such that Malawi can become a leading country for HIV-associated cancer research.

NIH/NCI P20CA210285

Gopal, Mipando, Mkandawire, Dittmer (MPI)

9/1/2016-8/31/2020

# Planning for a national non-communicable disease center of research excellence in Malawi

This award is for a two-year planning period to develop a Malawi Center of Research Excellence for non-communicable diseases (NCDs), focused on cancer, injury, and cardiovascular disease. The planning grant will engage every major group in Malawi with significant NCD programs, to develop a truly national agenda. The center will include administrative, developmental, clinical, laboratory, biostatistics, and implementation cores. Sustainability of the center and its impact will be ensured by strong scientific ownership from collaborating Malawian partners, including participation by the highest levels of Malawi College of Medicine

and Ministry of Health leadership. Active linkages to international institutions and networks outside Malawi will allow the center to leverage external relationships to achieve regional scientific importance.

Role: Contact PI

NIH/NCI UM1CA121947

Mitsuyasu (PI)

3/1/2006-8/31/2020

# **AIDS Malignancy Consortium**

The AIDS Malignancy Consortium (AMC) was established in 1995 and has conducted 96 clinical trials, surveys, and laboratory studies involving 3484 patients with HIV-associated cancers and published on a wide variety of topics in AIDS malignancies. The AMC is also conducting clinical trials in HIV-associated cancers in sub-Saharan Africa where the epidemic of HIV and cancer has grown substantially. The participation of many key clinical and laboratory researchers in AIDS malignancies has made the AMC the principal clinical trials group dedicated to improving treatment and prevention of cancers among HIV-infected individuals worldwide. Role: Associate Chair for African International Sites

NIH/FIC K01TW011191

Westmoreland (PI)

6/1/2019-5/30/2024

Understanding methotrexate dosing, pharmacokinetics, and toxicities for Burkitt lymphoma in Malawi This application is for a K01 International Research Scientist Development Award for Dr. Westmoreland, a pediatric hematologist-oncologist at the University of North Carolina (UNC). Dr. Westmoreland will conduct mentored research that will implement a methotrexate dose escalation phase 1 clinical trial to determine the maximum tolerated dose for this key medicine in BL treatment protocols for SSA (Aim 1) and develop a population pharmacokinetic model for methotrexate to optimize dosing (Aim 2). The proposed research and career development plans outlined in this proposal will accelerate Dr. Westmoreland's global pediatric oncology research career, and form the basis for a future R01 application to lead a multicenter clinical trial to optimize BL treatment across SSA.

Role: Primary Faculty Mentor

NIH/FIC K01TW011470

Painschab (PI)

9/16/2019-6/30/2024

# Safety, efficacy, and cost-effectiveness of rituximab for HIV-associated multicentric Castleman disease in Malawi

This is a K01 International Research Scientist Development Award for Dr. Painschab. He proposes to test the safety and efficacy of rituximab-based treatment for MCD (AIM 1) in a single arm, phase II study in Malawi. He will also conduct a comprehensive microcosting study of treatment of MCD in Malawi and use outcomes from AIM 1 to establish a Markov model (AIM 2) that we will use to analyze the cost-effectiveness of rituximab-based therapy. This research will establish a unique prospective cohort of MCD patients and samples that can be leveraged for future independent research awards to better understand this emerging HIV-associated comorbidity and improve patient outcomes in both SSA and high-income countries. Role: Primary Faculty Mentor

NIH/NCI R21CA236770

Chinula (PI)

9/19/2019-8/31/2021

# A Novel Cervical Cancer Screen-and-Treat Demonstration Project with HPV Self-testing and Thermocoagulation for HIV-infected women in Malawi

This proposal is to evaluate the following novel invasive cervical cancer (ICC) screen-and-treat algorithm among women living with HIV (WLHIV) in Lilongwe, Malawi: self-collected vaginal specimen for primary high risk (hr)-HPV testing, with same-day visual inspection with acetic acid (VIA) and thermocoagulation for VIA positive, ablation-eligible women. This innovative strategy links new technologies (Xpert HPV, thermocoagulation) with self-collected swabs and has not been rigorously evaluated among WLHIV at highest risk for ICC.

Role: Co-investigator

**USAID** 

Tang, Chinula (MPI)

3/1/2019-2/28/2021

# Accelerating the introduction of a human papillomavirus screen-and-treat strategy in the Republic of Malawi

This proposal is to evaluate the feasibility and cost-effectiveness of integrating a human papillomavirus (HPV)-based cervical cancer screening and treatment approach with voluntary family planning programs in the

Republic of Malawi. This strategy, which empowers women to self-collect samples for HPV testing, will provide HPV-positive women with an opportunity for same-day treatment of visible precancerous lesions. Treatment will be done using thermocoagulation, which is a portable device that uses heat to quickly, safely, and effectively remove affected tissue. To increase access for rural women, this project will offer HPV self-collection in community-based settings. This proposal builds on a previous UNC study that found thermocoagulation is safe and acceptable to rural Malawian women in community-based campaigns. Role: Co-investigator

# **Grants (submitted)**

NIH/NCI R01 Fedoriw, Gopal (MPI) 4/1/2020-3/31/2025

Defining Selective Pressures for HIV-associated Diffuse Large B-cell Lymphoma in the Tumor Niche Large-scale genomics have become critical to our understanding of underlying lymphoma biology, and, more recently, in defining and therapeutically targeting the complex interactions between tumor and the tumor niche. Diffuse Large B-cell Lymphoma (DLBCL), the most common lymphoma worldwide, is highly associated with HIV, but studies of tumor-host interactions in HIV-associated DLBCL are notably lacking. Leveraging the unique clinical, diagnostic and sequencing infrastructure, and advanced bioinformatics expertise, we aim to comprehensively investigate key molecular determinants and characteristics of the tumor niche in DLBCL across the spectrum of HIV-associated immune dysfunction.

Role: Co-PI

NIH/NCI R01CA243828

Gopal (PI)

4/1/2020-3/31/2025

# Oral, virus-targeted, chemotherapy-free treatment for EBV+ lymphoma in Malawi

This proposal will evaluate the safety of VRx-3996 (an investigational oral class 1 selective HDAC-I) + valganciclovir to treat diverse relapsed/refractory EBV+ lymphomas in Malawi in a phase 1b/2 clinical trial (Aim 1); and evaluate the clinical and molecular efficacy of VRx-3996 + valganciclovir to treat diverse relapsed/refractory EBV+ lymphomas in Malawi (Aim 2). If successful, this strategy would represent a major advance for EBV+ lymphoma patients in low-income countries, and indeed worldwide, and would support larger, more definitive evaluations through international NCI networks we participate in. It would also support combining VRx-3996 + valganciclovir with other targeted agents to possibly achieve chemotherapy-free treatment for patients who suffer from these common, curable, but frequently fatal cancers, which continue to be a major public health problem globally.

Role: Contact Pl

MacArthur Foundation

Gopal, Namarika, Mipando (MPI)

10/1/2020-9/30/2025

#### **Cancer Control at National Scale in Malawi**

Building on our preeminent LMIC cancer program and Malawi's region-leading progress toward UNAIDS '90-90-90' targets for HIV, we will develop a national platform to achieve ambitious, unprecedented '50-50-50' targets for cancer prevention: (1) 50% reduction in preventable cancers; (2) 50% of cancers diagnosed at early stages; (3) 50% of patients with curable cancers in remission at two years; (4) 50% of patients with incurable cancers receiving effective palliation. These efforts will create large-scale operational evidence, catalytic energy, and a stable coalition to achieve durable progress for cancer in LMICs.

Role: Contact PI

#### **Grants (completed)**

Conquer Cancer Foundation

Painschab (PI)

7/1/2018-12/31/2019

Spectrum, resistance pattern, and clinical outcomes of bacteremia in patients undergoing chemotherapy for hematologic malignancies in Malawi: a pilot study

To date there has been no comparable large-scale effort to evaluate the causes of neutropenic fever among cancer patients in sub-Saharan Africa (SSA). A better understanding of neutropenic fever and the common bacterial infections among cancer patients in SSA is needed for safer cytotoxic therapy escalation, ultimately leading to improved cancer-specific mortality and morbidity. By defining the spectrum and resistance of

bacterial infections during neutropenic fever in cancer treatment in Malawi we will develop better prophylaxis and treatment plans for cancer populations across SSA.

Role: Primary Faculty Mentor

UNC CFAR Developmental Award Montgomery (PI)

8/1/2018-7/31/2019

#### Genomic Characterization of HIV-associated multicentric Castleman disease in Malawi

We propose to characterize cases of MCD in our cohort using modern genomic tools. First, we will apply a whole transcriptome RNASeq-based approach to define gene expression profiles that distinguish MCD from benign, reactive lymph nodes and that define transcriptional subsets of MCD associated with outcome. Next, we will perform targeted next generation sequencing of immunoglobulin genes in order to define the B-cell/plasma cell repertoire present in HIV-associated MCD. The innovative work funded by this award will provide fundamental insights into the biology of HHV8-driven lymphoproliferative disorders arising in the setting of HIV infection. In addition, this work will establish a platform to support an independent research program utilizing next generation sequencing tools to characterize HIV-associated lymphoproliferative disorders. Role: Primary Faculty Mentor

NIH/NCI P30CA016086-40S4

Earp (PI)

3/24/2016-11/30/2018

# Malawi Burkitt lymphoma project supplement

This supplement award to the Lineberger Comprehensive Cancer Center core grant is specifically for Burkitt lymphoma studies in Malawi. The included studies will focus on deriving and validating a diagnostic score to improve Burkitt lymphoma diagnosis, conducting a systematic methotrexate dose-escalation study, and increasing collaborations with partners in Kenya and Uganda during the supplement award period to establish a regional network for addressing this common pediatric cancer.

Role: Supplement award PI

NIH/NCI R21CA180815

Gopal (PI)

8/20/2013-7/31/2017

# Molecular profiling of HIV-associated lymphoma in the US and Malawi

The aims of this research are to perform the first large-scale molecular characterization of HIV-associated lymphoma, using RNA sequencing approach applied to lymph node specimens from the United States and Malawi. Patient specimens will be taken from two ongoing lymphoma cohort studies in the multicenter CNICS network in the US and in Malawi, for which I serve as PI, allowing correlation of all genomic analyses with robust clinical data.

Role: Contact PI

NIH/FIC K01TW009488

Gopal (PI)

9/20/2012-6/30/2017

# Developing a prospective clinical cohort of histopathologically characterized lymphoma patients in Malawi

This is an International Research Scientist Development Award to support my career development in the areas of HIV-associated lymphoma and lymphoma treatment in resource-limited settings. The goals of this research are to develop one of the only lymphoma cohorts in sub-Saharan Africa which is prospectively and longitudinally characterized with respect to histopathologic, clinical, and laboratory features. Up to 800 adult and pediatric patients with confirmed lymphoproliferative disorders receiving treatment according to local standards will be followed for up to five years to evaluate response to therapy, treatment-related toxicities, and health-related quality of life (HRQOL).

Role: Contact PI

Lineberger Developmental Research Awards

Gopal (PI)

7/1/2013-6/30/2018

# A pilot clinical trial of R-CHOP in Malawi

This is an ongoing single-center, non-randomized clinical trial of R-CHOP, using the Indian generic biosimilar Reditux. We are enrolling 40 patients with and without HIV. Patients will be followed for primary endpoints of toxicity and progression-free survival. The study will provide essential preliminary data to support incorporating rituximab into clinical trial protocols in the multicenter AIDS Malignancy Consortium and Burkitt Lymphoma Trial Network. It will also provide momentum for a paradigm shift away from cytotoxic treatment in settings where this is difficult, and efforts to increase access to essential cancer medicines.

Role: Contact PI

Lineberger Developmental Research Awards Smith (PI) 7/1/2017-6/30/2018

# Concomitant Conventional Treatment and Traditional, Complementary, and Alternative Medicine (TCAM) Use by Cancer Patients in Malawi

We propose to implement an interviewer-administered quantitative survey of conventional treatment and TCAM use in adult cancer patients presenting to the Kamuzu Central Hospital in Lilongwe, Malawi, and to conduct qualitative focus groups of cancer patients. The primary outcome measure will be the frequency of concomitant TCAM use among adult cancer patients undergoing conventional cancer treatment. The secondary outcome measure will be the frequency of delayed clinical cancer diagnosis due to seeking alternative TCAM treatment for symptoms.

Role: Co-investigator

UNC Lineberger and CFAR HIV Malignancies Pilot Award Gopal (PI) 6/1/2013-6/30/2016 Epstein-Barr virus (EBV) and Kaposi sarcoma-associated herpesvirus (KSHV) in HIV-associated non-Hodgkin lymphoma (NHL) in Malawi

This is a National Cancer Institute supplement to perform virologic tests on lymph node and peripheral blood specimens from patients enrolled in our prospective lymphoma clinical cohort in Malawi. Specifically, the goals of this research are to determine the frequency of EBV and KSHV in HIV-associated NHL specimens from Malawi and compare to HIV-uninfected controls, as well as to assess EBV and KSHV viral kinetics in blood among HIV-associated NHL patients from Malawi and compare to HIV-uninfected controls. Role: Contact PI

UNC Lineberger and CFAR Developmental Research Awards Gopal (PI) 7/1/2012-6/30/2015 Characterizing a large cohort of HIV-associated lymphoma in the CNICS network and examining correlates of clinical outcomes

The aims of this research are to characterize in detail the largest cohort of HIV-associated lymphoma patients receiving routine care in the antiretroviral therapy (ART) era, comprised of nearly 500 patients treated at 8 academic centers across the United States. In this work, we are examining associations between HIV and lymphoma treatment and clinical outcomes, as well as temporal trends in presentation and survival since the beginning of the ART era.

Role: Contact PI

# **Professional Service**

#### To Discipline

Reviewer, NIH US-South Africa Program for Collaborative Biomedical Research Phase 2,	2019	
RFA-AI-19-022		
Steering Committee Member, Visakhapatnam Cancer Research Park, Visakhapatnam, India	2019-2020	
Associate Chair, NCI AIDS Malignancy Consortium cooperative clinical trials group	2019-2020	
Reviewer, Fogarty International NCD Research Training Grant (D43) and Emerging	2019	
Global Leader Award (K43), PAR-17-001, PAR-18-901, PAR-19-051		
Reviewer, UK National Institute for Health Research and Innovation for Global Health	2019	
Transformation Panel		
Co-chair, NCI Advisory Board Ad Hoc Global Health Working Group	2018	
Discussant, Harvard-Botswana Tumor Board		
External reviewer, St. Jude's Children's Research Hospital Clinical Trials Scientific	2018-2020	
Review Committee		
Reviewer, National Comprehensive Cancer Network Framework for Resource	2018	
Stratification of Guidelines		
Reviewer, Wellcome Trust International Fellowship	2018	
Reviewer, NIH Fogarty Global Infectious Disease Training Program (D43), PAR 18-840		
External examiner, University of Witswatersrand Postgraduate Research Office		

CONNICOLOM VITAL. Satisfi Copai MD Mi 11	
Themed discussion leader, HIV-associated malignancies in sub-Saharan Africa, 25th Conference on Retroviruses and Opportunistic Infections	2018
Abstract Reviewer, 22nd International AIDS Conference	2018
Reviewer, UK National Institute for Health Research Global Health Program	2017-2020
Reviewer, NIH Fogarty International Center International Research Scientist	2017
Development Award (K01), PAR-17-002	
Reviewer, NCI Collaborative Consortia for the Study of HIV-Associated Cancers:	2017
US and Low- and Middle-Income Country (LMIC) Partnerships (U54), RFA-CA-16-018	
Lymphoma session co-chair, African Organization for Research and Training in Cancer	2017
biannual international conference	
Reviewer, Thrasher Research Fund	2016
Reviewer, NCI/AORTIC BIG CAT grants program	2016
Doctoral thesis external co-referee, University of Bern, Switzerland	2015
Member, Novartis Breast Cancer Advisory Group for Southern Africa	2014
Member, Cancer Working Group, International epidemiologic Databases to Evaluate	2013-2020
Evaluate AIDS (IeDEA)	
Investigator, AIDS Malignancy Consortium Hematologic Malignancies Working Group,	2013-2020
HPV Working Group, Kaposi Sarcoma Working Group, Solid Tumor Working Group	
Member, Cancer Working Group, Center for AIDS Research Network of Integrated	2012-
Clinical Systems (CNICS)	
Reviewer, AIDS Research and Human Retroviruses, PLoS One, Antiviral Therapy,	2012-2020
Nature Reviews Clinical Oncology, Infectious Agents and Cancer, Journal of Clinical	
Oncology, Emerging Infectious Diseases, BMC Cancer, AIDS, Journal of AIDS,	
International Journal of STD & AIDS, Journal of Antimicrobial Chemotherapy, Journal	
of Medical Virology, Journal of Oncology Practice, International Journal of Cancer,	
Journal of Infectious Diseases, Leukemia & Lymphoma, Cancer Medicine, BMC	
Infectious Diseases, Journal of Global Oncology, Journal of the National Cancer	
Institute, Pediatric Blood & Cancer, BMC Infectious Diseases, Blood, Lancet HIV, BMC	
Health Services Research, BMC Women's Health, Journal of Clinical Investigation,	
Journal of Clinical Pathology, Malawi Medical Journal, Lancet Global Health, Cancer,	
JAMA	
Invited contributor, US Department of Health and Human Services Panel on	2012
Antiretroviral Guidelines for Adults and Adolescents	
Within UNC-Chapel Hill	
Member, UNC School of Medicine Strategic Planning Oversight Committee Global	2018
Heath Working Group	2010
Winter Commencement Speaker, UNC-Chapel Hill	2017
Reviewer, UNC Gillings School of Global Public Health Innovation Lab Awards	2016
Reviewer, UNC Lineberger Developmental Awards	2015
Neviewer, ONC Emederger Developmental Awards	2013
Other	
Internal Medicine Residency Selection Committee, Norwalk Hospital	2005-2007
Internal Medicine-Pediatrics Residency Selection Committee, University of Michigan	2003-2007
Davison Council Service Chair, Duke University School of Medicine	1999-2000
Davison Council Octation Onlair, Dake University Octation of Medicine	1333-2000