

IGHID Global Research in Malawi, Zambia, South Africa, Nicaragua, China and Vietnam: Summer, 2017

For the past 10+ years, the UNC Institute for Global Health & Infectious Diseases has sponsored first-year UNC medical students to conduct summer research at the UNC Project in Lilongwe, **Malawi** or the University of Zambia, Lusaka, **Zambia**. We are now extending this program to include our research sites in Hanoi/Thai Nguyen, **Vietnam**; Leon, **Nicaragua**; Guangzhou, **China and Johannesburg, South Africa**. If chosen, UNC faculty will sponsor/mentor students to apply for scholarships and grants', however students must procure their own funding.

Eligibility: First-year medical students who are available for eight weeks during the summer, 2017. We are looking for students with a demonstrated or strong career interest in (global) research. Student must procure their own funds. Total costs: \$3,500-\$5,000. Note: if your research proposal is favorably reviewed by the UNC Office of International Activities (OIA) they will provide substantial support. Nicaragua requires Spanish fluency; China requires at least 3 years of formal Mandarin training.

Application Deadline: Applications are due by **November 4, 2016**

Select students will be granted a series of interviews with final decisions made prior to **December 2, 2016**.

Application Requirements

1. Current CV
2. One-page description of why you want to conduct global research including your short- and long-term career goals. If you have a strong interest, connection or language skill linked to a particular country or project, please include that information in your statement.

Electronic applications must be sent to:

Irving Hoffman (hoffmani@med.unc.edu) and Martha Carlough (martha_carlough@med.unc.edu)

More information on funding for global health electives can be found here:

<http://www.med.unc.edu/oia/medical-students/funding>

This year we will select up to 7 students who will work with mentors on a variety of possible research projects.

- 1) The UNC Project, -**Malawi** website is: <http://www.med.unc.edu/infdis/malawi> AND <http://www.uncprojectmalawi.org>
- 2) The **Zambia** website is: <https://www.med.unc.edu/obgyn/global-womens-health>
- 3) The UNC Project-**Vietnam** website is: <http://sph.unc.edu/global-health/page/3/>
- 4) The UNC Project-**China** website is: <http://globalhealth.unc.edu/unc-project-china/>
- 5) the UNC Program in **Nicaragua** can be found at: <http://globalhealth.unc.edu/where-we-work/latin-america/>
- 6) The **South Africa** web site is <http://www.righttocare.org/>

Here are some examples of what research activities may be available to student's at each site:

UNC Project – China Guangzhou, China

UNC has a long history of collaborative health research, service, and training in China. The mission of UNC Project-China is to work collaboratively to improve the health of China and promote UNC-Chapel Hill's presence in China. UNC faculty, students, and trainees are leading research on non-communicable diseases, HIV and STIs, maternal and child health, and other global health areas.

China has tremendous inequalities and unique capacity for public health implementation, providing a dynamic and rich environment in which to pursue mentored research. China's rapid resurgence of sexually transmitted diseases creates opportunities for clinical, epidemiological, behavioral, and basic science research focused on sexual health. Large funded projects supported by the NIH, WHO, and Gates Foundation create opportunities for students to carve out parallel mentored research.

Students interested in working with UNC Project-China must demonstrate proficiency in Mandarin (preferable) or Cantonese during an in-person interview.

Students in China may work in the following areas:

Social entrepreneurship for sexual health (project website [here](#)): New models of care are needed to expand HIV/syphilis screening among men who have sex with men and other most-at-risk populations. In cooperation with local and regional community-based organizations, this project focuses on evaluation of health, social, and business metrics associated with innovative HIV and syphilis testing programs. For example, examining how social marketing and crowdsourcing influence the success or failure of HIV testing programs. Opportunities for qualitative and quantitative research are available.

Social Science and Ethics of Curing HIV (project website [here](#)): Curing HIV is now a priority of the International AIDS Society and the US National Institutes of Health. Clinical trials have already started in many sites, including Chapel Hill. This research project examines the social, anthropological, ethical, and policy implications of cure HIV research. The coming year will focus on community engagement related to HIV cure research.

African Migrant Health Project in Guangzhou: There are over 100,000 African migrants in Guangzhou, but access to health services is limited by a number of cultural, linguistic, and other barriers. Local colleagues have established a clinical service for Africans in the Xiaobei Lu area. The project also examines how foreign policy questions and trade issues influence health and wellness.

Sexually Transmitted Infections: China has a resurgent syphilis epidemic and some of the highest rates of purchasing sex among urban men of anywhere in the world. The Guangdong Provincial STD Control Center plays a key role in organizing a response to STIs in Guangdong, a southern province with a high syphilis burden. This provides unique opportunities for clinical, behavioral, epidemiological, and modeling STI research.

HIV-HCV Co-infections: The Number Eight Hospital in Guangzhou sees over 3700 HIV-infected patients and has detailed data on a cohort of HIV-HCV co-infected patients. Clinical, behavioral, and basic science research opportunities are available.

Methadone Maintenance: A province-wide system of methadone maintenance clinics regularly engages over 15,000 individuals and provides opportunities for infectious disease testing, treatment, and retention among drug users. This project led by the Sun Yat-sen Center for Migrant Health Policy explores the methadone system and its optimization.

UNC Project- Malawi Lilongwe, Malawi

UNC has had a presence in Malawi since 1990. UNC Project-Malawi, a collaboration between UNC and the Malawi Ministry of Health, was established in 1999 on the campus of Kamuzu Central Hospital in Lilongwe. UNC Project has grown to include more than 300 employees with research, clinical and laboratory space, and living quarters for students and visiting faculty. UNC Project's current portfolio of activities spans clinical service delivery, public health program implementation, and clinical and operational research focused on HIV and STDs, other infectious diseases such as malaria and tuberculosis, emergency obstetrics, cancer, family planning, surgery and trauma.

Students in Malawi may work in the following areas:

1. **Option B+ PMTCT (S4)** Study evaluating the safety of first and second line ART treatments among HIV infected pregnant women and their infants. This study has multiple aims related to safety, viral suppression, opportunistic infection, neurocognitive development of infants, and understanding defaulters. This takes place in 2 clinics in Lilongwe. (Contact: Mina_Hosseinipour@med.unc.edu)
2. **iKnow study**- This is looking at finding acute HIV patients in the STI setting and arranging for partner and social contacts of these patients to determine strategies for preventing onward HIV transmission in high risk groups. (Contact: Bill Miller, miller.8332@osu.edu)
3. **Adolescent Health** study (POWER)- This pilot study will evaluate strategies to engage high risk young women (aged 15-24) in sexual and reproductive health services with a focus on HIV prevention. This will operate in four clinics in Lilongwe. An antiretroviral therapy pre-exposure prophylaxis demonstration project may be added to this study. (Contact: Nora_Rosenberg@unc.edu)
4. **Partner Notification** study- This randomized controlled trial will focus on evaluating two strategies for engaging men in HIV testing and reproductive health services with a goal of improving retention in PMTCT and ART services for women as well as linking men to care. The coming year will be focused on completing enrollment and beginning follow-up. Contact: Rosenberg, Nora (Nora_Rosenberg@unc.edu)
5. **Bubble CPAP** study- this study will evaluate the efficacy of bubble CPAP for prevention of mortality in children with severe pneumonia, aged 1-59 months. This study will take place in Salima district hospital. Contact: Eric McCollum (ericdmccollum@gmail.com)
6. **KCH lymphoma study**- This is an ongoing longitudinal cohort, initiated in June 2013, of adults and children with pathologically confirmed lymphoproliferative disorders receiving standardized treatment under local conditions at Kamuzu Central Hospital. The study focuses on clinical presentation, treatment, and outcomes, with embedded virologic, biomarker, and genomic correlative studies, and includes a pilot clinical trial evaluating safety and efficacy of the anti-CD20 monoclonal antibody rituximab in this environment. Contact: Satish_Gopal@med.unc.edu
7. **Kaposi sarcoma cohort**- Patients with KS at Lighthouse Trust and the KCH Cancer Clinic will be enrolled in a longitudinal cohort similar to the lymphoma study, with a focus on clinical and molecular predictors of outcomes. The study is anticipated to start in the 3rd quarter of 2016. Contact: amoses@unclilongwe.org
8. **Breast cancer cohort study**- This study is anticipated to start in the 3rd quarter of 2016, and will develop a clinically annotated cohort of breast cancer cases at Kamuzu Central Hospital. It will establish a tumor block repository for future molecular and genomic characterization and collect data from patients on risk factors and post-treatment outcomes. Contact: Clara_lee@med.unc.edu (or lee.7951@osu.edu after 7/1/16)
9. **Malawi HIV-cancer match study**- Data from the Malawi National Cancer Registry are linked to HIV cohort data in a large epidemiologic study to assess cancer burden in the HIV-infected population and changes over time with availability of antiretroviral therapy. Contact: Satish_Gopal@med.unc.edu
10. **Sickle cell cohort**- In January 2015, we initiated hemoglobin electrophoresis capabilities in Lilongwe and established a longitudinal cohort of children with confirmed sickle cell disease to better understand clinical features and natural history of this disease in this environment. Contact: Kenneth_Ataga@med.unc.edu
11. **Depression Case Management in HIV**- This two clinic pilot study will evaluate models for depression care management among HIV infected patients as a strategy to improve HIV adherence and suppression. Contact: Brian Pence bpence@unc.edu, Mina_hosseinipour@med.unc.edu
12. **Community-facility linkage study**- A retrospective cohort study enriched by epidemiological sampling methods to characterize widely adopted community-facility linkage models and assess their impact, compared with each other and to the standard of care, on mother-infant pair care retention and other priority maternal-infant health outcomes in the context of Malawi's Option B+ program. Anticipated start February 2017. Contact: michael_herce@med.unc.edu, imofolo@unclilongwe.org

UNC Project-Vietnam

Hanoi, Vietnam

Students will primarily work out of the UNC-project Vietnam office, where ten full-time UNC employees who are Vietnamese nationals that speak fluent English are based. Dr. Vivian Go, PhD, associate professor of health behavior at UNC Gillings School of Global Public Health will be the primary mentor and is based at UNC in Chapel Hill. Dr. Go travels to Vietnam quarterly. The project director is Dr. Ha, who has been working with UNC for more than ten years, will be the on-site supervisor. Hanoi is a beautiful, culturally vibrant city. Apartments are available that are walking distance to the office.

Environment

The UNC-Vietnam office building is located in Hanoi, Vietnam, where the permanent UNC-Vietnam staff is based. It is a fully functioning, furnished 4-floor office building with air-conditioning, telephone and hi-speed internet access via password-secured wifi. The building contains offices and office space for the Project Director and all permanent staff. A large conference room on the fourth floor with fully functioning audio-visual equipment is available to all staff. There are also a number of extra cubicles that may be used by visiting investigators and colleagues. All staff offices are equipped with desktop or laptop computers and printers, and the building is equipped with a copier, fax machine, and scanners. The offices have several locking cabinets where project files are stored.

All MS1 students will have the opportunity to participate in clinical rounds at the National Hospital of Tropical Diseases and/or Bach Mai hospital, two of the largest hospitals in Vietnam.

Students in Vietnam may work in the following areas:

HPTN 074: Multi-site, two-arm, randomized vanguard study in Ukraine, Indonesia and Vietnam to determine the feasibility of a future trial that will assess whether an integrated intervention combining psychosocial counseling and supported referrals for antiretroviral therapy at any CD4 count and substance use treatment for HIV-positive people who inject drugs will reduce HIV transmission to HIV-negative injection partners as compared to routine care according to national guidelines for HIV-positive PWID. There are two study sites in Thai Nguyen, Vietnam.

HPTN 083: Multi-site study in 41 sites, 7 countries, to evaluate the efficacy of the long-acting injectable agent, cabotegravir for pre-exposure prophylaxis in HIV-negative men and transgender women who have sex with men. The study site in Vietnam will be Hanoi, Vietnam, and anticipated start date will be March, 2017.

HCV integration: Small qualitative study to examine the barriers to integration of HCV screening services in HIV clinics in Hanoi and/or Thai Nguyen Vietnam.

HIV-positive MSM: Pilot intervention using electronic and mobile apps to engage HIV-positive MSM in the HIV continuum of care in Hanoi, Vietnam.

Hazardous Alcohol Use Among Female ART clients: Comparative effectiveness trial of two evidenced-based alcohol reduction programs among ART clients, to understand the intersection of HIV and alcohol consumption unique to hazardous drinking among women.

University of Zambia (UNZA)

Lusaka, Zambia

UNC has collaborated with the UNZA School of Medicine for over a decade. Together, this partnership has supported educational and training opportunities in the health sciences, with an eye toward local capacity building. This engagement has helped to foster bi-directional exchange of knowledge and collaboration at the faculty, fellow, and student levels. Several Chapel Hill-based faculty have lived in Lusaka for 10+ years; others – including two faculty members and five fellows currently – continue to work full-time in the field. All have adjunct appointments at UNZA and

support its clinical, research, and training activities. In addition, UNC is in the process of establishing a registered entity in Zambia (expected in early 2017), an important administrative step that will increase our field presence and provide greater oversight to UNC trainees.

(1) Obstetrical outcomes: We are currently a recruitment site for the Global Alliance to Prevent Prematurity and Stillbirth (GAPPS) collaboration, funded by the Bill and Melinda Gates Foundation. Based at the University Teaching Hospital in Lusaka, this observational cohort study is expected to enroll 2,000 women in the first and early second trimester and follow them through delivery. The data and specimens collected from the study will answer important questions about the factors and mechanisms underlying poor obstetric outcomes in resource-constrained African settings. In early 2017, we will leverage this cohort to study interventions to reduce preterm delivery among HIV-infected pregnant women on antiretroviral therapy, via expected funding from the NIH.

(2) HIV prevention: We are implementing studies focused on different aspects of HIV prevention. The ECHO study is a multi-center randomized trial to determine the impact of different contraceptive methods on HIV acquisition among HIV-uninfected women of childbearing age. We are currently recruiting participants into a randomized trial of point-of-care early infant diagnosis of infants born to HIV-infected mothers, using the assay both as a screening and monitoring tool to improve long-term program retention. We are also awaiting funding decision on an NIH grant to investigate combination HIV prevention strategies for pregnant women and their families (anticipated in early 2017)

(3) Cervical cancer prevention and treatment: Our team was among the first in the country to provide routine cervical cancer screening. The cervical cancer program started by UNC faculty has now provided services to over 500,000 women nationwide. We continue to investigate new modalities to optimize screening, including assays for HPV genotyping. We are also developing and testing new approaches for treating cervical dysplasia and early-stage cervical cancer when detected.

(4) Breast cancer: Through funding from the Susan G. Komen Foundation, our team is developing novel strategies to expand breast cancer screening and diagnosis in Zambia. This work began with an extensive assessment of national capacity for breast cancer-related care and treatment. We are now training mid-level and community-based health providers to further support education and enhance linkages between health services.

UNC supports a vibrant environment for clinical, public health, and research activities in Zambia. The UNZA School of Medicine and its accredited teaching hospital, the University Teaching Hospital (UTH), comprise the principal medical training institution in Zambia for medical students, interns, and postgraduate doctors. Post-graduate physician training is available in the Departments of Anesthesia, Internal Medicine, Obstetrics and Gynecology, Pediatrics, Surgery, and Pathology. UTH trains nurses and midwives through the Nursing School located within the hospital grounds and clinical officers (physician assistants) through their college located at Chainama Hills College Hospital in Lusaka. UTH has approximately 2,000 beds. The Cancer Diseases Hospital, built in 2007, offers the country's only cancer treatment via medical oncologists, radiation oncologists, and surgeons. Our primary collaboration is with the Department of Obstetrics and Gynaecology, but over the years we have partnered with other departments and institutes at UNZA.

UNC Program in Nicaragua

León, Nicaragua

The University of Nicaragua (UNAN)-University of North Carolina (UNC) relationship arose in 1999 through a series of service and teaching initiatives, with research initiatives beginning in 2003. Research at the site has focused on pediatric vaccines and gastrointestinal disease epidemiology, often in partnership with the Nicaraguan Ministry of Health. UNC collaborators are provided with office space within the Department of Microbiology at the UNAN Medical Campus in León, Nicaragua. The program provides students with options for housing in León, including with host families. There are opportunities to improve Spanish language skills through formal classes in León.

We are seeking a student with Spanish language skills to contribute to studies on Zika in Nicaragua. Areas of active investigation include 1) clinical features and epidemiologic risk for symptomatic Zika infection 2) rates and risk of congenital Zika infection 3) effect of congenital infection on perinatal and early childhood outcomes 4) dynamics of prolonged viral shedding and likelihood for non-vector-borne transmission 5) humoral immunity to Zika infection 6) development of serologic diagnostics for flavivirus infections. The UNC investigators working on these projects include perinatologist, Dr. Elizabeth Stringer, and infectious disease specialist, Dr. Natalie Bowman. The student's role may include field data collection, laboratory analyses, data entry and generation of preliminary results, based on the student's interests, and previous skills and experience. Alternately, the student may be able to contribute to a new community-based study of childhood diarrhea in Leon, with UNC faculty, Dr. Sylvia Becker-Dreps.

Right to Care (RTC) Cervical Cancer Prevention Unit

Johannesburg, South Africa

UNC maintains a longstanding collaboration with the South African NGO, Right to Care [<http://www.righttocare.org>], and its affiliated research group, the University of the Witwatersrand (Wits) Clinical HIV Research Unit (CHRU) [<http://beta.chru.co.za>]. The collaboration, currently led by Drs. Carla Chibwasha (UNC GWH) and Bridgette Goeieman (RTC), provides an excellent learning environment for medical and public health trainees interested in global women's health and global oncology.

Established in 2009, RTC's Cervical Cancer Prevention Program is supported through both the U.S. President's Emergency Plan for AIDS Relief (PEPFAR) and an innovative partnership with the South Africa insurance company, First for Women. The program provides cervical screening services in public-sector clinics across South Africa. Mobile screening services are also provided to peri-urban, rural, and remote communities. Between 2009 and 2015, over 75,000 women screening services through at RTC-support clinics (where either a Pap smear or VIA is the standard of care). In addition to this large service program, the Cervical Cancer Prevention Unit also conducts numerous single- and multi-site clinical trials, as well as implementation and decision science research. Current opportunities for implementation research include work on a new mobile app, designed to improve the quality and reduce attrition from care. The team is also leading a six-country randomized trial of the 9-valent HPV vaccine.