Makerere University/Yale University Collaboration (MUYU) Orientation Guide

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Welcome to the Makerere University/Yale University (MUYU) Collaboration in Uganda!

This Orientation Guide is meant to provide you with all the information you need to prepare for your clinical rotation here in Uganda. There have been a number of versions of this guide produced over the years and we are indebted to past MUYU participants for their generous written contributions. This guide should supplement any other orientation information you may have received from your home institution. You can address with us any discrepancies you may find between this and other documents. This guide does not take the place of a Uganda travel guide (Lonely Planet, Bradt, etc) though we have included some key information for you about living in Kampala.

A Brief Introduction to Makerere University, Mulago Hospital, and MUYU

Makerere University is considered Uganda’s premier institution of higher learning and the University’s College of Health Sciences has long been considered East Africa’s top medical school. Mulago Hospital is the national referral hospital and the teaching hospital of Makerere University College of Health Sciences. Mulago is a 1500-bed hospital and provides many services that are offered nowhere else in the country.

The experience of working at Mulago Hospital will be an incredibly rich one, but it will also be quite challenging. Compared to any hospital in the United States, the patients at Mulago tend to present at a later stage of illness and the resources to care for them are relatively limited. You should anticipate an adjustment period, though the time it takes for each person to adjust to working here will differ. If you come into the experience with an open mind, bring with you all you have learned from your own training, and translate that into a positive energy of collegiality, teaching, and learning, we are sure that you will have a rewarding experience. Medical practice here may differ from what you are used to—sometimes because of different teachings and sometimes because of resource limitations. Most importantly, you should always respect local practice. It is never wrong to make a suggestion, but always honor the fact that you are a visitor in a vastly different environment.

As a MUYU participant, you will have a weekly schedule full of inpatient and outpatient activities; departmental academic sessions (teaching conferences, grand rounds, post-mortem rounds, etc); local cultural tours; Luganda language lessons; laboratory sessions; and more. You will participate in weekly feedback sessions with MUYU leadership. At the end of your rotation, we will ask you to reflect on your time here. Excerpts from these reflections may be used in our MUYU newsletter, but we will always ask for your approval first.

MUYU is a partnership that aims to strengthen clinical training, medical education, diagnostic laboratory infrastructure, and research. The program is not a medical tourism model— it thrives because every participant brings his/her knowledge, dedication to medicine, and love of teaching to the forefront. As a MUYU participant, you will be held to a very high standard and expected to offer what you can towards the above goals.

The MUYU Office in Uganda

Our office is located in the Makerere University College of Health Sciences on the Mulago Hospital campus—Clinical Research Building, Second Floor. This office will be your “home base” while you work at Mulago Hospital. Since the office is small, we ask that you follow these basic rules so that it remains a useable space for everyone:
1. During the workday you can leave a bag in the office while you are in the hospital. You can leave your white coat in the office overnight.
2. The office computers and printer/scanner are for the use of office staff only. You may bring your laptop with you and keep it in your bag during the workday. There is wireless Internet in the office, though it does shut down when the electricity goes down. There are some computer labs around the hospital campus that you may use as well.

Our mailing address is:

MUYU Collaboration Office Uganda
Makerere University College of Health Sciences
P.O. Box 7072, Kampala, Uganda

Our office phone number is: 041-4531022 (see Keeping in Touch section for details on calling Ugandan phone numbers).

**MUYU Office Staff**

Administrator: Jamidah Nakato ([muyu.office@yahoo.com](mailto:muyu.office@yahoo.com)); cell #071-2420610
Coordinator: Susan Nalugo ([muyucoordinator@yahoo.com](mailto:muyucoordinator@yahoo.com)); cell#071-2134040
MUYU Deputy Director: Dr. Frederick Nelson Nakwagala
MUYU Co-Director (Makerere): Reverend Professor Samuel A. Luboga

**Flights**

You are responsible for making all flight arrangements to and from Entebbe Airport (EBB). At this time the following international carriers service EBB: British Airways, Emirates, Brussels Airlines, KLM, Ethiopian Airlines, Kenya Airways, South African Airways, and Turkish Airlines. For specific questions regarding flights please contact your home institution’s administrator.

Entebbe is the city where the international airport is located, about 40 minutes south of the capital, Kampala. Once you book your ticket please e-mail it to the MUYU Administrator ([muyu.office@yahoo.com](mailto:muyu.office@yahoo.com)). **We must receive confirmation of your travel dates one month prior to arrival.**

We will arrange for a driver to pick you up and take you to the airport in Entebbe at the time of your arrival and departure. **You will be responsible for paying the driver at the time of service, at a cost of 60,000 Ugandan Shillings per person, in each direction.** See Money section below for details on obtaining Ugandan Shillings.

There are ATM machines and Money Exchange Bureaus (open 24 hours) at Entebbe International Airport.

Please cc Laura Crawford ([laura.crawford@yale.edu](mailto:laura.crawford@yale.edu)) as well as your home institution’s administrator (i.e. Joce Rodriguez at Stanford: [joce@stanford.edu](mailto:joce@stanford.edu)) when you email your travel itinerary.

*If your connecting flight is delayed please call one of our cell phones (listed above) — we cannot reliably track your flight otherwise.*

**Visa**

U.S. citizens need a visa to enter Uganda. You can obtain your visa either ahead of time from the Ugandan Embassy in Washington, D.C. (via mail) or at the airport in Entebbe on arrival in Uganda. Be aware that
only single-entry visas are available at the airport; if applying for your visa ahead of time, the cost is $50 for a single-entry visa or $100 for multiple-entry. The Ugandan Embassy website has all the information you need (http://www.ugandaembassy.com/visa.html#6). If purchasing your visa at the airport, be sure to bring current US dollar bills (see Money section below).

In the visa application:
- List Jamidah Nakato, phone 0712420610, as the contact in Uganda
- List Makerere University Campus, Kampala, Uganda as the address in Uganda where you intend to stay.

Always keep your passport in a safe place. Make sure to leave a photocopy or digital copy of your passport front page with someone you trust at home. If you use a cloud backup service (i.e. Carbonite, Dropbox, etc) it would be prudent to upload digital copies of your important travel documents prior to departure.

Ugandan Medical License
If you are a resident or faculty member you will need to get a Ugandan medical license. At the present time, the Ministry of Health requires that all applicants present to the Ministry in person, along with their application documents (which includes a copy of the Ugandan visa stamp in your passport); the MUYU Office will facilitate this once you have arrived. The application requires copies of the following documents (which you should plan to bring with you as hard copies):

- Front page of your Passport
- Passport page with your Ugandan visa
- Medical license from your home country or notarized letter from your residency Program Director stating that you are operating under your institution’s training license (contact Laura Crawford [laura.crawford@yale.edu] for the template)
- Medical school diploma and residency diploma (if applicable)
- 2 passport size photographs
- For non-J&J scholars, a letter from your home institution which includes documentation of good standing as well as length of employment
- Your CV

The license fee is USD $200. Please ensure that you bring payment with you to the Ministry of Health.

Safety
There is a strong security presence in Kampala and the city is generally safe, provided you take the same precautions you would in any large city. The walk between your housing accommodations and Mulago Hospital takes you through a bustling section of town and there are people out and about at all hours of the day and night. However, if you ever do not feel safe walking, there are always special hire taxis available (see Transportation in Kampala section below). You must be especially cautious when traveling around town after dark. Please avoid walking alone and please travel by special hire taxi at night.

We recommend that you stay abreast of the international news and consult official sources of travel advisory information for your home country. All participants who are U.S. citizens are encouraged to register with STEP (“Smart Traveler Enrollment Program” [https://travelregistration.state.gov/ibs/ui/] through the Department of State) so that the U.S. Embassy will know how to contact you in the event of an emergency.
Traveler’s Health
Your personal health is extremely important to us. Please visit the CDC “Health Information for Travelers to Uganda” website (http://wwwnce.cdc.gov/travel/destinations/uganda.aspx) for guidance regarding travel-related vaccinations and malaria prophylaxis.

You will need to take guidance from your home institution regarding pre-departure health visits. Appointments should be made well in advance - at least 4-6 weeks prior to departure.

Regarding malaria prophylaxis, the options are once-daily doxycycline, once-daily Malarone, and once-weekly mefloquine. Doxycycline and Malarone tend to be the drugs of choice, given untoward psychiatric side-effects of mefloquine. Be advised that you can purchase doxycycline at any pharmacy in Kampala for approximately 5 cents/capsule. Both can be purchased in bulk and without prescription. Since you must begin taking your prophylaxis prior to arrival in Kampala, you may want to consider filling a prescription for one-week’s worth of medication and obtaining the rest once you arrive. Of course, we cannot guarantee the availability, integrity, or cost of any medications purchased outside the U.S.

Before leaving your home country, make sure that you have an understanding of your evacuation, worker’s compensation and malpractice coverage, as it pertains to international travel/work.

In Case of Illness or Injury While in Uganda
You are responsible for seeking healthcare services if you should fall ill while here. Neither the MUYU office nor MUYU physicians are able to provide healthcare services for you. We will provide you with contact information for The Surgery (www.thesurgeryuganda.org; 2 Acacia Road, Kampala; Tel: 0414 256003) - this is a well-respected and well-run clinic nearby the hospital and university campus that provides quality healthcare services 24 hours a day. They also have an ambulance in case of emergency. The Surgery accepts credit cards so access to cash should never be an impediment to seeking healthcare here.

Other well-respected health centers that cater to expatriates include: International Hospital Kampala (St. Barnabus Road; Tel: 077 2200400) and International Medical Center clinic (in the Watoto Church Building, Bombo Road; Tel: 041 341291 or 031 2341291).

To file a claim for reimbursement from your insurance company once you return home, you will need to save all receipts and details of care provided.

If you are unwell or are injured, you must inform the MUYU office.

Emergency Evacuation
Yale provides emergency evacuation insurance through Medex Travel Insurance and Emergency Assistance (www.medexassist.com). Medex DOES NOT provide personal health or travel insurance.

All J&J scholars and Yale affiliates are covered by Medex, but you will still need to enroll prior to your trip (this can be done on the J&J intranet site: www.globalhealthscholar.yale.edu).

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1 Stanford residents should contact Occupational Health on Welch Road: (650) 736-0466. Yale residents should contact Occupational Health in the East Pavilion: (203) 785-4197. Yale medical students will be directed to a travelers’ health clinic by the YMS international office. When you are given HIV post-exposure prophylaxis, make sure to record the phone number to call in case of an exposure. The services provided by your home institution’s occupational health service may not meet all of your travel needs. You may need to contact a private travel clinic (i.e. Passport Health) if this is the case.
Accommodation
We will arrange for you to be housed in an apartment on or near the Makerere University campus. The housing situation differs based on the number of participants at any given time, so we cannot accommodate specific housing requests. You will be housed in a safe, clean apartment with a full kitchen, den, dining room, and housekeeping. There may be wireless Internet. You will likely be sharing accommodations with other MUYU participants and may share a bedroom (same-sex). Laundry is done by hand and can be done by the housekeeper for an extra fee. Housing options include (among others) Lincoln Flats and MISR apartments.

Given the complexity of arranging housing, we MUST receive confirmation of your travel dates
one month prior to the start of your rotation.

Money
The local currency is the Ugandan Shilling (UGX). As of February 2013, the exchange rate is approximately 1USD=2600UGX; you can copy 1USD in UGX into Google to search for the latest exchange rate.

There are 2 ways to obtain local currency:
1) Forex Bureau: there are many of these around Kampala. All U.S. dollars that you bring to Uganda must be dated within the last 5 years (or from the most recent printing of that denomination) and must be in denominations of $50 or $100. Banks can easily accommodate these requests in their branch offices prior to your departure.
2) ATMs: these are also widely available in Kampala and often offer a better exchange rate than the Forex bureaus. Most ATMs that accept U.S. cards only accept VISA ATM cards (they will have a VISA sign posted outside). However, Stanbic Bank ATMs accept Mastercard. Please be aware that your bank may charge fees for using non-network ATMs and for making international withdrawals (one exception is Barclay’s Bank which is an affiliate of Bank of America such that there is no service charge - check with your bank before you come). Your withdrawal limit from ATMs is usually 500,000UGX (approximately $250) per transaction. However, bank branches will allow you to withdraw larger amounts from the teller.

There are ATM machines and Money Exchange Bureaus (open 24 hours) at Entebbe International Airport.

Uganda is essentially a cash-only society. Some stores, supermarkets, and upscale restaurants as well as travel agencies will, however, accept credit cards. Be advised, though, that there is often a service charge added (in addition to any international service charge levied by your credit card company).

We recommend that you contact your bank/credit card companies ahead of time to let them know that you will be in Uganda (and any other countries you may visit on your journey) so your card is not blocked by the company’s fraud department.

As a safety precaution, you should avoid moving around town with large amounts of cash.

Stipend
If you are a J&J Global Health scholar, you may receive up to a $3500 stipend; you are responsible for any expenses beyond this amount. Save all receipts (airline receipt and boarding passes, receipt for housing, receipt for medical license, airline receipt for box of medical supplies) to submit upon your return. Please send your receipts to the Yale office (laura.crawford@yale.edu) as they will be processed there.

If you are a Yale medical student, your stipend is arranged by the YSM Office of International Medical Student Education.

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2 These are the only bills that will be accepted by the MUYU office for all fees.
Fees

All fees must be paid either in advance via wire transfer or during on-site orientation on the first business day of your rotation (see below for details).

- All MUYU participants will pay a Participation Fee. This includes your accommodations as well as MUYU programming (i.e. lecture sessions, fieldtrips) and office support. The housing cost for MUYU participants is very reasonable given the high cost of accommodations in Kampala.
- All MUYU participants who are NOT from Yale or a MUYU affiliate program (refer to table) will need to pay a MUYU Administrative Fee of $50 per week; Yale and the MUYU affiliate programs make separate, direct contributions to the MUYU Operating Budget.
- All MUYU participants who are NOT from Yale (refer to table) will also need to pay a $200 Makerere University Administrative Fee to the Makerere College of Health Sciences International Office; this should be done in cash during your Orientation.

There are two ways to pay the MUYU Participation Fee and Administrative Fee: by bringing cash (USD) with you to Uganda, or via international wire transfer. The Ugandan Medical License Fee must be paid in cash (USD); do not wire transfer the funds for the Medical License. Wire transfers are simple to do through your online banking site or at your bank’s branch and they assure that you will not have to travel with large sums of US Dollars on your person. There is typically a nominal additional fee to send an international wire transfer but past MUYU participants have felt this fee is worth paying in order to avoid traveling with so much cash. Use the following details to send your international wire transfer (if you choose to do so):

**Bank name:** Stanbic Bank Uganda Limited Corporate Branch

**Bank address:** PO Box 7131, Kampala, Uganda

**SWIFT number:** SBICUGKX

**Bank account number:** 0240059133501

**Account name:** Makerere University College of Health Sciences Research Account

**Account address:** Makerere University, Kampala, Uganda

Please alert us at muyu.office@yahoo.com once you have sent a wire transfer and indicate in your email the amount sent.

Additionally, you must bring proof of your wire transfer (confirmation receipt) with you to Uganda.

Remember that the US Dollars you do bring with you to Uganda need to meet certain requirements (see Money section above).

Keeping in Touch

Cell phones are ubiquitous in Uganda and offer the most reliable method of communication. You may be able to borrow a MUYU office cell phone during your stay, but this depends on the number of participants
at any given time. If a phone is not available for you, it is very easy to purchase a new phone for around $30; if you have an unlocked international cell phone, you may wish to bring it with you. Ugandan cell phones are unlocked - meaning that any phone will work on any network. All you do is purchase a SIM card for your network of choice (MTN and Warid are currently the most commonly used) for a few dollars - this activates the phone and gives you a phone number. To make calls, you need to buy airtime cards - these are available just about anywhere.

For your own safety, and so we can reach you in case of an emergency, you **MUST** provide your Ugandan cell phone number to the MUYU Administrator as well as to your home institution.

*If you have an unlocked cell phone, you can likely use it in Uganda.*

*Be aware, though, that cell phone theft is a common petty crime so you may not want to use your cell phone from home.*

**International calls**

To call Uganda from the U.S., dial 011 256, then the number. Leave off the ‘0’ in front of all phone numbers. For example, if your number in Kampala is 077-2208539, your friends and family would dial 011 256 77 220 8539 from the U.S.

To call the U.S. from Uganda, dial + (press * twice) plus 1 and then the number. For example, to call the Yale page operator, dial +1 203 688 3111.

Prices to call the U.S. from Uganda using a cell phone runs ~$1/minute. Incoming calls (including calls from the U.S.) are FREE – therefore, it is cheaper to have family and friends in the U.S. call you. Using Skype to call a U.S. phone number costs approximately 2 cents/minute. Internet calling cards are another option – Nobelcom.com has calling cards for ~10 cents/minute that are reportedly reliable.

**Internet access**

There are Internet cafés all over Kampala. Lincoln Flats and MISR Flats both have wireless Internet access. Many coffee shops (i.e. Endiro, Mish Mash, Café Pap, Mokka Terrace at Nakumatt Oasis Mall, Club 5 on Makerere Campus) have wireless access for those who make purchases. As stated above in the MUYU Office section, the office has a wireless connection and there are some computer clusters on the Mulago campus. Be aware that Internet connections in Uganda, in general, are slower and not as reliable as those you are used to in the U.S. **Patience while using the Internet is a virtue!**

**Transportation**

There are 3,000 road traffic fatalities and 12,000 road traffic injuries in Uganda each year, and using common sense is critical while getting around. *Boda bodas* (motorcycle taxis for hire) are a very popular mode of transport here, but they are EXTREMELY dangerous. Do NOT travel even short distances by *boda boda*. The other popular mode of transport for Ugandans is the *matatu* (which Ugandans refer to as “taxi”). These are blue and white vans which are always easy to catch and inexpensive.

We recommend that you use *special-hire taxis* for transport around town, especially at night. These are more expensive but are the safest option. There are always *special hires* waiting for customers at Mulago Hospital as well as outside Makerere University, across the street from the shopping malls, and elsewhere around town. If you like your driver, be sure to get his/her phone number so you can call for future rides. Also, the MUYU office staff would be happy to provide you with phone numbers of trusted drivers.

*No matter the mode of transport, always settle on the price of your trip before getting in the vehicle!*
Weekends/Personal Travel
During your time as a MUYU participant, the MUYU office MUST BE INFORMED of any trips you decide to take outside of Kampala. We need to know your anticipated destination and your anticipated departure and arrival times. This is not meant to be invasive to your privacy - it is meant to ensure that, in the case of an emergency, we will be able to reach you.

Food and Water
As stated above, your housing accommodations will have a full kitchen (though these kitchens may not have all the amenities you are used to). From where you will be staying, it is very easy to access supermarkets and restaurants. See the Other Information section below for supermarket and eating-out options. Regarding drinking water, you can boil tap water and keep a pitcher in the refrigerator. Alternatively, you can buy bottled water in 500mL, 1L and 2L bottles or 5-gallon containers at local supermarkets. Bottled water is available at every eating establishment (usually 500mL bottles).

Evaluations
We are continuously striving to improve the MUYU participant experience. For that reason, you will be asked to complete the following: Weekly Log Sheet; evaluations of each clinical teaching session and lecture; reflections based on your experiences at Mulago Hospital, St. Stephen’s Hospital, and Lacor Hospital (as applicable). With your permission, we may include excerpts from your reflections in our MUYU Newsletter. We will also take a photo of you for our MUYU Yearbook.

As with all rotations, you will be evaluated on your performance during your MUYU rotation. Participants should make sure that all evaluation forms are completed by their supervising attendings and turned in to the MUYU Office prior to returning home.

Conducting Research
If you are thinking about conducting a research project during your rotation, please read Appendix Three: Conducting Research as a MUYU Participant.

Climate
Uganda, being on the equator, has generally mild temperatures (60-80 degrees F is the annual range). There are typically 2 rainy seasons: April/May and September/October/November. Please check online for expected weather conditions during your rotation.

TIME OFF POLICY
Although you are expected to round on the wards five days a week (Monday-Friday), you will not have any academic responsibilities between Friday afternoon at 1pm and Monday mornings at 8am. This is ample time for most recreational travel within the country, as well as some trips outside Uganda. Please make sure the MUYU Office is aware of where and when you plan to travel, so that you can be contacted in the event of an emergency.

You will not be required to work on Ugandan national holidays that occur during your rotations, though you certainly do have the option. If a national holiday occurs on a Monday or Friday, this means that you will have a 3-day weekend. Given the expectation that you will integrate with your ward team, however, we do not allow participants to take additional days off for recreational travel.
**Suggested Items to Bring to Uganda**

- 1 multi-purpose plug adaptor
- 2 white coats
- Stethoscope
- Watch with second hand
- Reflex hammer
- Hand sanitizer
- Non-sterile gloves, 3-4 boxes
- N-95 masks
- Alcohol prep pads
- HIV post-exposure prophylaxis (typically 1 week’s worth is dispensed ahead of time and you need to call to have the rest sent by FedEx)

**Thermometer, blood pressure cuff, pulse oximeter, tongue depressors: some participants have found bringing these to be useful as they may not always be available on the wards**

- Professional clothes you would wear to work in the hospital in the U.S., bearing in mind there is no air conditioning. Ugandan medical professionals tend to dress nicely at work.
  - For women: slacks, dresses and skirts at knee-length or below, shirts or blouses that are not low-cut
  - For men: button-down shirts (short- or long-sleeved) with tie
- Casual clothes to wear outside of the hospital
- Backpack or large purse for carrying to and from the hospital or around the city
  - Larger backpack or carry-on sized bag is useful for taking weekend trips
- Umbrella
- Walking shoes if walking to/from the hospital (can change shoes at the hospital)
- Sunscreen and sun hat
- Insect repellant
- Bathing suit
- Flashlight
- Bath towel (these will be provided at Lincoln Flats, but past participants have appreciated bringing their own as well)
- Personal items: Note that soap, shampoo, conditioner, toothbrushes, toothpaste, deodorant and lotion can all be purchased at local supermarkets

**Other Information**

The following list is, by no means, exhaustive but is a compilation of favorites of past MUYU participants. For more information… *The Eye* is a locally published bimonthly guide to goings-on in Uganda— you can pick one up for free at many tourist-oriented shops around town. Travel guides such as Lonely Planet are also really useful. A group of medical students and residents who were in Kampala in May 2012 put together a Google Map listing a number of key sites within the city—we hope you find it useful: [http://g.co/maps/6ppj5](http://g.co/maps/6ppj5)

If you happen to be in Kampala during a U.S. national holiday (e.g. Independence Day, Thanksgiving) and you would like to find out what other Americans in the area are doing to celebrate, you may wish to contact the U.S. Embassy in Kampala ([http://kampala.usembassy.gov](http://kampala.usembassy.gov)) or the American Recreation Association of Kampala ([http://www.arakampala.com](http://www.arakampala.com)).

**Gym on Makerere Campus**

There is a gym at Club 5, across from MISR apartments. Facilities include elliptical machines, one stair-climber, stationary bikes and weights. Cost is 10,000 UGX per visit, or 150,000 UGX/month.

**Pharmacies**

Located all over town, including a number in Wandegeya (the neighborhood nearby Makerere Campus) and in private clinics.
Supermarkets:
There are many small supermarkets around town, including in Wandegeya. The larger supermarkets are Tusky Supermarket (across from Makerere University campus), Uchumi at Garden City Mall, Nakumatt at Nakumatt Oasis Mall, and ShopRite at Lugogo Mall.

Cultural highlights:
Uganda Museum
National Mosque
Baha’i Temple
Ndere Center- highly recommended outdoor amphitheatre; cultural dance performance every Wednesday and Sunday evening (dinner available)
Art galleries: Tulifanya, Afriart, others near Kabira Club
Introduction ceremonies (these are pre-wedding cultural celebrations which you may be invited to attend)

Restaurants:
Club 5 (restaurant and internet café on Makerere Campus): Burgers, Indian food, omelettes, etc.
Italian: Mamba Point (Nakasero)
Mexican: Lotus Mexicana (Nakasero)
Indian: Khana Khazana (Acacia Ave, Kololo), Pavement Tandoori (Kisementi), Haandi (Kampala Road), Masala Chaat (across from National Theatre)
Ethiopian: Fasika (Ggaba Road, past the American Embassy), Casablanca (Acacia Ave, Kololo – also has Indian food)

Coffee Shops:
Café Pap (downtown and at Garden City)
BanCafe downtown and at Nakumatt Oasis
Thousand Cups (downtown)
Good African (at Lugogo)
Mish Mash (Acacia Ave, Kololo)
Endiro (Kisementi)

Shopping:
Bookstore: Aristoc (downtown and at Garden City)
Crafts: there is a large craft market at the National Theatre; there is another craft market across from Thousand Cups coffee shop. Banana Boat (at Garden City, Kisementi, and Lugogo Mall) is a great store for crafts, souvenirs, etc.

Recommended books:
• Oxford Handbook of Tropical Medicine
• Atlas of Tropical Medicine and Parasitology – Wallace Peters and Geoffrey Pasvol
• Lecture Notes on Tropical Medicine – G.V. Gill, N.J. Breechking
• Luganda-English Phrasebook for Tourists (from Makerere bookshop, across the street from Lincoln flat)
• Lonely Planet East Africa
• White Nile – Alan Moorehead
• We Wish to Inform You that Tomorrow We Will Be Killed With Our Families – Philip Gourevitch
• The Shadow of the Sun - Ryszard Kapuscinski
• AIDS in the Twenty-First Century: Disease and Globalization – Tony Barnett and Alan Whiteside
• Blue Nile - Alan Moorehead
• King Leopold’s Ghost: A Story of Greed, Terror and Heroism in Colonial Africa – Adam Hochschild
• Long Walk to Freedom - Nelson Mandela
• Latitude Zero, Tales of the Equator - Gianni Guadalupi and Antony Shugaar
• Makerere University, Towards Becoming an African University - Carol Sicherman
• Mountains Beyond Mountains – Tracy Kidder
• Season of Blood; A Rwandan Journey – Fergal Keane
• *The Last King of Scotland* - Giles Foden
• *The White Masai* – Corinne Hofmann
• *The Zanzibar Chest* – Aidan Hartley
• *Uganda Since Independence, A Story of Unfulfilled Hopes* - Phares Mutibwa
• *Why Victims Become Killers – Colonialism, Nativism, and the Genocide in Rwanda* – Mahmood Mamdani
• *The Bottom Billion* - Paul Collier
• *The Wretched of the Earth* - Frantz Fanon
• *The White Man’s Burden* - William Easterly
Appendix One: Duties and Expectations for Internal Medicine Residents

All Internal Medicine residents rotating with the MUYU Collaboration in Uganda are expected to do the following in their 6-week rotation:

1. **DAILY WARD ROUNDS**
   During your 6-week rotation, you will be assigned to rotate on 2 ward teams at Mulago (Infectious Diseases, Hematology, Endocrinology, Gastroenterology, Cardiology, Renal, Pulmonary, or the Oncology), each for approximately 3 weeks. The team members vary from service to service, but generally your team will include one Mulago resident, at least one Mulago intern, perhaps an attending and medical students (depending on the time of year). **You are expected to round with the team each morning (rounds typically begin around 9 am), 5 days a week (Monday – Friday).** In the afternoon, the team does procedures, etc. If you would like to see patients on the other wards, please feel free to do so in the afternoons.

   While on the ward team, visiting residents are expected to teach and model:
   - How to construct a broad differential diagnosis
   - How to manage and interpret laboratory and radiologic data
   - Bringing articles for the team relevant to clinical questions asked on rounds
   - Communication with patients about their diagnosis, outlining why tests are needed and the rationale for treatment given

   **Performing Invasive Procedures:** It is important to remember that the goal of MUYU is for you to participate in a global health educational exchange and that we strongly discourage students and residents from doing invasive procedures while at Mulago Hospital. The Ugandan trainees are responsible for drawing blood and performing procedures on their patients, and you should never feel that you are being pressured to do them. Keep in mind that the equipment being used in Uganda may not be what you are used to using (not to mention, there may be a lack of local anesthetic and the level of informed consent may be different), that the inpatient HIV infection rate is >50%, and the Hepatitis C infection rate is unknown.

2. **MULAGO CLINICS**
   You are expected to work in the clinic of your current inpatient ward, alongside Mulago faculty, for a minimum of **one clinic per week.** Feel free to visit any other clinics of your choice during your rotation.

   The clinic schedule is as follows:
   - Monday: Hypertension, Thyroid, General Medicine
   - Tuesday: Renal, GI, General Medicine, Chest Clinic, Dermatology
   - Wednesday: Neurology, General Medicine
   - Thursday: Hematology, Cardiology, General Medicine, Dermatology
   - Friday: Rheumatology, ID/Communicable diseases
   - Daily: HIV Clinic, Diabetes Clinic

3. **CASE-BASED DISCUSSIONS AT MULAGO**
   One way that MUYU residents and students can contribute to medical care at Mulago Hospital is by leading discussions and/or giving formal lectures geared towards Mulago faculty, housestaff and medical students. You will be expected to lead at least four educational sessions while working at Mulago. You will need to schedule with your teammates when and where you will give these talks – there are a number of available rooms just off the wards. **These talks should be based on general concepts/general approach to patients and diagnoses, avoiding complicated discussions/use of technology that is not available in Uganda.**

   Additionally, MUYU residents are expected to participate in at least one journal club presentation during their rotation. You will be paired with a Ugandan resident (Senior House Officer [SHO]) to present an article that the two of you will choose together. You are also strongly encouraged to participate in other teaching conferences during your rotation (e.g. Mini-Rounds, Grand Rounds, Post-Mortem Rounds, and Division Conferences) – if your assigned ward team is presenting during your rotation, you should plan to participate as a member of the team.

   **List of topics for case-based discussions** (this list is meant to help guide you, though the greatest utility will come from leading discussions / giving lectures which grow out of clinical questions that come up on rounds):

   **CARDIOLOGY**
   a. Management of CHF (focus on medications available at Mulago)
   b. ECG tutorial (can have several sessions)
c. Management of HTN (focus on medications available at Mulago)
d. Management of atrial fibrillation (rate control and anticoagulation)
e. Rheumatic heart disease
f. Pericardial syndromes (physical exam, ddx and treatment for tamponade, pericarditis/constrictive pericarditis, pericardial effusion)
g. Clinical scenarios with echocardiograms (including the utility of echos in the management of CHF)

PULMONARY
h. CXRs in various clinical scenarios (can have several sessions)
i. Approach to pleural effusion (exudative vs. transudative)
j. Approach to a patient with cavitary lung lesions on CXR (include TB, malignancy, lung abscess, etc)

NPHROLOGY
k. Approach to a patient with elevated creatinine/acute kidney injury
l. Hyponatremia
m. Hyperkalemia
n. Nephrotic Syndrome
o. Management of chronic kidney disease

INFECTIONIOUS DISEASES
p. Antibiotic lecture (focus on ceftriaxone, doxycycline, cipro, chloramphenicol, dicloxacillin, ampicillin)
q. Basics and toxicities of antiretroviral therapy (focus on d4T, AZT, TDF, FTC, 3TC, FTC, NVP, EFV, Lopinavir/ritonavir, Atazanavir/ritonavir)
r. Review of WHO guidelines for initiation of ART and staging
s. Cryptococcal meningitis and disseminated cryptococcosis (include utility of CSF and serum CrAg, data on fluconazole vs. ampho B vs. ampho B + 5FC)
t. Overview of HIV-associated opportunistic infections (PCP, oral and esophageal candidiasis, toxoplasmosis, PML)
u. Review of WHO guidelines for treatment of tuberculosis
v. STDs: GC, CT, NGU, PID (include syndromic management in Uganda)
w. STDs: Genital ulcer disease (HSV, syphilis, chancroid, granuloma inguinale, malignancy)

RHEUMATOLOGY
x. Overview of SLE
y. Overview of sarcoidosis

GASTROENTEROLOGY
z. Approach to a patient with ascites (SAAG, cell count differential and ddx, etc)
aa. Approach to a patient with jaundice
bb. Approach to a patient with hepatosplenomegaly
cc. Approach to a patient with abdominal lymphadenopathy
dd. Approach to a patient with hypoechoic lesions in the liver or spleen
e. Approach to a patient with transaminitis/fulminant liver failure
ff. Approach to a patient with cholestasis
gg. Approach to a patient with severe nausea/vomiting
hh. Causes, treatment and complications of pancreatitis

HEMATOLOGY/ONCOLOGY
ii. Approach to a patient with anemia
jj. Approach to a patient with pancytopenia
kk. Kaposi’s sarcoma – different clinical presentations and treatment in Uganda

ENDOCRINE:
ll. Approach to a patient with goiter
mm. Management of diabetes (focus on medications available at Mulago)
nn. DKA vs. HHNK

NUTRITION:
oo. Case-based review of clinical presentation of various nutritional deficiencies
4. VISIT ST. STEPHENS HOSPITAL – Minimum TWICE during the 6-week rotation

You will have the opportunity to spend a minimum of two full Mondays visiting St. Stephens Hospital, a community hospital in Kampala. You will round on the inpatient ward and see patients in the outpatient clinic. As part of your visit, you can join a member of the St. Stephens staff and make “home visits” as a means to administer medical care in the community. J&J Scholars are expected to go to St. Stephens twice during their 6-week rotation, and going more frequently (up to 6 times, i.e., every Monday) is optional.

You should plan on leading one of your four lectures/discussions at St. Stephens, in addition to giving it at Mulago.

Clinical oversight will be provided by faculty on the medical wards. Though the level of supervision during this rotation will not be able to mimic that at your home institution, efforts will made to provide adequate clinical supervision. As with every rotation during residency, you will be evaluated on your performance during your MUYU rotation. Participants should make sure that all evaluation forms are completed by their supervising attendings and turned in to the MUYU Office prior to returning home.

5. LECTURES AND CONFERENCES

MUYU Lectures:
- Tropical medicine lectures: given by MUYU faculty multiple times a week. The MUYU office generates each week’s schedule at the end of the preceding week. Examples include (but are not limited to): Malaria, Tuberculosis, Diarrheal Disease, Schistosomiasis, and Trypanosomiasis.
- Laboratory sessions held in the 4A side laboratory on Wednesdays from 2 – 4 pm
- Clinical sessions with one of the MUYU faculty members as scheduled by the MUYU office
- 1-2X weekly Luganda classes
- Uganda political science lectures, usually given on Wednesdays from 4-6 pm

General lectures/conferences at Mulago:
1. Mini-rounds (in depth discussion of a case by a single medical sub-specialty), held on 4A on Tuesday morning from 8 – 9:30 am
2. Medicine Grand Rounds, held on Tuesdays in the Davies Lecture Hall from 2 – 4 pm
3. Journal Club, held Thursdays 8:15 am – 9:30 am on the 6th floor
4. Post-mortem rounds/case discussion, held Fridays 12 – 1 pm on 1C
5. Division conferences:
   a. Pulmonary: Wednesdays 9 – 10 am on 4C – can attend the conference and then join rounds on 4A
   b. GI: Thursdays 1 – 2 pm on 4A

Infectious Diseases Institute (IDI) conferences (held on 2nd floor of IDI building):
6. SWITCH meeting (HIV case discussion about changing ART regimen), held on Tuesdays from 8 – 9 am
7. HIV case conference, held on Friday mornings from 8 – 9 am
Appendix Two: Duties and Expectations for Medical and PA Students

Rotation Assignments
Medical students, like residents, will rotate on 1 or 2 of the medical wards during their rotation (i.e. ID, GI, Pulmonology, Renal, Cardiology, etc). Other options for rotations include the Uganda Cancer Institute and the Palliative Care Service. There are many other possibilities so if, while at Mulago, you develop an interest in spending time on a certain service, please ask the MUYU office staff to help coordinate this for you. Be advised that some of the rotations that MUYU participants do not typically do may take some time for the office to arrange.

Like residents, you are expected to round with the team Monday through Friday starting at 9am (some rounds may start a bit later on some days). You also are expected to attend your team’s outpatient clinic, usually one morning per week.

Less is more! It is better to spend a greater amount of time on one service than to rotate through many departments, particularly if that service has a good attending physician or senior resident where you will have more teaching and supervision. You will get to know your team better and with time feel that you are able to contribute more, as opposed to moving around every week or two.

Performing Invasive Procedures: It is important to remember that the goal of MUYU is for you to participate in a global health educational exchange and that we strongly discourage students and residents from doing invasive procedures while at Mulago Hospital. The Ugandan trainees are responsible for drawing blood and performing procedures on their patients, and you should never feel that you are being pressured to do them. Keep in mind that the equipment being used in Uganda may not be what you are used to using (not to mention, there may be a lack of local anesthetic and the level of informed consent may be different), the level of supervision will be highly variable, the inpatient HIV infection rate is >50%, and the Hepatitis C infection rate is unknown.

Clinical Role
Medical students should see their primary clinical role as that of observer. You are not expected to take on patient responsibilities as that of Ugandan medical students. Given language, cultural, and scheduling barriers, it is hard to expect medical students to “clerk” your own patients. In addition, you will not know how to navigate the Mulago system or have permission to do blood draws or procedures. That said, you should feel free to partake in as much non-procedural patient care as the medical team wants you to do and you feel comfortable doing. This may include (but not be limited to!) reading patients’ charts, taking histories and conducting physical exams on patients of interest, and assisting Ugandan medical students in clerking patients and preparing their round presentations or chart notes. You can also assist the team by retrieving laboratory results, labeling lab slips/tubes and dropping samples off in the lab, collecting supplies needed for patients, and transporting patients without attendants to radiology or procedures. On daily rounds, you should feel comfortable asking questions or responding to attending questions. In addition, you should identify patients for review during MUYU bedside teaching sessions or physical exam rounds.

Teaching Role
By the time you are a MUYU participant, you should have completed your required clinical rotations and possibly a sub-internship. You should feel comfortable assuming a small teaching role with Ugandan medical students, particularly the fourth year students (their program is five years). Fourth year Ugandan students have had little patient contact and very little clinical instruction before they begin on the wards. They are very eager for any clinical teaching one might provide. Opportunities for teaching include instruction on “pre-rounding” and practice of patient presentations; interpretation of labs and radiology studies; and integrating information into an assessment and plan. You should feel free to partake in as much non-procedural patient care as the medical team wants you to do and you feel comfortable doing. This may include (but not be limited to!) reading patients’ charts, taking histories and conducting physical exams on patients of interest, and assisting Ugandan medical students in clerking patients and preparing their round presentations or chart notes. You can also assist the team by retrieving laboratory results, labeling lab slips/tubes and dropping samples off in the lab, collecting supplies needed for patients, and transporting patients without attendants to radiology or procedures. On daily rounds, you should feel comfortable asking questions or responding to attending questions. In addition, you should identify patients for review during MUYU bedside teaching sessions or physical exam rounds.

Clinical oversight will be provided by faculty and residents on the medical wards. Though the level of supervision during this rotation will not be able to mimic that at your home institution, efforts will made to provide adequate clinical supervision. As with every rotation, you will be evaluated on your performance during your MUYU rotation. Participants should make sure that all evaluation forms are completed by their supervising attendings and turned in to the MUYU Office prior to returning home.

Ambassador Role
The MUYU medical student program became a true bilateral exchange in 2009. MUYU medical students should understand their role as serving as representatives of the U.S. healthcare system just as the Makerere students represent Uganda at Yale. A cultural exchange will naturally occur in the students’ daily interactions. But you are encouraged to get to know your Ugandan medical student colleagues outside of the hospital as well.

Refer to the “Visit St. Stephens Hospital” and “Lectures and Conferences” sections in Appendix One for additional information relevant to student MUYU participants
Appendix Three: Conducting Research as a MUYU Participant

The MUYU office staff, specifically the MUYU Coordinator (muyucoordinator@yahoo.com), are happy to support you in your endeavors should you be interested in conducting a research project. Be aware, however, that without adequate advance planning, conducting research in the course of a typical rotation is NOT advised. You will need to be in touch with the MUYU Coordinator well in advance (preferably more than 2 months) of your arrival. There are many details to be worked out and the MUYU Coordinator will help you navigate these. Also you should know in advance that Makerere University rules require that all original data remain on-site after you leave - this means that you will need to digitize or photocopy all of your collected data prior to your departure. The following template will help guide you in writing your research proposal.

PROPOSAL TEMPLATE FOR MUYU RESEARCH PROGRAM

The proposal should have the following sections:

- **Title page** contains the protocol title in large font, including: names and academic degrees and awarding institutions of the student or Principal Investigator from foreign institution; names and academic degrees and awarding institutions of the supervisors or co-investigator. At least one co-investigator should be Ugandan. Additionally, the title page should include a statement of the academic purpose of the study (e.g for partial fulfillment of a degree program at Makerere University).

- **Introduction section** highlights the rationale for the proposed research question(s) (Usually one page)

- **Background section** provides a discussion of the hypothesis and review of relevant literature, along with any other specific information concerning the intended area of study. This section also includes a conceptual framework describing how dependent (outcome) and independent (predictor) variables interact.

- **State research question(s)** (no more than three)

- **State overall and specific objectives** (includes the practical applications for research results)

- **Methodology section** with the following subsections:
  - Study design
  - Study setting or study site description (including the availability of the target study population)
  - Brief description of study population
  - Inclusion and exclusion criteria
  - Sample size estimation
  - Sampling procedures
  - Recruitment procedures
  - Other Study procedures
  - Data collection
  - Data quality control
  - Data analysis plan and proposed timeline for data analysis including when and how results will be shared with MUYU/Makerere/clinic where research took place.
  - Ethical issues
  - Plans for the dissemination of findings
  - How the research benefits the clinic or institution at which the study will be conducted and how the research coincides with/advances institutional goals.

- **Appendices** (when relevant)
  - References
  - Consent forms (in English and any translated versions)
  - Questionnaires or data collection tools
  - Recruitment materials (flyers, announcements, etc.)
  - Standard protocols and measurement tools (e.g. Karnofsky performance score, BP norms)
  - Laboratory protocols