Activities Report
July 2013 - June 2014
Welcome to Global REACH

Dear Colleagues and Friends,

According to one Nigerian proverb, “In the moment of crisis, the wise build bridges, while the foolish build dams.” In a year when infectious diseases such as Ebola and Middle East Respiratory Syndrome have captured headlines, and conflict in Africa, the Middle East, and Eastern Europe has given pause to those who travel internationally, faculty, students, and staff at the University of Michigan have continued their work in addressing global health challenges. Despite a few cancelled trips and postponed international meetings, our collective global health efforts have persisted, all with the goal of transforming health around the globe.

This 2013-2014 annual activities report for Global REACH, the international initiative of the University of Michigan Medical School (UMMS), reflects just a few of those collective efforts. Global REACH (which stands for Research, Education, and Collaboration for Health) is a unit within the medical school dean’s office that seeks to connect the hundreds of global health faculty working across the medical school’s 29 departments. In this report, we highlight some of the many international activities at UMMS that occurred this past year – some of which were spear-headed by faculty and staff at Global REACH, and some of which were driven by individuals and departments throughout the Medical School.

A few examples of our collective efforts this past year include:
• Securing more than $127M in grants related to global health by medical school faculty;
• Publication of more than 100 global health-related manuscripts in leading peer-reviewed journals;
• Visits of 92 international scholars, faculty, and dignitaries to UMMS, including a visit from the Minister of Health of Ethiopia; and
• Implementation of a collaborative grant between the schools of Medicine, Engineering, Business, and Natural Resources, and the College of Literature, Science, & the Arts that sent 26 trainees to Ethiopia for up to 12 weeks to work on interdisciplinary projects addressing local health needs, including teaching biomedical science topics in Ethiopian universities.

The activities described in this report are but a snapshot of the global engagement at the medical school. With the launch of our Faculty Associates program (see Pages 81-90), 116 faculty members from 27 departments in the Medical School have self-identified as conducting international work and being willing to mentor students and foster the growth of our global health community. This level of commitment by our faculty speaks volumes, and we are excited to leverage their expertise and experience to improve educational opportunities for our trainees, improve the reputation of the University of Michigan Medical School as a global player, and to address some of the most challenging issues in global health today.

Sincerely,

Joseph C. Kolars, MD
Josiah Macy, Jr., Professor of Health Professions Education
Senior Associate Dean for Education and Global Initiatives
University of Michigan Medical School
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About Global REACH

Global REACH was founded in 2001 by Medical School Dean James Woolliscroft to explore the value of creating an institution-wide unit to leverage existing international activities, create opportunities for synergy, and expand offerings for medical trainees. More than a decade later, Global REACH is driven by the following mission, vision, values, and strategies.

VISION

Global REACH aims to be a nationally recognized leader for developing individuals and programs to improve health and healthcare through collaborative partnerships in other countries.

MISSION

• Enable students, trainees, and faculty to develop high impact careers in global health
• Create partnerships that allow our medical school community to collaborate synergistically to improve global health
• Advance education and research in global health, particularly on the “science of collaboration,” while cultivating a community of educators and scholars
• Demonstrate the value of global health initiatives to the Medical School and University

VALUES

• Mutually beneficial, transparent, egalitarian relationships
• Health equity and a commitment to addressing health disparities
• Capacity building through education, training, and research
• Sustainability, integrity, and interdisciplinary approaches

STRATEGIES

• Establish platforms, such as multi-departmental, multi-disciplinary collaborative efforts, that foster synergistic innovation and cutting edge research to address global health challenges
• Convene and connect members of our school and institution to advance programs and careers in global health; leverage current strengths to benefit others in our community
• Build mentoring programs for students, trainees, and faculty
• Create and strengthen meaningful experiences for students, trainees, and their mentors
• Fund pilot projects and new initiatives that advance the mission with a focus on our values; provide consultation on approaches to external funding
• Provide technical assistance for training and educational programs offered through the Medical School
Global REACH tracks several metrics to measure success in global health initiatives at UMMS.

**COLLABORATION...pages 4-21**

- 116 Global REACH Faculty Associates representing 27 different UMMS units are conducting research in 40 countries across 5 continents
- 23 Memoranda of Understanding link UMMS with international partners
  For a complete list, see globalreach.med.umich.edu/collaboration.mou

**RESEARCH...pages 22-33**

- $127M in extramural grants related to global health were secured by UMMS faculty in 2013-2014, representing a success rate of 40% of all global health grants submitted*
- 100+ global health publications were authored by Global REACH Staff/Faculty Associates
- 36 funding announcements were disseminated through Global REACH alerts

**EDUCATION...pages 34-65**

- 53 UMMS students traveled to 21 countries in FY2013-2014
- 42 UMMS students were supported by Global REACH for international work
- 23 M4 students participated in international clinical electives/rotations
- 18 M1 students took part in faculty-led international small group research projects
- 26 UM students traveled to Ethiopia as part of an interdisciplinary grant funded by the Office of the Provost and led by the Medical School
- 37 international scholars and fellows visited UMMS from 11 countries
- 55 international students visited UMMS from 13 countries for 73 months of training

*Data Source: eRPM 7/25/14 + new awards (S Fisseha, C Moyer)
eResearch Proposal Management
University of Michigan
Many UMMS faculty have longstanding relationships with colleagues from around the world. These working partnerships pave the way for other researchers who are expanding their work into the global health arena, and for medical students looking to gain educational, clinical, and research experiences abroad.

Over time, these partnerships grow into a collaborative network of individuals and groups working to build capacity in low-resource areas. Global REACH facilitates such synergistic partnerships through “platforms for collaboration.” Ideal collaboration platforms foster multi-dimensional translational science — crossing traditional departmental and disciplinary lines to enable innovative research and educational opportunities.

The next few pages illustrate the primary platforms for collaboration from oldest to most recent: Ghana, China, Brazil, Ethiopia, and India.

Photo: Dr. Mahesh Misra (Director, All India Institute for Medical Sciences in New Delhi, India) prepares to sign letters of collaboration with University of Michigan President Mary Sue Coleman during the UM delegation visit to India in November 2013. Twenty-two members of the Medical School were part of the delegation, including Dr. Joseph Kolars (right), Senior Associate Dean for Education and Global Initiatives.
The University of Michigan has vibrant, long-standing relationships with many institutions in Ghana, which date back nearly four decades. In the early 1980s, Dr. Timothy Johnson, Chair of the Department of Obstetrics & Gynecology at UMMS, partnered with Ghanaian colleagues to develop an in-country post-graduate training program for Obstetrician/Gynecologists that is still in place today. To date, 140 of the 142 graduates of the program still practice or hold leadership positions in Ghana.

The doors opened by Dr. Johnson led to a formalized Ghana-Michigan Platform of Engagement. The Ghana-Michigan Platform is hallmarked by a variety of activities that span departments, disciplines, and institutions.

**Primary Ghanaian Partners**
- GHS: Ghana Health Service
- KATH: Komfo Anokye Teaching Hospital, affiliated with KNUST (Kumasi)
- KBTH: Korle Bu Teaching Hospital, affiliated with UG (Accra)
- KNJST: Kwame Nkrumah University of Science and Technology (Kumasi)
- MOH: Ministry of Health
- NMIMR: Noguchi Memorial Institute for Medical Research (Legon)
- UCC: University of Cape Coast (Cape Coast)
- UDS: University of Development Studies (Tamale)
- UG: University of Ghana (Accra)

**Platform Highlights: FY2013-2014**

- **Northern/Pacific Global Health Research Training Consortium**
  Dr. Rockefeller Oteng was awarded an 11-month fellowship at KATH, as part of the Northern/Pacific Global Health Research Training Consortium. Dr. Oteng, who is an instructor in the Department of Emergency Medicine at UMMS, spent 2013-2014 working on a project to explore the impact of the introduction of Emergency Medicine as a specialty at KATH on patient outcomes. UMMS student, Andrew Gardner, has been selected as a 2014-2015 Fellow. Read more on Pages 60-61.

- **Ghana-UM Emergency Medicine Partnership**
  The Medical Education Partnership Initiative (MEPI) is an NIH-funded program to enhance medical education in Africa. The 5-year MEPI program (2009–2014) has expanded the Ghana Emergency Medicine Collaborative clinical training program to include research capacity development and interdisciplinary training that includes emergency medicine nurses as well as physicians. MEPI is led by Principal Investigator, Professor Peter Donkor, former Pro Vice-Chancellor, KNUST. Dr. William Barsan, Professor and former Chair of UM’s Department of Emergency Medicine, serves as lead from UMMS. To date, 11 residents have graduated as specialists, attained Ghana College of Physicians & Surgeons membership status, and have leadership positions; 19 residents are currently in training, and 10 residents have participated in emergency medicine rotations at UMMS and other international medical institutions. Thirty-seven nursing students (26 from KATH and 11 others from across the country) have been admitted into the 1-year Diploma in Emergency Nursing curriculum developed and approved by KNUST.
- **Factors Affecting Motivation for Rural Practice Among Midwifery Students in Ghana**
  Dr. Jody Lori, Associate Professor of Nursing, and Sarah Rominski, MPH, Senior Research Associate at Global REACH, work with a team of investigators in Ghana to understand factors influencing third-year midwifery students’ willingness to work in rural areas. To date, students at 15 of the 16 public midwifery training schools have been surveyed. In total, more than 700 third-year midwifery students who are about to graduate and enter the workforce will be surveyed. The study, funded in part by a small grant from the African Social Research Initiative at the University of Michigan, will enable the Ghanaian MOH to create and test incentive packages for midwives and will provide a framework from which the preferences of other cadres of health workers can be assessed.

- **Ghana-Michigan Post-doctoral And Research Trainee NETWORK - Investing in Innovation (PARTNER II)**
  Dr. Tom Robins (PI), School of Public Health and UMMS, and Dr. Cheryl Moyer (co-I), Global REACH and the Department of Learning Health Sciences, have a 5-year grant (2013-2017) from the Fogarty International Center at the National Institutes of Health to enhance global health research training among Ghanaian and US post-doctoral fellows. The first cohort of fellows, two from Ghana and one from Michigan, arrived in Ann Arbor in August 2013 and spent 6 months in Ann Arbor followed by 6 months in Ghana focusing on interdisciplinary approaches to addressing occupational and environmental health challenges in Ghana. Ghanaian PARTNER institutions include: GHS, KATH, KBTH, KNUST, MOH, NMIMR, UCC, UDS, and UG. Read more on Pages 58-59.

- **Adult and Pediatric Sickle Cell**
  Andrew Campbell, MD, Assistant Professor of Pediatrics, has been working with colleagues at UG/KBTH Adult and Pediatric Sickle Cell Clinic for the past 6 years and Princess Marie Louise Children’s Hospital in Accra for the past year on projects related to determining the sickle cell disease phenotype within the Ghanaian population. Dr. Campbell’s collaborative efforts in Ghana have involved the participation of 14 students over the past 7 years, including 2 medical students and 2 MPH students. Dr. Campbell's primary collaborators in Ghana include Dr. Onike Rodrigues, Dr. Fredericka Sey, Dr. Charles Antwi-Boasiako, and Dr. Eric Sifah.

- **Stigma, Adolescent Sexual Health, and Contraception**
  Kelli Stidham Hall, PhD, MS, Research Investigator in the Department of Obstetrics and Gynecology and Institute for Social Research, has been working with colleagues in Ghana to explore the role of stigma as a barrier to family planning among young women. Supported by funds from the University of Michigan Office of the Vice President for Research and the African Studies Center, Dr. Hall’s project aims to understand relationships between adolescent sexual reproductive health stigma and rates of modern contraception and family planning service use among a diverse community cohort of Ghanaian adolescents.
• Ethnic Differences in Triple Negative Breast Cancer
  
  Dr. Lisa Newman, Professor of Surgery and Director of the UM Breast Care Center, has been working with her Ghanaian colleagues for many years on the genetics of breast cancer in Ghana. In 2013, her team established a state-of-the-art teleconference center at KATH. This system supports weekly, live audiovisual tumor board discussions of KATH breast cancer patients by the UM and KATH staff together, as well as videoconferencing of UM breast cancer lectures and symposia at KATH. In collaboration with Drs. Max Wicha and Sofia Merajver at UMMS, this research team has also created a series of tissue microarrays and xenografts for unique studies of the biology of breast cancer in women with African ancestry, as represented by African American and Ghanaian breast cancer patients. This program has recently been expanded to include the Tamale Teaching Hospital in Tamale, Ghana.

• Stillbirth and Early Neonatal Deaths in Northern Ghana (SANDS)
  
  Dr. Cheryl Moyer, Managing Director of Global REACH and Assistant Professor in the Department of Learning Health Sciences, worked with partners in northern Ghana and the US to combine quantitative data from the Navrongo Demographic Surveillance Site and qualitative data from interviews with more than 250 community members and healthcare providers to explore the prenatal, perinatal, and postnatal periods in rural northern Ghana. The SANDS team – dubbed the Navrongo Maternal and Neonatal Health Consortium – has published nine manuscripts from the resulting data addressing such things as the predictors of stillbirth, early neonatal mortality, and neonatal mortality, as well as the social and cultural factors associated with care seeking, nutrition, and decision-making.

• Otolaryngology
  
  The Department of Otolaryngology is working with partners at Komfo Anokye Teaching Hospital (KATH) to help establish an otology program in Kumasi that will expand both training and clinical practice around chronic ear surgeries. Drs. Mark Prince, Jeff Moyer, and David Brown visited Ghana in October 2013 to meet with key leadership at KATH to identify priority areas for collaboration, and in May the department hosted Dr. Alex Oti Acheampong from KATH at their annual dissection course.

• Addressing Maternal Mortality
  
  Dr. Frank Anderson, Associate Professor of Obstetrics and Gynecology, is working with colleagues in Ghana on several initiatives aimed at reducing maternal mortality. These include studies of preeclampsia for the development of clinical, policy, and technological interventions to improve detection at the community level, the use of magnesium sulfate at rural and district levels, and the use of fetal assessments at the district and teaching hospital levels. In addition, Dr. Anderson has supervised students from the Minority and Health Disparities International Research Training Program (MHIRT) who have worked with the district medical officer in the Botsomtwe District of the Ashanti Region of Ghana to implement active surveillance of maternal mortality to replace the current system of voluntary reporting.
Physical Medicine & Rehabilitation (PM&R)
The International Rehabilitation Forum is a Michigan-based not-for-profit academic consortium that supports sustainable medical rehabilitation in low-resource countries. For more than a decade, Ghana has been the key laboratory and platform for that work. Advancements included: change in the WHO World Disability Report based on research at UM that showed essentially no available PM&R in sub-Saharan Africa, and development with University of Ghana of the Language Independent Functional Evaluation, a video-based functional assessment that bypasses language and literacy, now used on 4 continents. Compelled by this work, the president of Ghana recently announced the formation of a national rehabilitation center. Dr. Andy Haig leads the global effort while Dr. Sean Smith coordinates efforts within Michigan.

Access to Family Planning Services
Sarah Rominski, MPH, Senior Research Associate at Global REACH, is working with colleagues in Ghana to explore the issues surrounding access to abortion care. With a small grant from the African Studies Center, she is conducting qualitative interviews with women seeking comprehensive abortion care or care for post-abortion complications, as well as healthcare providers and community members in and around Kumasi. The goal is to investigate the reasons women choose to bypass the formal healthcare system and seek abortion services from untrained providers in unsafe locations, causing unnecessary death and disability.

Charter for Collaboration Defines Partnership
Frank Anderson, MD, MPH, Associate Professor in the Department of Obstetrics and Gynecology, was the lead author of a publication in Academic Medicine that highlights a successful model for collaboration developed as part of a Bill & Melinda Gates Foundation Grant focused on human resources for health. The paper, entitled “Creating a Charter of Collaboration for International University Partnerships: The Elmina Declaration for Human Resources for Health,” focused on identifying and codifying the challenges, opportunities, and responsibilities of all partners when engaging in collaborative relationships where the resources may not be evenly split. Additional authors included Ebenezer Appiah-Denkyira, George Fidelis Dakpallah, and Janet Kwansah (Ghana MOH); Peter Donkor (KNUST); Raymond de Vries, Jane Hassinger, Airong Lou, Cheryl A. Moyer, Gurpreet K. Rana, and Sarah Rominski (UM); and Seth Ayettey, Aaron Lawson (UG).

Taubman Health Sciences Library
UM’s Taubman Health Sciences Library (THSL) was one of five grant recipients in the Elsevier Foundation’s 2013 Innovative Libraries program. Gurpreet Rana, MLIS, THSL Global Health Coordinator, is the lead investigator. The project aims to create an integrated, evidence based information skills curricula to enable the Ghana Emergency Medicine Collaborative (GEMC) to strengthen education, research, and clinical care capacity of emergency care services in Ghana. It builds on the collaborative GEMC project, a partnership between KNUST, KATH, the MOH, and UM’s Department of Emergency Medicine and School of Nursing.
The University of Michigan Medical School (UMMS) has a long history of clinical, educational, and research initiatives with Chinese partners, both at the individual and the institutional level. Much of the Medical School’s collaborative work with China focuses on the Joint Institute (JI) for Translational and Clinical Research, a partnership between the University of Michigan Health System (UMHS) and the Peking University Health Science Center (PUHSC), which was established in 2010. However, additional initiatives beyond the JI are equally important in developing and sustaining the rich partnerships between the Medical School and educational institutions throughout China.

Platform Highlights: FY2013-2014

- In 2013, the University of Michigan (UM) signed a Memorandum of Understanding with PUHSC establishing a collaborative MD/PhD program. Two students from the 2013 summer research rotation have been enrolled into the UM Program in Biomedical Sciences (PIBS) and will begin doctoral programs in Fall 2014. Seven students were accepted for research or medical clerkship rotations for Summer 2014.
- The PIBS program also enrolled several guest students from Shanghai Jiao Tong University, both within their summer program and as members of one of their 14 doctoral programs. Students include: Yangyang Bao, Wei Chen, Tong Li, Jiawei Xu, Runze Zhao, Congzhen Qiao, Bo Wang, and Limbo Zhao.
- New collaborative agreements established in Winter 2014 will foster educational and research initiatives between UMMS and two institutions in China: Central South University Xiangya School of Medicine and Nanjing University School of Medical. Five students from Xiangya School of Medicine were accepted into the research training program at UMMS and will start Fall 2014.
- Nearly 150 UM alumni, friends, parents, faculty, and staff participated in the largest UM alumni event ever to be hosted in Beijing (read more about this event on Page 69).

Long-time donors Richard and Susan Rogel continued their support of the UM and its China initiatives with a new commitment of $50M. Their gift will provide $30 million towards scholarships at UMMS and $10 million towards programs at the Center for Chinese Studies. The remaining $10 million is earmarked for future initiatives, including support for PUHSC students who pursue advanced degrees at UMMS.
UMHS-PUHSC Joint Institute for Translational and Clinical Research

The Joint Institute for Translational and Clinical Research between the University of Michigan and the Peking University Health Science Center (PUHSC) was formalized in 2010. The two institutions created an organizational structure, established key research programs, and developed a strategic plan designed to encourage research collaborations among faculty. Four diseases and three infrastructure cores currently guide the partnership initiatives.

Focusing on research in cardiovascular, liver, pulmonary, and renal diseases – areas of interest to both institutions – JI leaders maximize their capacity for translational research through synergistic collaborations. Infrastructure “cores” work through potential issues and concerns, including human protection, biorepository and biomedical informatics, as well as research on the science of collaboration. Each program and core are co-led by a faculty member from PUHSC and UMMS. Overall JI leadership responsibility belongs to Dr. Joseph Kolars, Senior Associate Dean for Education and Global Initiatives, UMMS, and Professor Weigang Fang, Vice President, PUHSC. They are advised by an Executive Board and an Executive Committee.

Joint Institute Highlights: FY2013-2014

- In 2014, a request for proposals was released to fund pilot projects that would demonstrate an effective team approach to discovery and new findings on diseases relevant to both countries. Seventeen applications were received and seven awards were made (see right panel).
- Four UMMS Residents rotated through PUHSC clinical sites during Winter 2014: Dr. Ashmita Chatterjee (Pulmonary Medicine, mentored by Drs. Ning Shen and Bei He, Third Hospital); Dr. Amanda Guentner (GI/Hepatology, mentored by Drs. Anna Yuan, Huiying Rao, and Lai Wei, Second Hospital); Dr. Emily Perdoncin (Cardiology, mentored by Drs. Yan Zhang and Yong Huo, First Hospital); and Dr. Rina Verma (Cardiology, mentored by Drs. Wang Guisong and Wei Gao, Third Hospital).
- Professor Qingbian Ma, Vice Director PUHSC Third Hospital Emergency Department, spent three months in the UMMS Emergency Department (ED) doing a clinical observation during Spring 2014. She was mentored by Dr. Robert Neumar, Chair of ED.
- Dr. Anna Lok from UMMS served as co-chair and gave the Keynote Address at the Diagnosis and Treatment of Hepatitis C Virus Forum hosted by PUHSC on July 3, 2014.
- In June 2013, Dr. Joseph Kolars was invited to become a member of the PUHSC’s Medical Graduate Education Committee.
- The Third Annual Symposium of the Joint Institute for Translational and Clinical Research was held October 9-11, 2013 in Beijing, China. The Fourth Annual JI Symposium will be held in Ann Arbor, October 1-3, 2014. See Pages 68-69.

2014 Call for Proposals Generates Seven New JI Projects

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<td>Ming Li, MD, Professor of Pediatrics, First Pediatric Hospital, PUHSC</td>
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<td>Li-Ping Duan, MD, Professor and Vice-Chair, Division of Gastroenterology, Third Hospital, PUHSC</td>
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Research Program Updates

Cardiovascular Program
Leadership for the cardiovascular program is shared by Dr. Eugene Chen, Frederick G.L. Huetwell Professor of Cardiovascular Medicine, Professor of Internal Medicine, UMMS and Professor Wei Gao, Chair of Cardiovascular Medicine, PUHSC Third Hospital. The JI’s cardiovascular team has initiated several important studies designed to significantly advance understanding about the genetic basis of cardiovascular disease; in particular: studying the role genetics plays in the development of risk factors, such as high blood pressure, as well as in the onset of cardiovascular diseases, including myocardial infarction, abdominal aortic aneurysm, and coronary artery disease. Five peer-reviewed papers have been published from the collaboration and two manuscripts are under preparation.

Liver Disease Program
Led by Dr. Chung Owyang, Division Chief and Professor of Gastroenterology, UMMS, and Professor Lai Wei, Director of the Hepatology Institute and Department of Hepatology, PUHSC Second Hospital, the JI’s liver disease program focuses on treating and preventing Hepatitis C virus (HCV). Dr. Anna Lok and Professor Lai Wei, co-leads for the HCV project, recently received $1.46M from the Bristol-Myers Squibb Company to continue their work on the incidence and risk factors for hepatitis C virus related cirrhosis and carcinoma project, which has enrolled 2000 patients to date (read more on Page 91). Two peer-reviewed papers have been published and five abstracts have been presented at international conferences.

Pulmonary Program
Dr. Margaret R Gyetko, Professor of Internal Medicine Associate Dean for Faculty Affairs, UMMS, and Professor Bei He, Professor and Director, Department of Respiratory, PUHSC Third Hospital, co-lead the JI’s Pulmonary Disease Program. The Joint Institute’s work focuses on building a new area of research investigating the role that the respiratory microbiome plays in the development and clinical course of lung disease, specifically COPD. The JI Pulmonary group at UM was awarded a $600,000 supplement award from NIH’s National Heart, Lung, & Blood Institute Global Office through the Centers of Excellence program to combat non-infectious chronic diseases. UM served as the data coordinating center, the sequencing and bioinformatics center, and the biostatistics center, as part of a four-site international study of the Pulmonary Microbiome in COPD. The countries involved (in addition to UM in the US and PUHSC Third Hospital in China), include Peru, Nepal, and Bangladesh. One peer-reviewed paper has been published.

Renal Disease
The renal disease research program is co-led by Dr. Matthias Kretzler, Professor of Nephrology, Internal Medicine, UMMS, and Professor Haiyan Wang, Professor of Nephrology, PUHSC First Hospital. The UMHS and PUHSC renal divisions are at the forefront of translational glomerular disease research in the US and China and have joined forces to address the most urgent unmet need in the field, which is early and accurate identification of patients at high risk to progress to end stage renal disease for targeted treatments. The JI renal program strives to develop non-invasive molecular markers to allow early detection of patients at high risk for progression, and identify molecular pathways that bridge the genotype-phenotype gap to determine molecular mechanisms driving chronic kidney disease progression, which will then be used as targets for future interventional trials.

The annual Joint Institute symposia provide a perfect opportunity for in-person collaboration between program and core team members. Pictured below are investigators from the renal team (left), liver team (center), and cardiovascular team (right side, next page) during the 2013 Symposium.
Other Collaborative Projects

Radiology - Multiple Myeloma
The multiple myeloma project, co-led by Dr. Qian Dong, Associate Professor of Radiology, UMMS, and Professor Wei Guo, Chair of Orthopedic Oncology, Second Hospital, PUHSC, seeks to discover clinically translatable magnetic resonance imaging (MRI) metrics that would provide a predictive biomarker to identify disease stage and assess treatment response in multiple myeloma. The computerized image analysis and quantification methods with MRI (conventional MRI and diffusion MRI) will be useful as a clinical decision support system at the time of baseline examination, and subsequently for quantitative staging, treatment response monitoring, and prognosis prediction. Quantitative data from computerized image analysis and MRI should improve the accuracy and efficacy of the staging and the assessment of treatment response for multiple myeloma.

Core Updates

Collaboration Core
The Collaboration Core is co-led by Dr. Amy Huang, Director for China Programs, UMMS and Professor Qiudan Sun, Director for Office of International Cooperation, PUHSC. This Core was established to facilitate a collaborative partnership between the JI institutions. It tracks the collaboration needs and goals of each institution, defines measures of success, and identifies the management structures and processes that lead to favorable outcomes. In addition, the Core assists JI leadership in formulating strategies related to communication, project management, and coordination by providing advice and guidance to the programs and leadership.

Institutional Review Board and Human Protection Core
The Institutional Review Board (IRB) and Human Protection Core is co-led by Dr. Raymond Hutchinson, Associate Dean for Regulatory Affairs and Professor of Pediatrics and Communicable Diseases, UMMS, and Professor Yali Cong, Professor of Medical Ethics Program, PUHSC. The central mission of the Joint Institute’s IRB and Human Protection Core is to promote the protection of human participants in the research being conducted by the Joint Institute. The Board comprises representatives from the internal IRBs of both universities. Through careful review and monitoring of Joint Institute Programs and proposals, the Board works to ensure that research activities adhere to all applicable laws, regulations, and institutional policies for research involving human subjects. The Joint Institute IRB serves as liaison to the UHMS IRBMED and the PUHSC IRB ensuring that all collaborations meet the human protection standards in place at both universities.

Biorepository and Biomedical Informatics Core
The Biorepository and Biomedical Informatics Core is co-led by Dr. Kai Zheng, Assistant Professor, School of Public Health, UM, and Professor Yanfang Wang, Associate Director, Peking University Clinical Research Institute, PUHSC. The Biorepository and Biomedical Informatics Core is responsible for establishing and maintaining a standardized process for securing and storing biological specimens and clinical data that supports the Joint Institute’s research. This critical function facilitates information sharing and manages project details such as patient consent, sample tracking, and data access privileges, enabling research teams to focus on collecting and analyzing data. The core also provides a robust technical infrastructure to support data management and sharing of translational and clinical research. All Joint Institute programs and investigators are required to follow the standards established by this core.
University of Michigan Medical School (UMMS) faculty members have been collaborating with partners in Brazil for several decades. In Fall 2012, UM President Mary Sue Coleman traveled to Brazil with a delegation of researchers and scholars, including several from UMMS, in an effort to formalize these institutional relationships. She signed institutional collaboration agreements with University of São Paulo Faculty of Medicine (FMUSP) and Biological Sciences Institute (ICB); the State of São Paulo Research Foundation (FAPESP, one of the main funding agencies in Brazil); and the University of Campinas (UNICAMP). A Memorandum of Understanding (MOU) with Federal University of Bahia (UFBA) was formalized in 2014 and a new one with Federal University of Rio Grande do Sul (UFRGS) is in process. These new agreements have further stimulated collaboration between UM researchers and researchers throughout higher education and research institutions in Brazil.

Nearly two-dozen clinical, educational, and/or research projects are currently underway between members of the University of Michigan and their colleagues in Brazil. Involving more than 15 medical disciplines, several of these key research partnerships form the basis of the Brazil Collaboration Platform. See Pages 16-17 for highlights of select projects underway.

Platform Highlights: FY2013-2014

- **July 2013**: Brazilian post-Doc student Beatriz de Carvalho Borges began a 1-year project in Dr. Carol Elias’ laboratory at the Department of Molecular and Integrative Physiology. The research project, *Role of PI3K Signaling Pathway in Endotoxin-induced Leptin Resistance*, is partially funded by a Brazilian grant from FAPESP.
- **July 2013**: Dr. Bernardo Rodrigues, Brazilian Neurology fellow, began a 2-year fellowship in Dr. Hank Paulson’s Movement Disorders Lab.
- **August 2013**: UM joint symposium with Rio de Janeiro’s Oswaldo Cruz Foundation (FIOCRUZ) was held in Brazil. This collaboration brought together a multidisciplinary delegation of 14 UM faculty members and several FIOCRUZ researchers and students working in the areas of health status, determinants, outcomes, interventions, and histories to engage in substantive and medium-range projects.

Recent Milestones (2013-2014)

- **2013**: UM/State of São Paulo Research Foundation (FAPESP) grant program begins; 3 UMMS faculty awarded
- **August 2013**: collaborative conference with the Rio de Janeiro’s Oswaldo Cruz Foundation (FIOCRUZ) held in Rio de Janeiro
- **32 Global REACH Faculty Associates from 11 departments are engaged in the Brazil Platform**
- **7 UMMS students traveled to Brazil for research and clinical experiences**
- **20+ visitors from Brazil engaged in scholarly activities at UMMS**
• **October 2013:** Dr. Kate Stanley (Obstetrics & Gynecology) gave a talk at the 70th Anniversary of Brazilian Milk Banks Project in Belo Horizonte, Minas Gerais. See Page 24 for more information.

• **November 2013:** Dr. Marcio A. Torsoni, (Faculty of Applied Sciences, UNICAMP), started working on a 1-year project, *The role of AMPK activity in the modulation of reproductive-neuroendocrine axis*, at Dr. Carol Elias’ lab, fully funded by a Brazilian grant by FAPESP.

• **January 2014:** M3/M4 medical student, William (Trey) Shield III, began a six-month observership at FMUSP’s Hospital das Clínicas under the guidance of FMUSP surgeon, Dr. Luiz A. Carneiro D’Albuquerque, and Dr. Wellington Andraus (Director of Student Exchanges for the Liver Transplant Unit at USP).

• **January 2014:** Pilot course “Portuguese for Spanish-Speaking Health Professionals” began for UMMS students and faculty interested in learning/improving their language proficiency. The course was taught over the Spring semester by Brazil Platform Program Manager, Dr. Elisa Teixeira.

• **February 2014:** M4 Adam Baruch participated in a 4-week medical observership in the FMUSP Divisions of Endocrinology and Gynecology.

• **March 2014:** First Brazil Meet and Greet. See Page 72 for more information.

• **April 2014:** Dr. Denise Tate led a team of five UM researchers to visit FMUSP Institute of Orthopedics and Traumatology and participate in a workshop on driving assessment for the elderly and persons with disabilities.

• **May 2014:** Dr. Luis Felipe Carissimi Schmidt, the first resident from UFRGS, arrived in Ann Arbor for a 2-month observership at UMMS Pathology and Oncology.

• **May 2014:** Led by Dr. Akinlolu Ojo (UM Department of Internal Medicine), an MOU with Federal University of Bahia (UFBA) was finalized.

• **Summer 2014:** Five M1 students participated in Dr. Michele Heisler’s Faculty-Led Trip to Brazil sponsored by Global REACH. See Page 40 for more information.
Brazil Platform

Select Research Program Highlights

Neuropathogenesis of Oropouche Virus
Dr. Katherine Spindler, from the Department of Microbiology and Immunology, has worked with her Brazilian collaborator, Dr. Eurico de Arruda Neto from the Cell Biology and Virology Research Center at the University of São Paulo Medical School at Ribeirão Preto (FMRP), since 2008. Their joint project, Neuropathogenesis of Oropouche Virus (OROV), was one of the 3 UMMS recipients of the UM-FAPESP 2013 grants. The long-term goal of their project is to improve therapy for people with arboviral disease by understanding how viral gene products interact with the host to cause disease. Toward that goal, this team seeks to determine how OROV infects the central nervous system (CNS) using and further developing mouse models in which there is severe CNS involvement. In June 2013, Dr. Luiza Antunes de Castro Jorge began working as a post-doc in Dr. Kathrine Spindler’s lab, supported by a “Science Without Borders” scholarship from Brazil.

Adrenal and Other Endocrinological Cancers and Disorders
The partnership between the Adrenal Cancer and Diseases group at UMMS and FMUSP continues to strengthen and expand activities since President Coleman’s delegation trip to Brazil in late 2012. UMMS team members, led by Dr. Gary Hammer, Millie Schembechler Professor of Adrenal Cancer, have traveled to Brazil a number of times giving talks, lectures, and building this relationship. Dr. Hammer and his colleagues in Michigan and at the Department of Endocrinology at USP are working together on the National Cancer Institute’s (NCI) The Cancer Genome Atlas (TCGA) Project, and actively exchanging students and faculty. He currently has one Brazilian visiting scholar in his laboratory, Dr. Antonio Lerário, spearheading the TCGA project. Brazilian graduate student Mônica Malheiros França and medical student Thiago Nogueira have worked in his lab the past two years.

The adrenal team’s efforts are now concentrated on the creation of TCGA, a comprehensive and coordinated effort to accelerate the understanding of the molecular basis of cancer through the application of genome analysis technologies, including large-scale genome sequencing. TCGA began as a three-year pilot in 2006 with an investment of $50 million each from the NCI and the National Human Genome Research Institute. The pilot project confirmed that an atlas of changes can be created for specific cancer types. It also showed that a national network of research and technology teams working on distinct but related projects can pool the results of their efforts, create an economy of scale, and develop an infrastructure for making the data publicly accessible. Importantly, the pilot demonstrated that making the data freely available enables researchers anywhere in the world to make and validate important discoveries.

The success of the pilot led the National Institutes of Health to commit resources to TCGA to collect and characterize tumor types. Adrenal cancer was selected as one of the first rare cancers to be studied by TCGA, largely due to the work of Dr. Hammer and the UM and USP adrenal investigators.

SAVE THE DATE
First UM-Brazil Platform Symposium
Ann Arbor, Michigan
November 12-13, 2014
Spinal Cord Injury (SCI)

**Dr. Denise Tate**, Associate Chair for Research and Professor in the Department of Physical Medicine and Rehabilitation and Co-Director of University of Michigan SCI Model System (UM SCIMS), has been collaborating with her Brazilian colleagues for more than 20 years. Her current partnership with **Dr. Julia Greve**, Director of the SCI Program at USP’s Hospital das Clínicas, began when they decided to adapt the datasets used to collect information about spinal cord injuries across the world into Brazilian Portuguese. They have been developing a common database to collect information to inform clinical care to illustrate the importance of standard datasets in guiding clinical treatment and research in SCI. They have translated and completed psychometric studies of the SCI Bowel Function Basic dataset and are in the process of completing others for joint use in future clinical validation studies. Testing these datasets adds to the current studies being conducted at the UM SCIMS, which focus on examining the influence of bowel and bladder management on complications and quality of life after SCI.

Comparing data cross culturally is another added benefit of this international collaboration. The Presidents of the International Spinal Cord Society (ISCoS) and the American Spinal Injury Association have endorsed the project.

More recently, another joint project they wrote together, *Development of standard methods to evaluate driving among older individuals with and without disabilities*, was awarded one of five UM-FAPESP grants in 2013. The team, involving other FMUSP and UM post graduate students and faculty—such as **Drs. Bruno Giordani, Krishnan Chandramouli, Jean Shope, Paula Kartje, Mark Peterson and Ron Maio**—met in Ann Arbor in 2013. In 2014, the group went to São Paulo and participated in lectures and presentations of a workshop developed jointly with their Brazilian partners. A conference report is being organized next. The group is also jointly writing two papers to be submitted by Fall 2014.

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Primary Care: Health Equity and Chronic Disease Management

**Dr. Michele Heisler**, Professor of Internal Medicine and Health Behavior and Health Education, and her partner at FMUSP, **Dr. Alexandra Brentani**, also received a UM-FAPESP two-year planning grant. Their collaboration brings together two teams of interdisciplinary researchers (including **Lawrence An**, UM Center for Health Communication Research; **Sarah Burgard**, UM Department of Sociology; and **Ken Resnicow**, UM School of Public Health) to develop collaborative projects in three principal areas: 1) population-based longitudinal cohort studies; 2) development and evaluation of cost-effective primary care-based programs to improve child health and chronic disease prevention and management; and 3) creation and testing of innovative eHealth platforms and behavioral approaches to improve delivery of primary care outreach to vulnerable populations. A pilot study at one health center in a low-income neighborhood in São Paulo is underway. In addition, Dr. Heisler applied for and received one of the Faculty-led Summer Research Projects funded by the UMMS’s Global REACH program. Five M1 students were funded under that program and worked on research projects in conjunction with the UM-FMUSP collaborative program. See Page 40 for more information.
Ethiopia Platform

Recent Milestones (2013-2014)

- June 2013: Second cohort of 14 new OBGYN residents accepted at St. Paul Hospital Millennium Medical College (SPHMMC)
- November 2013: International Conference on Family Planning held in Addis Ababa
- January 2014: Global Challenges for Third Century grant Ethiopia-Michigan Platform for Advancing Collaborative Engagement (EM-PACE) awarded; SPHMMC launched their Internal Medicine residency program, Surgery residency program, and Maternal Fetal Medicine fellowship program
- March 2014: Continuing Medical Education Conference on Maternal Fetal Medicine and Family Planning held in Addis Ababa
- May 2014: 26 EM-PACE students traveled to Ethiopia
- June 2014: Visits from Dr. Zerihun Abebe, SPHMMC Provost, and Dr. Kesetebirhan Admassu, Ethiopian Minister of Health
- 14 Global REACH Faculty Associates from 6 UMMS departments participate in the Ethiopia Platform

Across the University of Michigan, approximately 10 schools and colleges have collaborative projects underway with colleagues in Ethiopia, making it one of the fastest emerging platforms of engagement in both the Medical School and the broader University. Within the Medical School, nearly 50 investigators from 27 different departments are collaborating with colleagues from several institutions in Ethiopia. Projects range from family planning to faculty development; organ transplantation to surgical simulation; medical education and post-graduate training in various specialties; and triple negative breast cancer to heart disease in pregnancy.

Senait Fisseha, MD, JD, Associate Professor, Department of Obstetrics and Gynecology, Division Director of Reproductive Endocrinology and Infertility, and Medical Director at the Center for Reproductive Medicine, has served as a catalyst for many of these partnerships. Dr. Fisseha, a native of Ethiopia, completed her OBGYN residency in 2003 and Reproductive Endocrinology & Infertility Fellowship at the University of Michigan in 2006.

The collaboration between St. Paul Hospital Millennium Medical College (SPHMMC), the Federal Ethiopian Ministry of Health, and UMMS has expanded to include a number of different departments and schools at UM, including the Ross School of Business, the William Davidson Institute, the School of Natural Resources and Environment, the College of Engineering, Horace Rackham School of Graduate Studies, and the School of Nursing.
Platform Highlights: FY2013-2014

- In the past 18 months, nearly 35 Ethiopian faculty and several high-ranking officials have visited the University campus, including the Minister of Health, H.E. Dr. Kesetebirhan Admasu, who met with dozens of University leaders and faculty during a visit in June 2014.
- Approximately 65 faculty and staff and an additional 50 students have traveled to Ethiopia to participate in educational, research, and clinical activities.
- November 2013: 15+ UM faculty attended the International Conference on Family Planning held at the African Union in Addis Ababa; 30 SPHMMC residents and faculty attended the conference and several presented their own family planning research and collaboration. The family planning training program for medical trainees was spearheaded through the collaborative efforts of UMMS and SPHMMC with grant funding from an anonymous foundation.
- January 2014: the Medical School and several other UM partners were awarded a Global Challenges for Third Century grant from the Office of the Provost to support the development of the Ethiopia-Michigan Platform for Advancing Collaborative Engagement, or EM-PACE. Thirty-two students were selected to participate in the EM-PACE initiative for Summer 2014; 26 travelled to Ethiopia while 6 stayed in Ann Arbor for their research experience. Read more about EM-PACE on Pages 56-57.
- March 2014: UM and SPHMMC hosted a Maternal Fetal Medicine and Family Planning Continuing Medical Education conference for Ethiopian physicians at SPHMMC and Black Lion Hospital in Addis Ababa. This followed the SPHMMC OBGYN department launching of a Maternal Fetal Medicine Fellowship in January.
- Since the beginning of 2014, SPHMMC launched three new post-graduate residency-training programs in internal medicine, surgery, and radiology. U-M residency directors and department chairs have partnered with SPHMMC physician leadership to design curricula and plan faculty exchanges for training and support of the new residents.
The University of Michigan Medical School (UMMS) is developing a collaborative platform that includes two of the leading institutions in India: All India Institute of Medical Sciences (AIIMS) and Maharashtra University of the Health Sciences. In 2011, a Memorandum of Understanding with AIIMS was signed. In 2012, collaborations were formalized with Maharashtra University of the Health Sciences through the joint Obama-Singh 21st Century Knowledge Initiative award.

**Platform Highlights: FY2013-2014**

- **President Mary Sue Coleman** led a UM delegation to India in November 2013. The goal was to build partnerships and strengthen collaborations with Indian institutions of higher education, including AIIMS and Delhi University.
- Twenty-two faculty, one resident, one student, and one staff member from the Medical School accompanied President Coleman, including Drs. Joseph Kolars, Krishnan Raghavendran, and Ruma Banerjee. Twelve travel grants were awarded by the Medical School to support faculty participation in this delegation.
- Three teams of UM/India investigators submitted grants for the NIH Indo-US Collaborative Program on Affordable Medical Devices. Applicant proposals focused on 1) ultrasound to measure optic nerve sheath diameter in traumatic brain injury (Drs. Krishnan Raghavendran and Krishna Rajajee); 2) deep venous thrombosis incidence/prevalence in India trauma patients (Dr. Vineet Chopra); and 3) genetic diagnosis of heritable neurodevelopmental disorders with clinical exome sequencing (Dr. Stephanie Bielas).
- Two proposals are being explored for potential development with colleagues and funding agencies in India: a clinical research education proposal for emergency medicine collaboration (Dr. Ronald Maio), and a proposal for developing a score for severe brain injury to predict functional outcome (Dr. Krishnan Raghavendran).

"As much as we teach, we must also learn. International collaborations increase our understanding of the world to better prepare tomorrow’s global citizens."

—University of Michigan President Mary Sue Coleman

**Recent Milestones (2013-2014)**

- **November 2013:** UM Presidential Delegation to India
- **November 2013:** Conference on Advancing Research Partnerships hosted by the All India Institute of Medical Science (AIIMS)
- **41 Global REACH Faculty Associates** from 19 departments are participating in clinical, research, or service work in India
- **2 M4 students completed clinical rotations** in India and two 2 visiting students from India were hosted by UMMS

**Members of the UM Presidential Delegation visited the Jai Prakash Narayan Apex Trauma Center in New Delhi in Fall 2013**
Platform Focus Areas
More than 40 UMMS and AIIMS faculty have identified approximately 50 projects for collaboration. Most of the projects fall under four delivery or contents areas (some of which overlap on specific projects): patient care, education, clinical research, and basic science.

Almost 20 different medical specialties are represented, including:

- Cancer Genetics
- Cardiology
- Emergency Medicine
- Gastroenterology+
- General Surgery+
- Human Genetics+
- Immunology
- Internal Medicine+
- Nephrology
- Neurosurgery+
- Oncology
- Ophthalmology & Visual Sciences
- Oral & Maxillo-Facial Surgery
- Pediatric Oncology
- Proteomics
- Radiation Oncology
- Rehabilitation Medicine
- Thoracic Surgery

*Grant applications submitted to the National Institute of Health or to the Indian Council for Medical Research
+Areas and individuals that have made substantial progress through development of an ongoing collaborative platform, manuscript preparation, and/or grant submissions

Shown above (left to right) are UMMS faculty Drs. Sheeja Francis, Stephanie Bielas, and Chandan Kumar at the AIIMS conference

Several UMMS faculty visited the Taj Mahal
Each year, hundreds of UMMS faculty and their global partners design, implement, and analyze the results of their collaborative research.

As the Medical School unit charged with facilitating global health activities, Global REACH often plays a prominent role, such as administrating a global health training grant with mentors and trainees in several different departments. In other cases it may have a very limited role, such as simply helping faculty or trainees celebrate their global work by boosting visibility.

In this section, we highlight some of the newsworthy global health research items that have taken place over the past year at the Medical School. Other such activities can be found throughout the report.

Photo: Ghana leads most African countries in the provision of free basic education for children, with primary school enrollment at nearly 85%. However, children's books can be found in less than 1% of low-income households in Ghana. (2008-2012 data; UNICEF Ghana, 2013)
Reducing Infant Mortality through a Comprehensive Breastfeeding and Human Milk Donation Program: Learning from Brazil

It is widely accepted that human milk provides optimal nutrition for infants in the first year of life, and that lack of proper nutrition has a direct effect on infant mortality. Despite the proven benefits of human milk, many mothers are unable to provide their own breast milk to their infant. In the absence of a mother’s own milk, pasteurized donated human milk from a regulated milk bank is a safe and beneficial alternative and may be superior to commercial formula. Currently, access to pasteurized donated human milk is limited in the US, costs of processing it are high, and the supply is inadequate to meet the needs of all infants who could benefit.

Through the efforts of the Brazil Initiative housed within the Center for Latin American and Caribbean Studies (LACS), the Oswaldo Cruz Foundation (FIOCRUZ), and Global REACH, the University of Michigan (UM) has joined with Brazil to learn more about its methods regarding human milk donation. As the first North American medical school to engage collaboratively with the network, UM pediatrician, Dr. Lisa Hammer, MD, IBCLC, and neonatologist, Kate Stanley, MD, have teamed up with Dr. João Aprígio Guerra De Almeida, director of the Brazilian Milk Bank Network, and Dr. Danielle Aparecida da Silva to develop collaborative education and research initiatives about human milk.

Brazil is internationally known for its well-organized, cost-effective, regulated network of more than 200 human milk banks (compared to 14 in the US) and its wide social acceptance of breastfeeding and donor human milk practices. The Brazilian Milk Bank Network was established in the late 1980s, and is overseen by the National Human Milk Bank Committee and a reference milk bank based at FIOCRUZ in Rio de Janeiro. The reference bank ensures the quality of donated human milk and compliance with national guidelines regarding human milk banking. It provides education and training for employees of milk banks, conducts research on donated human milk and quality control methodology, disseminates information about milk banks, and collaborates with the national government to design public health policies. Researchers believe this campaign has contributed to reductions in Brazil’s infant mortality rate over the past two decades.

With support from the Brazil Initiative at LACS, a multidisciplinary delegation of UM physicians, nurses, nutritionists, lactation consultants, and public health students traveled to Rio de Janeiro in August 2014 to work directly with the Brazilian collaborators to gain valuable hands-on experience and to develop international projects focusing on breastfeeding, human milk, and infant nutrition. This partnership will help guide UM’s CS Mott Children’s Hospital as it works toward the development of an on-site human milk bank.
Building Academic Partnerships to Train 1000+ OBGYNs in Sub-Saharan Africa

Led by Frank Anderson, MD, MPH, and funded by the Flora Family Foundation and the Bill & Melinda Gates Foundation, the University of Michigan Department of Obstetrics and Gynecology hosted a three-day meeting in Accra, Ghana titled *Building Academic Partnerships to train 1000+ OBGYNs in sub-Saharan Africa (SSA)*. The February 2014 meeting was a continuation of the work begun at the International Federation of Gynecology and Obstetrics conference in Rome during November 2012, including developing initiatives to spur partnerships between departments of OBGYN in high-income and low-income countries that will result in the training and certification of more than a thousand new African OBGYNs in the next decade.

Attendees made up 19 teams, each of which included a US academic representative and three representatives from 14 SSA countries (an OBGYN professional, a Ministry of Health representative, and a Ministry of Education representative). The teams discussed ways of creating or improving mutually beneficial academic partnerships to increase post graduate training in OBGYN and to develop a blueprint for OBGYN academic training programs and standardized national certification processes. Working with Dr. Anderson, among others, is Dr. Diana Curran, Residency Program Director and OBGYN Associate Professor at UMMS, who is helping to develop curriculum and resource mapping for African colleagues. She has written the content for an online course “Hypertensive Disorders in Pregnancy” with a Dutch company, that is currently being piloted.

The overall goal of the project is to reduce maternal and neonatal morbidity, mortality, and obstetric fistula by training a cadre of more than 1000 African obstetricians and gynecologists and establishing partnerships and infrastructure to strengthen academic training programs and certification in SSA.
Research Highlights

Finding Safer Conception Methods for HIV-Affected Couples

For the past several years, Dr. Okeoma Mmeje has been working to bring safer conception options to HIV-affected couples in Kenya. Working primarily with HIV-serodiscordant couples (where one partner is HIV positive and the other is not), Dr. Mmeje and her colleagues have provided information to help them safely conceive while minimizing the risk of HIV transmission to their partners and infants.

HIV transmission within a heterosexual HIV-serodiscordant relationship accounts for at least 60% of new HIV infections in sub-Saharan Africa, which is often attributed to HIV-affected couples engaging in risky behaviors in an effort to conceive children. Yet conception methods exist that decrease the risk of HIV transmission during delivery and reduce the risk of transmission to partners. Methods such as timed, unprotected intercourse, vaginal insemination, or sperm washing with intrauterine insemination to reduce the risk of sexual HIV transmission are available, and OB/GYN specialists such as Dr. Mmeje are working to increase safer conception awareness, education, and acceptance both in the US and abroad.

Dr. Mmeje began her original study in 2011 during a fellowship at the University of California, San Francisco. The project’s focus was evaluating the use of timed vaginal insemination as a reduced-risk conception method. Working in the Nyanza region, where the prevalence of HIV is approximately 15%, 40 monogamous, serodiscordant couples were enrolled in a pilot study involving clinical evaluation, education, monitoring of sexual practices and condom use, and timed vaginal insemination for up to six ovulatory cycles. Of the 26 couples who completed the entire intervention period of 15 months, there were no cases of HIV transmission to the partner or neonate.

Several follow-up studies are currently underway, including:

- Development and evaluation of a Safer Conception Training and Education Toolkit for the empowerment of HIV-affected women, couples, and healthcare providers in Kenya
- Qualitative study conducted with mixed- and single-gender focus groups in Kisumu, Kenya; aimed at assessing availability and access to preconception counseling and reproductive services
- Qualitative survey involving 150 registered OB/GYNs in Kenya examining the current assisted reproduction practices for HIV-affected couples and establishing a registry of healthcare providers willing to support HIV-affected couples in achieving pregnancy safely
- Needs assessment project on the state of reproductive services for HIV-affected couples in Ethiopia

“HIV-affected couples are often unaware of safer methods of conception that also prevent sexual HIV transmission.”

—Okeoma Mmeje, MD, MPH

Dr. Mmeje has been working with HIV-affected couples in the Nyanza region of Kenya, which has the highest prevalence rate of HIV (15%) in a country with an overall prevalence rate of 5-7%. Map courtesy of The Lonely Planet
Infection Prevention and Hand-Hygiene in Italy and Japan

Sanjay Saint, MD, MPH is the George Dock Professor of Internal Medicine at the University of Michigan Medical School, and Director of the Veteran’s Administration/University of Michigan Patient Safety Enhancement Program.

Dr. Saint has a long-standing history of conducting health services research both nationally and internationally. His specific area of professional and research expertise is in enhancing patient safety by preventing healthcare-associated complications, with special focus on catheter-related infection, translating research findings into practice, and medical decision-making.

Dr. Saint, who is also Associate Chief of Medicine at the VA Ann Arbor Healthcare System, and a core faculty member of the VA Center for Clinical Management Research, has worked with colleagues in both Italy and Japan assessing hand-hygiene compliance, as well as determining the use of recommended infection prevention strategies.

• In Italy, Dr. Saint and his team compared two infectious disease units. The first unit, a participant in a prior hand hygiene intervention, showed sustained improvement in hand hygiene adherence (71% 4-years post-intervention vs. 37% pre-intervention). While rates for physicians remained stable, rates for nurses decreased after the loss of a nurse champion (86% to 61%). In the second unit, which was not part of the prior intervention, adherence dropped from 50% to 5.7% after the loss of a physician champion. This demonstrates that a key to sustainability may be influential clinician leaders who engage hospital staff and model exemplary hand hygiene behavior. This follow-up study was conducted by UM medical student, Sarah Lieber, who was mentored and supported by Dr. Saint.

• In Japan, Dr. Saint and his team conducted a survey of hospitals assessing infection prevention program characteristics, the use of general infection prevention practices, and the use of practices specific to preventing catheter-associated urinary tract infection, central line-associated bloodstream infection, and ventilator-associated pneumonia. Most hospitals reported the regular use of alcohol-based hand rub, aseptic technique during catheter insertion and maintenance, avoiding routine central line changes, use of maximum sterile barrier precautions, and semi-recumbent positioning. However, regular use of many evidence-based prevention practices—such as direct monitoring of hand hygiene compliance and urinary catheter reminders or stop orders—was low, highlighting the importance of developing an organization-wide atmosphere that prioritizes patient safety and the use of effective measures to reduce healthcare-associated infection in Japan.

“Finding novel ways to reduce healthcare-associated infection is crucial, both nationally and globally. Working with trainees, nurses, and physicians worldwide offers immense benefits, including personal and professional enrichment, increased global networking, and broadened cultural awareness.”
—Sanjay Saint, MD, MPH
Enabling Technologies Support Research, Education, and Training

Medical School Information Services (MSIS) supports many of the global collaborations within the Medical School. Through the creation and promotion of free, openly licensed teaching materials, the facilitation of media-enabled education, and the provision of technological expertise, MSIS and the Office of Enabling Technology provide immeasurable opportunities for learning to medical school constituents and their partners around the world. For example:

- Through a partnership with St. Paul Hospital Millennium Medical College (SPHMMC) in Ethiopia, the Open.Michigan initiative provides information communications and technologies (ICT) training support for their OBGYN residency program, which was launched in July 2012. The goal of the collaboration is ensuring that the residents, faculty, and support staff have the equipment, tools, skills, and space to effectively find, author, and deliver digital resources and content that are convenient to access, relevant to their context, and affordable. To date, three new OBGYN learning modules have been created, two have been adapted from Ghana, and several more are in progress.

- MSIS Solution Center sent Chris Goosman, an audio-visual specialist, to set up high-definition videoconferencing for two medical schools in Africa: the Komfo Anokye Teaching Hospital (KATH) at Kwame Nkrumah University of Science and Technology in Ghana for their cancer center and with St. Paul Hospital Millennium Medical College (SPHMMC) in Ethiopia for surgery and OBGYN. KATH is using the videoconferencing for joint breast cancer tumor boards with collaborators at Michigan. At SPHMMC, videoconferencing will support their growing undergraduate and graduate medical education programs. It will also be used to connect SPHMMC with the Ministry of Health and the teaching hospitals at Yirgalem and Adama for distance education in support of the Ministry’s New Medical Education Initiative across 13 new medical schools.

- In support of the faculty-led student summer research experience mentored by Dr. Dan Clauw and sponsored by Global REACH, the Instructional Design and Technology Team and Office of Enabling Technologies, both within MSIS, helped create “Histology Offline” for partners at Kenya Methodist University and Meru University. This project uses a small, low-cost computing device called Raspberry PI to create a local area wireless network to host course content and histology images that can be viewed with a free local version of virtual microscope from Aperio. Because the histology images have open licenses, “Histology Offline” is also available for reuse by other institutions who are interested in the same content and local network distribution models.
The following bibliography represents some of the publications of Global REACH Faculty, Faculty Associates, and staff (names bolded) that were published in 2013-2014 related to global health or authored with international partners. *Previously reported publications are not included here.*


Select Publications


Johnson TRB. Implementing evidence based science to improve women’s health globally. *Int J Gynecol Obstet*. 2013; 122(2): 91-93.


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**Building Academic Partnerships to Reduce Maternal Morbidity and Mortality: A Call To Action and Way Forward**


A new book by Dr. Frank Anderson captures the compelling ideas, stories, and knowledge shared by international maternal health specialists who gathered during the 2012 meeting of the International Federation of Gynecology and Obstetrics (FIGO) in Rome, Italy. Dr. Anderson received a Flora Foundation planning grant to improve maternal health and reduce maternal mortality through training obstetricians. Using lessons learned from other partnerships within his department and his long-term relationships with his own international collaborators, he used the award to convene several national leaders from ten sub-Saharan Africa (SSA) countries and the US to discuss ways to increase professional OB/GYN capacity as a means to improving maternal health in the SSA region. This gathering opened the first-ever group dialogue among African OB/GYNs on ways to improve maternity care by improving specialist-level obstetric care capacity.
Global REACH supports the mission and goals of the University of Michigan Medical School by providing opportunities for students to participate in educational experiences abroad and by facilitating the visits of international scholars and trainees.

Medical students across all four years may participate in a formal educational program to study global health and disparities, conduct faculty-mentored research projects overseas, or complete clinical electives abroad. Most of these experiences are funded by Global REACH, while others are supported and administered by units within the Medical School, across campus, or outside the University.

Visiting scholars and learners come from around the world to engage in clinical, educational, or research activities. Visits may range from a few days to more than a year. Global REACH works with individual units to facilitate these visits — helping enhance the experience for our guests and strengthen their collaborative relationships with partners at the University of Michigan.

Photo: M1 Vikas Jayadiva (left) is shown with a new friend during his summer experience on a clinical research training project in Meru, Kenya
The Global Health & Disparities (GHD) Path of Excellence—the first co-curricular Path of Excellence program offered to UMMS students—welcomed its inaugural class during August 2011 (graduating class of 2015). As Global REACH helps to facilitate the international activities of UMMS constituents, GHD and Global REACH have become natural partners in facilitating UMMS student activities related to health equity, both in the United States and abroad.

An optional, co-curricular activity, GHD supplements the standard curriculum and provides a flexible, mentored, self-regulated environment shaping student learning. It operates through several discrete structured learning experiences, longitudinal faculty advising, and a capstone field project. GHD provides students an opportunity to integrate foundational, investigative, and experiential learning around domestic and global health disparities in order to become agents of sustainable change. GHD students have the opportunity to gain practical experience in an underserved setting in the United States or a developing country. These opportunities generally take place during the summer following the M1 year or during the M4 year as a clinical elective.

The GHD Path offers a pre-travel learning experience with video triggers to foster awareness and preparedness for UM students traveling off-campus. It focuses on topics such as personal safety, cross-cultural communication, gender-specific safety, cultural isolation, and exposure to infectious diseases. This experience is now required of all UM medical students traveling to low-resource settings as part of their professional development.

GHD is co-directed by Brent Williams, MD, Associate Professor of Internal Medicine, and Senait Fisseha, MD, Associate Professor of Obstetrics and Gynecology, assisted by faculty advisors, and guided by a faculty steering committee.

Current Faculty Advisors
Sana Ahmed, Pediatrics
*Jason Bell, Obstetrics & Gynecology
Kevin Chung, Plastic Surgery
Daniel Clauw, Anesthesiology and Psychiatry
Alicia Cohen, Family Medicine
Michael Fetters, Family Medicine
*Senait Fisseha, Obstetrics & Gynecology
Andy Haig, Physical Medicine & Rehabilitation
Michele Heisler, Internal Medicine
Jason Kahn, Internal Medicine and Pediatrics
Joseph Kolars, Internal Medicine
Preeti Malani, Internal Medicine
*Patricia Mullan, Department of Learning Health Sciences
Julie Perry, Obstetrics & Gynecology
Preet Rana, Health Information Sciences
Michelle Riba, Psychiatry
Brent Williams, Internal Medicine
*Joy Williams, Family Medicine

*GHD Faculty Steering Committee

“Our Global Health & Disparities Path of Excellence is unique because of its focus on health equity—in underserved communities in the US as well as abroad.”

– Dr. Joseph Kolars, Senior Associate Dean for Education and Global Initiatives
Global Health & Disparities
Path of Excellence

GHD Students (Classes of 2015 and 2016)

Twenty-nine M1 students made up the inaugural GHD cohort (UMMS Class of 2015), with two-thirds choosing an international health disparities summer project. In 2012-13, 37 M1s joined the GHD community in the second cohort; 24 of whom participated in international summer experiences.

Having completed their M3 clerkships, some of the inaugural group of GHD students are taking time out of medical school to pursue scholarly work in health disparities. They include:

- Hally Crissman; Center for Disease Control Hubert Fellowship in Haiti
- Peter Finin; Howard Hughes Medical Research Fellowship in South Africa
- Andrew Gardner; Fogarty Fellowship in Ghana
- Mohammad Issa; Multidisciplinary Clinical Researchers in Training Program in Kenya
- Vivian Lam and Bianca Verma; Harvard School of Public Health
- Sam Neher; Coursework in social medicine in Haiti

2013-2014 GHD Students (Class of 2017)

In 2013-14 the GHD Path of Excellence enrolled its third cohort of students. Twenty M1 students entered the GHD track (shown below).

M1 Shailly Prasad (left) worked with children at Amani Children’s Home in Kenya. Here she is shown illustrating the properties of hydrophobic and hydrophillic molecules using dish soap and milk

Students who successfully complete the GHD Path of Excellence receive special recognition in their Dean’s letter at graduation, which includes a description of the tasks and competencies of the GHD path.

*A of the 14 GHD students with international health disparities projects, 10 were participants in Global REACH faculty-led projects (see following pages).
Global REACH developed faculty-led small group experiences to encourage stronger student mentorship by faculty, continuity of engagement with our international partners, and team-based learning.

Faculty-led Small Group Experiences

The Joint Institute HCV team is shown at the Hepatology Institute, Peking University Second Hospital. Co-leads Dr. Anna Lok and Professor Lai Wei are standing center (front and back rows respectively). M1 student Fanny Du is shown center right next to Professor Wei.

Care of Patients with Liver Diseases: A Comparative Study between the US and China

Faculty Mentor
Anna S. Lok, MD, Alice Lohrman Andrews Professor of Hepatology; Professor of Internal Medicine; Director of Clinical Hepatology; and Associate Chair for Clinical Research, Department of Internal Medicine

For the past several years, Dr. Anna Lok has been collaborating with Professor Lai Wei, Peking University, Hepatology Institute, Second Hospital in Beijing, on a hepatitis C project funded by the University of Michigan Health System and Peking University Health Sciences Center Joint Institute for Clinical and Translational Research (JI). Their project has been highly successful in patient enrollment and retention, as well as in data and sample collection. Since 2012, they have been sending M1 students to China as part of the Global REACH Faculty-led program.

The main goal of this program is to provide M1 students an opportunity to witness how medical care for patients with liver disease is delivered in China and in the US and to compare Chinese and US patients’ knowledge about their liver diseases, satisfaction with their care, and preferences in management decisions. The project comprises 5 parts: 1) introduction to liver disease and its management, 2) observation at UMHS liver clinic, 3) observation at Peking University Second Hospital’s liver clinic, 4) survey of patients in liver clinic, and 5) analysis of survey data.

M1 student Fanny Du was selected for the 2014 project. She was joined by an UM undergraduate student Angela Xie to collect the data in China, while two other new UM graduates, Cassandra Rodd and Shanna Cheng, worked on the US portion of the project. Angela, Cassandra, and Shanna have been working in Dr. Lok’s lab as part-time research assistants.

Fanny Du (right) is shown administering a survey to a patient at the Hepatology Clinic at Peking University Second Hospital.
Faculty-led Small Group Experiences

The Genetic Basis of Deafness in Bangladesh

Faculty Mentor
Glenn Green, MD, Associate Professor of Otolaryngology

With approximately 162 million people, Bangladesh is one of the most populous countries in the world, including an estimated 15 million people who suffer from severe to profound hearing loss. The genetics of individuals with deafness in Bangladesh has not been characterized, although both syndromic or non-syndromic caused deafness are normally related to gene mutations.

Working with partner otolaryngologists at the Specialized ENT Hospital serving Society for Assistance to Hearing Impaired Children (SAHIC) in Bangladesh and the Integrated Pre-School of Hearing Impaired Children of SAHIC in Mohakhali, Dhakha, the UM team (including two M1 students) set out to collect, analyze, and characterize the extent of genetic deafness by examining DNA from individuals from consanguineous families with deafness. Unfortunately, final IRB approval was not received until the students were ready to return to Ann Arbor so data collection has been postponed.

In addition to participating in all stages of the study development and IRB process, the students were able to shadow in the surgery and audiology departments of SAHIC. They witnessed a variety of surgeries including tonsillectomies and adenoid removals, thyroid removals, a submandibular gland removal, deviated septum procedures, the drainage of abscesses, and tympanoplasties. Almost daily, they observed mastoid exploration procedures. Often, as a result of chronic middle ear infections lasting many years, infection can spread to the mastoid. In some cases the bones of the middle ear are destroyed, and in extremely advanced cases the infection can spread to the dura and brain.

M1s Yael Braunschweig* and Silas Carwell* were funded by Global REACH to participate in this inaugural project. *UMMS Global Health & Disparities Path of Excellence Student

“The diseases we saw were much more advanced than what is usually seen in the US. We saw firsthand the medical consequences of not being able to treat childhood ear infections, the resulting morbidity, and the specialized surgical techniques developed to treat advanced cases.”

– M1 Yael Braunschweig
Faculty-led Small Group Experiences

Community Based Cohort Study in the Western Region of São Paulo

Faculty Mentor
Michele Heisler, MD, Professor of Internal Medicine, UMMS

This research project partnered with the Pediatrics Department at the Faculdade de Medicina of Universidade of São Paulo (FMUSP) to examine the social determinants of health in a subpopulation of mothers and infants in São Paulo. Led by Dr. Heisler and her FMUSP colleague, Dr. Alexandra Brentani, the summer team of 3 UMMS students, a Harvard college student, and a social worker from USP’s Hospital Universitario (HU), developed a thorough, semi-structured interview protocol and a home observation survey.

One project team identified 100 babies (from a cohort of 3,000) who were living in some of the highest-risk areas in São Paulo and conducted 12 home interviews with the mothers using questions structured to gain an understanding of the social determinants of health (i.e., access to healthcare services, extent of toxic stresses in the environment, health conditions of the mother and infant, living conditions in the home, development of the infant, and the mother’s resiliency and problem solving techniques). Local community health agents (CHAs) served as guides and facilitators.

Another team conducted over 40 home visits with about 20 CHAs based at Vila Piaui, a Sao Paulo health center. They observed and assessed the results of a pilot diabetes self-management intervention that trained CHAs to use motivational interviewing to improve patient outcomes. Evaluations were compiled using an adapted fidelity checklist. Data was also collected for the 50 patients participating in the study and for 50 control patients.

2014 UMMS students on this project were: Pooja Agrawal*, Marlon Bohorquez, Stephanie Chalifour, Simanjit Mand*, and Miquel Rovira*.
*UMMS Global Health & Disparities Path of Excellence Student
Faculty-led Small Group Experiences

Clinical Research Training in Meru, Kenya

Faculty Mentors

Dan Clauw, MD, Professor of Anesthesiology, Professor of Internal Medicine, Professor of Psychiatry, UMMS
Jeff Punch, MD, Jeremiah and Claire Turcotte Professor of Transplantation Surgery and Professor of Surgery, UMMS

The clinical research training program in Kenya is integrated into the existing NIH-funded Multidisciplinary Clinical Researchers in Training (MCRiT) Program directed by Dr. Clauw. The MCRiT program, funded as a NIH T32 Roadmap grant in 2005, includes a “summer immersion” program that is offered to medical, dental, pharmacy, and nursing students to expose them to clinical research early in their training. Students help implement a community health survey in the rural Kenyan region of Meru, contributing to the ultimate goals of establishing educational, research, and clinical care partnerships between Kenyan universities and various UM schools and faculty.

The 2014 team spent most of their time at Consolata Hospital in Meru reviewing patient files and observing C-Sections. They completed a review of every C-section, maternity, and newborn file over the past year, laying the basis for a comparative analysis of C-section outcomes and cost at Consolata Hospital and UMHS. In addition, they performed physical exams on all the children of Amani House, the orphanage where they lived during the project. They created an electronic data base for each child so that medical records can be easily accessed and updated. Their third project involved teaching sexual education to primary and secondary students, something that is not part of the normal curriculum. This provided excellent teaching and learning opportunities about sexual anatomy, menstruation, hygiene, safe sex, pregnancy, contraception, and sexually transmitted infections.

Four UMMS students were funded by Global REACH to participate in the Kenya Summer Clinical Research Program: Erica Heisel, Vikas Jayadeva*, Shailly Prasad*, and David Sanford.

*UMMS Global Health & Disparities Path of Excellence Student

(top photo)
Vikas Jaydeva weighs and measures a child from the Amani House Orphanage in Meru, Kenya

(middle photo)
Erica Heisel shares the sounds of her heart with friends from the Amani House

(bottom photo)
Shailly Prasad (upper left) and Erica Heisel create a growth chart for physical exams at the Amani House
Improving Chronic Illness Care in Bolivia Using Mobile Health Tools

Faculty Mentor
John Piette, PhD, Professor of Internal Medicine, UMMS

The Program on Quality Improvement for Complex Chronic Conditions, directed by Dr. John Piette, develops resources for chronically-ill patients and their clinical teams and supports telehealth services in low/middle income countries, as well as across national boundaries. Student summer projects include rigorous implementation of science methods and collaboration with experts in international health research to ensure a stimulating experience for students and the development of a service delivery model that has the greatest possible impact on the health of chronically-ill patients around the globe. The program emphasizes community engagement, experiential learning, and work on specific, results-oriented research project. It also offers an opportunity for students to practice medical Spanish.

Building on the work of the 2013 student group, the 2014 students conducted the same cross-sectional survey with a new cohort of patients, and re-contacted and surveyed a previous subset of chronically ill patients in hopes of converting the cross-sectional study into a longitudinal study. The ultimate goal is to follow this cohort for the next five years in order to monitor how the treatment and management of chronic diseases changes over time.

Three specific projects were conducted during Summer 2014 at three different public hospitals throughout La Paz:
• A longitudinal survey focused on chronic diseases such as hypertension, diabetes, and depression. The survey assessed demographic information, access to healthcare, past medical history, tobacco and alcohol use, chronic care management, and medical adherence. Students also took measurements of height, weight, and blood pressure.
• Implementation of an Interactive Voice Response (IVR) system through which hypertensive or diabetic patients received weekly automated calls to collect information on medication compliance, medication supply, and disease symptoms.
• A pilot study that focused on supporting patients with depression using the IVR system. Patients who screened positive for depression according to a patient health questionnaire, but who had not yet been diagnosed by a physician, completed baseline surveys, then received automated calls for six weeks. The calls were a way to both monitor their health and offer support through discussion and awareness.

Three UMMS students participated in the 2014 project: Emily Morgan*, Chelsea Reighard, and Philip Asamoah*.

*UMMS Global Health & Disparities Path of Excellence Student
Faculty-led Small Group Experiences

Cognitive and Family Intervention Trials: Summer UM Medical Student Research Placements in Uganda

Faculty Mentors
Bruno Giordani, PhD, Professor of Psychiatry, Professor of Neurology, UMMS; Professor of Psychology, College of Literature, Science, and the Arts, UM
Michael J Boivin, PhD, MPH, Adjunct Associate Professor of Psychiatry, UMMS; Associate Professor of Psychiatry and Neurology/Ophthalmology, Michigan State University

Drs. Boivin and Giordani have been collaborating in cross-cultural studies in African and Southeast Asian settings for over 20 years. Their partners in Uganda include: Drs. Robert O Opoka, Paul Bangirana, and Noeline Nakasujja, Makerere University Medical School; and Dr. Patrick Mutono, Kanginima Hospital, Pallisa District and member of the Ugandan Parliament.

This ongoing research project, funded through the National Institute of Mental Health, represents the first study to systematically evaluate the effectiveness of computerized cognitive rehabilitation therapy in improving cognitive performance and behavioral outcomes in Ugandan children with HIV. Another important component of this study is a systematic evaluation of how the HIV subtype and the corresponding immunological status of the children modify neuro-cognitive performance gains and psychiatric symptom reduction that may be seen as this intervention proceeds.

Students on this project assisted medical officers and nurses in all aspects of their work, including clinical evaluations of study children and in-home healthcare programs, as well as analyzing laboratory work. Students had short placements at the large University-based Mulago Hospital and in the rural-based Kanginima Hospital, including ward experiences and distribution of medical and other supplies in outlying Ugandan areas.

“T he way the doctors work in these under-staffed and under-resourced areas was inspiring to me. It was an absolute pleasure to learn methods that most in the US would call antiquated... and helped me realize that we cannot take a single thing in the US health system for granted, from the most complex to the very simplest.”

– M1 Eric Spencer

M1 students Nikita Jambulingam, Eric Spencer, and Sarah Bliss (left to right) participated in the Summer 2014 Uganda project
M4 International Electives/ Clinical Rotations

Alec Anderson
Komfo Anokye Teaching Hospital/Kwame Nkrumah University of Science and Technology, Ghana
Sept 2–29, 2013
Obstetrics & Gynecology

Charlotte Gamble
St. Paul’s Millennium Medical College, Ethiopia
Feb 2–28, 2014
Obstetrics & Gynecology

Alaina Bennett
Hospital Materno-Infantil Jose Domingo de Obaldia, Panama

Evelyn Hall
Florence Institute Universitario del Hospital Italiano, Argentina
Apr 7–May 2, 2014
Medical Intensive Care

Calista Harbaugh
All India Institute of Medical Sciences, India
Apr 7–May 2, 2014
Health Care Delivery

Arun Hariharan
All India Institute of Medical Sciences, India
Apr 7–May 2, 2014
Surgical and General Medical Care

Lauren Dennisuk
Jose Domingo de Obaldia Hospital for Women and Children, Panama
Apr 7–May 2, 2014
Obstetrics & Gynecology

Allison Janda
University Hospital Center Zagreb, Croatia
Apr 7–May 2, 2014
General Medical Care and Education

Phoebe Cheng
Korle Bu Teaching Hospital/University of Ghana Medical School, Ghana
Sept 2–29, 2013
General Medicine and Therapeutics

M4 Rachel Shah (second from left) stands with student volunteers at an Aravind eye camp in the town of Vaitheeswarankoil, Tamil Nadu. Ms. Shaw initiated a collaborative research project with Dr. Paula Anne Newman-Casey of Kellogg Eye Center and Dr. Rengaraj Venkatesh, chief medical officer of the Pondicherry ophthalmology satellite program of the Aravind Eye System. The project tests whether a mobile fundus camera can be used to take retinal photographs of sufficient quality to allow remote diagnosis of diabetic retinopathy and glaucoma.

UMMS M4 students are shown above with other international medical students during their clinical rotations in Ghana. Shown are Alec Anderson (left, OBGYN), Jennifer Wong (fourth from left, General Medicine) and Phoebe Cheng (third from right, General Medicine and Therapeutics).
In addition to those supported by Global REACH, one other M4 student did an international elective during the 2013-14 academic year.

- **Sameer Khatri**
  - Aga Khan University Hospital, Pakistan
  - Feb 3–Apr 28, 2014
  - Health Care Delivery

- **Sindhura Kodali**
  - Physicians 4 Haiti/The University of the Aristide Foundation Medical School, Haiti
  - Jul 8–28, 2013
  - Social Medicine

- **Grace Lee**
  - Taipei Veterans General Hospital, Taiwan
  - Apr 7–May 2, 2014
  - Traditional Medicine

- **John Nan**
  - Shanghai Jiao Tong University, China
  - Feb 10–Mar 9, 2014
  - Traditional Chinese Medicine

- **Laura Newcomb**
  - Korle Bu Teaching Hospital/University of Ghana Medical School, Ghana
  - Jul 8–Aug 1, 2013
  - Obstetrics & Gynecology

- **Jeanne Poel**
  - Amazon Promise, Peru
  - Feb 8–Mar 1, 2014
  - Medical Outreach

- **Devon Rupley**
  - University Hospital Rebro/University of Zagreb Medical School, Croatia
  - Apr 7–May 2, 2014
  - Multiple Clinical Rotations

- **Yongwoo David Seo**
  - Seoul National University Hospital, South Korea
  - Apr 7–May 2, 2014
  - Hepatobiliary and Liver Transplant Services

- **Rachel Shah**
  - Korle Bu Teaching Hospital/University of Ghana Medical School, Ghana
  - Jul 8–Aug 1, 2013
  - Obstetrics & Gynecology
  - Aravand Eye System, Pondicherry, India
  - December, 2013
  - Ophthalmology

- **Tina Wang**
  - Peking Union Medical College, China
  - Apr 7–May 2, 2014
  - Gastroenterology

- **Yao Wang**
  - Shanghai Jiao Tong University, China
  - Feb 9–Mar 7, 2014
  - Traditional Chinese Medicine

- **Jennifer Wong**
  - Korle Bu Teaching Hospital/University of Ghana Medical School, Ghana
  - Sept 2–27, 2013
  - General Medicine

- **Jeanne Poel**
  - Amazon Promise, Peru
  - Feb 8–Mar 1, 2014
  - Medical Outreach

- **Devon Rupley**
  - University Hospital Rebro/University of Zagreb Medical School, Croatia
  - Apr 7–May 2, 2014
  - Multiple Clinical Rotations

- **Yongwoo David Seo**
  - Seoul National University Hospital, South Korea
  - Apr 7–May 2, 2014
  - Hepatobiliary and Liver Transplant Services

- **Rachel Shah**
  - Korle Bu Teaching Hospital/University of Ghana Medical School, Ghana
  - Jul 8–Aug 1, 2013
  - Obstetrics & Gynecology
  - Aravand Eye System, Pondicherry, India
  - December, 2013
  - Ophthalmology

- **Catarina Gulledge**
  - New Zealand
  - Spring 2014
  - Physical Medicine & Rehabilitation
“My rotation in Croatia was my first experience working in the health care system of another developed country besides the US. It was extremely helpful for me to see a totally different organizational structure for delivering care to an entire population, as Croatia has universal health care. The systems are dramatically different but both produce excellent end products.”
—M4 Devon Rupley, Croatia, April 2014

“I appreciated seeing the diagnosis and management of diseases not often found in the United States such as malaria, TB, and HIV as well as more common diseases such as mitral stenosis and rheumatoid arthritis in their end-stage presentations.”
—M4 Phoebe Cheng, Ghana, September 2013

“One of the most valuable parts of the experience was learning more about the health system in Panama, and how much this hospital differed from the ones I’ve seen in the US. It made me extremely grateful for things like electronic medical records and private patient rooms, while at the same time realizing that some of the conveniences we rely on aren’t absolutely necessary.”
—M4 Lauren Dennisuk, Panama, April 2014

“The best aspects of my experience were truly experiencing how other people in the world live and what their access to basic needs is like. Building relationships with people who live such different lives than us gave me new and diverse perspective that was invaluable.”
—M4 Jeanne Poel, Peru, February, 2014

“On a regular basis I saw disease processes that I had learned about during M1 or M2 year but had never seen. There were students from Germany, The Netherlands, Colombia, Mexico, Egypt, etc. We had many long conversations about training, attitudes about healthcare, and work life balance in different countries. It was a very expansive experience to learn from these students.”
—M4 Adam Baruch, Brazil, May 2014
“Many of the patients I took care of had received little to no prior healthcare, and at admission most patients had advanced disease. Through my interactions with these patients, I began to really value the impact of the care physicians can provide, especially in the outpatient setting. If some of these patients had received proper outpatient care, they would never have been hospitalized with these advanced diseases.”
—M4 Sameer Khatri, Pakistan, March, 2014

“Seoul National University is a world leader in living donor liver transplantation... they do on average 3 to 4 per week. The surgical technique and post operative care involved in both the donor and the recipient were incredible to watch.”
—M4 Yongwoo Seo, South Korea, April 2014

“Medicine in a developing country, especially in a government hospital, is drastically different from that in the US. Understanding the value of resource allocation was one of the most important lessons I learned.”
—M4 Arun Harihan, India, April 2014

“I have always been quite skeptical about traditional Chinese Medicine, but this rotation convinced me otherwise. Most of the treatments used are to supplement western medicine, and the clinical improvement in patients demonstrates that many of the treatments and herbs do work in terms of improving the overall health of the patients.”
—M4 Yao Wang, China, February 2014

“Each day was yet another battle to deliver live babies, find cross-matched blood, repair ruptured ectopic pregnancies, and ensure that women with septic abortions remained stable. This stands in sharp contrast with my experience in Ann Arbor, where the majority of patients are wealthy, healthy, and educated. This global disparity between countries is fantastically easy to notice. Yet what continues to fascinate me the most—and what compels me to work in global health—are the disparities within countries, and how they relate to these disparities in other countries.”
—M4 Charlotte Gamble, Ethiopia, February 2014
Non-Traditional and Conference Grants

Global REACH Non-Traditional Grant Recipient

Bruce Bassi (M4)
San Jose, Costa Rica
February 2-28, 2014
Tropical Medicine in Medical Spanish

Global REACH Conference Grant Recipients

Cecelia Kwak (M3)
Improving access to long-term family planning services in Zambia: Quality assurance frameworks in action
Association of Reproductive Health Professionals Annual Conference
Denver, Colorado; September 19-21, 2013

Nauzley Abedini (M4)
The relative burden and risk factors for neonatal jaundice in Ghana: A mixed-methods study
American Academy of Pediatrics Annual Meeting
Orlando, Florida; October 23-29, 2013

M4 Nauzley Abedini is shown above at the annual meeting of the American Academy of Pediatrics

Global REACH Conference Grant Recipients

Consolidated of Universities for Global Health
Washington, DC; May 9-11, 2014
- Clay Bavinger (M3)
  Correlation between burden of disease and foreign assistance in African countries
- Joshua Greenberg (M2)
  Social determinants of maternal health risk factors and perceptions in Southwestern Uganda
- Steven Weinberg (M2)
  Post-graduate training in Ethiopia - an approach to fighting brain drain
- Leigha Winters (M2)
  International health research collaborations: Contextual and operational lessons from a pilot project in Quito, Ecuador

M2 Daniel Pepper is shown at the 5th Annual Conference of the Consortium of Universities for Global Health

M3 Clay Bavinger was one of only 48 speakers invited to present at the 5th Annual Conference of the Consortium of Universities for Global Health
In addition to funding provided by Global REACH for clinical electives and global health experiences, medical students often receive support from other sources. For instance, the Student Biomedical Research Program (SBRP) is a medical student research training program funded by the National Institutes of Health (NIH). Students supported by SBRP typically spend eight weeks during the summer working on self-designed research projects. Another source of funding that first-year medical students often turn to is the NIH-funded Minority Health & Health Disparities Research Training Program (MHIRT), administered by the UM Center for Human Growth & Development.

**Summer 2014 M1 Students**

*UMMS Global Health & Disparities Path of Excellence Student

<table>
<thead>
<tr>
<th>Student</th>
<th>Project Description</th>
<th>UM Mentor(s)</th>
<th>Funding Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sarah Bell*</td>
<td>Comparing the syndromic approach with point-of-care testing in treatment of sexually transmitted infections at St. Paul's Hospital (Addis Ababa, Ethiopia)</td>
<td>Dr. Jason Bell</td>
<td>SBRP Award</td>
</tr>
<tr>
<td>Alana Eason*</td>
<td>Determining associations between genetically-defined African ancestry and susceptibility for triple-negative breast cancer (Kumasi, Ghana)</td>
<td>Dr. Lisa Newman</td>
<td>SBRP Award</td>
</tr>
<tr>
<td>Josh Greenberg*</td>
<td>Health, human rights, and development (Southwestern Uganda)</td>
<td>Dr. Joseph Kolars, Dr. Rebecca Thornton</td>
<td>Funding Sources: MSTP, Department of Economics, African Studies Center</td>
</tr>
<tr>
<td>Stephen Lichtenstein*</td>
<td>Assessment of depression, social support, and social undermining among cancer patients (Quito, Equador)</td>
<td>Dr. Melvin McInnis</td>
<td>SBRP Award</td>
</tr>
<tr>
<td>Alana Pinsky*</td>
<td>The state of reproductive services for HIV-infected individuals at St. Paul's Hospital (Addis Ababa, Ethiopia)</td>
<td>Dr. Okeoma Mmeje</td>
<td>SBRP Award</td>
</tr>
<tr>
<td>Nicole N. Lugo Santiago</td>
<td>Intimate partner violence witnessing and risk factor evaluation in Chilean young adults (Santiago, Chile)</td>
<td>Dr. Betsy Lozoff</td>
<td>MHIRT Program Award</td>
</tr>
</tbody>
</table>
Kavita Vinkar, 2013-2014 CDC Hubert Global Health Fellowship Recipient

The Hubert Global Health Fellowship from the Center for Disease Control (CDC) is offered to medical and veterinary students in their 3rd and 4th years. It assigns selected applicants to global projects being overseen by a CDC epidemiologist. Each fellowship includes an intensive 4-day epidemiology training session at the CDC headquarters in Atlanta, along with a 6- to 12-week field experience.

M4 student and Hubert Fellowship recipient, Kavita Vinkar, spent her fellowship working in the global immunization division with Dr. Rania Tohme on a collaborative study in Haiti. The CDC-Haiti partnership is preparing for a rollout of rotavirus and pneumococcal vaccines. Yet data are needed to understand the current state of morbidity and mortality from these diseases. For her field project, Ms. Vinkar collaborated with several Haitian medical students to collect data at eight sentinel surveillance hospital sites, including reviewing hospital records and determining the number of pediatric respiratory and diarrheal hospital admissions from 2011-2013. The team is in the process of writing up their findings with the hope that data monitoring will continue after program rollout to assess changes in hospital admissions. Ms. Vinkar and Dr. Tohme are currently collaborating on a manuscript demonstrating their findings of baseline admissions for diarrheal and respiratory illness and seasonal trends in these admissions.

“I had the opportunity to collaborate with my Haitian counterparts on a project that was meaningful and interesting. We now have some valuable data that have the potential to influence our ability to assess the impact of the rotavirus and pneumococcal vaccine programs.”

– M4 Kavita Vinikar
Exploring Genetics of Deafness in Bangladesh

Farhan Huq, MD, is a recent UMMS graduate who completed a 12-month research fellowship on the genetics of deafness in Bangladesh. Under the mentorship of Dr. Glenn Green, Associate Professor of Pediatric Otolaryngology at UMMS, Dr. Huq was supported by a fellowship through the Department of Otolaryngology-Head and Neck Surgery to venture into relatively unchartered research territory in the country of his ancestors.

Dr. Huq, who is Bangladeshi by heritage, had always wanted to create a collaboration between the University of Michigan and Bangladesh. He approached Dr. Green about the prospect of exploring such a collaboration, and together they decided that Mr. Huq should craft a study looking at the genetics of deafness in Bangladesh.

Through his previous medical contacts in Bangladesh, Dr. Huq was able to facilitate collaborations between the UMMS Otolaryngology department and the largest preschool for deaf children in Bangladesh, the Integrated Preschool for Hearing Impaired Children (IPSHIC). Working primarily with IPSHIC and other schools for hearing-impaired children in Dhaka (one of the most population-dense cities in the world with 115,209 people per square mile), he and several Bangladeshi otolaryngologists conducted a collaborative, multi-institutional study examining DNA from consanguineous families with deafness, seeking to identify and characterize gene mutations that are typically linked with deafness.

Joining him on the study during Summer 2014 were two other UMMS students, participating in the project as part of a Global REACH faculty-led student experience (see Page 39).

“Although Bangladesh is one of the poorest countries in the world, it has some of the best public health outcomes. However, that is not good enough... people are still suffering and we can always do better. I sincerely hope I can serve the country and my people in the future as an otolaryngologist.”

– M4 Farhan Huq
Woll Family Foundation Provides Opportunities for International Health Experiences

An ongoing donation to the University of Michigan Medical School by Drs. Douglas and Margo Yellin Woll in 2012 will become the Woll Family Global Health Opportunities Endowed Fund. The Endowed Fund will be used to assist and support exceptional third or fourth year UMMS students in pursuing and engaging in an international clinical experience, preferably in the form of a one- or two-month clinical clerkship in an underserved area in a developing country. The donors hope the students will obtain both valuable knowledge and deep insight into various disease states, many of which will present at later stages than seen in resource-rich environments like the United States. The first two Woll Family Scholars were awarded in 2013.

M4 students Charlotte Gamble and Laura Newcomb were selected as the 2014 Woll Family Global Health Opportunities Scholars. Both used their awards to support clinical electives in obstetrics and gynecology; Ms Gamble at the St.Paul’s Hospital Millennium Medical College in Addis Ababa, Ethiopia, and Ms. Newcomb at the University of Ghana/Korle Bu Teaching Hospital.

Choosing to do their medical electives in resource-poor countries provided a broader view of diagnostic and treatment options for normal OB/GYN deliveries and situations, but also exposure to more advanced stages of diseases than they would normally see in the United States. Both were assigned to teams of medical students and residents, joining them on rounds and for lectures, learning about long-term family planning methods, providing assistance with women in labor and with deliveries, conducting physical exams and triaging patients in clinic, and observing major operations.

“Interacting with a different patient population than what I am used to helped me to become a culturally sensitive provider who understands and appreciates the various barriers to healthcare and issues that come up for an increasingly diverse patient population here at home.”

– M4 Laura Newcomb

“Women in Ethiopia are like women in Ghana, in Cameroon, in French Guiana, and in Detroit, Michigan– they are strong.
The marks of poverty are also similar.”

– M4 Charlotte Gamble
Josip Matovinovic MD Endowed Fellow in Medicine

Dr. Josip Matovinovic was an internationally recognized endocrinologist who served as Professor of Medicine in the Division of Nuclear Medicine, UMMS, from 1959-1984, and as Professor Emeritus from 1984 until his death in 1998. Born in the village of Licko Cerje, Croatia, Matovinovic obtained his medical degree from the University of Zagreb Medical School in 1939 and was invited to become a faculty member at UMMS in 1959. At the time of his retirement, Matovinovic was the UMMS Officer for International Education, facilitating the international medical electives of between 15-30 medical students each year. Shortly after his death, Mrs. Natalie Matovinovic ensured that her husband’s belief in the value of educational training opportunities would continue to be realized by making a lifetime gift to the University through the Josip Matovinovic MD Endowed Fellow in Medicine, a post-graduate fellowship open to Croatian physicians seeking additional training in any medical specialty or sub-specialty. The first Matovinovic Fellow was named in 2005.

2014 Josip Matovinovic MD Endowed Fellow in Medicine: Mislav Vrsalovic, MD, PhD, cardiologist and vascular medicine specialist, Chief, Division of Angiology, Department of Cardiology, University Clinical Hospital Center “Sestre Milosrdnice”, Zagreb, Croatia; Assistant Professor of Internal Medicine, School of Medicine, University of Zagreb, Croatia.

As the fourth Josip Matovinovic MD Endowed Clinical Fellow in Medicine, Dr. Mislav Vrsalovic was awarded a 6-month fellowship to participate in cardiology and vascular medicine projects in the University of Michigan Health System (UMHS). Under the mentorship of Theodore J. Kolias, MD, Associate Professor, Internal Medicine, and Director, Adult Echocardiography Laboratory, and James Froehlich, MD, MPH, Associate Professor, Internal Medicine, and Director, Vascular Medicine, Dr. Vrsalovic has been able to immerse himself in the UMHS clinical and research arenas of advanced echocardiographic techniques and vascular medicine for improved patient care.

In addition to joining three ongoing projects within his first six weeks, he created and led a new project on novel echocardiographic parameters through successful IRB approval analyzing patients’ echocardiograms using these techniques for research purposes and analyzing a database of research data.

“I have accomplished so much more during this fellowship than I ever anticipated. Using what I have learned during this fellowship, I hope to expand and improve some of our own research activities and policies.”

– Dr. Mislav Vrsalovic
The University of Michigan Asylum Collaborative (UMAC) was founded in 2013 by student members of the University of Michigan Medical School (UMMS) chapter of Physicians for Human Rights (PHR). In partnership with the University of Michigan Law School, PHR, and community organizations such as Freedom House, this student-led initiative provides an avenue for physicians and students to advocate for victims and survivors of human rights violations. It also serves as a voice for those who have limited access to such resources.

Each year, the United States grants refuge to thousands of individuals who have experienced torture, rape, or other crimes against humanity. There are two legal avenues for applicants to receive refuge; one program is for refugees who currently live outside of the United States, and the other program is for asylees, individuals that already reside in the United States. Asylum, which provides protection and refuge, can be granted to individuals who left their native country as refugees. Asylees may seek refuge from persecution, or a well-founded fear of persecution on the grounds of race, nationality, religion, membership in a particular social group, or political opinion.

UMAC focuses on facilitating inter-professional collaboration between pro bono legal and medical providers to conduct forensic evaluations and provide medical affidavits for asylum, human trafficking, and other cases where individuals have experienced human rights abuses. Research shows that legal cases supported by medical affidavits that corroborate the applicant’s testimony are significantly more likely to be granted asylum (PHR reports a current success rate of 91%). Currently, there are not enough trained physicians to meet the need for medical affidavits; there is also a lack of coordination between legal representation and physicians who can provide these medical evaluations. UMAC hopes to meet the need for medical affidavits by training medical professionals and students to assist in forensic evaluations and foster inter-professional collaborations.

Pilot Year 2014 Accomplishments
• Trained 24 UMMS medical students and 10 physicians on forensic evaluation and the role of a medical affidavits in human rights justice
• Sponsored a continuing education speaker series that highlighted human rights-related topics
• Engaged bi-lingual physicians and medical students to evaluate clients that were referred by community partners or the national PHR organization
• UMAC teams have successfully completed 5 evaluations; 3 more will be completed by end of Summer 2014
Two UMMS students were part of a five-member team from the University of Michigan that advanced to the regional finals of the 5th annual Hult Prize. M3 students Jonathan Awori and Callistus Ditah—along with their teammates Gregorio Avanzini (Architecture), Joshua Bogus (School of Public Health), and Marianna Kerppola (Ross School of Business and School of Natural Resources & the Environment)—were among 300 international teams (out of 10,000 applicants from 150 countries) that progressed to the six regional finals held during early March, 2014.

At stake was the opportunity to spend summer 2014 inside the Hult Prize Accelerator—an innovative incubator for social enterprise located at the Hult International Business School in Cambridge, Massachusetts—and to earn $1M to create start-ups aimed at building sustainable and scalable social enterprises to address non-communicable diseases in urban slums. The Hult School works in conjunction with the Clinton Global Initiative each year to identify a social enterprise challenge for the basis of the competition. The 2014 challenge was Improving Chronic Disease Care in Slums by 2019.

The UM team began working on their project in early December, progressed into the regional competition, and presented their start-up ideas to an executive jury made up of regional CEOs, non-profit leaders, and social entrepreneurs. Although the UM team did not advance beyond the San Francisco regional, the model of interdisciplinary teamwork with students from across campus left an indelible impression on the students.

“Our teammates from the other schools bring a different type of insight; and I don’t think we could have found anyone else as fascinating and appropriate for what they bring to the table.”

– M3 Callistus Ditah

“In the end, this is how these types of problems will get solved—from a multitude of perspectives. We had a real opportunity to think creatively about a real solution that can affect people in other parts of the world; and use our medical knowledge in a way that encompasses a wider circle than we could have imagined.”

– M3 Jonathan Awori
Training Programs

Ethiopia-Michigan Platform for Advancing Collaborative Engagement (EM-PACE)

Thirty-two University of Michigan students participated in Summer 2014 research experiences as part of the EM-PACE project, 26 of them traveling to Ethiopia. EM-PACE is supported by a Global Challenges for Third Century grant from the UM Office of the Provost and seeks to address some of the most pressing problems identified by country leadership and stakeholders in Ethiopia. The one-year grant of nearly $300k was approved in November 2013 and is supplemented with an additional $250,000 in cost-shared funds from the home units of the eight primary investigators. The major goal of EM-PACE is to help create a sustainable model of collaboration by piloting these interdisciplinary projects and build on existing health-related initiatives pertaining to the environment and science education.

Participating students came from schools and departments across the University, including the Medical School, the College of Engineering, the School of Natural Resources and Environment, the Program in Biomedical Sciences, the Stephen Ross School of Business, the School of Public Health, and the School of Public Policy. Students worked on four different research teams under the mentorship of the investigators, focusing on water/environmental science and engineering, science teaching, encouraging private sector engagement in public health care provision, and maternal health technology.

Team members were selected in late February after a formal application process and met weekly with their project mentors before leaving for Ethiopia in May. Teams stayed between 4-10 weeks and their mentors joined them for part of their on-the-ground experience. Each student received a stipend to cover their living and travel expenses.

Project Investigators and Team Mentors include (in alphabetical order):

Allen Burton, PhD, School of Natural Resources and Environment
Senait Fisseha, MD, JD, Medical School
John Godfrey, PhD, Rackham School of Graduate Studies
Lori Isom, PhD, Medical School
Joseph Kolars, MD, Medical School
Nancy Love, PhD, PE, BCEE, College of Engineering
Kathleen Sienko, PhD, SM, College of Engineering
John Williams, PhD, Medical School
Prashant Yadav, PhD, William Davidson Institute

In a pre-departure session, Dr. Joseph Kolars discusses the goals of the EM-PACE grant with students who participated in the 2014 projects

M1 student, Darci Foote, shown with a new friend during her EM-PACE project
EM-PACE students (left to right) Graham Billey, Joe Labuz, Kevin Fries, and Annie Wang are shown outside Bete Giyorgis in Lalibela. Bete Giyorgis is one of 11 monolithic stone churches built by King Lalibela in the early 1200s. It is carved out of the ground from one unbroken piece of stone, and shaped from the inside out with its roof forming the shape of a Greek cross. Cut 40 ft down, it connects to the other sunken stone churches through a series of elaborate tunnels. Lalibela is considered one of the holiest places in Ethiopia and is a center for pilgrimages by Ethiopian Christians.

Christina Vallianatos, PhD in Human Genetics, is shown teaching Biochemistry to first-year medical students in Debre Markos, Ethiopia.
Ghana-Michigan Post-doctoral And Research Training NEtwoRk - Investing in Innovation (PARTNER II)

The Ghana-Michigan Post-doctoral And Research Training NEtwoRk - Investing in Innovation (PARTNER II) is a five-year (Aug 2012-July 2017) grant funded by the Fogarty International Center, National Institutes of Health. The program is co-Directed by Dr. Thomas Robins (School of Public Health) and Dr. Cheryl Moyer (UMMS). The overall objective is the strengthening of interdisciplinary research capacity in Ghana and at the University of Michigan to address global health challenges in low- and middle-income countries. A key strategy to accomplish this goal is the annual selection of 3 one-year post-doctoral fellows to form an interdisciplinary team focused on specific area of concern. The teams consist of 2 post-docs from Ghana and 1 post-doc from the US, together with senior scientist mentors at the University of Michigan (UM) and at institutions in Ghana.

Three fellows participated as part of the 2013-2014 PARTNER II fellowship program, which focused on Occupational and Environmental Health (OEH) Challenges in Ghana—specifically small-scale gold mining in Ghana. The students were mentored by Dr. Thomas Robins, Department of Environmental Health Sciences, UM School of Public Health, and Dr. Niladri Basu, who previously served on the faculty at the UM SPH and now serves on the faculty at McGill University’s School of Public Health in Canada. Dr. Edith Clarke from the Ministry of Health in Ghana, served as the Ghanaian senior mentor.

2013-2014 Fellows
Dr. Benedict Calys-Tagoe, Physician, Korle-Bu Teaching Hospital
Dr. Eric Odei, Physician, Korle-Bu Teaching Hospital
Dr. Lauretta Ovadje, PhD, University of Michigan’s School of Public Health (US Post-doc fellow)

Shown left to right are Dr. Calys-Tagoe, Dr. Ovadje, and Dr. Odei
Six fellows were selected to work on one of two interdisciplinary teams in 2014-2015: maternal and neonatal health (MNH) research in Ghana, or global health technology research and design (GHT). The fellows will be in training at the University of Michigan (UM) in Ann Arbor from August 2014 through February 2015. They will then return to Ghana and work full time on their research from March 2015 through August 2015.

**2014-2015 Fellows (MNH project)**

- **Dr. Ashura Bakari**, Pediatrician, Suntreso Government Hospital
- **Dr. Samuel Oppong**, Obstetrician/Gynecologist, University of Ghana
- **April Bell**, graduate student, Indiana University (US Post-doc fellow)

**Mentors**

- **Dr. Cheryl Moyer**, Managing Director, Global REACH and Assistant Professor in the Department of Learning Health Sciences, UM Medical School
- **Dr. Richard Adanu**, Dean, University of Ghana’s School of Public Health

Shown left to right are April Bell, Dr. Cheryl Moyer, Dr. Ashura Bakari, and Dr. Samuel Oppong

**2014-2015 Fellows (GHT project)**

- **Daniel Addo**, medical physics graduate student, University of Ghana
- **Samuel Dery**, Assistant Lecturer, University of Ghana
- **Michael Deininger**, biomedical engineering graduate student, UM (US Post-doc fellow)

**Mentors**

- **Dr. Kathleen Sienko**, Miller Faculty Scholar and Associate Professor, Mechanical and Biomedical Engineering, College of Engineering, UM
- **Dr. Elsie Kaufmann**, Biomedical Engineering Senior Lecturer, University of Ghana

Shown left to right are Michael Deininger, Dr. Elsie Kaufmann, Samuel Dery, Daniel Addo, and Dr. Kathleen Sienko
The Northern/Pacific Universities Global Health Research Training Consortium is a partnership between the Universities of Washington, Hawaii, Michigan, and Minnesota. The Consortium is one of several across the United States that hosts the Global Health Fellowship Program, which is sponsored by the Fogarty International Center and several other institutes and offices of the National Institutes of Health (NIH). The Global Health Fellowship Program replaces the Fogarty International Clinical Research Scholars and Fellows Program in offering 11-month clinical research training for post-doctoral trainees and doctoral students in the health professions.

The University of Michigan Medical School (UMMS) made four inaugural awards in Summer 2012 and three awards in Summer 2013 (including one extension from 2012). Three fellows will be supported in the upcoming year, one UMMS student and two post-doctoral fellows from the Peking University Health Sciences Center in Beijing, China.

2013-2014 Fogarty Global Health Fellows

**Dr. Ching-Ping Lin**, Senior Fellow in the Institute of Translational Health Science at the University of Washington, received an extension on her 2012 award to continue working on a metabolic disease study in Pinggu, China. The study explored genetic and environmental factors affecting Chinese populations with Type II diabetes, metabolic syndrome, and non-alcoholic fatty liver disease and the interaction between these factors.

**Dr. Rockefeller Oteng**, Clinical Instructor in the Department of Emergency Medicine at UMMS, used his fellowship year at the Komfo Anokye Teaching Hospital (KATH) in Kumasi, Ghana to explore the creation, construction, and evaluation of injury and trauma-related studies in emergency settings and gain a better understanding of the related research methodology. As part of his fellowship, Dr. Oteng proposed solutions to the information gaps found in existing trauma and surgery data bases at KATH to facilitate future systematic reviews of preventable/salvageable deaths. The trauma and injury database that he developed has become the core of an emergency department research office at KATH and is slated to become a key component in a trauma improvement program between the departments of emergency medicine and surgery. *Dr. Oteng recently received the Globalization and Advancement award from the Global Emergency Medicine Academy of the Society of Academic Emergency Medicine.*

**Dr. Daniel Chai Chivatsi**, Senior Veterinary Pathologist at the Institute of Primate Research in Nairobi, Kenya, used his Fogarty Global Health Fellowship to study Baboon Papillomavirus in Olive baboons as a nonhuman primate animal model for Human Papillomavirus infection. Working under the mentorship of UM faculty members Drs. Jason Bell and Ingrid Bergin, he conducted prevalence, pathology, and infectivity studies in wild-caught animals in Kenya.
Dr. Chai Chivatsi is shown examining Pap smears from the cervical samples of newly-arrived animals

2014-2015 Fogarty Global Health Fellows

Andrew Gardner is an M-4 student in the Global Health and Disparities Path of Excellence and the third UMMS awardee to be selected as a Fogarty fellow. Mr. Gardner’s research project will begin in July 2014 and will focus on the prevalence of alcohol use with trauma in an Emergency Department (ED) setting in Ghana. He will be working with the Ghana-Michigan Emergency Medicine Collaborative, which is comprised of Kwame Nkrumah University of Science and Technology, Komfo Anokye Teaching Hospital (KATH), Ghana College of Physicians and Surgeons, Ghana Ministry of Health, UMMS ED, and the UM School of Nursing. During his training, Mr. Gardner will be mentored by Dr. Ronald Maio, Professor Emeritus in Emergency Medicine at UMMS, Dr. George Oduro, Head Directorate of the KATH ED where the research project will be performed, and Dr. Rocky Oteng, Clinical Instructor in Emergency Medicine at UMMS who has just completed his own 11-month Fogarty Fellowship (see previous page).

Dr. Ming Yang, MAE, Director and Professor, Peking University Hepatology Institute, will use this post-doctoral fellowship to investigate the differences in patient knowledge about their liver disease, satisfaction with care they receive, and preference in medical decisions in the US and urban and rural China. Dr. Yang hopes to identify factors associated with deficiencies in patient knowledge and satisfaction with care in order to tailor interventions to reduce those deficiencies in each setting. Dr. Yang will be mentored by Dr. Anna Lok, Alice Lohrman Andrews Research Professor in Hepatology, Director of Clinical Hepatology, and Associate Chair for Clinical Research in the Department of Internal Medicine, UMMS, and Professor Lai Wei, Director and Professor, Peking University Hepatology Institute, Peking University People’s Hospital and President of the Chinese Society of Hepatology.

Dr. Maoyi Tian is a Research Fellow at The George Institute for Global Health at Peking University Health Science Center in Beijing, China. During his fellowship, he will be conducting a study identifying the potential feasibility and acceptability of mobile communication technology for disease management among rural Chinese patients with chronic disease. Specifically, he hopes to: 1) understand the opportunities and constraints experienced by patients with chronic conditions in accessing high quality health care; 2) determine patients’ access to mobile communication technology, particularly among patients who are vulnerable to poor outcomes due to limited access to in-person care, low health literacy, and severe illness; and 3) identify patients’ interest in mobile phone-based chronic disease self-management. He will be mentored by Professor Yangfeng Wu, Senior Director of The George Institute, China, and Dr. John Piette, Professor of Internal Medicine, UMMS.

“As someone who resides and does his research in a low-income country, the new methods and training I experienced introduced me to a greater concept of global health. This was amazing and eye-opening. The world needs each other in aspects of health.”

– Dr. Daniel Chai Chivatsi
Visiting Fellows and Scholars

Dr. Alexandra Brentani (July 5–28, 2013)
University of São Paulo, Brazil
UM host: School of Public Health

Macedonia Ministry of Health, Skopje, Macedonia
Dr. Aleksandra Tatabitovska (Aug 1–30, 2013)
University Clinic of Pulmonology and Allergy,
UM host: Internal Medicine (Dr. Theodore Standiford)

Dr. Sanja Trajkova (Aug 1–30, 2013)
University Clinic for Hematology
UM host: Internal Medicine (Dr. Moshe Talpaz)

Dr. Dubravka Antova (Aug 1–Sept 30, 2013)
University Clinic of Rheumatology
UM hosts: Internal Medicine (Dr. Vladimir Ognenvovski)
Pathology (Dr. Jeffrey Warren)

Dr. Marta Foteva (Aug 1–Sept 30, 2013)
University Clinic for Orthopedic Surgery
UM host: Surgery (Dr. Kevin Chung)

Dr. Koshi Ota (Aug 4–10, 2013)
Nozaki Tokushukai Hospital, Osaka Japan
UM host: Family Medicine

Dr. Emilija Lazarova (Aug 27–Nov 30, 2013)
University Clinic of Cardiology, Skopje, Macedonia
UM host: Cardiology (Dr. William Armstrong)

Dr. Remi Takenoshita (Aug 31–Sept 14, 2013)
Teine Keijinkai Hospital, Shizuoka Prefecture, Japan
UM host: Family Medicine

Dr. Eralp Baser (Sept 3–Nov 22, 2013)
Zekai Tahir Burak Women’s Health Training and Research Hospital, Ankara, Turkey
UM host: Obstetrics & Gynecology

Dr. Tomoko Yamada (Sept 14–28, 2013)
Ito Municipal Hospital, Shizuoka Prefecture, Japan
UM host: Family Medicine

Dr. Sho Segawa (Sept 16–27, 2013)
Kameda Medical Center, Chiba, Japan
UM hosts: Family Medicine (Dr. Masahito Jimbo)
Sports Medicine (Dr. Robert Kiningingham)

Dr. Elizabeta Stefanovska (Oct 1–Nov 30, 2013)
Clinic for Radiology, State Hospital, Skopje, Macedonia
UM host: Radiology (Dr. Jon Jacobson)

Dr. Petar Janevski (Oct 1–Nov 30, 2013)
Institute of Anatomy, Skopje, Macedonia
UM host: Radiology (Dr. Ashok Srinivasan)

Dr. Kwabena Amo-Antwi (Oct 5–Nov 2, 2013)
Komfo Anokye Teaching Hospital, Kumasi, Ghana
UM host: Obstetrics & Gynecology

Dr. Chibuike Chigbu (Nov 1–10, 2013)
University of Nigeria College of Medicine,Nsukka, Nigeria
UM host: Obstetrics & Gynecology

Dr. Claudia Afosah-Anim (Nov 6–Dec 14, 2013)
University of Ghana, Accra
UM host: Physical Medicine & Rehabilitation

Beijing Anzhen Hospital, Beijing, China
UM host: Cardiovascular Center (Dr. Bo Yang)

Dr. Vincent Boama (Nov 17–30, 2013)
Hampshire Hospital, Basingstoke Hospital, Hampshire, England
UM host: Obstetrics & Gynecology

Dr. Yang Xu (Nov 18, 2013–Oct 31, 2014)
First Affiliated Hospital of Soochow University, Suzhou, China
UM host: Pediatrics (Dr. James Ferrara)
Dr. Ken Joko (Nov 30–Dec 14, 2013)
Hamamatsu Medical University, Kikugawa City, Japan
UM host: Shizuoka Family Medicine Program

Dr. Richard Kwaku Kwarteng Owusu
Dr. Rex Mawuli Kwatjo Kjokoto (Dec 2, 2013–Feb 21, 2014)
Komfo Anokye Teaching Hospital, Kumasi, Ghana
UM host: Obstetrics & Gynecology

Dr. Jing Li (Jan 2–June 31, 2014)
Peking Union Medical College Hospital, Beijing, China
UM host: Cardiology (Dr. Ralph Stern)

Dr. Qing Zhao (Feb 1–July 31, 2014)
Nanjing University, Jiangsu Province, China
UM host: Pediatric Cardiac Surgery (Dr. Richard Ohye)

Dr. Mislav Vrsalovic (Mar 1–Aug 15, 2014)
University of Zagreb, Zagreb, Croatia
UM host: Cardiovascular Center (Dr. Theodore J. Kolias)

Dr. Qingbian Ma (Apr 1–June 30, 2014)
Dr. Yaan Zheng (May 20–May 30, 2014)
Peking University Third Hospital, Beijing, China
UM host: Emergency Medicine (Dr. Marie Lozon)

Dr. Igor Aluloski (Apr 1–May 31, 2014)
University Clinic of Gynecology & Obstetrics, Skopje, Macedonia
UM host: Gynecologic Oncology Division

Dr. Magdalena Boguchevska (May 1–July 31, 2014)
General City Hospital, Department of Radiology-Magnetic Resonance, Skopje, Macedonia
UM host: Radiology (Dr. Jon Jacobson)

Dr. Anatoly Budylev (May 1–31, 2014)
Rabin Medical Center, Petah Tikva, Israel
UM host: CS Mott Children’s Hospital (Dr. Richard Ohye)

Dr. Adedamola Soyibo (May 5–May 31, 2014)
University of the West Indies and University Hospital of the West Indies, Mona, Jamaica
UM host: Internal Medicine, Nephrology (Dr. Frank Brosius)

Dr. Yaan Zheng (May 20–May 30, 2014)
Peking University Third Hospital, Beijing, China
UM host: Emergency Medicine (Dr. Marie Lozon)

Dr. Luis Felipe Carissimi Schmidt (May 28–June 30, 2014)
Universidade Federal Do Rio Grande Do Sul, Porto Alegre, Brazil
UM host: Pathology Oncology

Dr. Ivan Barbov (June 1–July 31, 2014)
University Clinic for Neurology, Skopje, Macedonia
UM host: Neurology (Dr. Eva Feldman and Dr. James Teener)

Dr. Biljana Spirkoska (June 1–Aug 31, 2014)
Institute of Pathology, Ss Cyril & Methodius Medical School, Skopje, Macedonia
UM host: Pathology (Dr. Barbara McKenna)

Dr. Alexander Yeboah
Dr. Kwame Adu-Bonsaffoh (June 2–Aug 22, 2014)
Korle Bu Teaching Hospital, Kumasi, Ghana
UM host: Obstetrics & Gynecology
Visiting Students and Trainees

Shanghai Jiao Tong University, Shanghai, China
(July 1–Aug 31, 2013)
Wei Chen (Cell & Developmental Biology, Dr. Jun-Lin Guan)
Tong Li (Ophthalmology & Visual Sciences, Dr. Donald Puro)
Jiawei Xu (Cardiology, Dr. Jose Jalife)
Runze Zhao (Cardiology, Dr. Eugene Chen)
UM host: Program in Biomedical Sciences

Peking University Health Science Center, Beijing, China
UM host: Joint Institute for Translational and Clinical Research
(July 8–31, 2013)
Jingnan Han (Cardiology, Dr. Eugene Chen)
Haocheng Lu (Pediatrics, Dr. Carey Lumeng)
Jiuling Yang (Internal Medicine, Dr. Shaomeng Wang)
Si Cheng (Ophthalmology & Visual Sciences, Dr. Peter Hitchcock)
(July 22–Aug 17, 2013)
Wanyu He (Ophthalmol & Visual Sciences, Dr. David Antonetti)
Dingran Wang (Cardiology, Dr. Eugene Chen)

University for Development Studies, Navrongo, Ghana
(July 9–Dec 20, 2013)
Edmond Atindaana (July 9–Dec 20, 2013)
University for Development Studies, Navrongo, Ghana
UM host: Microbiology & Immunology (Dr. Alice Telesnitsky)

Pontifica Universidad Católica del Ecuador, Quito, Ecuador
(July 15–Aug 15, 2013)
Daniel Chaves (July 15–Aug 15, 2013)
Pontifica Universidad Católica del Ecuador, Quito, Ecuador
UM host: Emergency Medicine

Kwame Nkrumah University of Science and Technology, Kumasi, Ghana
(Aug 1–31, 2013)
Francis Opoku Ag yapong (Surgery)
Kwabena Danso (Pediatrics)
Richard Enimil (Internal Medicine)
Jeffrey Sakyi Offeh (Neurology)
Gyanwa Opare-Addo (Obstetrics & Gynecology)

Cape Coast University School of Medical Sciences, Cape Coast, Ghana
(Aug 1–31, 2013)
Yaw Goh Asare (Internal Medicine)
Aimee Awuku (Obstetrics & Gynecology)
Celestina Osei-Boateng (Obstetrics & Gynecology)
Ethel Osei-tutu (Obstetrics & Gynecology)

Shira Heisler (Aug 5–Aug 29, 2013)
Sackler School of Medicine, Tel Aviv, Israel
UM host: Internal Medicine

Hironari Matsuda (Aug 10–17, 2013)
Juntendo University, Kanagawa, Japan
UM host: Family Medicine (Dr. Michael Fetters)

Stephanie Alessi (Sept 13–Oct 11, 2013)
St. George’s University, St. George, Grenada
UM host: Neurology (Dr. Jeffrey Kutcher)

Jan Henrik Hagemann (Oct 5–Nov 30, 2013)
Ludwig-Maximilians University, Munich, Germany
UM host: Internal Medicine (Dr. Matthias Kretzler)

University of Ghana Medical School, Accra, Ghana
(Oct 25–Nov 24, 2013)
Gifty Antwi Amoateng (Obstetrics & Gynecology)
Martha Boatem Boateng (Obstetrics & Gynecology)
Patience Yeboah (Obstetrics & Gynecology)
George Yin–Nyeya Wuni (Pediatrics)

Devika Kir (Nov 22–Dec 22, 2013)
All India Institute of Medical Sciences, New Delhi, India
UM host: Internal Medicine

Yuchen Wang (Nov 22–Dec 22, 2013)
Peking Union Medical College, Beijing, China
UM hosts: Emergency Medicine and Urology

George Vasquez (Nov 22–Dec 22, 2013)
Universidad Peruana Cayetano Heredia, Lima, Peru
UM host: Internal Medicine
Visiting Students and Trainees

July 2013–June 2014

- 55 international students and trainees
- 13 different countries
- 18 UMMS host units
- 73 total months of training

Yucheng Wang (right), visiting medical student from Peking Union Medical College, and George Vasquez (left), a medical student from the Universidad Peruana Cayetano Heredia

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**Peking University Health Science Center, Beijing, China**
(Nov 22–Dec 22, 2013)

**Yuebo Jin** (Surgery and Emergency Medicine)

**Jing Song** (Internal Medicine)

**Zexuan Wu** (Psychiatry and Radiology)

**Meng Yu** (Neurology)

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**Saskia van Diessen** (Jan 4–June 30, 2014)
Leiden University, Leiden, Netherlands
UM host: Endocrinology (Dr. Peter Arvan)

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**Abdullah Abass** (Jan 9–Feb 9, 2014)
University for Development Studies, Tamale, Ghana
UM host: Obstetrics & Gynecology

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**Anurag Mehta** (Jan 9–Mar 7, 2014)
All India Institute of Medicine, New Delhi, India
UM hosts: Internal Medicine, Nephrology, and Infectious Diseases

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**Kiichi Furuse** (Jan 9–Mar 7, 2014)
University of Tokyo, Tokyo, Japan
UM hosts: Emergency Medicine and Surgery

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**Thaisa Silveira Barbosa** (Jan 9–Mar 7, 2014)
University of São Paulo, São Paulo Brazil
UM hosts: Internal Medicine, Psychiatry, and Dermatology

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**Leonardo Mateus de Lima** (Jan 9–Mar 7, 2014)
University of São Paulo, São Paulo Brazil
UM hosts: Psychiatry and Dermatology

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**Maria Elena Gutierrez** (Feb 7–Mar 9, 2014)
Universidad Peruana Cayetano Heredia, Lima, Peru
UM host: Pediatrics & Communicable Diseases

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**Ken Sasaki** (Feb 7–April 6, 2014)
University of Tokyo, Japan
UM hosts: Neurology and Surgery

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**Ryobu Fumihira** (Feb 14–Mar 13, 2014)
Kyoto University in Kyoto Japan
UM host: Endocrinology (Dr. Tae-hwa Chun)

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**Monika Miloshevska** (Mar 10–Apr 6, 2014)
Ss. Cyril & Methodius Medical School, Skopje, Macedonia
UM hosts: Anesthesiology and Internal Medicine

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**I-Hong Lin** (Mar 10–Apr 6, 2014)
Shen-Li Cho
National Taiwan University, Taipei, Taiwan
UM host: Ophthalmology and Visual Sciences

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**Peking Union Medical College, Beijing, China**
(Mar 10–May 4, 2014)

**Yuan Liu** (Emergency Medicine)

**Zhou Ying** (Internal and General Medicine)

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**Okayama University Medical School, Okayama, Japan**
(Apr 7–May 4, 2014)

**Rikito Yamanaka** (Surgery)

**Yuki Nakagawa** (Internal and General Medicine)

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**Misa Sugiyama** (May 12–23, 2014)
Hamamatsu University Medical School, Shizuoka, Japan
UM host: Family Medicine

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**Saki Nakamura** (May 26–June 6, 2014)
Hamamatsu University Medical School, Shizuoka, Japan
UM host: Family Medicine
Global REACH celebrated many events and activities over the past year; some large, some small. Along with the research and education initiatives highlighted in previous sections of this report, Global REACH supported the Medical School’s involvement in several public events and hosted the visits and tours of more than 100 guests from around the world.

In October 2013, a delegation of nearly 50 UM faculty visited China for the Third Annual Symposium of the University of Michigan Health System-Peking University Health Science Center Joint Institute for Translational and Clinical Research.

In May 2014, a group of almost 30 members of the UM campus traveled to Washington, DC to present at the annual meeting of the Consortium of Universities for Global Health.

Smaller events included a Meet and Greet for Brazil Platform collaborators and the World Malaria Day Forum.

Photo: The first Brazil Meet and Greet was attended by about 40 UM community members
NTS
The Third Annual Symposium of the Joint Institute for Translational and Clinical Research was held October 9-11, 2013 in Beijing, China. More than 200 participants attended the symposium, including 50 members of the University of Michigan (UM) community. The UM delegation represented more than 15 different departments within the Medical School as well as the Schools of Kinesiology and Public Health, the Center for Chinese Studies, and the Office of International Giving.

The Joint Institute (JI), a partnership between the University of Michigan Health System and Peking University Health Sciences Center (PUHSC), was launched in October 2010 and sponsors high-impact collaborative research that leverages the unique strengths of each university to advance global health. The location of its annual meetings alternates each year: during the odd years, PUHSC hosts the symposium in Beijing. During the even years, the meetings move to the University of Michigan’s main campus in Ann Arbor.

In addition to a robust scientific schedule, board meetings, project-specific discussions, and setting the agenda for future initiatives, the 2013 annual meeting in Beijing—three years after the Joint Institute was formed—provided an opportunity for introspection; a time to truly appreciate all that has taken place over the past 36 months.

The symposium featured several JI investigators as well as invited guests. Shown above are Bishr Omary, MD, PhD (left), Professor and Chair, Department of Molecular & Integrative Physiology, UMMS, and Honkin Deng, PhD, Professor of Cell Biology and Director of PUHSC Stem Cell Research Center.

More information about the Joint Institute and the 2013 symposium program book is available online at www.puuma.org
In the largest alumni event ever to be hosted in Beijing by the University of Michigan (UM), nearly 150 alumni, friends, parents, faculty, and staff closed out the Joint Institute Symposium in the same celebratory fashion enjoyed by participants all week. The event was supported and arranged by the University of Michigan Medical School, the Development Office, and the International Institute, and was held in the Jinmao Ballroom of the Westin Beijing Chaoyang Hotel.

The theme focused on fostering strong alumni community and UM visibility in Beijing and was evident throughout the event, which featured a reception and a short program. Isabelle Sun (MS ’85, PhD ’91), member of the UM Provost Advisory Committee and Co-Founder/Executive VP of Hinacom Software and Technology, presented the opening remarks and introduced Medical School Dean James Woolliscroft and Dr. Lester Monts, Senior Vice Provost for Academic Affairs. Dr. Woolliscroft provided highlights from the symposium while Dr. Monts extended greetings from President Mary Sue Coleman and gave a brief update of the status of international initiatives related to students and alumni of the University. The final speaker was alumni Richard Rogel (BBA and valedictorian ’70), long-time supporter of the University of Michigan and its China initiatives.
Global REACH hosted a dinner for CUGH participants from the University of Michigan (photo at left). UM presenters included Global REACH staff Dana Benyas (left) and Jamila Yakubu (right) whose work focused on midwives’ perspectives on maltreatment during labor and delivery in rural Ghana.

The 2014 Anvar and Pari Velji Leadership Award for Emerging Leaders in Global Health was awarded to Josh Greenberg (right), a MD/PhD student at UM. The award celebrates global health service and honors individuals who demonstrate committed, creative approaches to serving underserved populations. Mr. Greenberg is shown with Dr. Joseph Kolars, who nominated him for this honor.

SAVE THE DATE
2015 CUGH Conference: March 26-28, Boston, MA
Abstracts Accepted for Oral Presentations
(UM Faculty and Students)

Development of a trauma care assessment tool for emergency nurses in West Africa
Sue Anne Bell, PhD (Nursing)

It takes a village: Maternity waiting homes in rural Liberia
Jody Lori, PhD, CNM, FACNM, FAAN (Nursing)

Neonatal jaundice in Kumasi, Ghana: An exploration of contributing factors
Nauzley Abedini, MD (UMMS)

Can facility-based delivery boost infant vaccinations? The long-term impact of facility delivery in sub-Saharan Africa
Cheryl Moyer, PhD, MPH (UMMS)

Correlation between burden of disease and foreign assistance in African countries
Clay Bavinger (UMMS M3)

Dr. Nauzley Abedini, who was an M4 at the time of the meeting, was one of eight students from the 2014 CUGH Trainees Essay competition chosen to read their essay at the conference. Her essay “Break the Silence” was based on her year-long Fogarty Fellowship at the Kwame Nkrumah University of Science and Technology in Kumasi, Ghana, which focused on maternal and child health.

The full program for the 2014 CUGH meetings can be found at http://2014cughconference.org
Brazil Meet and Greet
March 5, 2014

Approximately 30 University of Michigan investigators and some of their Brazilian colleagues were in attendance at the First Annual Meet and Greet for the Brazil Platform held in Ann Arbor in early March. The evening was a mix of formal and informal engagement and included a dinner of Brazilian cuisine and live music provided by a UM trio. The event was jointly funded by Global REACH and the Brazil Initiative at the Center for Latin American and Caribbean Studies.

Brief presentations of some of the current collaborative research between UM and partner institutions in Brazil included:

- Overview of the partnership between the University of Michigan (UM) and the Rio de Janeiro’s Oswaldo Cruz Foundation (FIOCRUZ), a growing collaboration of 17 UM researchers and 12 investigators from FIOCRUZ; presented by Dr. Alexandra Stern (UMMS)
- Funding opportunities and best practices for collaboration; presented by Drs. Joseph Kolars and Alexandra Stern (UMMS)
- Planning the development and testing standard methods to evaluate driving by older individuals with and without functional impairments; presented by Dr. Denise Tate (UMMS). Partners: UMMS and the University of São Paulo Medical School (FMUSP)
- Bahia-Michigan kidney disease collaboration; presented by Dr. Akinlolu Ojo (UMMS) Partners: UMMS and the Federal University of Bahia (UFBA)
- Neuropathogenesis of Oropouche Virus; presented by Dr. Katherine Spindler (UMMS) Partners: UMMS and the University of São Paulo Medical School at Ribeirão Preto (FMRP)
- The Milk Bank project; presented by Dr. Kate Stanley (UMMS) Partners: UMMS and Oswaldo Cruz Foundation (FIOCRUZ)
The Doctor Who Would be King: Medical Utopias in the Colonial World

A public lecture sponsored by Global REACH in April featured Professor Guillaume Lachenal, Lecturer in History of Science at the Université Paris Diderot, Junior Fellow of the Institut Universitaire de France, and Research Associate at the Centre d’Études des Mondes Africains.

Dr. Lachenal studies the history and anthropology of biomedicine in Africa, and is currently coordinating the Agence Nationale de la Recherche project “Memorials and remains of medical research in Africa” (MEREAF), an anthropological and archeological exploration of the ruins and memories associated with the past in African medical institutions.

For the foundation of this lecture, Dr. Lachenal used the fieldwork (including ethnographies and oral histories) he is doing on medical utopias in the colonial world and what happens when doctors are given full powers to govern.

Related work of Dr. Lachenal includes:

- Biography of a drug called pentamidine, which was mostly used to eradicate sleeping sickness, but had enormously detrimental effects in colonial Africa

- History of a camp for sleeping sickness patients in East Cameroon: How people live on the remains of a biopolitical colonial infrastructure

- Anthropology of “virus hunters”, which focuses on HIV/AIDS in Cameroon

Global REACH provides a venue for sharing activities and best practices. It supports faculty- and student-driven opportunities for educational exchanges.
In conjunction with other institutions across the world, the University of Michigan hosted an awareness symposium on World Malaria Day, April 25, 2014. Attendees represented several student and local organizations (M-HEAL, Lenovo Group, Global Scholars Program, Llamasoft, Inc.), many UM schools and colleges (medicine, pharmacy, public health, nursing, engineering, public policy, business, LS&A), and organizations from outside the local geographical area—most of which have a collaboration with the primary sponsor, the William Davidson Institute (Dilla University, Norwegian University of Science & Technology, Academy of International Business, Novartis Malaria Initiative, and Pharmacy Council of Tanzania).

World Malaria Day was instituted by World Health Organization Member States during the World Health Assembly of 2007. It is an occasion to highlight the need for continued investment and sustained political commitment for malaria prevention and control, an opportunity to learn from each other’s experiences and support each other’s efforts, and a chance to join a global partnership against malaria.

**Opening Remarks: Dr. Prashant Yadav**, Senior Fellow & Director, Healthcare Research Initiative, William Davidson Institute

**Plenary: Challenges to malaria prevention: Determining who is infectious to interrupt transmission; Dr. Mark Wilson**, Professor of Epidemiology & Ecology and Evolutionary Biology, School of Public Health

**Plenary: Insights on malaria trends: Climate change, poverty traps & synergies in control; Dr. Mercedes Pascual**, Rosemary Grant Collegiate Professor of Ecology and Evolutionary Biology; Howard Hughes Medical Institute Investigator, Department of Ecology and Evolutionary Biology, College of Literature, Science, and the Arts

**Research in Action Presentations:**
- *Plasmodium vivax malaria and relapse treatment: Insights from a seasonal epidemic system*
- *An evaluation of factors affecting anti-malarial drug quality in the private sector*
- *Estimating in-country costs of getting Artemisinin Combination Therapies (ACTs) and Rapid Diagnostic Tests (RDTs) to health facilities*
- *Optimal coverage at minimal cost: A dynamic modeling approach to simultaneous allocation of multiple anti-malaria interventions*
- *Exploring semi-batch production of artemisinin from artemisinic acid*

*Presented by the The William Davidson Institute, the Office of Global Public Health in the School of Public Health, and Global REACH at the University of Michigan Medical School*
Reflections from Dr. Sr. Priscilla Busingye

Dr. Sister Priscilla Busingye is one of the only obstetricians in Western Uganda. Working most of her life near where she was born and raised, Sister Priscilla is a member of the Sisters of the Daughters of Saint Theresa of the Child Jesus (Therese Lisieux). She is also the Medical Director of the Holy Family Virika Hospital in Fort Portal, Uganda located on the border of the Congo. As the only OBGYN specialist in a region that struggles with even minimal health care, Sister Busingye lives on-site at the hospital and performs up to 200 deliveries and 75 caesarean sections each month.

In May 2014, Sister Priscilla made her third trip to Ann Arbor. During her visit, she was hosted by Global REACH and members of the Catholic Medical Student Association at a luncheon where she presented an overview of her personal and professional journey, sharing some of the challenges of healthcare in this region of Africa and how her faith plays an integral role in her work. Sister Priscilla discussed a recent pilot project “Saving Mothers, Giving Life,” which was implemented to increase access to skilled birth attendance and to provide support services through provision of medical supplies and human resources for emergency obstetric care. She expressed appreciation for the support that has come from the University of Michigan, including startup funds for a maternity center, quality improvement tools, a doppler fetal scan and an ultra sound scan, and essential funding for fistula repair. She explained that an obstetric fistula is a tear between the vagina and rectum or bladder that is caused by prolonged obstructed labor, leaving a woman ‘wet for life’ (incontinent of urine or feces or both). This complication affects 1-2 million women in Africa, yet can be repaired through highly-skilled yet low-tech surgery.

Dr. Sister Priscilla Busingye is pictured below at the Holy Family Vrika Hospital (left) and with Global REACH Administrator, Robyn Hodges (right), who has sewn and donated nearly 800 hats for infants under Sister Priscilla’s care
November 14, 2013
59th Annual Student Biomedical Research (SBRP) Fall Forum
The research of more than 100 UMMS students was presented at the annual SBRP Fall Forum, which showcases student research projects funded by the National Institutes of Health Student Biomedical Research Program and the O’Brien Kidney Research programs. Each of the projects requires a faculty mentor from the University of Michigan.

Among the featured international projects were:

- **Chronic pain and exposure to pesticides and monosodium glutamate**, presented by Kenneth Hayes (upper right). Mr. Hayes was mentored by Dr. Dan Clauw and Dr. Tom Robins. His project took place in Meru, Kenya.

- **Hepatitis C Virus awareness and factors affecting clinical research participation in Beijing, China**, presented by Tammy Lin and Elisabeth Wang (center right). Ms. Lin and Ms. Wang were mentored by Dr. Anna Lok.

- **Reproductive health teaching methods in Meru, Kenya**, presented by Amanda Shepherd (lower right). Ms. Shepherd was mentored by Dr. Dan Clauw.

- **Feasibility study of adopting electronic health records by private practitioners in Urban India**, presented by Daniel Pepper. Mr. Pepper was mentored by Dr. Krishnan Raghavendran.

- **The impact of cataract surgery at the Aravind Eye Hospital, India**, presented by Hong-Gam Le. Dr. Jonathan Trobe and Dr. Joshua Stein served as mentors for Mr. Le.

- **Depression, social support, and cancer in Quito, Ecuador**, presented by Erica Prochaska. Ms. Prochaska was mentored by Dr. Melvin McInnis and Dr. Sofia Merajver.

April 2, 2014
*Made in India* Lunch and Discussion
Several faculty, staff, and students from across the University enjoyed an intimate lunch with Vishali Sinha, one of the directors and producers of *Made in India*, a film about surrogacy in India. Ms. Sinha was on campus for a viewing of the film.

The events were part of the LS&A “India in the World” theme semester and were co-sponsored by more than ten UM departments, including Global REACH.
In addition to hosting international scholars and learners, Global REACH also facilitates the visits of dignitaries who come to the medical campus each year. Two such visits over the past year included:

**Harbin University Medical School, Harbin, China** (April 30 – May 2, 2014)
Leaders of Harbin University are shown above with **Dr. Amy Huang** (right), Director of China Programs for the University of Michigan Medical School. Their visit included tours of the University Hospital, CS Mott Children’s Hospital, and the Frankel Cardiovascular Center, as well as meetings with Medical School leadership to discuss potential collaboration on medical education.

**Ethiopia Minister of Health** (June 30 - July 1, 2014)
Nearly 35 Ethiopian faculty and several high-ranking officials visited the UM campus over the past 18 months including **H.E. Dr. Kesetebirhan Admasu**, the Minister of Health of the Federal Democratic Republic of Ethiopia, who met with UM leaders as part of the expanding collaborations between the University and its Ethiopian partners. Guests at a welcome dinner included (left to right): **Dr. Timothy Johnson** (Chair, OBGYN), **Dr. Valerie Castle** (Chair, Pediatrics), **Dean James Woolliscroft** (Medical School), **UM President Mary Sue Coleman**, **Dr. Kesetebirhan Admasu** (Ethiopia Minister of Health), **Vice Provost James Holloway** (Global and Engaged Education), **Dr. Senait Fisseha** (OGBYN), **Dr. Michael Johns** (Interim EVPMA), **Dr. Cheryl Moyer** (Global REACH), and **Senior Associate Dean Joseph Kolars** (Education and Global Initiatives, Medical School).
At a large and diverse institution like the University of Michigan, building a community around the equally large and diverse topic of global health has long been challenging.

Global REACH has focused efforts on building the UMMS global health community through many of the collaboration, research, and education initiatives described in this report, as well through the co-sponsorship of public events. In addition, our Global Initiatives Forum and Faculty Associate Program have strengthened relationships across UMMS and beyond.

It is our hope that creating these networks will help keep us all better informed about the international activities in which our medical school faculty are engaged.

**Photo:** UMMS members of the Presidential delegation to India in November 2013 enjoyed a side trip to the Taj Majal. Shown left to right are Drs. Joseph Kolars, Pauline Park, Farokh Demehri, Peter Ehrlich, Chandan Kumar, Rajiv Saran, and Vineet Chopra
One important goal of Global REACH is to encourage the growth of a community of researchers, clinicians, and educators at the University of Michigan Medical School (UMMS) who are interested in and committed to global health. With 29 departments and more than 2000 faculty, the Medical School has a vibrant and diverse portfolio of faculty with global health engagements. Yet our size and diversity often makes it difficult for faculty from different departments to appreciate the activities of their colleagues and to realize the potential for synergy. With that in mind, Global REACH launched the Global Initiatives Forum in June 2012 followed by a Faculty Associate program in February 2013. In August 2014, Global REACH launched a Faculty Affiliate program to include faculty beyond the Medical School.

Global Initiatives Forum
The Forum consists of representatives from clinical and basic science departments who have expressed an interest in sharing their global health work or learning about others’ efforts. Led by Dr. Joseph Kolars, Josiah Macy, Jr., Professor of Health Professions Education and Senior Associate Dean for Education and Global Initiatives, the forum meets 8-10 times per year to share best practices, discuss funding strategies, and present case studies of successful global health endeavors.

Faculty Associate Program
Global REACH Faculty Associates are UMMS faculty who have gone through a formal application process and thus become eligible to compete for Global REACH intramural funding (e.g. faculty-led student projects and upcoming pilot grants) and gain facilitated access to trainees interested in committing their time to global health-related projects. Bringing together like-minded researchers, educators, and clinicians helps to maximize the impact of our global activities and transcend individual interests.

Faculty Affiliate Program
Beginning August 2014, Global REACH began accepting applications for its Faculty Affiliate program. Faculty Affiliates may be members of any UM school or department who are interested in participating in our global health community to deepen and strengthen ties and help improve communication and collaboration across units. Affiliates will typically be nominated by current Global REACH Faculty Associates and will go through a formal application process.
As of July 2014, there were 116 Global REACH Faculty Associates. Nearly all of the UMMS clinical and basic science departments are represented in the Faculty Associate program, with the largest numbers coming from Internal Medicine, Obstetrics & Gynecology, Ophthalmology & Visual Sciences, and Surgery.

Current Faculty Associates are shown in the pages that follow. Information includes their home department, global health research focus, and country/ies of interest. Some of their recent global health highlights and recognitions are also included.

For more information, please go to globalreach.med.umich.edu/articles/faculty-associates.
Global REACH Faculty Associates

Frank Anderson, MD, MPH
Obstetrics & Gynecology
Maternal and neonatal morbidity and mortality prevention through capacity building and community based interventions; Low-resource settings in sub-Saharan Africa, Asia, and globally

Richard Auchus, MD, PhD
Internal Medicine
Collaborating with experts at other institutions to study rare diseases, particularly adrenal diseases and disorders of sex development, in both children and adults; Brazil, China, and the United Kingdom

M Bernadete Ayres, MD
Ophthalmology & Visual Sciences
Collaborating with ophthalmologists in the education and study of ophthalmic ultrasound techniques and rare ocular diseases and echographic features; Brazil, Chile, Spain

Jason Bell, MD, MPH, MS
Obstetrics & Gynecology
The intersection between reproductive infectious diseases and family planning, how risk of sexually transmitted infections impact contraception use as well as how HIV/AIDS impacts contraception uptake and use of family planning services; Ethiopia, Ghana, Kenya, and Uganda

Jessica Bensenhaver, MD
Surgery
Decreasing the stage of cancer diagnosis, enhancing access to quality care, and developing management plans to improve outcomes; establish and maintain tumor registries, characterize tumor biology, and determine the prevalence of genetic predisposition; Ethiopia, Ghana, and Haiti

Urvashi Bhan, MD
Internal Medicine
Sepsis, pneumonia, and acute lung injury, expanding global work in research endeavors, increasing collaboration with other countries, and providing training for potential partnership in terms of education; India

R Alexander Blackwood, MD, PhD
Pediatrics & Communicable Diseases
Employing health assessment tools to evaluate the need for patient education in order to affect behavior changes and increase overall health; Middle East

Dean Brenner, MD
Internal Medicine
Development and dissemination of new strategies to assess cancer risk, detect cancer at its early stages, develop and validate interventions to delay or reverse carcinogenesis progression; India, Israel, United Kingdom, Canada, Australia

Cesar Augusto Briceno, MD
Ophthalmology & Visual Sciences
Development of international research and training collaborations with other academic institutions in Latin America; Brazil, Dominican Republic, and Colombia

David J Brown, MD
Otolaryngology
Developing otology, sinus, and laryngology simulation and task trainers for consultants and trainees at KATH in Kumasi, Ghana

David T Burke, PhD
Human Genetics
Technology development for the developing world, primarily in low-cost health monitoring and diagnostics; use of wireless systems for health assessment in remote locations; Ghana, Jamaica, and Nigeria

Margit Burmeister, PhD
Human Genetics, Psychiatry, Molecular & Behavioral Neuroscience Institute
Collaborations, facilitating medical and graduate student exchanges with Germany, Poland, Israel, and China. Research collaborations in (epi) genetics in China; China, Germany, Israel, Poland, Taiwan

Andrew Campbell, MD
Pediatrics & Communicable Diseases
Investigating the differences of the Sickle Cell Disease Phenotype internationally in pediatric and adult patients; investigating healthcare disparities in Sickle Cell Disease care and outcomes; Ghana and Italy

Vineet Chopra, MBBS, MD, MSc
Internal Medicine
Developing mutually beneficial research and educational collaborations between India and the United States; India
Tae-Hwa Chun, MD, PhD
Internal Medicine
Teaching bench research and clinical skills necessary to understand the pathogenesis of metabolic and endocrine disorders, particularly obesity and diabetes; Japan

Kevin C Chung, MD, MS
Surgery
Outcomes research, assessment of health care quality, clinical trials, economic analysis in healthcare, and epidemiology and statistical issues in surgery; China, India, and other countries within Asia

Daniel Clauw, MD
Anesthesiology
Community needs assessments and education concurrent with education of UM students; Kenya

Wayne Cornblath, MD
Ophthalmology & Visual Sciences
Ophthalmology and teaching on a global level to increase access and quality of care; Bahrain, Brazil, China, and Vietnam

Thomas Crawford, MD
Internal Medicine
Evaluation of the concept of pacemaker reuse, its safety and efficacy, as well as the ethical and regulatory issues involved; Bolivia, Ghana, Kenya, Mexico, Pakistan, Philippines, Uganda, and Vietnam

Diana Curran-Galejs, MD
Obstetrics & Gynecology
Post-graduate OBGYN medical knowledge and surgical skills education/development/curriculum design/implementation; Ethiopia

Sherry H Day, OD, FAAO
Ophthalmology & Visual Sciences
Optical contact lens training programs for low vision rehabilitation (for the visually impaired); China, Taiwan, and other countries that would like to learn and provide these services for their people

Karen S DeLoss, OD, FAAO
Ophthalmology & Visual Sciences
Developing mutually beneficial research and educational collaborations in the areas of ocular surface disease as well as disorders of the cornea including keratoconus and corneal ectasia; Brazil

Hakan Demirci, MD
Ophthalmology & Visual Sciences
Clinical research in the area of ocular oncology including intraocular, conjunctival, orbital and eyelid tumors; Turkey

Raymond DeVries, MD
Department of Learning Health Sciences
Promotion of maternal and child health via the training of midwives and obstetricians and improvement of the ethical conduct of clinical trials in low resource countries; China, Ghana, and the Netherlands

Courtney A Dewey, OD
Ophthalmology & Visual Sciences
Medical missions aimed at providing basic eye care and refractive correction to underserved areas of developing countries; Brazil, India, Peru, and Romania

Raymond Douglas, MD, PhD
Ophthalmology & Visual Sciences
Collaborative clinical and research projects in the field of thyroid eye disease; Brazil, China, Denmark, and Ghana

Kathleen Bronson Dussan, MD, RN
Internal Medicine
Medical education, refugee health and students’ attitudes and exposure to the underserved; medical reuse/recycling in promoting the recovery of unused medical supplies for the purpose of global aid, waste reduction, and cost-effectiveness; Colombia, Guatemala

Peter Frederick Ehrlich, MD, MSc
Surgery
Childhood cancer, primarily renal tumors in children and quality and outcomes, and pediatric trauma system development and improving care for injured children; India and Peru
Avraham Eisbruch, MD  
Radiation Oncology  
Reducing toxicities and improving quality of life of patients with head and neck cancer undergoing radiotherapy, using advanced technology; India

Carol Fuzetti Elias, PhD  
Molecular & Integrative Physiology  
Determining the mechanisms by which metabolic imbalance disrupts the reproductive function; Brazil, Argentina, and Chile

Sheeja Francis, MD  
Internal Medicine  
Integrative rheumatology, with focus on improving accessibility to rheumatologic care in Kerala, India; India

Niels Cary Engleberg, MD, DTM&H  
Internal Medicine  
Facilitating the development of transportable, open-licensed learning materials for training of health care workers in under resourced environments; Ethiopia and Ghana

A Oveta Fuller, PhD  
Microbiology & Immunology  
Health equity and global health research to develop and rigorously document impacts of sustainable intervention models that foster practical implementation of biomedical science advances for community use to prevent or reduce burden of infectious and chronic diseases; South Africa, Zambia

Gary J Faerber, MD, FACS  
Urology  
Collaborative outreach programs with urologists who have shown an interest in developing endoscopic capabilities to manage urinary stone disease; Ghana, Senegal, Nigeria, Mozambique, and South Africa

Mohammad Ghaziuddin, MD  
Psychiatry  
Autism/Asperger syndrome, behavioral phenotypes, and mental retardation; India and Saudi Arabia

Michael Fetters, MD  
Family Medicine  
Promotion of educational and research collaboration in family medicine and medical education; Brazil, China, Ghana, Japan, and Qatar

Bruno Giordani, PhD, MA  
Psychiatry  
Neurodevelopmental changes in cognition, behavior, and mobility associated with medical treatments and disease, including cerebral malaria and HIV/AIDS; driving distraction and enhancement of driving performance across cultural settings; Brazil, China, Costa Rica, DR Congo, and Uganda

Debbie S Gipson, MS, MD  
Pediatrics & Communicable Diseases  
Establishing a network to support a translational research program, nephrotic syndrome research registry and training opportunities; India, United Kingdom, and Kenya

Katherine J Gold, MD MSW MS  
Family Medicine  
Maternal-child health, particularly in the perinatal period; stillbirth and infant death prevention as well as improving maternal mental health; Ghana and other African countries

Edward Goldman, MD, JD  
Obstetrics & Gynecology  
Working with the law faculty in Kumasi, Ghana to create a Masters program in reproductive justice; Ethiopia and Ghana

Senait Fisseha, MD, JD  
Obstetrics & Gynecology  
Women’s health, strengthening undergraduate medical education, and supporting postgraduate training programs; Brazil, Ethiopia, and Ghana

Patrice E Fort, PhD  
Ophthalmology & Visual Sciences  
Mechanisms of protection of the retina and their alteration in various neurodegenerative disorders such as diabetic retinopathy, age-related macular degeneration, retinal detachment and glaucoma; France and Germany
Global REACH Faculty Associates

Glenn Edward Green, MD
Otolaryngology
Translational interventions in complex communications disorders affecting speech and hearing; China, Spain, Israel, and Bangladesh

Jennifer J Griggs, MD, MPH
Internal Medicine
Volunteer Physician for Asylum Seekers’ Network of Physicians for Human Rights; addressing the problem of breast cancer in Haiti, one of the poorest countries in the world; Haiti and Brazil

Larry D Gruppen, PhD
Department of Learning Health Sciences
Promoting collaborations among medical educators around the world to develop innovative and effective interventions to address core health care education challenges; fostering research and scholarships, both through partnerships and faculty development; China and India

Deborah Gumucio, MPH, PhD
Cell & Developmental Biology
Intestinal development and homeostasis and implications for inflammatory bowel disease and intestinal failure; Brazil, Chile, United Kingdom, Spain, Turkey, and Greece

Andrew J Haig, MD
Physical Medicine & Rehabilitation
Building medical rehabilitation and rehabilitation leadership around the world; teaching global health and disparities issues to students; Austria, Brunei, China, and Ghana

Kelli Stidham Hall, PhD, MS
Obstetrics & Gynecology
Maternal and child global health, psychosocial determinants and consequences of teen and unintended pregnancy, as well as access and barriers to family planning service provision; Ghana

Gary Hammer, MD, PhD
Internal Medicine
Adrenal and other endocrinological cancers; Brazil and India

Ted Hanss, MBA
Medical School Information Technology
Researching and facilitating technology-enabled collaboration, using qualitative methods to identify the socio-technical factors that contribute to successful global health collaborations between differently resourced institutions; Ghana, China, South Africa, and Ethiopia

Michele Heisler, MD, MPA
Internal Medicine
Development and evaluation of interventions to improve patient chronic disease self-management and outcomes; longitudinal, population-based research to inform better targeting and implementation of primary care programs; Brazil and Ecuador

Joseph Holoshitz, MD
Internal Medicine
Development of a new generation of synthetic adjuvants that could be used to improve vaccination potency in long list of human disease, many of which are endemic; Brazil, Canada, China, Israel, and other countries in Africa, the former Soviet Union, South America, and East Asia

Christopher Thomas Hood, MD
Ophthalmology & Visual Sciences
Medical missions and volunteerism; Haiti

Amy Huang, MD, MHSA
Internal Medicine
Science of international collaboration and medical education; China, Japan, Taiwan, other countries within Southeast Asia

Robert Curtis Hyzy, MD
Internal Medicine
Providing medical outreach to the indigent, underserved population of the Peruvian Amazon River basin and educational opportunities to UMMS students and residents during M-4 elective rotations; Peru

Elizabeth Anne Jackson, MD, MPH
Internal Medicine
Women’s cardiovascular health across the lifespan, the development of vascular risk factors and disease in relation to the menopausal transition, and health behaviors in women and the impact on family members; China, India, and Vietnam
Global REACH Faculty Associates

Timothy RB Johnson, MD
Obstetrics & Gynecology
Women’s health projects, sustainable partnerships, and postgraduate training programs; Ghana

Shruti Jolly, MD
Radiation Oncology
Using integrative techniques (physical activity, nutritional interventions) to reduce morbidity of cancer treatment and enhance cancer survivorship; India

Chava Kahn, MD
Obstetrics & Gynecology
Women’s reproductive health care in Sub-Saharan Africa, particularly surrounding maternal mortality and family planning; implementation of a cervical cancer screening program in rural Uganda, utilizing the see-and-treat approach; Ghana and Uganda

Joseph Kolars, MD
Internal Medicine
Assessment of teaching quality; efficacy of medical learning venues; educational outcomes; measurement of learner competency; educating trainees to improve patient care; Brazil, China, Ethiopia, Ghana, India, Nepal, Peru, Tanzania, Uganda, Vietnam, and Zimbabwe

Matthias Kretzler, MD
Internal Medicine
Research networks for translational nephrology on five continents focusing on integration of comprehensive clinical data sets with large-scale genetic and genomic information; Brazil, China, Germany, India, and EU networks

Chandan Kumar, PhD
Pathology
Research, training and educational collaborations in translational cancer genomics studies and allied areas in India and other countries in the subcontinent; India, Nepal, and Myanmar

Paul Lee, MD, JD
Ophthalmology & Visual Sciences
Glaucoma, cataract, and anterior segment disease; China and India

Helios Leung, PhD, OD, FAAO
Ophthalmology & Visual Sciences
Optometric education; China

Michael J Lipson, OD, FAAO
Ophthalmology & Visual Sciences
Stopping and/or slowing progression of myopia via alternative methods of vision correction/therapy; China

Anna Suk-Fong Lok, MD, FRCP
Internal Medicine
Prevention and treatment of viral hepatitis particularly in countries where hepatitis (B and C) are prevalent; prevention and early diagnosis of hepatocellular carcinoma; education of physicians and other health providers including community leaders on how to prevent and treat viral hepatitis; China

Ronald Frank Maio, DO
Emergency Medicine
Emergency care in under-resourced settings; treatment and prevention of traumatic injuries; Ghana and India

Dorene S Markel, MS, MHSA
Department of Learning Health Sciences and The Brehm Center
Exploring potential collaborations with China, studying (and preventing) the impact that the projected diabetes epidemic could have on both the US and China, focusing on the learning health system and health literacy effects on clinical research engagement in minority populations; China

Varsha Mehta, PharmD, MS (CRDSA), FCCP
Pediatrics & Communicable Diseases
Causes of and interventions for reducing neonatal and infant mortality especially in premature neonates in the underserved population globally; improving rates of infant immunizations; and disease prevention strategies that will improve neonatal, infant and child health in collaboration with other health care providers; India and China

Shahzad Mian, MD
Ophthalmology & Visual Sciences
International eye banking; developing a resource for surgeons and healthcare professionals working outside the US who are interested in obtaining transplantable corneal tissue for surgery, or who want to learn more about partnering with international eye bank development; China
Okeoma Mmeje, MD, MPH
Ophthalmology & Visual Sciences
Evaluation and implementation of safer methods of conception for HIV-affected individuals and couples in low-resource environments, particularly in sub-Saharan Africa, as a means of HIV prevention; Ethiopia, Ghana, and Kenya

Rajen Mody, MD, MS
Pediatrics
Empowering local champions to design and adopt clinical treatment protocols feasible for their settings and patient population; improving infrastructure for clinical research for other supportive care services; India, South Africa, and Nepal

Cheryl A Moyer, PhD, MPH
Department of Learning Health Sciences
Maternal and neonatal health; social and cultural factors that influence facility-based delivery, stillbirth, early neonatal mortality; research capacity development; Ethiopia, Ghana, and Uganda

Jeffrey S Moyer, MD, FACS
Otolaryngology
Capacity development in otolaryngology in Sub-Saharan Africa, particularly Ghana; Ghana

Patricia Mullan, PhD
Department of Learning Health Sciences
Enhancing the competency assessment systems for professional health education programs in developing countries; mentoring student projects related to health education in developing countries; China, Ghana, India, Republic of Ireland, and South Korea

David C Musch, PhD, MPH
Ophthalmology & Visual Sciences
 Provision of epidemiological expertise to the design and conduct of clinical research studies on eye disease and instruction for “traveling courses” on clinical trial principles and methods; China and India

Christine C Nelson, MD, FACS
Ophthalmology & Visual Sciences
Exploring areas of collaborations in education in Eye Plastic and Orbital Surgery; teaching residents and local ophthalmologists surgical techniques; clinical research in congenital eye diseases; improving quality of life and surgical techniques; China, Dominican Republic, Haiti, Kenya, and Peru

Lisa Ann Newman, MD, MPH, FACS
Surgery
The study of breast cancer variation related to African ancestry; Ghana

Paula Anne Newman-Casey, MD
Ophthalmology & Visual Sciences
Decreasing rates of blindness through creating systems-based approaches to improve access to care; creating effective educational curricula for paramedical personnel; and studying patient decision making and health behavior change; Brazil, Ecuador, India, and other Latin American/Spanish-speaking countries

Vladimir Ognenovski, MD
Internal Medicine
Help train rheumatologists in Macedonia, establish rheumatology clinics to improve patient access and quality of care, and promote student and faculty exchanges; Macedonia

Akinlolu Ojo, MD, PhD, MBA
Internal Medicine
Clinical and translational research infrastructure and capacity development in sub-Saharan Africa, genetics of kidney disease in people of African ancestry, comparative studies in African Americans, Afro-Brazilians, and sub-Saharan Africans; Brazil, Ethiopia, Ghana, India, Jamaica, and Kenya

Amit Pandya, MD, RDMS, RVT, RDCS
Radiology
Use of portable radiation and ultrasound technology in low-resourced countries; India, Uganda, and Brazil

Chintana Paramagul, MD
Radiology
Promoting the advancement of medical and scientific knowledge; maintaining the highest possible medical standards and ethics; conducting activities directed towards the sustenance and advancement of health care delivery and education in Thailand and the United States; and establishing and promoting cooperation with related organizations; Thailand

Pauline K Park, MD
Surgery
Trauma and ICU care delivery; India
Ruben Peredo, MD  
Internal Medicine  
Chronic diseases in developing countries; exploring prevailing rheumatic diseases and their differences in their prognoses compared to developed nations; link of environmental hazards of developing countries and inequity in health care access with a poorer outcome; Bolivia, Brazil, Ecuador, and Mexico

Marc Peters-Golden, MD  
Internal Medicine  
Basic and translational research in innate immunity, inflammation, and fibrosis, particularly in the lung; collaborative research and mentoring international trainees and visiting scientists; Brazil, Canada, France, Germany, India, Japan, Korea, and Russia

John Piette, PhD  
Internal Medicine  
Developing interventions using health information technology to improve self-management and outcomes for patients with diabetes and other common, high-risk diseases in low/middle income countries; Bolivia, Chile, Colombia, Ecuador, and Mexico

Rodica Pop-Busui, MD, PhD  
Internal Medicine  
Mechanisms of chronic diabetic complications, particularly diabetic peripheral neuropathy and cardiovascular autonomic neuropathy and their role in the development of the high cardiovascular risk complicating diabetes; the role of oral health in diabetes complications; Brazil, China, Korea, and Romania

Mark Prince, MD  
Otolaryngology  
Developing increased patient care and research capacity through medical student and postgraduate medical education programs; Ghana and Macedonia

Raphael Pristoop, MD  
General Medicine  
Clinical care for resource-poor hospitals; supervision and training of medical students/residents in patient care; and education of health workers; India, Israel, and Uganda

Jeffrey Punch, MD  
Surgery  
Partnering with the St Paul Millenium Medical School in Addis Ababa, Ethiopia and the Ethiopian Health Ministry to establish a kidney transplant program in Ethiopia, and increasing involvement with the medical school partnership in Meru, Kenya; Ethiopia, Kenya, and Southeast Asia

Malini Raghavan, PhD  
Microbiology & Immunology  
Understanding how polymorphisms in immune response (major histocompatibility complex class I) genes influence immunity to infections and vaccine outcomes, particular as relating to HIV infections; India

Krishnan Raghavendran, MD  
Surgery  
Organization and delivery of trauma services and critical care to the developing world; India, Southeast Asia

Venkatakrishna Rajajee, MBBS  
Neurosurgery & Neurology  
Care of patients with Traumatic Brain Injury in the developing world, where there are are very specific challenges and issues; India, Ghana, and China

Gurpreet Kaur Rana, MLIS  
Taubman Health Sciences Library  
Providing leadership in identifying global information resources; cultivating partnerships with health sciences community; collaborating with faculty to lessen health disparities around the world using the power of information resources; Ghana, India, and other developing countries

Sheila AM Rauch, PhD, ABPP  
Psychiatry  
Dissemination of evidence based practice with an emphasis on international dissemination of effective treatment for PTSD following disasters; Japan and other disaster impacted areas

Sanjay Saint, MD, MPH  
Internal Medicine  
Prevention of healthcare-associated infections as well as hand hygiene: projects aimed at assessing and increasing hand hygiene compliance among healthcare workers and preventing common healthcare-associated infections; Italy, Japan, Thailand, Australia, New Zealand, Switzerland, and other European countries

Sabina Siddiqui, MD  
Surgery  
Assisting with acute surgical care needs, providing training to local health care providers, assessing resource utilization and process innovation; Egypt, Kenya, Nicaragua, and Peru
Global REACH Faculty Associates

Sivaraj Sivaramakrishnan, PhD
Cell and Developmental Biology
Development of new technologies for drug development and discovery and strengthening basic science research in developing countries; India, Kenya, and Israel

Terry Jay Smith, MD
Ophthalmology & Visual Sciences
Extending endocrine care and patient education to underdeveloped countries; Brunei, Croatia, Ghana, and Vietnam

H Kaz Soon, MD, MS
Ophthalmology & Visual Sciences
International ophthalmology; Brazil, Bulgaria, China, Haiti, India, Japan, and Taiwan

Katherine Spindler, PhD
Microbiology & Immunology
Viral pathogenesis of viruses that cause encephalitis, using mouse models and genetic approaches; Brazil

Joshua D Stein, MD, MS
Ophthalmology & Visual Sciences
Utilization of eye care services and outcomes of eye care in developing nations and how they compare with the US, and alternative health care delivery models for eye care in other countries; India

Alexandra Minna Stern, PhD
Obstetrics and Gynecology
History of the health sciences with a focus on reproduction, genetics, genomics, and public health; interdisciplinary approaches to global, racial, and gender health disparities in Latin America; Brazil, Argentina and Mexico

Alan Sugar, MD
Ophthalmology & Visual Sciences
Corneal transplantation and eye banking; Guatemala and Trinidad

Denise Tate, PhD
Physical Medicine & Rehabilitation
Spinal cord injury clinical management, aging with disability, women with disability, quality of life outcomes, environmental factors in health and disability, health care policy and disparities; Brazil, Germany, Taiwan, United Kingdom, and other Latin American countries such as Argentina and Chile

Trilokraj Tejasvi, MD, MBBS
Dermatology
Providing health services and medical education in needy and impoverished areas through teledermatology, providing medical education about tropical dermatology, and learning about the genetic basis of common dermatological diseases in different ethnicities; Brazil, Ghana, Guatemala, and India

Jonathan D Trobe, MD
Ophthalmology & Visual Sciences
Problem-based learning courses in neuro-ophthalmology; Brazil, China, India, and Taiwan

Kalpesh Unadkat, MS, MBA, CISSP
Medical Center Information Technology (IT)
Enabling use of IT to facilitate collection, consolidation, and analysis of health information in a way that can create efficiencies in the area of clinical and research management, organization, and decision making; India, Ghana, and Ethiopia

Manuel Valdivieso, MD, MS, CPE
Internal Medicine
Infection-related cancers including gastric, cervical and hepatic cancers; reducing the burden of H pylori infection; Bolivia, Brazil, Colombia, Chile, Mexico, and Peru

Mark A Veitch
UMHS Office of Development
Securing external funding to support our education and research programs overseas; China, India, Singapore, and South Korea

Akbar K Waljee, MD, MSc
Internal Medicine
Establishing links between academic organizations, hospitals, and universities between developed countries and developing countries; address disparities in surgical and medical healthcare; Kenya
Dr. Bob Hyzy (back row, far left) went to Peru with two students, one resident, and two fellows in February 2014, where they worked in conjunction with “Vitamin Angels” and started 200 children under the age of 5 on a year of multivitamins.

In May 2014, Dr. Hyzy received the Public Service Award from the American Thoracic Society for his contributions in respiratory public health. He has made seven medical trips to Peru since 2007 as part of Amazon Promise, a non-profit organization that provides free medical services and education to residents of jungle villages in Loreto, Peru’s largest and poorest province.

To become a Faculty Associate or receive global health monthly news updates, email globalreach@umich.edu
Select Awards and Honors of Global REACH Faculty Associates

Dr. Margit Burmeister recently received two new global health grants: an NIH-EHS Pilot grant, *Epigenetic effects of prenatal environmental exposures in Hangzhou, China* (co-PI), and a Rauner Family Foundation grant, *Genetic factors that influence iron status in infancy in Beijing, China* (PI).

Dr. Senait Fisseha, was awarded the Ethiopian Federal Ministry of Health’s (FMOH) highest Health Sector’s Award at its 15th Annual Review Meeting in Mekelle, Ethiopia in October 2013. Nominated by the several key officials including Ethiopia’s health minister, His Excellency Dr. Kesetebirhan Admasu, Dr. Fisseha was recognized for her overall contribution to Ethiopia’s health sector. Dr. Fisseha has very quickly and efficiently guided the University’s early global initiatives efforts in Ethiopia, which encompass a partnership with the FMOH and support the New Medical Education Initiative and a twinning partnership with St. Paul Hospital Millennium Medical College in Addis Ababa.

Dr. Katy Gold will serve as the James C. Puffer/American Board of Family Medicine Fellow, Institute of Medicine, The National Academies, Washington, DC, October 2013-2015.

Dr. Tim Johnson was inducted into the Johns Hopkins University (JHU) Society of Scholars On April 7, 2014. This prestigious society was the first of its kind in the nation and inducts former fellows and faculty members who have continued to excel in their fields after leaving JHU. Dr. Johnson has been a faculty member in the Medical School since 1993—coming directly from JHU where he had appointments in both the Schools of Medicine and Hygiene and Public Health.

Dr. Joe Kolars received the 2014 Distinguished Educator Award from the American Gastroenterological Association, which acknowledges exemplary educators in the field. In addition, he was selected to serve on the Fogarty International Center Advisory Board.

Dr. Anna Lok was awarded $1.46M by the Collaborative Science Research & Operations, Global Development & Medical Affairs Division of the Bristol-Myers Squibb Company to continue her cross-cultural research on the Hepatitis C Virus (HCV). Lok and her co-investigator from the Peking University Health Science Center in Beijing, China, Professor Wei Lai, earned support to continue their HCV project, which began about three years ago through the Joint Institute for Translational and Clinical Research. Five-year funding was awarded for the continuation project, *Incidence and risk factors for hepatitis C virus related cirrhosis and hepatocellular carcinoma: A comparative study of two cohorts of patients in China and the United States*.

Dr. Cheryl Moyer was appointed to the Scientific Advisory Committee for the INDEPTH Network. INDEPTH is a global network of health and demographic surveillance systems (HDSSs) comprised of 42 member centers in the developing world, which observe and record the life events of over three million people in 20 countries in Africa, Asia, and Oceania.

October 2013 Dean’s Awards:
- Dr. Robert Hyzy, Medical School Community Service Award
- Dr. Alan Sugar, Lifetime Achievement Award in Medical Education
- Dr. Denise Tate, Clinical and Health Services Research Award
- Dr. Jonathon Trobe, Kaiser-Permanente Award for Excellence in Clinical Teaching
- Dr. John Williams, Distinguished Faculty Lectureship Award in Biomedical Research
International Night at Kellogg

Kellogg Eye Center Celebrates its First International Night Symposium

More than 200 University of Michigan medical students, house officers, faculty, and staff attended the first International Night at Kellogg, which showcased several activities in the growing body of ophthalmology initiatives abroad. Held on September 18, 2013, the symposium celebrated the efforts of the Kellogg Center for International Ophthalmology (KECIO), which was established in 2013 to facilitate international clinical and research activities for the Eye Center. The event was hosted by [Joshua Vrabec, MD](mailto:joshua.vrabec@umich.edu), who directs KECIO as well as the ophthalmology program for UM medical students. KECIO is supported by a grant from the Jerome Jacobson Foundation and is dedicated to facilitating international exchanges in ophthalmology. It is co-directed by [Drs. H Kaz Soong](mailto:h.kaz.soong@umich.edu) and [Jonathan Trobe](mailto:jonathan.trobe@umich.edu). [Ms. Donna Donato](mailto:donna.donato@umich.edu) serves as administrative director.

Invited speakers included faculty and students from across the medical campus who are involved with international medical education and health. [Alan Robin, MD](mailto:alan.robin@umich.edu), Professor of Ophthalmology at the Wilmer Eye Institute and Bloomberg School of Public Health, Johns Hopkins University, presented the Keynote address.

The evening also included:

- [Kevin Chung, MD, MS](mailto:kevin.chung@umich.edu), Professor of Surgery and Associate Director of Global REACH, discussed the importance of enduring relationships with international medical centers such as those established through Global REACH collaborative platforms. These partnerships involve exchanges among faculty, residents, and medical students, and generate a more positive and sustained effect on medical training than does “medical tourism,” (going abroad for the sake of interesting medical experiences).

- [Brent Williams, MD](mailto:brent.williams@umich.edu), Associate Professor of Internal Medicine discussed the Global Health and Disparities Path of Excellence (GHD) program, which was inaugurated in 2011 and matches medical students with opportunities to deliver medical services in underserved areas in the US and abroad. Dr. Williams serves as co-Director of GHD along with Dr. Senait Fisseha.

- [Shilpa Gulati](mailto:shilpa.gulati@umich.edu), fourth-year UM medical student, used her training in economics and business to propose an innovative business model for treating high volumes of patients at low cost. The effort won Ms. Gulati and her collaborators first prize in an international contest sponsored by UM’s Stephen M Ross School of Business.

- Third-year resident, [Dr. Crandall Peeler](mailto:crandall.peeler@umich.edu), described a telemedicine project he conducted in rural Nepal under a Career Development Award from Kellogg. He provided evidence that sending long-distance slit lamp anterior ocular segment photographs eliminates needless travel over treacherous mountain roads and provides excellent medical decision-making.

With 22 Global REACH Faculty Associates, Ophthalmology and Visual Sciences is one of the best represented departments.
Global REACH Team

Joseph C Kolars, MD, Senior Associate Dean for Education and Global Initiatives

Kevin C Chung, MD, MS Global REACH Assoc Director

Michele Heisler, MD, MPA Global REACH Assoc Director

John Plette, PhD Global REACH Assoc Director

Cheryl A Moyer, PhD, MPH Global REACH Managing Director

Brent Williams, MD Director, Global Health & Disparities Path of Excellence

Amy Huang, MD, MHSA Director for China Programs

Robyn Hodges Global REACH Administrator

Carrie Ashton Global Visitors Coordinator

Mira Gupta Senior Research Specialist

Yi Mao, MPH Program Coordinator

Kate Restrick Communications Coordinator

Sarah Rominski, MPH Senior Research Associate

Elisa Duarte Teixeira, PhD Program Manager, Brazil Platform

Jamila Yakubu, MPH Program Manager, EM-PACE and Ghana MEPI

Global REACH Team
REGENTS OF THE UNIVERSITY OF MICHIGAN
Effective through December 31, 2014

Mark J Bernstein
Ann Arbor

Julia Donovan Darlow
Ann Arbor

Laurence B Deitch
Bloomfield Hills

Shauna Ryder Diggs
Gross Pointe

Denise Ilitch
Bingham Farms

Andrea Fischer Newman
Ann Arbor

Andrew C Richner
Grosse Pointe Park

Katherine White
Ann Arbor

Mary Sue Coleman (ex officio)

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Dr. Maja Damjanovska (left), a visiting otolaryngology resident from Skopje Macedonia, is shown with Dr. Alex Acheampong Oti, an oral and maxillofacial surgeon from Kumasi, Ghana. They were participating in a head and neck dissection course taught by faculty in the UMMS Department of Otolaryngology.

Dr. Oti is helping facilitate collaborations between the otolaryngology departments at UM and the Komfo Anokye Teaching Hospital in Kumasi.