U.S. Institution	Title	Geographic Region	Program Type	Program Focus	Host Institution	Program website	Restrictions	Target Population	Time Commitment	Funding Availability	Application Due Dates	Contact	Brief Description
Alliance for Stroke Awareness and Prevention Project	Stroke Prevention in Developing Countries	Africa, SE Asia	Neurology specific	CC, RS	None	www.asapp.org		R, F, N	Open	Yes		Jerome Chin (chinj@asapp.org)	ASAPP is a non-profit organization founded to fight the rising burden of stroke in developing countries. Volunteers provide free weekly screening, counseling, and referral for treatment of hypertension at community-based project sites in Uganda, Tanzania, and India. Potential opportunities are available for program participation, program development and expansion, and community-based research.
Beth Israel Deaconess Medical Center	Global Neurology Elective	Africa	Neurology specific	CC, RS, DE	University of Zambia School of Medicine (Lusaka, Zambia)	http://www.bidmc.org/Medical- Education/Departments/Neurology/Residency/Za mbia-Elective.aspx	Beth Israel affiliates	R	4 weeks	Yes		Omar Siddiqi (osiddiqi@bidmc.harvard.edu)	Elective open Oct - June. Clinical focus is on CNS opportunistic infections in the HIV population. Instruction provided for EEG interpretation. Residents will also provide formal teaching sessions to host institution housestaff.
Boston University	Global Health Initiative	Caribbean	Neurology specific	CC, DE	St. Damien Pediatric Hospital (Port-au- Prince, Haiti), St. Luc Hospital (Port-au-Prince, Haiti)	https://www.bmc.org/neurology/global-health- initiative	Boston University affiliates	R, F, JF, SF	10 days	Yes	August	Malveeka Sharma or Anna Hohler (globalhealthneurology@gmail.com)	Annual 10-day trip to Port-au-Prince, Haiti, providing clinical care and didactic education. Includes a Global Health Track for residents with formal presentations on global health neurology and opportunities in field experience and research.
Brigham and Women's	Partners in Health Neurology Training Program - Haiti	Caribbean	Neurology specific	CC, DE	Hôpital Universitaire de Mirebalais (Mirebalais, Haiti)	http://www.brighamandwomens, org/Departments_and_Services/neurology/servic es/GlobalNeurology/default.aspx		N	2 weeks, min 1- 2 visits per year	Yes		Aaron Berkowitz (aberkowitz3@partners.org)	Program designed to train 5-10 Haitian internists in neurology over the next 5 years. It requires teaching faculty to provide onsite clinical precepting of outpatient, inpatient (floor, ICU), and emergency room consults conducted by our Haitian trainees along with didactic lectures.
Centro Internacional en Neurociencias	Brigada Neurologica to the Ecuadorian Amazon Rainforest	South America	Neurology specific	сс	Hospital Jose Maria Velasco Ibarra (Tena, Ecuador)	http://www.cien-ecuador.org/		R, F, JF, SF	1 week min, last week of July	Yes		Patricio Sebastian Espinosa (ps. espinosa@gmail.com) or info@cien-ecuador.org	Annual trip to Tena, Écuador to evaluate patients with a variety of neurological disorders (mostly epilepsy). There are a lot of pediatric patients, thus pediatric neurologists will have priority. Spanish Fluency is preferred but not required.
Columbia University Medical Center	Community and Global Neurology Program	Africa, Caribbean	Neurology specific	CC, DE	Hospital Salvador Bienvenido Gautier (Santo Domingo, Dominican Republic), Queen Elizabeth Central Hospital (Blantyre, Malawi)	http://columbianeurology.org/research/divisions- and-programs/community-and-global-neurology	Columbia affiliates	R, F	Open	Yes		Kiran Thakur (ktt2115@cumc.columbia.edu) or Hiral Shah (hs2412@cumc.columbia.edu)	Malaw: Trainees serve a consultative role in a large government hospital seeing 6-8 consults per day and attending general neurology, HIV, TB, epilepsy, and other subspecialty clinics of interest. Teaching is expected for medical students, residents and registrars on core neurology topics (stroke, epilepsy, headache disorders, neurological infections, etc.).  Dominican Republic: Trainees see patients in the hospital and attend
Cornell Medical Center	Global Health Elective at Cornell Medical Center	Africa	Neurology specific	СС	Weill Bugando Hospital (Mwanza, Tanzania)	http://neurology.weill.comell. edu/education/residency/program-highlights	Cornell affiliates	R, F	Open	Yes		Halinder Singh Mangat (hsm9001@med. cornell.edu)	subspecialty clinics. Teaching opportunities are available as well. Long-standing collaboration with Well Bugando Hospital in Nwanza, Tanzania, where residents manage neurological illnesses not commonly encountered in the United States. Typically, residents travel to Tanzania during their PGV4 year.
Duke, Harvard, UCSF, UMN, UNC, Yale	Doris Duke International Clinical Research Fellowship	Africa, SE Asia, South America	General with option to focus in neurology	RS	Various (mentor specific)	http://www.ddcf.org/what-we-fund/medical- research/goals-and-strategies/encourage-and- develop-clinical-research-careers/international- clinical-research-fellowship/	U.S. citizenship	MS	12 months	Yes	January	ddcfcrf@aibs.org	This is a competitive one-year clinical research fellowship in global health for medical students between 3rd and 4th year of medical school.
Geisinger Commonwealth School of Medicine	Resident International Elective	Caribbean	Neurology specific	СС	St. Luke's Foundation (Port-au-Prince, Haiti)	https://www.geisinger.edu/en/education/medical- education/neurology-residency/curriculum	Geisinger affiliates	R	4 weeks	Yes		Kelly Baldwin (neurobaldwin@gmail.com)	Every October the neurology faculty take a team of residents to Port-au- Prince, Halti, to provide pediatric and adult neurologic care. This effort is in collaboration with the St. Luke's Foundation and the America Academy of Neurology. Other international electives will be approved on a case by case basis.
Global NeuroCare, in Special Consultative Status with United Nations ECOSOC	Global Neurology Rotation	Africa	Neurology specific	СС	Addis Ababa University (Addis Ababa, Ethiopia)	http://globalneurocare.org		R, F, N	4 weeks	Yes	6 months prior to start	Jim Johnston (johnston@GlobalNeurology.com) or info@GlobalNeuroCare.org	In collaboration with the Addis Ababa University Department of Neurology since inception of its residency training program, this Global NeuroCare observership provides an opportunity for residents from the U.S. and other countries to rotate with the Ethiopian staff and residents, covering inpatient services and outpatient clinics. Senior residents preferred.
Johns Hopkins University	Global Neurology Research Elective	Africa, Middle East	Neurology specific	CC, RS	Rakai Health Sciences Program (Entebbe, Uganda), Tawam Hospital (Al Ain, Abu Dhabi, United Arab Emirates), University of Zambia School of Medicine (Lusaka, Zambia)	http://www.jhsph.edu/research/centers-and- institutes/rakai-health-sciences-program/		R, F, MS	4 weeks	No		Ned Sacktor (sacktor@jhmi.edu) or Deanna Saylor (deanna@jhmi.edu) or Nicoline Schiess (nschies1@jhmi.edu)	Uganda: International clinical research program focused on HIV- associated neurocognitive disorder but also looking at HIV-associated neuropathy, headache, and neurological complications of HIV infection in general. There are opportunities to participate in outpatient evaluations of III+P patients and provide education regarding common neurologic presentations to HIV care providers. Zambia: Opportunity for clinical care, clinical research (especially neuro- HIV research), and teaching at the University of Zambia School of Medicine. Participants have the opportunity to work alongside Zambian neurology residents during their training.
Mayo Clinic-Arizona	Mayo International Health Program	Africa	General with option to focus in	cc	Mbarara University of Science and Technology (Mbarara, Uganda)	http://www.mayo.edu/mayo-clinic-school-of- graduate-medical-education/mayo-international-	Mayo Clinic affiliates	R, F	1-4 week(s)	Yes		Cumara B. O'Carroll (ocarroll.cumara@mayo. edu)	participate in clinical research in neuroimmunology.  Clinical rotation where senior residents see patients, teach local trainees, and conduct research projects (if interested) at Mbarara University of Science and Technology under the mentorship of Dr.
Mayo Clinic-Minnesota	Mayo International Health	Africa	neurology Neurology specific	CC	Addis Ababa University (Addis Ababa, Ethiopia)	http://intranet.mayo.edu/charlie/international- health-program/	Mayo Clinic affiliates	R, F	1-4 week(s)	Yes		James Bower (bower.james@mayo.edu)	O'Carroll.  Clinical elective in underserved international community. Neurology-specific rotations are definitely an option.
None	Global Neurology Observorship	SE Asia	Neurology specific	СС	All India Institute of Medical Sciences (New Delhi, India)	http://www.aiims, edu/en/academic_section_training.html		R, F, JF, SF	1-6 month(s)	No	6 months prior to start	Mamta Bhushan Singh (mbsneuro@gmail.com)	Opportunity to observe the spectrum of neurological diseases and care being imparted at a teriary level teaching hospital in New Delhi, India. International observers will encounter almost every neurological disease that they may or may not had read. They can decide to spend lime in general neurology or in any subspecialty: epilepsy, movement disorders, storke, pediatric neurology, neuroledcrophysiology, etc.
None	Neurology Capability Development	South Pacific	Neurology specific	CC, DE	Oceania University of Medicine, Samoa National Health Service (Apia, Samoa)	http://www.oceaniamed.org/		N	Open	No		Viali Lameko (viali.lameko@oum.edu.ws) or Logan McDaneld (loganmcdaneld@gmail.com)	Opportunity to volunteer and teach Neurology in Samoa.
NYU Langone Health	Global Health Clinical Elective	Africa	Neurology specific	СС	Makerere University College of Health Sciences (Kampala, Uganda)	http://www.med.nyu.edu/neurology/global-health- and-neurology	NYU affiliates	R	3-4 weeks	Yes		Jaydeep Bhatt (Jaydeep.Bhatt@nyumc.org) or Jerome Chin (Jerome.Chin@nyumc.org)	Challenging clinical elective at Mulago Hospital, the national referral hospital of Uganda. Supervised electives are offered in the spring and fall.
Oregon Health & Science University	Global Health Neurology Program and Partnerships	Africa, SE Asia	Neurology specific	CC, DE, RS	Commonwealth Health Center (Garapan, Saipan), Mahidol University & Bangkok Dusit Medical Services (Mangkok, Thailand), Kilimanjaro Christian Medical Centre (Moshi, Tanzani), Scottish Livingstone Hospital (Molepolole, Botswana)	http://www.ohsu. edu/xideducation/ischools/school-of- medicine/departments/clinical- departments/medicine/residency- program/program/global-health.cfm	OHSU affiliates	R, F, MS, N	2-4 weeks	Yes		Marissa Kellogg (kellogma@ohsu.edu)	OHSU has some longstanding global neurology partnerships – including faculty and resident rotations and remote telehealth work – that date back more than 8 years with our colleagues in Saipan and Tarzania. Dr. Kellogg is actively involved with 3 of 4 partnerships and will be traveling to Bangkok in December and Botswana in May.
Rush University Medical Center	Zambia Neurology Elective	Africa	Neurology specific	CC, RS, DE	University of Zambia School of Medicine (Lusaka, Zambia)	https://www.rushu.rush.edu/zambia-neurology- elective	Rush affiliates	R, F	4 weeks	Yes		Igor Koralnik (ikoralni@gmail.com)	Elective at a resource-limited hospital where trainee will learn to treat patients with a variety of disease processes rarely seen in the United States, including AIDS-defining illnesses as tuberculosis meningitis, cerebral toxoplasmosis, cryptococcal meningitis, and progressive multificeal leukoencephalopathy, as well as endemic diseases such as African trypanosomiasis, and malaria.
Stanford University	Global Health Neurology Elective	Africa	Neurology specific	CC, RS, DE	Komfo Anokye Teaching Hospital, Kwame Nkrumah University of Science & Technology (Kumasi, Ghana)	https://med.stanford. edu/neurology/divisions/globalhealth.html	Stanford affiliates	R, F	6 weeks	Yes		Nirali Vora (nirali@stanford.edu)	Neurology-focused global health rotation with pre-training didactics through Stanford Center for Innovation in Global Health. Mentored inpatient consultative and outpetient neurology clinical and teaching experience in urban, public teaching hospital with opportunities for research particularly with respect to stroke systems of care.
University of California Global Health Institute	GloCal Health Fellowship	Africa, Asia, Central & South America	General with option to focus in neurology	RS	Various (mentor specific)	http://ucghi.universityofcalifornia. edu/fellowships/glocal-health-fellowship	U.S. citizenship, permanent residency, or affiliated LMIC affiliates	R, F, JF	11 months	Yes	November 1	ucghi@globalhealth.ucsf.edu	Mentored clinical research training program for postdoctoral trainees and junior faculty interested in studying health conditions in LMICs.

U.S. Institution	Title	Geographic Region	Program Type	Program Focus	Host Institution	Program website	Restrictions	Target Population	Time Commitment	Funding Availability	Application Due Dates	Contact	Brief Description
University of California, San Francisco	Global Health Flexible Residency	Africa, Asia, South America	Neurology specific	CC, DE, RS	Instituto Nacional de Ciencias Neurológicas (Lima, Peru), University of Ibadan (Ibadan, Nigeria), Peking Union Medical College Hospital (Beijing, China)		UCSF affiliates	R	Up to 6 months	Yes		Felicia Chow (felicia.chow@ucsf.edu)	Global health flexible residency opportunity for residents to spend up to 6 months on a global health experience.
UH, UM, UMN, UW	Northern Pacific Global Health Fellowship	Africa, Asia, South America	General with option to focus in neurology	RS	Various (mentor specific)	www.fogartyfellows.org	U.S. citizenship, permanent residency, or affiliated LMIC affiliates	R, F, JF	11 months x 36 hrs/wk	Yes	December	Nicole Hobbs (hobbsn@uw.edu)	Clinical research training program for postdoctoral trainees and doctoral students in the health professions. Sponsored by the NIH's FIC in partnership with several NIH Institutes and Centers
University of Maryland Medical Center	Nigeria NeuroAIDS Research Program	Africa	Neurology specific	RS	National Hospital Abuja (Abuja, Nigeria)			R, F	Open	No		Walter Royal (wroyal@som.umaryland.edu)	
University of Massachusetts Medical Center	Global Health Track for Neurology Residents	SE Asia	Neurology specific	CC, DE, RS	Charutar Arogya Mandal Medical Center (Gujarat, India)	https://www.umassmed. edu/neurology/residency/comprehensive- educational-experience/global-health/	UMass affiliates	R, F, MS	Monthly global health meetings, 2-4 weeks PGY- 3 year, 4-6 weeks PGY- 4 year	Yes		Anindita Deb (anindita.deb@umassmemorial. org) or Navid Valizadeh (navid. valizadeh@umassmemorial.org)	In the Global Health Track, interested neurology residents would attend ore global health modules (directiccase discussion) and video- conferenced sessions with global sites, complete online modules and travel to an elective site as part of a global health elective, culiminating in a research project presentation under the guidance of a global health mentor.
University of Nebraska Medical Center	International Neurology Program	Middle East, SE Asia	Neurology specific	DE, RS	National University of Medical Sciences (Rawalpindi, Pakistan), Shifa Tameer-e-Milat University (Islamabad, Pakistan)			R, MS, N	6 weeks	No		Danish Bhatti (dbhatti@unmc.edu)	International Neurology Program focuses on education for physicians in developing countries. The program is currently running teaching neurology clinics, a national movement disorders blended course, and an annual residents training camp in movement disorders in Pakistan. The program offers visiting scholars program for neurologists and faculty in developing countries to rotate through various subspecialties in Neurology at UNINC. An observership program is available for medical students and residents. Collaborative research programs in Parkinson Disease epidemiology is ongoing.
University of Pennsylvania	Foundation of African Medicine and Education	Africa	Neurology specific	СС	Foundation of African Medicine and Education Clinic (Karatu, Tanzania)	http://neuroresidency.uphs.upenn. edu/p/customized.html	UPenn affiliates	R	4 weeks	Yes		Mike Rubenstein (Michael.Rubenstein@uphs. upenn.edu)	Neurology clinic in rural Northern Tanzania that is partnered with The Foundation for African Medicine and Education (www.fameafrica.org). Two adult neurology residents and one pediatric neurology resident from UPenn and CHOP, respectively, go for 1 month long visit.
University of Utah	Infectious and Tropical Neurology	Africa	Neurology specific	CC, RS, DE	Komfo Anoyke Teaching Hospital (Kumasi, Chana), Moi Teaching and Referral Hospital (Eldoret, Kenya)			R, F, MS, N	1-2 month(s)	Yes	December 1	David Roman Renner (david.renner@hsc.utah. edu)	Neurological consultation at a tertiary care referral center that focuses largely upon critical care neurology, tropical and infectious neurology, HIV neurology, and the dynamic interplay between general internal medicine and neurology. The experience affords registrars, residents, and fellows an opportunity to practice neurology under extreme resource limitations, and the ability to teach primary care providers how to formulate diagnostic and treatment protocols with locally available means.
Washington University in St. Louis	Global Scholars in Neurology	Africa	General with option to focus in neurology	CC, RS, DE	Mekelle University (Mekelle, Ethiopia)	http://ghs.wustl.edu/	WUSTL affiliates	R	4 weeks	Yes	March / April	David Clifford (clifford@neuro.wustl.edu)	Four-week rotation designed to provide first-hand clinical experience in the delivery of medical care in a developing country. Experiences will be in the outpatient and inpatient settings.
Yale	Global Health Track in Neurology	Africa	Neurology specific	CC, RS, DE	Makerere University Faculty of Medicine (Kampala, Uganda)	http://medicine.yale. edu/neurology/education/residency/tracks/global health.aspx	Yale affiliates	R	6 weeks	Yes		Serena Spudich (serena.spudich@yale.edu) or Jason Sico (jason.sico@yale.edu)	Longitudinal clinical global health experience for Yale neurology residents that includes didactic courses, electives, and research.
Yale / Stanford	Yale / Stanford / Johnson & Johnson Global Health Scholars	Africa, South America	General with option to focus in neurology	CC, DE	Church of Scotland Hospital (Tugela Ferry, South Africa), Hospital Universidad del Valle (Cali, Colombia), Makerere University Faculty of Medicine (Kampala, Uganda), National University of Rwanda (Butare, Rwanda)	https://medicine.yale, edwintmed/globalhealthscholars/		R, F, JF, SF	6 weeks	Yes	December	Laura Crawford (laura.crawford@yale.edu)	Rotation directed towards clinical experiences, service, and teaching.

Appendix e-1. Global Health Programs in Neurology.

AIDS, acquired immune deficiency syndrome; ASAPP, Alliance for Stroke Awareness and Prevention Project; CC, clinical care; CHOP, Children's Hospital of Philiadelphia; DE, didadcic education; EEG, electroencephalogram; F, fellows; FIC, Fogarty International Center; HIV, human immunodeficiency virus; ICU, intensive care unit, JF, junior faculty; LMIC, low and middle-income countries; MS, medical students; N, neurologists (academic and non-academic); NIH, National Institutes of Health, NYU, New York University; OHSU, Oregon Health & Science University; F, residents; RS, research; SE, southeast, SF, senior faculty; TB, tuberculosis; UAE, University of Minnesota; UNC, University of Minnesota; UNC, University of Morth Carolina; UNM, University of Morth Carolina; UNM, University of Nebraska Medical Center; UPenn, University of Washington; WUSTL, Washington University in St. Louis