

Adult Neurology Residency Program

Department of Neurology

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The multidisciplinary Neurological Institute (NI), one of 26 institutes at Cleveland Clinic, is internationally known for superior diagnosis and treatment of neurological disorders ranging from the common to the most complex.

More than 300 specialists combine clinical expertise, academic achievement and innovative research to accelerate transfer of investigational therapies unavailable elsewhere, for the benefit of adult and pediatric patients. The institute is committed to improving outcomes while treating patients with compassion and respect.



Our Neurology Residency Program was ranked among the Top 10 Neurology programs in the country according to U.S. News & World Report and Doximity!



Welcome!

Dear Applicants,

Thank you for your interest in the Cleveland Clinic Adult Neurology Residency Program. We invite you to explore the reasons Cleveland Clinic is a world leader in health care. Patient care, research and education are our mission. Cleveland Clinic has become one of the most innovative health care systems in the country, consistently achieving remarkable medical breakthroughs. We routinely see fascinating, complex medical cases, and Cleveland Clinic is consistently ranked among America's top hospitals by U.S. News & World Report.

The Department of Neurology is part of the Neurological Institute at Cleveland Clinic. At the Neurological Institute, we provide medical and surgical services to improve patient care and experience. Our model of patient care allows physicians to put the needs of the patients first, even as we conduct cutting-edge basic research and participate in clinical trials that measure and improve outcomes.

The Department of Neurology is able to offer you a broad-based education tailored to your individual needs. Our experienced faculty is dedicated to providing residents with exposure to all aspects of neurology. Whatever your specialty interest, I am confident Cleveland Clinic will provide you with the opportunity to pursue your clinical or academic aspirations.

We recruit top-caliber residents; this is demonstrated by their academic successes.

As a 1997 graduate of the Cleveland Clinic Neurology Residency Program, I have experienced firsthand all the opportunities and wonderful patient interactions that this program provides. Over the years, I have seen tremendous growth and medical innovation. The chairman of the neurology department, Kerry Levin, MD, and I strongly believe in resident education; we make it a top priority.

I hope during your interview that you will have the opportunity to see the great camaraderie among our residents, and I invite you to be a part of this experience!



MaryAnn Mays, MD

Director, Neurology Residency Program

Adult Neurology
Residency Progr

Program Description

The Neurology Residency Program, which is ACGME-accredited, accepts candidates through the Electronic Residency Application Service (ERAS). There are ten positions offered per year in our four-year, PGY1-4 program, which includes a required first year in internal medicine at Cleveland Clinic.

First Year of Residency (PGY1)

The American Board of Psychiatry and Neurology (ABPN) requires that the PGY1 year be spent in an accredited medical training program. The Residency Review Committee for Neurology and the Accreditation Council of Graduate Medical Education (ACGME) specify that 12 months of general internal medicine training is ideal prior to entry into the three-year neurology residency. This year must include at least eight months of direct patient care in internal medicine, no more than two months in emergency medicine, and no more than four months in neurology.

First Year of Neurology Residency (PGY2)

The majority of this year is spent in direct patient care, most of which is in the inpatient setting. Residents spend most of the inpatient months on the two main adult neurology inpatient services: cerebrovascular disease and general neurology. Each inpatient team consists of a senior neurology resident, two junior neurology residents, two or more rotating junior residents from other departments, and two medical students. The on-call schedule during inpatient months is a nightfloat system. Cleveland Clinic uses a module system, with 13 four-week module rotations making up the academic year. In total, a PGY2 resident has eight inpatient modules and five outpatient modules where he or she has weekends off and no call. Longitudinal outpatient clinic is scheduled one-half day per week with a staff preceptor over six months

blocks to ensure core subspecialty exposure. Residents spend 8-12 afternoons over the course of their PGY2 year in lumbar puncture clinics and have the option to be trained to do lumbar punctures using fluoroscopy. Over the course of the three-year residency, two months are spent on the neuroradiology service, learning neuroimaging techniques and reading MRI and CT scans with staff neuroradiologists. Additional imaging training includes a daily neuroradiology conference while on the inpatient services.

Second and Third Years of Neurology Residency (PGY3 and PGY4)

A senior resident spends one module per year managing the three inpatient services, as well as an additional module in the NICU and one on the epilepsy service. The remaining time is split between electives and three academic courses. A three-month EEG/epilepsy rotation features an in-depth course covering EEG, evoked potentials, sleep, and intraoperative monitoring. Residents read EEG records and attend staff reading sessions and epilepsy outpatient clinics. A one-month rotation in the EMG laboratory includes didactic sessions, as well as hands-on experience in the techniques of nerve conduction studies and needle electrode examinations. If the resident is interested in further EMG exposure, the rotation can be expanded to three months. Finally, there is a two-module neuropathology course where residents are able to work directly with our neuropathologists. Senior residents use a nightfloat system which includes a total of six weeks (three weeks during the PGY3 year and three weeks during the PGY4 year).

Rotation Descriptions

PGY2 Schedule

Inpatient Rotations

- Stroke Neurology: 3 modules*
- General Neurology: 3 modules
- Neuro ICU: 1 module
- Epilepsy: 1 module
- Pediatric Consults: 1 module

Outpatient Rotations

- Pediatric Clinic: 1 module
- Neuroradiology: 1 module
- Subspecialty Clinic: 1 module
- Elective: 1 module

PGY3 Schedule

Inpatient Rotations

- Stroke Neurology: 1 module
- General Neurology: 1 module
- Adult Consults: 1 module
- Neuro ICU: 1 module
- Epilepsy: 1 module
- Nightfloat: 0.5 modules x 2

Outpatient Rotations

- Subspecialty Clinic: 1 module
- EMG Course: 1-3 modules
- EEG Course: 2-3 modules
- Elective: up to 3 modules

PGY4 Schedule

Inpatient Rotations

- Stroke Neurology: 1 module
- General Neurology: 1 module
- Adult Consults: 1 module
- Pediatric Consults: 1 module
- Nightfloat: 0.5 modules x 2

Outpatient Rotations

- Neuropathology: 2 modules
- Elective: 5 modules

* a module is a four-week rotation

Elective Options

Acute Stroke	Neuroimmunology
Autonomic Disorders	Neuro-Oncology
Carotid Ultrasound/TCD	Neuro Ophthalmology
Chronic Pain Management	Neuro Infectious Disease
Cognitive Disorders	Neuroradiology
Deep Brain Stimulation	Neurovestibular
EEG	Palliative Medicine
EMG/Neuromuscular	Regional Neurology
Ethics	Research/Quality Improvement
Evoked Potentials	Rheumatology
Headache	Sleep Medicine
Healing Services	
Metabolic Disorders	
Movement Disorders	

Fellowship Name	Accreditation Status	Total Number of Positions	Program Length (in years)
Behavioral Neurology & Neuropsychiatry (Las Vegas)	UCNS	4	2
Clinical Neurophysiology, EEG & Epilepsy	Non-accredited	5	1
Endovascular Surgical Neuroradiology	ACGME	3	2 to 3
Epilepsy	ACGME	6	1
Headache Medicine	UCNS	2	1
Movement Disorders	Non-accredited	2	1 to 2
Neurocritical Care	UCNS	4	2
Neuroimmunology	Non-accredited	4	1 to 3
Neuromuscular Medicine	ACGME	3	1
Neuro-Oncology	UCNS	2	1
Sleep Medicine	ACGME	4	1
Vascular Neurology	ACGME	3	1



Conferences / Didactics

The Cleveland Clinic Neurology Residency Program offers an extensive schedule of didactic and continuing medical education lecture series and conferences for trainees and staff including:

Daily (M-F) Noon Conference Series

- Neuroscience and Neuroanatomy
- Disease Pathophysiology and Management
- Professional Development
- Research, Statistics, Epidemiology
- Bioethics

Daily Neuroradiology Rounds

- Interpret imaging studies with a staff neuroradiologist
- Apply neuroanatomy to clinical practice

Weekly Conferences

- Neurology Grand Rounds
- Cerebrovascular Conference
- Epilepsy Grand Rounds
- Epilepsy Patient Management Conference
- Pediatric Neurology Grand Rounds
- Pediatric Neurology Neuroimaging Conference

Other Conferences

- Adult & Child Neurology Journal Clubs
- Brain-Cutting/Pathology sessions
- Quarterly Resident Meeting with Dr. Toby Cosgrove, Cleveland Clinic CEO
- Quarterly Neurological Institute Core Conference Series
- Neurology Morbidity and Mortality rounds
- Monthly meeting with program director, department chairman and residents
- Joint Neurology/Infectious Disease conference
- Monthly Quality Improvement Conference



Research Opportunities

Neurological Institute Research Day (NIRD)

Annually, all trainees in the Neurological Institute are given the opportunity to present their research. The Neurological Institute Research Council has launched a research mentorship program with specific training in statistics and trial design to help residents get their research projects published.

Professional Meetings

Residents are provided the opportunity to attend (and encouraged to attend) national meetings to present their research, with financial support from the department.

Publications (residents' names are in boldface type)

Genc G, **Abboud H**, Oravivattanakul S, Alsallom F, Thompson NR, Cooper S, Gostkowski M, Machado A, Fernandez HH. Socioeconomic Status May Impact Functional Outcome of Deep Brain Stimulation Surgery in Parkinson's Disease. *Neuromodulation: journal of the International Neuromodulation Society*. 2015

Abboud H, Petrak A, Mealy M, Sasidharan S, Siddique L, Levy M. Treatment of acute relapses in neuromyelitis optica: Steroids alone versus steroids plus plasma exchange. *Multiple Sclerosis (Houndmills, Basingstoke, England)*. 2015.

George P, Newey CR, Bhimraj A. The tablet device in hospital neurology and in neurology graduate medical education: a preliminary study. *Neurohospitalist*. 2015 Jan;5(1):15-21.

Sarkis RA, Mays M, Isada C, Ahmed M. MRI findings in cryptococcal meningitis of the non-HIV population. *Neurologist*. 2015 Jan;19(2):40-5.

Cerejo R, John S, Buletko AB, Taqui A, Itrat A, Organek N, Cho SM, Sheikhi L, Uchino K, Briggs F, Reimer AP, Winners S, Toth G, Rasmussen P, Hussain MS. A Mobile Stroke Treatment Unit for Field Triage of Patients for Intraarterial Revascularization Therapy *J Neuroimaging*. 2015 Jul 14.

Alex Rae-Grant, Clarissa Wong, **Rodica Bernatowicz**, Robert J. Fox. Observations on the brain vasculature in multiple sclerosis; a historical perspective. *Multiple Sclerosis and Related Disorders*. 2014; 3 (2) : 156-162.

Taqui A, Koffman L, Hui F, Gomes J, Hussain MS, Bain M, Toth G. Intra-arterial vasodilator therapy for parainfectious cerebral vasospasm. *J Neurol Sci*. 2014 May 15;340(1-2):225-9.

Gomes JA, Selim M, Coteleur A, Hussain MS, Toth G, **Koffman L**, Asi K, Provencio JJ. Brain iron metabolism and brain injury following subarachnoid hemorrhage: iCeFISH-pilot (CSF iron in SAH). *Neurocrit Care*. 2014 Oct;21(2):285-93.

Lakhan SE, Schwindt M, **Alshareef BN**, Tepper D, Mays M. Opinion & Special Articles: neurologist: specialized primary care provider vs consultant. *Neurology*. 2013 Jul 2;81(1):e1-2.

Lakhan SE, Tepper D, Snarski RD, Mays M. Opinion and special articles: electronic media in neurology education: progress, promise, and pitfalls. *Neurology*. 2013 Aug 20;81(8):e47-50.

"I was a Neurology resident at Cleveland Clinic from 2007-2010. I went on to complete fellowship at University of Pennsylvania, where I'm Assistant Professor of Neurology in the Movement Disorders division. I believe that I received robust clinical training during my residency, with exposure to a variety of cases ranging from the common to the rare. The faculty were not only teachers but invaluable mentors. The environment provided me with well-rounded training in clinical Neurology as well as research methods and other skills required for a career in academic Neurology. There were ample clinical research opportunities and my research productivity during residency and later in fellowship and at present attest to the strong foundation laid down during residency. I am proud to be a Cleveland Clinic Neurology residency alumnus; it is the ideal program for someone interested in an academic career that combines clinical care, patient-oriented research, and teaching".

Lama Chahine, MD

Class of 2010

Assistant Professor, University of Pennsylvania

Research & Innovations

Our clinical care is complemented by a robust research program that fosters collaboration and innovation. Neurological Institute physicians and scientists team with colleagues in the Lerner Research Institute, Cleveland Clinic's basic science research arm, to pursue lab-based and translational studies in addition to our hundreds of ongoing clinical trials.

- \$15.7m in research grants
- 242 clinical research projects

Standouts to our research program:

Outcomes Research

Cleveland Clinic's Neurological Institute treats over 140,000 patients every year, making it one of the busiest centers for neurological diagnosis and treatment in the country. The Institute has developed the Knowledge Program® to leverage this patient volume to systematically analyze patient care and improve outcomes. At every outpatient visit, HSMs are administered to patients electronically, while providers report outcomes as part of usual medical documentation. We aggregate these patient- and provider-generated data with information from other sources — such as to optimize clinical decision-making, quality improvement and research opportunities. This forward-looking data strategy has put the Neurological Institute well on its way to the use of predictive analytics to improve individual patient outcomes, reduce costs and enhance healthcare value.

Lou Ruvo Center for Brain Health

Cleveland Clinic Lou Ruvo Center for Brain Health is providing leading-edge services to athletes, both in a clinical evaluation and treatment and in a research study capacity. Since 2011, active and retired professional fighters (boxers, mixed martial arts) and retired professional football players have been pursuing testing, diagnosis, treatment and research with the Lou Ruvo Center for Brain Health, the only entity in the country to conduct a longitudinal study of hundreds of fighters.

Circulating Astrocytic Protein S100B May Indicate Blood-Brain Barrier Disruption Due to Childhood Emotional Trauma

By Tatiana Falcone, MD

At Cleveland Clinic's Neurological Institute, we have found evidence that S100B could be useful as a biomarker for BBB breakdown triggered by childhood trauma and abuse. If further validated, a serum test for S100B might become a clinical tool to assess the severity of emotional injury and the need for intervention. This study, along with others, suggests that emotional trauma can cause long-term changes to the brain, possibly by way of an inflammatory response. The next step may be to use neuroimaging to compare levels of inflammatory markers with structural changes in the hippocampus or frontal lobe. Of course, the most exciting potentiality would be to change the trajectory of a brain trauma so that intervention with medication or psychotherapy could prevent depression, psychosis or PTSD from developing.

The Concussion App Comes of Age: Expanded Reach, New Adaptations, Spinoff Applications and More

By Jay Alberts, PhD

The C3 App, utilizes the iPad's gyroscope and accelerometer to collect biomechanical data that are used to objectively quantify postural stability while an individual performs balance tests with the iPad secured at the waist. The C3 App also assesses cognitive function through tasks performed with a stylus on the iPad screen. Use of the Cleveland Clinic Concussion App (C3) to guide concussion management in student athletes continues to grow. Under a Department of Defense grant, we are determining motor and cognitive norms among military personnel to adapt the C3 App for use in managing mild traumatic brain injury in military personnel and to assess the app's use in dual-task functional testing. Modules of the C3 App are being adapted and applied to functional assessment in additional patient populations in a broad Neurological Institute effort to leverage common data elements to enable powerful predictive analytics for improved healthcare value.

Uncovering Molecular Mechanisms of Epilepsy Progression: Looking Beyond the Lesion to Growth-Associated Protein 43

By Zhong Ying, MD, PhD, and Imad Najm, MD

Focal cortical dysplasias (FCDs) are the most common pathologic substrates in both adults and children with pharmacoresistant focal neocortical epilepsy. Postoperative seizure outcome has been less compared with patients who have mesial temporal lobe epilepsy. There has been increasing awareness, however, that epileptogenicity in FCDs encompasses a more

complex network extending beyond the lesion. Moreover, epilepsy associated with FCDs is a progressive disease with compelling evidence of seizure worsening over time, change of EEG patterns and improved outcomes with early surgical resection. At Cleveland Clinic's Epilepsy Center, we aim to discover the molecular mechanisms that underlie epilepsy progression in FCD. Our translational research has focused on growth-associated protein 43 (GAP-43) as a potential substrate contributing to epileptogenic networks and the progression of epileptogenesis.

The Art of 7T Imaging

Mark Lowe, PhD, and Sehong Oh, PhD

System-level brain study at a nearly microscopic scale. That's what Neurological Institute researchers have been relishing since the installation of a 7-tesla MRI scanner on Cleveland Clinic's main campus in mid-2013. With more than double the field strength of 3T MRI, 7T scanning — which the FDA currently restricts to research use only — produces in vivo images at spatial resolutions up to five times those possible at clinical field strengths. The result is imaging studies that marry the spatial resolution of CT with the superior soft-tissue contrast of MRI. Current Neurological Institute applications of 7T scanning range from studies in multiple sclerosis and amyotrophic lateral sclerosis to epilepsy to traumatic brain injury.

What Does the Macrophage See? A Study of Inflammatory Demyelination

By Richard M. Ransohoff, MD, and Haiyan Lu, MD, PhD

Using this experimental autoimmune encephalomyelitis (EAE) model, our Cleveland Clinic-led multicenter research team set out to evaluate how macrophages attack myelin during EAE in the mouse. We used serial block-face scanning electron microscopy (SBFSEM) with three-dimensional (3-D) reconstruction to make pictures of macrophages attacking myelin at micrometer (millionths of a meter) resolution. These images showed a dramatic, unexpected representation of how inflammatory demyelination begins — namely, with macrophages being attracted to nodes of Ranvier. It was surprising and provocative to find macrophages localizing to these gaps in the myelin sheath. Our interest was strongly engaged because this feature of inflammatory demyelination might provide clues about the molecular signals that attract macrophages.

SEEG in Pediatric Patients with Refractory Epilepsy: Growing Experience Supports Safety and Efficacy

By Deepak Lachhwani, MD, and Jorge Gonzalez-Martinez, MD, PhD

Stereoelectroencephalography (SEEG) is a methodology for exploring surgical resection strategy in medically refractory patients suspected of having focal epilepsy. SEEG involves the temporary surgical implantation of electrodes that enable simultaneous recording of electrical activity from many parts of the brain at high temporal resolution (~ 1 ms), which is used to identify the epileptogenic zone.

SEEG involves relatively minimal risk of morbidity and mortality, and its results have aided the planning of surgical resection in appropriate candidates and the decision to avoid resection in patients deemed to have a poor prognosis. Our institution has seen steady growth in the use and acceptance of this methodology based on some distinct merits of SEEG relative to other methods of invasive evaluation, such as subdural grids. In our recently published series of 28 pediatric patients who underwent SEEG evaluation, 18 of 28 were able to undergo resection; of these 18 patients, 13 had improvement in their seizure control and five became seizure-free.

Lessons from the Care Path: Insights on the Neurological Institute's Lead Quality and Value Initiative

By Irene Katzan, MD, MS, and Nancy Papesh, RN, MBA

Cleveland Clinic's Neurological Institute has over two dozen condition-specific care paths completed or in development to operationalize evidence-based practice guidelines and guide clinical work flow. Care paths start with development of consensus-driven and evidence-based "guides," which are translated into algorithms and work flows. Next comes pilot testing and resulting refinements, followed by a technology "build-out" for integration into the EMR and clinical work flows. Initial care path pilot testing has demonstrated reductions in the overall cost of care delivery, and insights from our early experience include recognition that care paths must be applied flexibly, not generically; the need to judiciously prioritize care paths for EMR integration; and the importance of tracking patient-reported outcomes.



Our Residents

Where Did They Go After Their Residency?

Class of 2014

Bashar Alshareef

Texas, Neurohospitalist

Russell Cerejo

Cleveland Clinic, Vascular Neurology Fellowship

Rachel Donaldson

Cleveland Clinic, Neuromuscular Medicine Fellowship

Ahmed Itrat

Cleveland Clinic, Vascular Neurology Fellowship

Adham Jammoul

University Hospitals, Epilepsy Fellowship

Jeffrey Kim

Harbor-UCLA Medical Center, Epilepsy Fellowship

Shaheen Lakhani

Massachusetts General Hospital, Pain Medicine Fellowship

Ather Taqui

Cleveland Clinic, Vascular Neurology Fellowship

Class of 2015

Hesham Abboud

Cleveland Clinic, Neuroimmunology Fellowship

Zubair Ahmed

University of Utah, Headache Medicine Fellowship

Suma Babu

Massachusetts General/Brigham Women's Hospitals, Neuromuscular Medicine Fellowship

Megan Donnelly

Cleveland Clinic, Staff, Regional Neurology

Mohamed Hegazy

Cleveland Clinic, Epilepsy Fellowship

Lauren Koffman

Johns Hopkins, Neurocritical Care Fellowship

Karin Mente

National Institutes of Health, Movement Disorders Fellowship

Fernando Santos Pinheiro

Dartmouth, Neurophysiology Fellowship

Xin Xin Yu

Cleveland Clinic, Movement Disorders Fellowship

Class of 2016

Ashhar Ali

Cleveland Clinic, Headache Medicine Fellowship

Blake Buletto

Cleveland Clinic, Vascular Neurology Fellowship

Jason Mathew

Cleveland Clinic, Vascular Neurology Fellowship

Rebecca Michael

Cleveland Clinic, Headache Medicine Fellowship

Natalie Organek

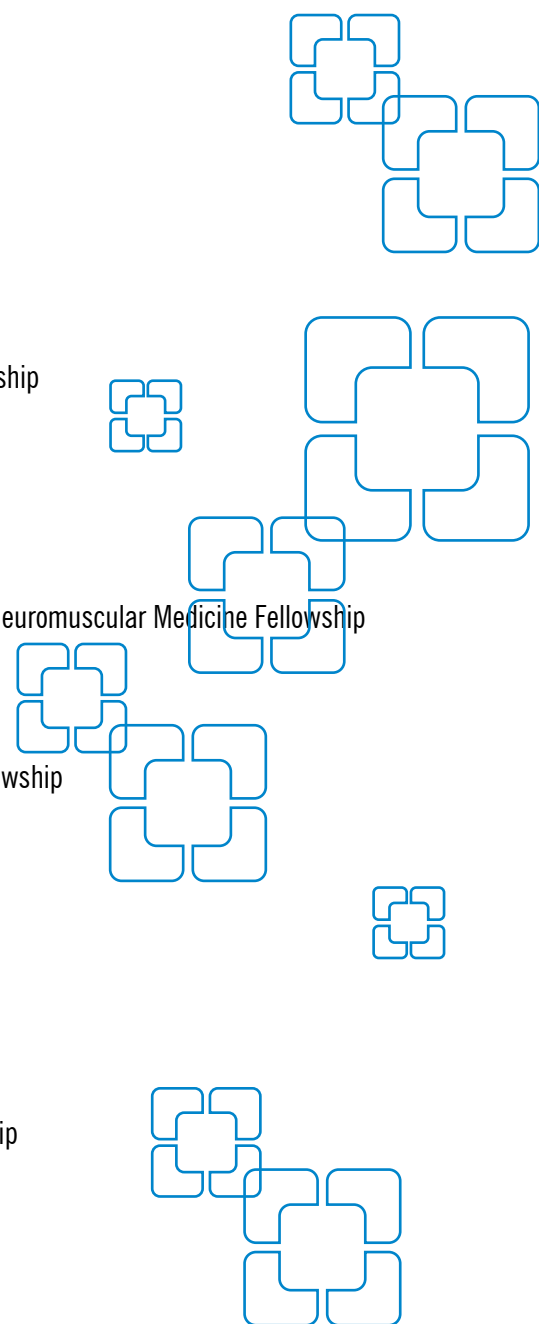
University of Pennsylvania, Neurocritical Care Fellowship

Luay Shayya

Cleveland Clinic, Neuromuscular Medicine Fellowship

Jessica Winslow

Cleveland Clinic, Epilepsy Fellowship



Compensation and Benefits

iPhones | As of January 2016, all trainees at the Cleveland Clinic will receive a Clinic-approved iPhone, which includes secure messaging, email, and electronic health record access.

Moonlighting | Junior and Senior residents can moonlight (with permission) on the Adult Neurology, Pediatric Neurology and Epilepsy services.

Health Insurance | The Cleveland Clinic will provide Cleveland Clinic Health Insurance Plan benefits, at a minimal cost, to you and your eligible dependents. Also available is a free on-campus gym, Curves or Weight Watchers membership.

Disability Insurance | Paid for by the Cleveland Clinic for Residents/Fellows in Clinical Training Programs. Guaranteed issue, portability, HIV stance.

Maternity Care | Full coverage is provided through your health plan, within the plan's guidelines.

Pharmaceuticals | Prescription drug benefits are determined by the health plan chosen. All health plans have a deductible, co-pay or both for prescription medication.

Dental Care Plan | The Cleveland Clinic offers a choice of three (3) plans provided at no cost to all Residents/Fellows and their eligible dependents after you have completed 12 months of training. Coverage during the first year of training may be purchased.

Vision Plan | The EyeMed Vision Care Program is available at minimal cost to you and your eligible dependents. This plan is a materials-only plan which provides savings on prescription eyewear. (Note: routine eye exams are covered through your health plan).

Life Insurance | A \$25,000 term group policy is provided.

Loans | A \$1,200 interest-free loan is available to all house staff who receive a salary from the Cleveland Clinic.

Malpractice Insurance | Paid by the Cleveland Clinic and includes tail coverage. Elective rotations outside of Cleveland Clinic are not covered by Cleveland Clinic insurance. Upon completion of your training program, this coverage remains in effect for any litigation that may arise from incidents while you were in training.

Library | Our 30,000-sq.-ft. library offers the following services: reference assistance, Medline searches, electronic resources (which may also be available from outside the library) and a Learning Resource Center (audiovisual materials, computers, Interlibrary Loans and self-service photocopying).

On-Call Meals | An on-call meal allowance is provided by the Cleveland Clinic GME Department. It is a flat rate calculated on an estimated number of calls per PGY level that you can use when you want, to allow for more flexibility.

Time Away | Professional Meetings: Residents are provided the opportunity to attend national meetings to present their research, with financial support from the department.

Vacation | Three weeks (15 paid working days).

Maternity | Six weeks' paid leave for natural childbirth or adoption; seven weeks for Cesarean section; 100 percent of your salary. Additional time off is possible (unpaid; maximum of 12 weeks under FMLA).

Paternity | Two weeks' paid leave (10 working days). Additional time off is possible (unpaid; maximum of 12 weeks under FMLA).

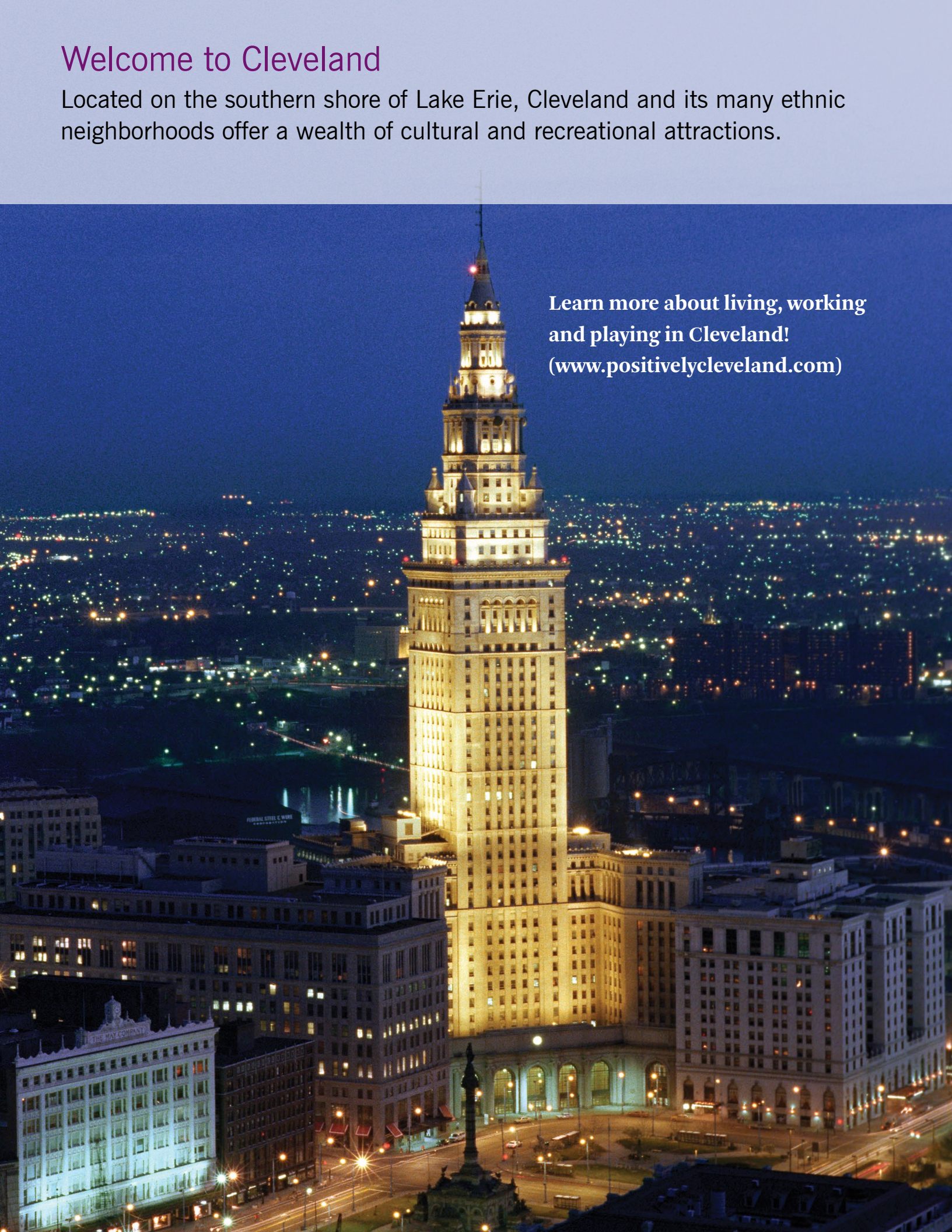
The Family Medical Leave Act (FMLA) entitles all employees to as much as 12 weeks off, unpaid, after one year of employment. See Graduate Physicians Manual for further information.

Check your specialty Board's requirements: You may need to make up part or all of your leave time prior to program completion.



Welcome to Cleveland

Located on the southern shore of Lake Erie, Cleveland and its many ethnic neighborhoods offer a wealth of cultural and recreational attractions.



Learn more about living, working
and playing in Cleveland!
(www.positivelycleveland.com)

Lakefront

Our harbor area features the Rock and Roll Hall of Fame and Museum, the Great Lakes Science Center and Cleveland OMNIMAX Theater. Marinas, beaches and other lakefront access stretch across the Greater Cleveland area.

Sports

Cleveland is home to Browns football, Indians baseball, Cavaliers basketball, Lake Erie Monsters hockey and Gladiators arena football. Many residents also participate in intramural/recreational sports leagues.



Culture

Cleveland Clinic is located near University Circle, the center of the city's cultural and educational offerings. Around the Circle are Case Western Reserve University, Severance Hall (home of the world-renowned Cleveland Orchestra), the Cleveland Museum of Art, the Cleveland Museum of Natural History and the Cleveland Botanical Garden. Cleveland's downtown theater district is one of the largest in the country. Downtown and Cleveland's neighborhoods are home to a variety of restaurants and entertainment venues, including the Horseshoe Casino. Cleveland has a very reputable food scene with many big name chefs!

Shopping

Shopping havens in the Cleveland area feature a number of moderate and high-end retailers. Beachwood Place, Eton/Chagrin Boulevard and Legacy Village are located in Cleveland's eastern suburbs; Crocker Park is in a western suburb. Many Cleveland neighborhoods feature unique shopping and art districts.

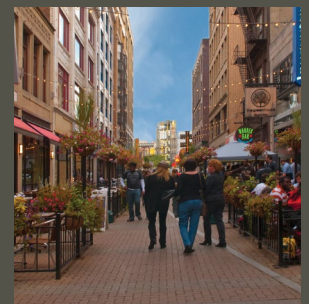
Parks and Recreation

The Cleveland Metroparks — the Emerald Necklace that surrounds the city — are perfect for golfing, hiking, bicycling, horseback riding, cross-country skiing and ice skating.

They also are home to the Cleveland Metroparks Zoo, featuring the "African Elephant Crossing" exhibit. Not far from Cleveland are Cedar Point Amusement Park, Wildwater Kingdom Water Park and the Lake Erie Shores & Islands region, offering year-round fun and relaxation for the whole family.

Living in Cleveland

Whether you want to live downtown, in a historic urban neighborhood or in a suburb, Cleveland offers unique residential areas, many with convenient public transportation and affordable housing.



"I chose the Cleveland Clinic because of its reputation as a world class center for neurological care, its diverse and sub specialized clinical faculty, and because of its well-rounded neurology residency program. I will always remember my training years fondly as I learned from great clinicians, and was exposed to rare neurological cases, but also a high volume of common neurological disorders. I was also able to launch my career in clinical research thanks to an amazing research infrastructure present at the hospital, and invaluable mentorship."

Rani Sarkis, MD, MSc.

Class of 2011

Associate Neurologist, Brigham and Women's Hospital
Instructor, Harvard Medical School

MaryAnn Mays, MD

Director, Neurology Residency Program
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Learn more about our
Neurological Institute
training programs at
http://my.clevelandclinic.org/services/neurological_institute/education