

Anatomy lab

How digital tools are enhancing anatomy education

Within the Toby Devan Lewis Digital Suite inside the Samson Pavilion, first-year students are discovering the intricacies of the human body by interacting with computer-generated simulations and virtual anatomical models. The digital suite comprises four rooms, each of which is designed to engage the students in exploring human anatomy with a particular technology:

Virtual reality: At this station, facilitated by Jennifer McBride, PhD, Associate Professor of Surgery and Director of Virtual Anatomy, students use an Oculus Rift virtual reality headset to examine digital anatomical models within the context of a clinical case. The anatomical models were produced by Zygote, the company that created an entire library of virtual three-dimensional anatomical models based on real patient imaging studies. Dr. McBride created the educational content to accompany the anatomical models. Currently, the students have access to a collection of clinical case modules that cover bodily systems such as neurologic, cardiovascular, respiratory, gastrointestinal, endocrine, reproductive and musculoskeletal, to name but a few. Students can also access these modules directly from their smart phones, tablets or computers via an app.

continued >>













Anatomy lab continued

Ultrasound simulation: At this station, guided by Shetal Shah, MD, Assistant Professor of Radiology, the students learn anatomy by practicing ultrasound-related examinations on a Simbionix U/S Mentor. The high-fidelity male and female manikins, which represent a human torso, head and neck, can simulate a wide variety of virtual patients with both normal and pathologic findings.

Radiology: At the radiology station, Stuart Morrison, MD, Clinical Professor of Radiology, guides students through a variety of imaging studies. Using the Agfa IMPAX client, a digital radiology imaging system, students can review a vast collection of patient X-rays, CT scans and MRIs.

Multi-user touch interface: This station, facilitated by Richard Drake, PhD, Professor of Surgery and Director of Anatomy, combines a Sectra Table, which is a two-dimensional touchscreen, and actual human imaging data from both the Visible Human Project from the U.S. National Library of Medicine and clinical imaging studies. The students can view these 3D renderings in multiple ways, including rotating, sectioning and isolating structures. Using a virtual knife, students can strip away layers of the body, including skin and muscle, and even perform virtual dissection.

To begin the morning anatomy session, the class meets for a large-group discussion of a clinical case focused on a system in the body, such as reproductive or renal. Cases chosen for these sessions are determined by the theme of the week designated by the course directors. For example, in week one of the Cardiovascular and Respiratory Sciences 1 course, the theme of the week is "How the Heart Itself Works as a Pump," so the large-group discussion begins with a case of a patient with a heart condition. The goal of the large-group session is to engage the students in a dialogue with a clinician about the importance of anatomical structures within the context of a clinical case. Following the discussion, the 32 students then break out into four groups of eight and rotate through each station, to further explore the anatomy discussed in the case.

During their time at the stations, the students review content based on the learning objectives for the session. At the radiology station, for example, Dr. Morrison reviews CT scans and MRIs of thoracic cavity structures and their relationship to one another. During the ultrasound station, Dr. Shah demonstrates how to capture basic views of the heart chambers, with time remaining for each student to try to capture these views as well. At the virtual reality station, students will review a brief clinical case of a patient experiencing a heart attack and coronary occlusion. Navigating through this module they will be able to explore the inside of heart chambers, heart valve anatomy, arterial branches and venous return on the surface of the heart. During their time at the Sectra Table, students can dissect through the layers of the chest wall to the heart and view sectional images of the thoracic cavity.

"Inclusion of these four modalities gives the students an opportunity to view and interact with complex anatomical structures in unique ways," says Dr. McBride. "They appreciate being able to look at anatomy in ways they aren't able to in the human donor. When they're using virtual reality, they can see the outside of a heart, for example, and then lean forward and suddenly be inside the heart ventricles, seeing the papillary muscles and how they project from the heart wall."

Dr. McBride notes that using digital technology to learn anatomy isn't a replacement for the most valuable learning resource, the human donor. "The technology-based platforms are just another tool in the toolbox, intended for a specific purpose."

With this in mind, students also attend anatomy sessions in the CCLCM Anatomy Laboratory. There, students rotate through four stations, which demonstrate different levels of dissections on human donors, who are not embalmed, bequeathed to the Cleveland Clinic Body Donation Program. "The students seem to enjoy learning anatomy from both technology and human donors," Dr. McBride says.

Currently, only a few medical schools, such as the University of California at San Francisco School of Medicine and the University of Illinois College of Medicine, are using extended reality in general anatomy education as extensively as the College and University programs at Case Western Reserve University.

In terms of measuring the impact of using extended reality in this regard, Drs. McBride and Drake are conducting a longitudinal retention study that started at the beginning of the academic year. They will measure retention at the end of the first, second and third years and then compare the results with previously published data.





J. Harry (Bud) Isaacson, MD

"Appreciative" in 2020

I hope you had some time for loved ones, rest and reflection during the holiday season. The pause that the holiday season allows encouraged me to spend some time reflecting, and I came back to a word that resonates deeply with me: appreciation.

Appreciation has roots at CWRU and in medicine in the form of "appreciative inquiry" and "appreciative practices." Appreciative inquiry was developed at the CWRU Weatherhead School of Management, and they define it this way:

"Appreciative Inquiry (AI) is a revolutionary approach to strategic change and sustainable growth for organizations. Developed by Weatherhead faculty members David Cooperrider, PhD and Ronald Fry, PhD, AI is practiced around the world to transform organizations, expand leadership vision, set strategy, and enhance the power of teams. AI is about the coevolutionary search for the best in people, their organizations, and the relevant world around them."

Appreciative inquiry has led to positive change in many fields including healthcare, as summarized in the book "Appreciative Inquiry in Healthcare: Positive Questions to Bring Out the Best," published by faculty from the University of Virginia Health System. Fundamental to AI is to focus on what is going well with people and their organization and to develop strategies that build on their success. "Appreciative practices" are related to AI and are tools to help promote a collaborative culture. The Center for Appreciative Practice at the University of Virginia, established by its schools of Medicine and Nursing, is an example of creating this collaborative culture.

At CCLCM we incorporate aspects of AI in several ways. For example, we encourage students to focus on "areas of strength" and continue those behaviors that lead to these strengths. We also spend significant effort reviewing our courses and identifying those areas that are working well and should continue. Appreciative practices can be as simple as an "appreciative check-in," in which members of a group are given an opportunity to demonstrate gratitude or reflect on anything meaningful in the moment. Many CCLCM committees and other small groups incorporate appreciative check-ins to foster collaboration.

My appreciative check-in as we start 2020 is that I am deeply grateful for the talented students, dedicated faculty and support team that sustain the CCLCM mission. As we head into the New Year, I'm confident we will continue to integrate features of AI and appreciative practices in our work together, focusing on what we're doing well, envisioning what we look like when we're at our best and ensuring that the changes we make are positive ones.

Thank you for all you do. I look forward to a great 2020!

Bud Isaacson, MD Executive Dean

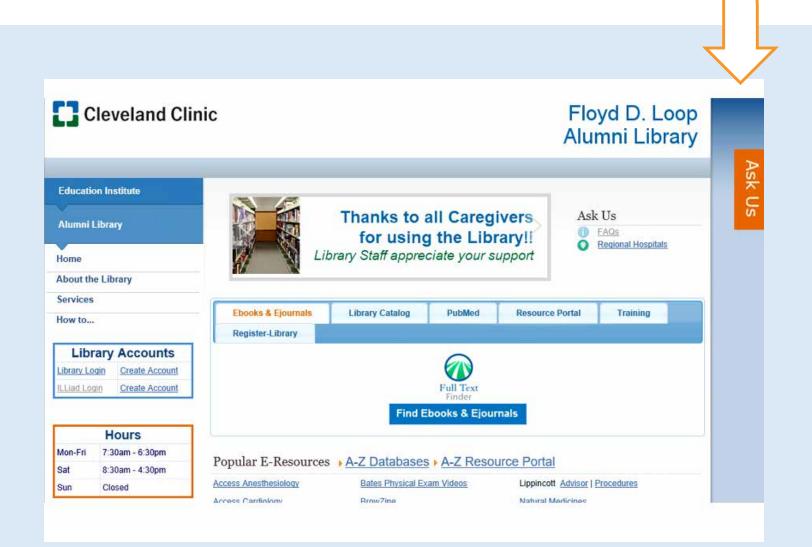
Live chat with the Library!

Do you need help creating a library account? Need a hand tracking down full text articles or performing a literature search? Now you can use the instant chat feature on the library's website to connect with staff from the Floyd D. Loop Alumni Library during peak hours of the work day.

This feature allows you to chat directly with a librarian in real time. Simply enter your name and type your question, and you will be connected with a member of the library staff. The chat is available during most of the library's hours of operation.

When the instant chat is unstaffed, you will have access to a list of Frequently Asked Questions, or you can leave a question for the library.

Visit the library's website and click on the "Ask Us" tab on the far right-hand side. Library help is just a click away!



CCLCM FACULTY



Q: Describe your work in academic medicine.

I am one of the two deputy editors for the *Cleveland Clinic Journal of Medicine* (CCJM), and a physician advisor for CCLCM.

About seven years ago, we received an email that a deputy editor position was open for CCJM. I had enjoyed reading CCJM for years, and I thought about what a wonderful position this would be, as you get time to read a journal as part of your job! However, I told myself that I would not be qualified for this position because at that time I did not have an editorial background, and I assumed my chair would not want me to fragment my clinical time. I also didn't want to put effort into the several-step interview process if my chances were low.

The day after I deleted the email call for applications, my chairman reached out to me saying that I should consider it. I had put up unnecessary barriers for myself, and with one of these hurdles down, I put together an application where I was honest about why I had interest in this job, including my selfish reasons of helping the burden of reading so many journals to stay updated. Several years later, this position remains one of the more satisfying parts of my career. I can't believe I was ready to talk myself out of it without even trying.

We need to remember that as professional staff, our unique skill sets allow us to adapt to many different roles within medicine. This taught me the important lesson of just going for what I want. When I was interested in the physician advisor position for CCLCM, I knew to scout it out on my own and was on a waitlist for more than a year until something opened up for me. If you are interested in something, go after it with your full passion.

Q: What are you most proud of in your work in education/academic medicine?

I am most proud of the relationships I have built with other doctors across the country who have similar interests and backgrounds. I did this mostly by reaching out and initiating conversations, grabbing a cup of coffee at national meetings, et cetera. This opens up a lot of opportunity for joint scholarly activity. This is my twenty-first year at Cleveland Clinic (including training), so it's nice to get an outside perspective of how things are done elsewhere, which often makes me appreciate our system even more!

Q: What brings you the most joy in your work?

I enjoy the daily interaction with our work teams and patients. At the end of the day, it's the human interaction that you remember; otherwise, I have a tendency to get lost in my work at my desk for hours.

Adapted from the Cleveland Clinic Women's Professional Staff Association newsletter, celebrating staff educators during Women in Medicine Month, September 2019.

Title IX policy protects students, caregivers involved in educational programs

Cleveland Clinic values a culture of respect and fairness. We care for our caregivers and ensure a safe environment to work, receive care and learn.

Students and caregivers who are involved in any capacity in an educational program or activity sponsored by Cleveland Clinic are protected from all forms of discrimination on the basis of sex, gender, sexual orientation, gender expression and gender identity under the requirements of Title IX and related laws.

Cleveland Clinic has adopted a Sexual Misconduct in Education policy* to address reports of sex discrimination, sexual harassment, sexual violence and retaliation in any of its educational programs and activities.

Students and caregivers who feel they were subjected to sex discrimination, sexual harassment, sexual violence or retaliation in a Cleveland Clinic educational program or activity are strongly encouraged to make a report.

Learn more about Title IX policies and procedures, how to make a report and more, and contact the Title IX Coordinator with any questions.

Reporting all other harassment

Individuals who believe they have been subjected to discrimination, harassment or retaliation are encouraged to immediately report their concerns to any of the following:

- Their manager
- Human Resources representative
- ONE HR Service Center (216.448.2247)
- Corporate Compliance Reporting Line (1.800.826.9294)
- Office of Diversity and Inclusion
- Law Department
- Office of Professional Staff Affairs; or if it involves a private practice physician in a Regional Hospital, report to the President, CMO, Chief of Staff of the Regional Hospital (or according to local policy)

Read the Non-Discrimination, Harassment or Retaliation Policy.

* In some regional locations, the previous Title IX policy is still in effect. <u>Please contact the Title IX Coordinator</u> to determine which policy is in effect at your location.

CCLCM students show off school colors

Each year, faculty member Bret Lashner, MD (front row, wearing an Ohio State University t-shirt and University of Michigan cap), encourages his first-year "kids" to wear their school colors on the last day of class, before the Ohio State vs. Michigan football game. Dr. Lashner co-directs Gastroenterology Systems 1 and 2 courses with Christina Lindenmeyer, MD (not pictured). Bud Isaacson, MD, Associate Professor of Medicine and Executive Dean of CCLCM, joined in the fun and is pictured in the inset holding a bobblehead of the legendary football coach Bo Shembechler.





Submit your creative work to Stethos

Submissions are open for the 10th issue of *Stethos*, the medical humanities journal of the Cleveland Clinic Lerner College of Medicine. In previous issues, *Stethos* has provided a wonderful forum to showcase the incredible diversity and creativity of our students, faculty and colleagues, and we hope to continue this tradition in our 10th issue.

We are seeking **submissions of short fiction**, **reflective writing**, **poetry**, **personal narrative**, **essays**, **artwork and photography**. Submissions may be about **any medicine-related topic or reflection**; if you have a question about a specific topic, please reach out and ask.

In celebration of our 10th anniversary, we will be organizing a feature piece highlighting reflections from past and present students (from any school/discipline). To contribute to this feature, we encourage you to consider writing a letter to your past or future self about lessons you have learned, dreams you hope to achieve, predictions about the world — the list goes on and on!

View previous issues of Stethos to see examples of published works.

The deadline for submissions is Monday, March 9, 2020.

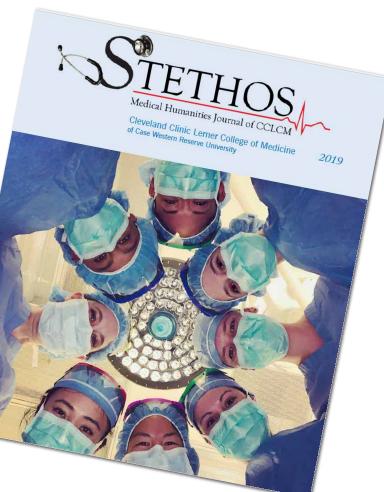
Submission guidelines

Send submissions using the <u>online form</u>.

- Up to four submissions per author; please send each submission on a separate form
- Prose should be less than 2,000 words, submitted in Microsoft Word
- Poems should be less than 75 lines, submitted in Microsoft Word
- Submit all photographs and artwork as a jpeg file (we will contact you later for high-quality file format)
- All photographs and artwork must include a caption
- Save the submission/illustration as the title (or abbreviated title) followed by the author's last name. For example, the article, "Generic" by Dr. Jones, would be saved as Generic_Jones.doc

Review process

All submissions will be peer-reviewed by a student-run editorial board consisting of co-editors and two editors-in-chief. The editorial board will review contributions for originality, style and content.



Patient consent/confidentiality

Our confidentiality policy is based on the Health Insurance Portability and Accountability Act of 1996 (HIPAA). <u>Please refer</u> to this document for questions about patient confidentiality. As a rule, authors/artists should protect the confidentiality of all individuals whose personal details may be revealed without their consent.

For questions or issues regarding submissions, please contact the editors at <u>cclcmhumanities@gmail.com</u>.

STUDENT SPOTLIGHT:

Caroline Franke

With a longstanding passion for diversity and inclusion, Caroline Franke ('20) strives to help those within her community. "Inclusion is important to me and it's something I want to make an impact in," she says. "I don't have a story about how I got involved; it's just the values I was raised on."

As a Princeton University alumna, Caroline actively serves on Cleveland's chapter of the Princeton Prize in Race Relations (PPRR) Committee. The committee is responsible for nominating a local high school student who has positively impacted race and diversity. Winning nominees are rewarded with a \$1,000 cash prize and a complimentary trip to Princeton for a symposium on race.

STUDENT



Caroline Franke

"It's a nice way to get involved in the local community outside of medicine," says Caroline, who believes it is important for medicine to be a part of her life, but not her entire life.

To further round out her commitment to diversity and inclusion, Caroline serves on the CCLCM Diversity Dinners Committee and the Diversity and Inclusion Task Force. As a member of the task force, she has helped with creating new training initiatives for faculty development.

In addition to diversity and inclusion, Caroline is passionate about patient narratives, empathy and humanity in medicine. She did her research year with Susannah Rose, PhD, in the Office of Patient Experience, looking at the intersections of empathy, patient experience and physician burnout. Caroline has decided to pursue a career as a psychiatrist. During her clinical rotations, she found herself wanting more time to go back and talk to the patients.

"I kept wanting to know more about who I was treating and wanted to talk more about who that person was," she says.

Fascinated by both the science and human aspects of psychiatry, Caroline views the field as "more of an art than an algorithm." In the future, she hopes to work as a psychiatrist within an underserved patient community.

In her free time, Caroline loves hanging out with her classmates and being a "cat mom" to Darla. She also has worked as a lacrosse coach for the Case Western Reserve University Lacrosse Club and the Shaker Heights High School Varsity Girls Team.

With graduation on the near horizon, Caroline reflects on her appreciation for her CCLCM family. "I've loved being a classmate of thirty-two. We really are a family," she says. "I feel fortunate that even though we will be going off to different cities next year, we will have each other for life."

Caroline offers this advice to incoming medical students: Don't be afraid to get involved in something outside the hospital. "Being able to do things and meet other Clevelanders who are not involved in medicine has helped make my experience even better," she says.

ACCOLADES



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Selena Pasadyn



Christine Warren, MD, MS

Research project accepted for oral presentation

Congratulations to Selena Pasadyn ('21) whose teledermatology research project, entitled "Store-and-Forward Teledermatology Impact on Diagnosis, Treatment, and Dermatology Referrals: Comparison Between Four Practice Settings," was accepted for oral presentation at the American Academy of Dermatology annual meeting in March 2020.

Selena's research mentor is Christine Warren, MD, MS ('09), Clinical Assistant Professor of Dermatology and Associate Dean of Admissions and Student Affairs.

"Dr. Warren is a phenomenal mentor, as she has guided me through thinking up research questions and executing them, has taught me so much about diagnosis and treatment in the clinic, and provides detailed feedback so I can continue to learn and improve," says Selena. "I feel very blessed to have the opportunity to work with her and hope to one day be as great of a physician-scientist and educator as she is."

STUDENTS AND FACULTY: Be sure to email Laura Greenwald with news about your achievements so that we can share your terrific news with our entire education community!



Caregivers earn Educator & Scholar Development certificates

Dozens of caregivers engaged in various faculty development programs offered by the <u>Office of Educator & Scholar Development</u>, earning them certificates in 2019.

Earned the Distinguished Educator I: Fundamentals of Teaching Certificate from the Office of Educator & Scholar Development in 2019:

- Gowrishankar Gnanasekaran, MD, MPH, Medicine Institute
- Katie Pestak, MD, Pediatric Hospital Medicine
- Roshni Sreedharan, MD, Anesthesiology Institute
- John Kanaan, MD, Anesthesiology Institute
- Lora Greene Sowunmi, MD, Pediatric Institute
- Divya Yogi-Morren, MD, Endocrinology & Metabolism Institute

Earned the Distinguished Educator I: Fundamentals of Teaching Certificate from the Office of Educator & Scholar Development in 2019:

- Jessica Greenfield, PhD, Center for Educational Resources, Education Institute
- Himanshu Deshwal, MD, Internal Medicine (Trainee-Graduated)
- Sherie Gause, MD, Respiratory Institute (Trainee-Graduated)
- Kelsey McHugh, MD, Pathology & Laboratory Medicine Institute (Trainee-Graduated)
- Tinetta Serdinak, MA, CCC-SLP, Therapy Services
- Joyce Brodnik, MSN, RN, CCRN-K, VA-BC, Nursing Education
- Linda Juriga, MEd, BSN, RN, CMSRN, Nursing Education
- Amanda Koehler, BSN, RN, CCRN-K, Nursing Education
- Tammy Leon, MSN, RN-BC, Nursing Education
- Kathleen Mau, DNP, APRN, Nursing Education
- Migdalia Serrano-Smith, MSN, RN, Nursing Education
- Renate Szeltner, MSN, RN, Nursing Education

- Amy Moore, BA, Scientific Publications, Education Institute
- Catherine Forse, MD, MSc, Pathology & Laboratory Medicine Institute (Trainee-Graduated)
- Cory Henson, MD, Pediatric Institute (Trainee-Graduated)
- Erica Parrotta, DO, Neurologic Institute (Trainee-Graduated)
- Sarah Basurto, BSN, RN, OCN, Nursing Education
- Evangeline Galizio, BSN, RN, CMSRN, Nursing Education
- Amanda Kleckner, BSN, RN, CMSRN, Nursing Education
- Susan Lanzer, BSN, RN, CMSRN, Nursing Education
- Stacey Lieux, MSN, RN, Nursing Education
- Sol Sanchez, BSN, RN, Nursing Education
- Jaclyn Shriver, MSN, RN, Nursing Education
- Antoinette Zito, MSN, RN, FASPAN, Nursing Education

continued >>



Gowrishankar Gnanasekaran, MD, MPH



John Kanaan, MD



Katie Pestak, MD



Lora Greene Sowunmi, MD



Roshni Sreedharan, MD



Divya Yogi-Morren, MD



Jessica Greenfield, PhD



Amy Moore, BA



Himanshu Deshwal, MD



Catherine Forse, MD, MSc



Sherie Gause, MD



Cory Henson, MD



Kelsey McHugh, MD



Erica Parrotta, DO



Tinetta Serdinak, MA, CCC-SLP



Sarah Basurto, BSN, RN, OCN



AVAILABLE.





Sol Sanchez, BSN, RN



Joyce Brodnik, MSN, RN, CCRN-K, VA-BC



Susan Lanzer, BSN, RN, CMSRN



Migdalia Serrano-Smith, MSN, RN



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Tammy Leon, MSN, RN-BC



Jaclyn Shriver, MSN, RN



Linda Juriga, MEd, BSN, RN, CMSRN

PHOTO NOT

AVAILABLE.

Stacey Lieux, MSN, RN

Renate Szeltner, MSN, RN



Amanda Kleckner, BSN, RN, CMSRN



Kathleen Mau, DNP, APRN



Antoinette Zito, MSN, RN, FASPÁN

Caregivers earn Educator & Scholar Development certificates continued

Earned the Distinguished Educator II: Scholarly Activity Certificate from the Office of Educator & Scholar Development in 2019:

• Matthew Goldman, MD, Family Medicine

Earned the Distinguished Educator II: Written Feedback Certificate from the Office of Educator & Scholar Development in 2019:

• Suneeti Sapatnekar, MD, PhD, Laboratory Medicine

Earned the Train-the-Trainer for Health Professions Educators Program Certificate from the Office of Educator & Scholar Development in 2019:

- Bhavana Bhagya Rao, MD, Gastroenterology Resident
- Matthew Goldman, MD, Family Medicine
- Charlie Lin, MD, Internal Medicine Resident
- Alison Rybak, MEd, Graduate Medical Education



Matthew Goldman, MD



Suneeti Sapatnekar, MD, PhD



Bhavana Bhagya Rao, MD



Charlie Lin, MD



Alison Rybak, MEd

Congratulations to all for your hard work and determination to become among the finest of Cleveland Clinic educators! <u>Get details on programs offered by the Office of Educator & Scholar Development</u>.



Wedding bells

Ruth Davis, MD ('17), and Matt Blum, MD ('17), were married on Sept. 14, 2019. In attendance were several of their 2017 classmates, including Charlie Dai, MD; Adeeb Derakhshan, MD; Tunrayo (Mobolaji-Lawal) Oniwe, MD; Damilola Phillips, MD; Anne Runkle, MD; Alicia Stallings, MD; and Nick Szoko, MD.

"Who would have thought the dean of admissions also serves as matchmaker for so many couples!" says Dr. Blum, referring to Kathleen Franco, MD, Professor of Medicine, who retired last year. "We are so grateful for the bonds we formed in medical school with each other and so many of our close friends. From our first meeting at second look, to couples matching in Baltimore and graduating as fiancés, we look back on our time in Cleveland with the utmost fondness."

Both Drs. Davis and Blum matched to Johns Hopkins Hospital, Dr. Davis in otolaryngology, and Dr. Blum in internal medicine.

Congratulations and best wishes for a happy, long life together!









Alums reconnect at annual conference

Seetharam Chadalavada, MD ('09), and Nancy Pham, MD ('11), reconnected at the Radiological Society of North America annual conference in Chicago last month.

Dr. Chadalavada completed a residency in diagnostic radiology and a fellowship in interventional radiology and imaging informatics at the Hospital of the University of Pennsylvania in Philadelphia. Currently, he is the Vice Chair of Radiology-Informatics, Director of Interventional Radiology Medical Student Education, and Assistant Professor of Vascular and Interventional Radiology at University of Cincinnati and UC Health in Cincinnati.

Following an internship in Internal Medicine at Cleveland Clinic, Dr. Pham completed her residency in radiology and fellowship in neuroradiology at Duke University Medical Center in North Carolina. She is currently an Assistant Clinical Professor and neuroradiologist, with special interests in head and neck oncology and research, at UC Davis Comprehensive Cancer Center.



MARK YOUR CALENDAR

March 9-20

CCLCM Capstone

Cleveland Clinic

March 13

Tenth Annual CCLCM-wide Student Research Day

Cleveland Clinic

March 20

Match Day Dean's Comments: 11:30 a.m. Opening of the Envelopes: Noon Reception following CWRU, Tinkham Veale University Center

Advancing Our Mission

The Education Institute welcomes donations to advance its mission of educating those who serve. Individuals, families, foundations and corporations that believe in the value of education are making a difference in the future of patient care with their generosity. To learn how you can help, please contact Theresa Holthaus at 216.444.1839 or at holthat@ccf.org.

Alumni: Share Your News

We'd like to hear about what you've been doing since graduation. If you have news to share (maybe you're involved in an interesting research project or you recently returned from a global health mission), please email Laura Greenwald at greenwl@ccf.org.

Laura R. Greenwald, MBA, Managing Editor Dominique Pishotti, Writer Mary Reagan, Art Director