



SYNGCUK KIM ENDODONTIC CLINIC:

A HIGH-TECH SETTING FOR EDUCATION,
RESEARCH & PATIENT CARE





Penn Dental Medicine opened the doors of its new Syngcuk Kim Endodontic Clinic on January 7, 2013, and with it, opened the doors to one of the most high-tech clinical settings for endodontic instruction and patient care. While excellence in endodontics has long been synonymous with Penn Dental Medicine, now the School has a clinic environment that reflects the leading-edge instruction, research, and clinical care that are the hallmarks of the Penn program.

"It is truly the best of the best in terms of the equipment," says Dr. Syngcuk Kim, Louis I. Grossman Professor, who has led the Department of Endodontics for the past 21 years. "Seeing this clinic become a reality is tremendously rewarding for all it brings to the School. It gives our students and faculty the best environment for learning and teaching, provides the opportunity for first-rate clinical research, offers a wonderful venue for continuing education, and enables us to provide excellent patient care to the community."

Above: Dr. Syngcuk Kim, Louis I. Grossman Professor (center), in the Syngcuk Kim Endodontic Clinic with (left to right) Dr. Samuel Kratchman, GD'91, Clinical Associate Professor of Endodontics; Dr. Yi-Tai Jou, D'99, Director, Predoctoral Endodontics; Dr. Frank Setzer, GD'06, GD'07, D'10, Clinic Instructor; Dr. Bekir Karabucak, GD'07, D'02, Associate Professor of Endodontics and Director, Postdoctoral Endodontics Program; and Dr. Meetu Kohli, D'02, GD'05, Clinical Assistant Professor of Endodontics.



MODERN MEETS CLASSIC

The new space combines bright, modern design within the classic architectural elements of the historic Thomas Evans Building, with the original 10-foot windows revealed on both the north and south sides of the clinic, flooding the space in natural light. The Philadelphia-based architectural firm of Buell Kratzer Powell

designed the clinic, which remains in its previously existing location on the second floor of the Evans Building, but gained square footage by expansion into an adjoining area on the east end of the clinic.

The clinic features a total of 23 chairs and is designed on three levels. The entrance level includes the patient reception and waiting area, a surgical suite, a handicapped-accessible operatory, a cone beam CT radiography suite, and an instrument dispensing room. Five steps lead up from that level to the main clinic space; divided by a central corridor that incorporates a supply area, it features a wing of eight operatories on one side (designated for first-year residents) and a wing of eight on the other (designated for second-year residents). Steps on the east end of the clinic lead up to the third level — the new space gained in the renovation. It features

the main surgical suite, four operatories for predoctoral students, a consultation/meeting area, and preclinical work stations for participants in the Department's continuing education program for international clinicians, which is a three-month program designed for general dentists practicing in other countries.

BUILT WITH NEW VISION, INSPIRED ALUMNI

The state-of-the-art facility is the first project of the School's 10-year master plan for facilities improvements, a strategic plan for building and renovating key clinical, research, and teaching spaces to advance the School's mission and ensure it can continue to attract top students and faculty. While this clinic is a vital part of this vision for the future, making it a reality drew on strong ties from the past as well, with alumni coming together in great numbers to support the project. Alumni and friends contributed more than \$2 million to fund the renovation, which recognizes Dr. Kim's contributions to the Department and the field of endodontics as a whole with the naming of the clinic in his honor. A special dedication event was held on March 1, 2013 to celebrate the new space and alumni support (see photos, page 30).

"Our education at Penn Dental has given us so much; it is only appropriate that we give back, and recognize Dr. Kim, who has been such a great mentor," says Dr. Samuel Kratchman (GD'91), Clinical Associate Professor of Endodontics at Penn Dental Medicine, who along with his fellow endodontic alumni — Drs. Jung Lim (GD'04) and Brian Lee (D'00, GD'04) — led fundraising efforts for the clinic renovation among the Penn Endo Graduate Alumni Group. "I am very humbled by the naming of this clinic in my honor and the tremendous alumni support at all levels that has made it possible," adds Dr. Kim.



Each operatory features a surgical microscope, a digital x-ray unit, a chair-side computer for accessing patient records, and an elevated monitor for viewing clinical care as it occurs. The chairs are also specially designed with endodontic ultrasonic and endodontic electric motors built into the instrument panel. Designed in three levels, the entrance level includes the patient reception and waiting area, a surgical suite, and a handicapped-accessible operatory.



The clinic's high-tech equipment goes beyond the microscopes as well. The chairs are specially designed with the incorporation of endodontic ultrasonic and endodontic electric motors into the instrument panel. Each operatory also includes its own Carestream digital x-ray unit, seamlessly integrated with the School's electronic patient records, along with a chair-side computer for accessing patient records and a second elevated monitor for viewing

OUTFITTED WITH LEADING-EDGE TECHNOLOGY

Over the past two decades, the field of endodontics has been transformed by the illumination and magnification of the operating microscope and the accompanying high-tech instruments, and Penn Dental Medicine has been at the forefront of that movement, establishing itself as the leader in the integration of the operating microscope into endodontic education and practice. The high-tech equipment of the new clinic takes the Department to a new level of leadership.

Through a partnership with Carl Zeiss Meditec, the clinic is outfitted with ZEISS OPMI® Pico surgical microscopes in its 21 operatories and has OPMI® PROergo surgical microscopes in its two surgical suites. "This is the latest generation of microscopes with the best configuration of features in terms of flexibility and illumination," notes Dr. Kim. "Using a microscope in dentistry is different from other types of surgery. In dentistry, the patient is awake and can move, and we need to follow that movement. It involves tremendous flexibility in the microscope and our microscopes are perfectly equipped for that."

"We also have gained a great ability to document cases for research and education," adds Dr. Bekir Karabucak, Associate Professor of Endodontics and Director of the Postdoctoral Endodontics Program, explaining that each of the microscopes includes a high-definition camera for still image capture and video recording or streaming.

clinical care as it occurs. Along with Zeiss, other corporate sponsors that provided much of the state-of-the-art equipment for the clinic are B&L Biotech, Brasseler, and Carestream.

"Having all this equipment at each unit makes for more efficient care, which benefits the patients as well as the students," says Dr. Frank Setzer, Clinic Instructor. The fully equipped operatories also benefit students in terms of the cost of their postdoctoral education. "A number of programs require students to purchase their own microscopes and endodontic motors," explains Dr. Kim, "providing them as part of our clinic, eliminates that expense from our residents' educational budgets."

Rounding out the high-tech equipment within the clinic is a cone beam CT radiography unit. "Having a cone beam unit within the clinic gives our residents direct hands-on exposure to taking these scans and learning how to interpret them with the help of radiology," says Dr. Karabucak. "While we only use these 3D scans for special cases, seeing the anatomy and pathology before doing these procedures is a vital tool that is now readily available."

Dr. Samuel Kratchman (GD'91) in the Zeiss Microsurgical Suite — it and the Dr. Gabriele Edoardo Pecora Microsurgical Suite are specially equipped for streaming live surgical case demonstrations. All surgical microscopes in the clinic are outfitted for capturing high-resolution photos and video.



ADVANCING CONTINUING EDUCATION

Along with enhancing the educational experience for the residents in the School's endodontic program and the pre-doctoral students who rotate through the clinic, this new facility will also advance the School's continuing education efforts for courses held at Penn Dental Medicine as well as at venues around the country and world.

The two surgical suites — the Zeiss Microsurgical Suite and the Dr. Gabriele Edoardo Pecora Microsurgical Suite — are specially equipped for streaming live surgical case demonstrations to outside sites, such as national meetings or international symposia, as well as to monitors within the clinic itself or Penn Dental Medicine classrooms.

"The consultation area in the east wing of the clinic has a monitor so students or participants here as part of our international program can sit in that area and observe and discuss cases as they occur in one of the surgical suites," notes Dr. Karabucak. "It is another way this technology can add to our teaching resources."

The new clinic will boost the Department of Endodontics' Microscope Training Center courses as well. Since 1993, the Department has opened its doors to current practitioners looking to build their skills with the operating microscope and the latest instrumentation through its Microscope Training Center. Faculty members and postdoctoral residents provide intensive two- and three-day seminars and one-on-one hands-on training in microendodontics, advanced microendodontics, and microsurgery. With the



16 operatories in the main clinic area equally outfitted with microscopes and monitors, there can now be 16 participants for this one-on-one instruction. "There needs to be a monitor and microscope for each participant, so we can observe their work and watch that they are doing it correctly," explains Dr. Setzer. "The new clinic doubles the number we could accommodate previously in these hands-on courses."

From continuing education to clinical instruction and patient care, the benefits of this new clinic are many indeed and extend beyond the present. "It's an inspiring space," observes Dr. Kim. "We have great students and great faculty, and now a great clinic that will allow us to do even more." **PDJ**

—Beth Adams



The 16 operatories in the main clinic area — 8 on each side of the center corridor — are equally outfitted with microscopes and monitors, doubling the number of participants the Department can accommodate in its one-on-one, hands-on continuing education courses.



A consultation area in the east wing, third level of the clinic also has a monitor where faculty can discuss cases with students as they occur in one of the surgical suites. This third level — the new space gained in the renovation — also features the main surgical suite, four operatories for predoctoral student cases, and preclinical work stations for participants in the Department's continuing education program for international clinicians, which is a three-month program designed for general dentists practicing in other countries.

NEXT STEPS: FACILITIES MASTER PLAN MOVING FORWARD

With the Syngcuk Kim Endodontic Clinic complete, sights are set on the next priority within the School's 10-year master plan for facilities improvements — the lower concourse of the Thomas Evans Building.

Plans for the Evans Lower Concourse call for a major transformation of this 34,000-square-foot space, where along with an infrastructure renovation, the featured projects include a new Preclinical Lab and Continuing Education Training Center, replacing the General Restorative Dentistry Lab, and a new general restorative clinic, replacing the Myers and Paletz clinics. When the master plan was originally completed, the Preclinical Lab and Continuing Education Training Center was slated for the third floor of the Evans Building; subsequently, unforeseen challenges with that location prompted a change of plans. Now, the current General Restorative Dentistry Lab will undergo a complete overhaul to become the new Preclinical Lab and Continuing Education Training Center — a high-tech environment for preclinical instruction and hands-on continuing education courses.

The Preclinical Lab and Continuing Education Training Center will feature fixed benches with ample space for table-top projects and retractable simulation units fully outfitted with dental equipment and designed to replicate the spatial dynamics of a clinical setting to reinforce correct positioning and posture. Each space will also have a dental light and computer monitor for instructional videos and streaming of live demonstrations. This new space and its technology will also be used for hands-on continuing education programs, where presenters can stream live demonstrations.



The Lower Concourse Clinic will provide an estimated 70 dental operatories within a single space that is the same footprint as the School's Main Clinic two floors above. The entrance will be on the north side, allowing for a patient waiting area directly accessible from the lower level corridor and elevators in the Robert Schattner Center. The waiting area will also be bathed in natural light from an existing wall of windows that offer a view of the rock garden within the Robert Schattner Center courtyard and Fonseca Gardens.

Currently, plans are progressing with a feasibility study for the Evans Lower Concourse underway. Using the original master plan as a starting point, the study is re-evaluating the program and performing a strategic analysis of the mechanical, electrical, and plumbing systems and an assets and structural assessment review to determine construction costs and a programming- and design-phase schedule for moving forward. Be a part of shaping the future of care at Penn Dental Medicine. Contact Maren Gaughan, Associate Dean for Development and Alumni Relations, at 215-898-8951 for more information on the Evans Lower Concourse projects.