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Obituary

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In memory of Nathan A. Berger, MD

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Every July, the large lobby of the Biomedical Research Building at Case Western Reserve University is filled with posters displayed by eager high school students for family members and mentors. Students speak about their work with passion. Presiding over it all has been a supportive figure who introduces the session with pride and affection, Nate Berger. Midway through the 2024 student research program. Nate Berger passed away. Afterwards, it just wasn't the same.

His life

Nate arrived at Case Western Reserve University School of Medicine in 1983 as chief of the division of hematology-oncology, a man on a mission to build cancer research and obtain an NIH-designated cancer center. Building on his own research on poly (ADP-ribose) polymerase, DNA repair, stress proteins, and developmental therapeutics as they impact cancer, he also recruited bright young talent like Stan Gerson and James Willson, who themselves later became cancer center directors, and Sandy Markowitz, who grew into the director of a prominent NCI SCOR grant in gastrointestinal cancers. By 1987, Nate had achieved that goal. Subsequently, the Center attained comprehensive status and became the Case Comprehensive Cancer Center (CCCC). The CCCC remains Nate's legacy, studded with famous laboratories and rife with groundbreaking success. Even after he left the leading role, he kept watch and helped propel the CCCC to new heights. He was a passionate advocate for research and an elegant writer. Over time, his interests

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shifted to energy metabolism, genetics, and cancer, and he became an expert in the field. In his later years, he collaborated with a professor who was an expert in artificial intelligence and informatics, Rong Xu, on cancer risks conferred by COVID-19 infection and by obesity - and how they might be mitigated by new drugs such as semaglutide. He advised cancer investigators, believed fervently in the grant system, and instilled in others respect for the idea that fortune favors the funded!

From 1995 to 2002, Nate served as Dean of the School of Medicine. He viewed his mission there as promoting research and catalyzing its support. To do this, he not only recruited impressive talent, but also saw to it that investigators were supported with nominations for awards and mentoring. His nominations were beautifully written and often successful. He also realized that research requires modern space, so he oversaw the construction of a large, light-filled addition to the basic science departments. He knew that research took money, and so he advanced the position of the Medical School in the community, promoting the Amici Medicinae (Friends of Medicine, an evening dinner group meeting held before the Thursday performance by the Cleveland Orchestra) to familiarize community leaders with the work of the school (and encourage donations!). He founded the Mini-Med School, a series of presentations on medical topics led by excellent researchers and teachers in the school, again to engage the community with medical topics and show the prowess of the faculty. He raised funds to greatly expand the availability of endowed chairs for top talent, and he took the time to know them well as they developed their work.

Nate was a social creature. As Dean, he held Saturday morning leadership meetings with bagels, and he relished social interactions, from recruiting dinners to celebrations and research meetings. Every New Year's Day, he had an open house featuring multiple soups and Indian foods prepared by his wife Sosamma (also known as Susie), who was of Indian descent. These occasions were so popular that those who attended could barely move amidst the crowd. Everyone was sure to meet someone they knew, as well as someone they did not. That was the point. Science required collaboration - and Nate facilitated that through food.

As his deanship was ending, to promote scientific literacy and lift the expectations of the youth of Cleveland, he developed the Summer Youth Opportunities Program, or SEOP, which accepted students from many of the local public school districts and carefully matched them to brilliant sympathetic mentors, hand-picked for their patience and ability to bring out the best in students. He attracted support from some of his many community contacts, who kept the program going in the early years. Over the ensuing years, inner-city students told him that they feared that their success in this program only occurred because they were only competing with other inner-city students, and the program did not enroll the privileged, wellprepared students they would meet if they advanced. So, while retaining a strong emphasis on local students, he added those from suburban districts and private schools. The inner-city students learned that they could compete and be accepted among a diverse group of peers. The suburban students coveted this opportunity to interact with medical leaders. The program grew. When the National Cancer Institute (NCI) caught up with Nate's vision of providing early inspiration to foster recruitment into science, Nate obtained funding for the NCI program, Youth Enjoying Science (or YES), which expanded contacts to the middle school level and to teachers, and provided focus for some of them in the study of cancer. Nate added faculty and administrative help to run SEOP/YES. This program is one of great promise. At its maturity, more than 90% of its graduates were going to college (up from 35% in the Cleveland Metropolitan Schools when he started, and 65% when he finished) and some went on to medical or graduate school, inspired by what they had seen and driven to make a difference - like Dr. Berger. Nate was able to pull off such a successful program because he himself was an accomplished researcher, a revered mentor, and an experienced administrator with broad connections to the community and throughout the School of Medicine. Had any of those elements been missing, SEOP/YES would not have thrived. His impact will reverberate for generations.

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Nate did not just paint the program with broad strokes - he attended to detail and cared about the students. Nate applied his formidable writing skills to recommend students for local, regional, and national awards. I collaborated with him on two of these for his trainees - a Davidson Scholar award for Lindsey Wang, and a Calvin Coolidge fellowship for her brother Bill. Lindsey, an accomplished computer programmer, found an enormous opportunity in the SEOP/YES program, where she did the analytics for many papers on pediatric response to COVID and other viral infections, and also many about cancer, learning the skills not only of preparing data but also of presenting it to advantage, with clear charts and graphs. The Davidson Scholarship is a national award based on a research project and is given at three tiers in the form of a college scholarship. Lindsey received one of only two of the highest-level awards, and now attends Case Western Reserve University in a program that advances students after a successful undergraduate career directly to medical school. Bill is still in high school but was proposed as a Coolidge fellow, which provides the opportunity for a week in Vermont with other skilled students from across the country. Bill was working on the impact of the new anti-obesity drugs on diseases of cravings - tobacco use disorders, alcohol use disorders, and drug abuse. Nate was eager to have his top students recognized for their skills and advised them to aim high.

It is hard to remember Nate without thinking of Susie. As petite as he was large, she was charming and accomplished mountains of work with seemingly little ruffle. She kept things the way he liked them, at home, in the lab, and with the three children. She sat in his lab meeting, taking notes on a yellow pad that became the bible for the week. She was at the heart of the New Year's Day open house. She was not only smart and competent but also ever-present, gliding in her sari in the background but smoothing the way. They were a team, at work and at play and at life.

The last few years of Nate's life were troubled by health issues. No one could figure them out. Rumor had it that Nate and his physician had an ongoing battle over whether this novel disease would eventually be named for the physician or for Nate himself. It affected his mobility, and he needed help to arrive at inperson meetings. The coincidence of COVID-19 and the rise of Zoom was a godsend, for he could participate fully without having to move about. Fortunately, his mystery disease did not affect his brain. Four days before his death, he was talking science with Bill, the Coolidge fellow. Contact with these young people kept him going, and several, like Bill and Lindsey, stayed in touch throughout the school year and did research on the side. They, especially, will miss him. He was a rock to which they could anchor their ambitions, who never thought they were foolish to think big, who always encouraged them and believed in them. For the rest of us, we know, to paraphrase Hamlet, we shall not see his like again.

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