

UNIVERSITY of MARYLAND

MEDICINE *Bulletin*

Fall 2017 • Volume 102 • Number 2

SOLE FIELD HOUSE
PERFORMANCE CENTER



MARYLAND

TE

THE SCIENCE OF SPORT

A Center Like No Other

By Sandra McKee

THE SCIENCE OF SPORT

Big...hairy...audacious goals.

Those are the words professor and orthopaedics chair Andrew N. Pollak, MD, used when describing his dreams for the new University of Maryland Center for Sports Medicine, Health and Human Performance that is expected to be finished in 2019.

One might have added daring to the adjectives, as it brings together two proud universities—the University of Maryland, Baltimore (UMB) and the University of Maryland, College Park (UMCP)—to undertake a project that restores a classic building, Cole Field House, and creates an athletic, medical, and scientific research center unlike any that has been seen here—or possibly anywhere—before.

According to the center's co-directors, Pollak, who is the James Lawrence Kernan Professor and Chair, and Kevin Anderson, UMCP athletic director, the project grew out of a concept that leveraged Big Ten football and intercollegiate athletics into something much more magnificent.

"It was the brainchild of Kevin Anderson and me," says Pollak, who also credits the vision and leadership of both university presidents, medical school dean E. Albert Reece, MD, PhD, MBA, and the University System of Maryland Board of Regents. "We both recognized the importance of taking full advantage of the type of facility that could be developed around a Big Ten athletic program, a robust program to care for the entire area and region."

"It's a game-changer," says Anderson. "It gives our athletes everything they need to become



Andrew N. Pollak, MD

Photos by Alex Likowski

A Center Like No Other



Alan Faden, MD

21st-century athletes, both athletically as well as medically. And it also forged and enhanced the relationship with the medical school, our university, and our department.”

The first priority will be to address “a clinical question of great importance in sports”—the study of traumatic brain injury. But while concussions will be the initial focus, Pollak points out, it won’t stop there. There will be many questions addressed that are presented by healthy individuals in athletic endeavors.

“We will see kids playing youth sports, high school athletes, college and professional players, weekend warriors, and older people who are exercising to stay healthy,” Pollak says. “We will see students, student-athletes, faculty, and staff, and we will be a resource to the greater Prince George’s County community.”

Pollak notes PG County has a population of 900,000 with relatively little access to high-quality health care, particularly

sports medicine. The vision for the facility is to be “a magnet for sports medicine” in the entire D.C. area.

The scope is wide open. Everything from basic sports medicine to orthopaedics, to sports psychology, to seeing what the brain looks like “anatomically and functionally, after a concussion in ways that haven’t been possible in the past” will be pursued.

The new center will cost \$196 million. Of that amount, \$90 million is expected to come from donations. Thanks to 140 donors, including UMCP graduate and Under Armour CEO Kevin Plank, who started the fundraising drive with a \$25 million donation, 45 percent of those funds has been raised.

An extra carrot: The project is anchored by Cole Field House, which has been converted from a storied basketball arena to a building holding a new indoor practice field, training facilities, and locker rooms for the Terrapins football team. Cole also will house the academy for innovation and entrepre-

“The ability to integrate diverse research programs that involve biological sciences, engineering, computer sciences, and physical science will create powerful synergies that can address big science questions and will provide unparalleled opportunities for inter-campus collaboration and research funding.”

neurship, which will be run separately through UMCP.

A new 60,000-square-foot addition will be spread over two floors. It will house UMB faculty practices for the program in sports medicine, a newly formed clinical entity to facilitate interdisciplinary collaboration in the care of athletes on the first floor, and the sports medicine scientific research area on the second. The research component will initially be under the direction of scientific co-directors Alan Faden, MD, professor of anesthesiology, and Elizabeth Quinlan, PhD, professor of biology at UMCP, both of whom have significant professional interest in sports concussion.

The anticipation is palpable. You can hear it in Pollak’s voice, in Anderson’s. From Faden and Quinlan. And you can hear it in the voices of the clinical practitioners, like Valerie Cothran, MD, and Frank Henn, MD, of the department of orthopaedics.

“This new facility gives us so much,” says Cothran, who is the head team physician for all of the UMCP athletic programs. “It continues the tradition of having superior facilities. It’s exciting in terms of collaboration between the College Park campus and Baltimore. Most people would say the care athletes get in division I and in the pros is excellent. To provide that to the general public will be wonderful.”

UMB has had clinical practices based in College Park on Hartwick Road for more than 10 years, says Henn, who is also a Terps team physician.

“The center provides a tremendous opportunity for collaboration,” Henn says. “I am really excited about having the doctors, physical therapists, athletic trainers and researchers all together. That is really the innovative aspect—having multiple disciplines in one building.”

COLLABORATION KEY ELEMENT

Such teamwork is what the Maryland General Assembly had in mind when it launched the structured collaboration known



Elizabeth Quinlan, PhD

as *MPowering the State* in 2012 that grew into the Maryland Strategic Partnership Act of 2016, including \$3 million in seed money for the center for sports medicine.

“This represents one of the ultimate examples of how these two universities can come together to accomplish something neither one of these universities could have accomplished alone,” says Pollak, who singles out board of regents members Barry Gossett and Francis X. Kelly for pushing the idea forward.

Adds Faden, director of the center for shock, trauma and anesthesiology research (STAR), “The ability to integrate diverse research programs that involve biological sciences, engineering, computer sciences, and physical science will create powerful synergies that can address big science questions and will provide unparalleled opportunities for inter-campus collaboration and research funding.

“For example, within the last six months our lab group has initiated five new collaborations with College Park faculty. Research topics include micro-RNA mechanisms and biomarkers in concussive head injury, how brain injury profoundly affects the gut, microparticle-mediated chronic inflammation

in the brain, and engineered microvesicles as therapeutic agents. Other investigators at the medical school have also begun to leverage their research through such partnering.

“MPower funding in the area of traumatic brain injury and related neuroscience is currently supporting multiple bi-campus research initiatives of exceptional potential that should help establish a national reputation for the center, even before the hub clinical/research building is completed in 2019.”

Co-director Quinlan shares Faden’s excitement. A bridge builder who is good at communicating across disciplines, she says the goal of all basic science is to have discoveries such as Faden’s translated to the clinic—“to the medical treatment of patients.”

That’s where the new center comes in. It eliminates the long-standing boundaries—geographic, cultural, and others.

“This facility tears down those boundaries by bringing the basic scientist and the clinical scientist together under one roof,” Quinlan says. “This is absolutely going to accelerate translation. Multidisciplinary work is really the foundation of bold breakthroughs.

“To be able to work with a group of people who are experts in the field and their expertise is different from your own, that’s what really makes this exciting for me. You can see the problem from each person’s perspective within each discipline’s perspective—that’s something that we all hope for.”

PLAYING BALL

Speaking of team building, Pollak is an old hand at it. A six-year Cleveland resident during college and residency, he didn’t mind hearing that the National Football League Browns would be coming to Baltimore in 1996.

“I wasn’t heartsick they were leaving Cleveland,” says Pollak, who arrived at the University of Maryland School of Medicine in 1994, 10 years after the Baltimore Colts left town. “I was heartsick that I’d come to a town that didn’t have a football team.”

Hearing that the Browns were coming, he saw it as an opportunity, not a reason to protest. “I said to my boss here, ‘We should put together a sports medicine program for the new team.’ He said, ‘No way, Union [Memorial] will get that.’ And I said we should at least try and he said, ‘OK, go ahead and see what you can put together.’ So we recruited a sports orthopaedist (Claude T. Moorman, MD) from North Carolina, the primary care doc from the Browns (Andrew Tucker, MD), and got John Unitas (Baltimore Colt’s hall of fame quarterback) to help us with the presentation. The rest is history.”

Pollak got the job done, building the Ravens sports medicine program over the first eight years they were here. Meanwhile UMB also took over doing the Terrapins’ physicals in College Park. Under Pollak’s leadership the Terps’ current sports medicine program—which UMB continues to administer, with Cothran, Henn, and Craig Bennett, MD, the Terps’ chief orthopaedic surgeon—was spawned.

Like the effort of going after the Ravens’ medical program, the hardest part of putting the center together was convincing people a vision like this was achievable. After all, this vision is huge.

“I know what the future of Cole Field House looks like. It looks like hope to millions of Americans who suffer debilitating injury. And it looks like home to everyone who’s serious about cutting-edge leadership in the science of sport.”

“This facility will be the best and biggest of its kind in the Big Ten and likely one of the premier facilities in the world,” Pollak says. “I’m not sure there is nothing like it anywhere, but we did our homework. We went and saw some places and we learned and grew from there. We have a much, much stronger research focus than many of the other facilities. But we are going to have a very, very robust clinical practice, as well.”

While Anderson says he would never have taken Maryland from the Atlantic Coast Conference into the Big Ten “if I didn’t believe we’d be competitive,” it doesn’t take a very long memory to recall the sentiment coming from outside the UMCP campus community that Maryland wasn’t quite ready for it, that it would be, perhaps, dwarfed by institutions like Ohio State and Michigan, not only on the playing fields, but in its research and development arms, as well.

It was building on the transition and energy the move created that has made the current project possible and has made both UMB and UMCP better academically, clinically, and in research.

“But we can only accomplish any one of those things by accomplishing all of them simultaneously,” Pollak says. “Each one of these efforts is synergistic to the others.”

Pollak says there will be projects that belong to College Park faculty, and projects that belong to UMB faculty.

“But, at the end of the day, the projects will feed off each other,” he says. “What we really hope to develop are what

NIH calls program project grants. These are a series of grants that are funded under one umbrella that really allow for the development and understanding of the disease process at a very cellular and mechanistic level. What’s the mechanism by which the brain changes the way it works as a result of injury? What exactly happens, not just on a macro level, but a microscopic level?

“Once we know that, I’m guessing, we have a possibility of understanding how to treat it. Until we understand that, we are just guessing. Those are the big, hairy, audacious goals.”

And each university needs the other to make it work. UMCP has the intercollegiate athletic program, UMB the medical school, whose trauma centers in Baltimore and Prince George’s County already see more than 10,000 head injuries every year, which Pollak says “likely puts them in the No. 1 position nationally.” UMCP has the undergraduate student population, while UMB has the graduate student population, both of which Pollak believes are necessary for the center to succeed.

COLE HISTORY RELEVANT

During the formal opening of the center and groundbreaking for the science and research phase Aug. 2, UMCP president Wallace D. Loh, PhD, JD, acknowledged that view. He called the project “the capstone of the relationship between the University of Maryland, College Park and the University of Maryland, Baltimore” and pointed out that since the undertaking began “it has generated 60 joint faculty appointments and \$80 million in research funding that neither school could have generated on its own.”

There was also the matter of egos. Both schools have long, proud histories. Being team players was necessary to achieve the dream that is housed in the newly remodeled Cole Field House.

Says Pollak: “One of the reasons we’ve been able to succeed at this magnitude is that people in leadership positions at both campuses were able to overcome their egos.”

Certainly, melding opinions and egos is nothing new to the grand, 61-year-old structure, where traditional ideas have been set aside over its history for the greater good.

In 1966, Cole was the site of the NCAA men’s basketball championship that broke the color barrier, when Texas Western, fielding an all-black team, beat Kentucky, an all-white team.

In 1971, an international ping pong match there between the United States and China helped break down what Loh called “The Bamboo Curtain” during the Cold War.

Perhaps not on the same level, but grand, nonetheless, is seeing two great universities come together to achieve something bigger than either of them could achieve alone.

“I know what the future of Cole Field House looks like,” UMB president Jay A. Perman, MD, said at the groundbreaking. “It looks like hope to millions of Americans who suffer debilitating injury. And it looks like home to everyone who’s serious about cutting-edge leadership in the science of sport.”

Perman said he has watched the UMB scientists and UMCP engineers work together on questions. “They’ve made answers,” he said. “They’ve opened new paths where old ones end.”

And they’re only just beginning. 🏠



UMB president Jay A. Perman, MD