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Karen Holbrook

When Karen A. Holbrook became the 13th president of The Ohio State University on October 1, she arrived in Columbus at an opportune moment. The Ohio State Buckeyes were on their way to an undefeated season in the Big Ten Conference and a final victory in the Fiesta Bowl to claim the national football championship. "I had everything to do with it," says Holbrook with as straight a face as she can manage. "The coach is getting much too much credit." Then she laughs before adding, "It's great being Number One in the football polls, but I'd also like to see us Number One academically."

To her credit, Holbrook says she faces a steep learning curve in presiding over a big-time college athletics program. She went to Ohio State from The University of Georgia in Athens where as Senior Vice President for Academic Affairs and Provost, Holbrook was responsible for the day-to-day running of virtually every-thing but the Bulldogs' athletic program. Before that, Holbrook was Vice President for Research and Dean of the Graduate School, Office of Research, Technology and Graduate Education at the University of Florida in Gainesville.

Yet friends and colleagues who've followed Holbrook's career in research and then academic administration say they fully expect Holbrook to take Big Ten football in her stride. Karen Holbrook has a knack for drawing diverse talents and perspectives together for mutual advantage, according to colleague Peter Byers. A pathologist and geneticist at the University of Washington School of Medicine, Byers collaborated with Holbrook on 25 published papers on the molecular and morphological bases of inherited skin disorders. Holbrook's ultrastructure lab thrived on her eclectic approach, says Byers, mixing disciplines and technologies. "Karen is, first of all, a superb microscopist," says Byers. "Her micrographs were just works of art. The technical detail she got was terrific and made it possible to see so much."

Holbrook's lab straddled the frontier between research lab and clinic, according to Byers. Holbrook held a joint appointment through the Biological Structure department where she'd done her Ph.D. under electron microscopist Jim Koehler and in the Dermatology Division after she became head of the skin ultrastructure lab. Holbrook took the lab in new directions, says Byers. "Basically she created an image laboratory, transforming what had been a morphology lab into one where all kinds of people could work together, trying to figure out how we could use one set of tools to enhance each other's work. She's so positive in her outlook that you couldn't help feeling that everyone involved was going to come out of this looking good. That's a remarkable ability and one that only a few leaders have."

The clinical aspect gave her research a powerful immediacy, says Holbrook. The inherited fetal skin disorders that she and Byers investigated, the so-called "blistering diseases" such as epidermolysis bullosa or epidermolytic hyperkeratosis, are devastating conditions. "They either take lives," says Holbrook, "or ruin lives." Collaborating with a geneticist like Byers and working with multi-disciplinary colleagues like biochemist Beverly Dale in the lab led to new insights and new capabilities, says Holbrook. "This was before today's molecular techniques [of genetic characterization] but for the first time we were able to make a diagnosis from a sample of fetal skin taken in utero. The neat thing was that once we were able to look at adult skin [from heterozygous carriers] and identify the molecular or structural abnormality, we could ask ourselves based on our studies of fetal skin development, when was the molecule or structure expressed in fetal skin? It gave us a way of making pre-natal diagnosis."

Holbrook's ability to move between research and clinical application impressed her medical collaborators. Says University of Washington medical geneticist Virginia Sybert, "Karen pioneered the field of fetal skin development and her work on the electron microscopy is still the bible. As director of our Dermatology Program Project, she integrated scientists of disparate disciplines into a productive cohesive group. Karen is a basic scientist, and yet I remember seeing her interact with families and with patients with tremendous empathy and support. I still rue the day she left Seattle!"

The path to Seattle and onward to eventual football fame at Ohio State began in Iowa. Her parents were Midwesterners who met at graduate school in New York state. Both had careers in Parks & Recreation Management, and their jobs took them first to Iowa where Karen Horney was born in 1942, and then over the years to Illinois, Indiana, and finally Madison, Wisconsin. There Karen was lucky in finding an inspirational biology teacher, C. Joseph Antonio at Madison West High, and then in enrolling at the "local college." "I didn't know at the time that the University of Wisconsin was a great university," she recalls. "I went because I happened to be living there, although now I feel very fortunate to have ended up at such a great public university. In high school, I just loved biology and from that I did zoology without ever thinking what I might do with it."

Only half in jest, Holbrook claims that she went to grad school in Madison to become a zoology TA. "At that stage, women really didn't have many models or mentors. I thought that as a reasonable goal, I could be a TA." Her sights were raised by research work with Lowell E. Noland, "a wonderful man who was a real giant in the field of protozoan zoology." Earning her master's degree in 1966, Holbrook was hired by

Ripon College in Ripon, Wisconsin. She taught six different courses at Ripon, everything from invertebrate zoology to histology to comparative anatomy to cell biology. She loved it. "I figured I was going to be teaching for the rest of my life in a small liberal arts college."

Holbrook was deflected by a NSF-funded summer institute in comparative anatomy at the University of Washington School of Medicine where she was stunned by Doug Kelly's scanning EM images of the ultrastructure of the pineal gland. She had to get her hands on this technology. A year later, she was back in Seattle as a doctoral student in biological structure to learn EM with Jim Koehler, a freeze fracture expert. She applied her microscopy skills to her old friends, the protozoa, for her thesis in 1972 on the formation of a microtubular organelle—the trichocyst in a hypotrichous ciliate. "Then I went from protozoa to dermatology," says Holbrook. "An obvious transition, right?"

The transition came from the lab next door. George Odland had been setting up a facility to study epidermal ultrastructure when he was named Chief of the Dermatology Division. Impressed by Holbrook's EM skills and evident organizational abilities, Odland asked her to run the lab and then in 1979 to take it over completely. Holbrook switched from protozoa to human fetal skin, using material from the medical school's Central Lab for Human Embryology to explore development of the epidermis. The lab's work spread out into all parts of the fetal skin, and through collaborations into genetics, cell biology, biochemistry, and diagnostics. Post-docs arrived. Grants were earned. Papers were published. In 1982, she joined the ASCB, reasoning that, "if you do cell biology research, you want to belong to a prestigious society like the ASCB."

In 1993, Holbrook left the research lab, declining the second term of her NIH MERIT Award, passing on the PI'ship of a program project grant, and moving to the University of Florida as a full-time administrator. The change of direction was welcome and the decision not sudden, she says. In Seattle, she'd been working halftime as an Associate Dean for Scientific Affairs since 1985 and truly enjoying dean's work. "I like facilitating other people's careers. I like 'big picture' things. I like helping other people get together. My own lab was very broad in what we did. I like collaborations. I like multi-disciplinarity," she says.

And Holbrook had realized that her role in the lab had changed. "Talking to people is what I did. I would spend time with people in my lab looking at their data, facilitating what they wanted to accomplish on their own. What I was not doing was my own hands-on science. When I stopped doing that, it didn't feel right. I love doing things myself and when I could no longer do that, I decided, well, there are a lot of exciting things I could do in administration. So I turned back my MERIT Award to NIH can you believe that? I'd just gotten it renewed and never walked into a lab again to work. I finished some papers and continued some chapters but never did any more original research and never looked back."

Holbrook's friends can't imagine that someone so positive, so dynamic (she concedes that a newspaper description of her as "an 18-hour a day person" is probably accurate), and so good at academic leadership would look back. Watching her administrative successes at Florida and then Georgia, Peter Byers' only question was which university would grab Holbrook as its president first. "Karen has this ability to take the bare bones of an idea and create something positive," says Byers. "That's what academic institutions that want to thrive need desperately these days."

Karen Holbrook's personal history involves an other next-door discovery that she made soon after arriving in Seattle in 1969. Living in the next apartment was an oceanography graduate student, an ex-Navy officer just home from carrier duty off Vietnam, named Jim Holbrook. "We never dated," says Karen Holbrook. "We were just good friends and neighbors. And then we just became a couple as our relationship grew." They married in 1973. Jim Holbrook rose to become Deputy Director of NOAA's Pacific Marine Environmental Lab in Seattle before retiring from his government position to make the move to Florida and work as a freelance consultant. When Ohio State beckoned the Holbrooks from the University of Georgia, their son, James, 28, stayed in Athens to finish a degree in Telecommunications. Moving with them last fall to Pizzuti House, Ohio State's official presidential residence, was Karen's mother, Helen Horney, recently deceased, and the two family dogs, Dudley and Lamar ("Southern names," says Holbrook, "for southern dogs").

Fourteen weeks later, President Holbrook was the Number One fan of the Number One team. "I love college sports," she says. "I'm not at all apologetic. I can be an academic and still love that aspect of campus life."