

Wendy Wells, M.B.B.S.: Musical chair

By Christianna Lewis

Wendy Wells was tackling her cleaning duties early one morning when the supervisor of the office where she worked approached her. “The offices are so clean!” Wells recalls the woman gushing. “We wondered if you’d consider a permanent job?”

Wells was 16 at the time, working temporary jobs on her breaks from school, where she was taking premed classes. In England, where Wells grew up, potential doctors are identified when they’re still teenagers, and their coursework focuses exclusively on science and math. Wells had been at this particular job for only a week, and already she was being offered a permanent position.

Fortunately for DMS, and the field of pathology, she turned down several such offers. Instead, Wells pursued medicine and found her true passion—pathology—near the end of medical school. That passion led her across the Atlantic to Dartmouth, where she was recently named chair of the Department of Pathology. The gusto with which Wells takes on any and every project earns her rave reviews today, just as it did when she was a teenager cleaning offices.

Wells was raised in England, but her parents, a dentist and a schoolteacher, had immigrated to Britain from New Zealand. Their independent outlook and penchant for world travel were strong influences, Wells says. Her parents were always supportive, even when she deviated from the typical medical training path in England.

During most of her time as a medical student at St. Thomas’s Hospital Medical School in London, Wells planned to be a general practitioner. “I loved the patients, loved working with them,” she says. But she began to reconsider during a three-month rotation in pathology in her last year of medical school. The professor, a surgical pathologist, wowed her with his ability to diagnose cancer based on the cellular characteristics of tissue samples.

Wells’s fascination with pathology grew, but she wasn’t sure if she wanted to sacrifice the patient contact she enjoyed in general practice for work in a pathology lab. She needed more time to explore

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Grew up: Surrey County, England

Education: University of London, St. Thomas’s Hospital Medical School ’82 (M.B.B.S., the British equivalent of the M.D.); Royal Postgraduate Medical School ’93 (M.Sc. in image analysis in histology)

Training: St. George’s Hospital Medical School (residency in pathology); DHMC (residency in anatomic pathology, fellowship in cytopathology and analytical cell pathology)

Family: Husband Robert, a mechanical engineer, and two children—Christopher, 15, and Emma, 14

Talents: Choral singing, playing the piano, and sewing her own clothes, including some that she wears to work

Career advice: “Don’t be afraid to try things. It’s all experience, and experience is invaluable.”

Wells and her mentor really bonded when Burke caught Wells practicing the soprano line of Fauré’s *Requiem*.

both interests, she decided. That wasn’t a welcome decision in England, where the state pays for medical school and training. The government isn’t keen on students “mucking around,” as Wells puts it, to find their dream vocation. So Wells’s desire to spend an extra six months studying pathology in the U.S. was met with protests from peers and professors. Wells remained determined, though, and chose to come to Dartmouth because she had friends in the area.

She flew to the U.S. on a loan from her parents (“probably the best money they ever spent,” she says), showed up at DHMC unannounced, and offered to do a few months of unpaid clinical work as an elective. Although all the formal slots for residents had

been filled, she hit it off with an Irish faculty member, Dr. Margaret Sullivan, who found her some advanced work and set her up with a rent-free room in the nurses’ residence. It was at DHMC that Wells confirmed that pathology was indeed her passion.

Although pathologists spend little one-on-one time with patients, they are “intimately involved in the patients’ care,” she says. Every blood test, every biopsy, is interpreted by a pathologist. As she studied tissue samples, Wells realized that patients need just as much attention under a microscope as in a bed.

In 1983, after her six-month stint at DHMC, Wells returned to England and leapt into training in pathology at St. George’s Hospital, as a “very raw and totally ignorant recruit,” recalls her mentor there, Dr. Margaret Burke, a histopathologist. Burke quickly noticed Wells’s rapid progress, and the two really bonded when Burke caught Wells practicing the soprano line of Fauré’s *Requiem* in a pathology darkroom. A shared love of classical music is one of many ties that have kept them in touch over the years.

Though she had always loved England’s picturesque beauty, Wells was won over by the can-do spirit in the U.S. and longed to return to Dartmouth. She had only a handful of supporters for that choice; one of them was Burke, who felt Wells would do best in an environment that truly suited her. “In those circumstances,” says Burke, “you don’t put your foot down and stop a person.”

So Wells returned to DHMC for another three years of residency

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MARK WASHBURN

Wendy Wells, Dartmouth's new chair of pathology, has worked to improve the consistency and the clinical relevance of the diagnostic criteria that pathologists use.

and two years of fellowship. During that time, music again brought Wells together with a special person in her life, this time her future husband, Robert Wells. The two sang together in Dartmouth's Handel Society, a town-gown choral group, and soon decided to wed. They were married in England and then rode off for their honeymoon on a bicycle built for two.

Wells has practiced mostly in the U.S but has remained certified in England, too. One set of certification exams is "usually enough for us ordinary individuals," says Burke, who sees "a certain masochism in [Wells's] putting herself through extra exams." But dual certification has allowed Wells to take advantage of opportunities in both countries. For example, after completing her fellowship at DHMC in 1992, she returned to England to earn a degree in image analysis in histology.

In 1994, Wells and her husband returned to the U.S. and she became an assistant professor of pathology at DMS. Almost immediately, she joined the research team of the New Hampshire Mammography Network, which maintains a database of women's mammography results and breast cancer risk factors. The team needed pathology reports to complement mammography results, so Wells took on the task of recruiting pathologists throughout the state. Her enthusiasm and warmth helped her build strong relationships with community pathologists, says Dr. Alan Schned, a fellow DHMC pathologist.

Wells's work with the network also prompted her to tackle a major problem in the field of pathology: the fact that two pathologists might look at the same breast biopsy but come to different conclusions. When Wells was in training 25 years ago, pathologists would receive large samples of tissue from which to make diagnoses. But since the advent of minimally invasive procedures, pathologists have only tiny samples to work with, so they must rely entirely on cellular features and structural characteristics to make their diagnoses.

The same sample might be tagged by one pathologist as atypical ductal hyperplasia, which is not considered cancer, and by another as low-grade ductal carcinoma *in situ*, which is cancer. Such cases were rare, but Wells found the inconsistency intolerable. So she worked with other pathologists to agree on diagnostic criteria and classifications and to make the classifications relevant to treatment options.

Getting consistent diagnoses is also at the heart of Wells's latest re-

search. She has been working with radiologists at DHMC and engineers at Dartmouth's Thayer School of Engineering to develop alternative breast imaging technologies. Wells is correlating the images to the physical characteristics of tumors. For example, if a scan shows a high concentration of oxygen, Wells might relate that to the tumor's blood vessel count.

Dr. Steven Poplack, a radiologist, has consistently been impressed by Wells's commitment to doing the job right. He and Wells have worked together on breast cancer imaging since 1999, and he admires her refusal to cut corners and her intoler-

ance for unfounded assumptions or specious arguments.

Wells also challenges residents to reach their full potential. Dr. Shaofeng Yan, who was a resident under Wells, says her mentor was frank in both reproof and praise, spurring her to do her best.

Wells's high standards motivated her to take the position of interim chair of pathology in 2008. Her greatest frustrations throughout her career have been times when something prevented her from doing her job as well as she wanted. She wanted to streamline the pathology department's infrastructure using lean management principles to prevent such obstacles in the future. According to Schned, Wells quickly demonstrated her ability to tackle challenging issues without alienating her peers. He "took a page out of her book," he says, when he succeeded her as interim chair while she returned to England for two years to do research.

Wells also aims to improve the institution as a whole. Many trends in medicine today, such as evidence-based care and a focus on outcomes, have been embraced by pathology for years, says Wells. "I think pathology is going to be in the forefront of personalized medicine," she says. "I just want to make sure that we're ready."

To do any of these things, Wells knows she'll need a department of individuals who can discover and refine their talents, just as she was allowed to do. "We're all a huge team," says Wells. "Everyone plays their part." That's one of the lessons she learned working at temporary jobs as a teenager. Today, Wells regards everyone with respect—especially the person who cleans her office. She always chats with him as he empties her trash bin. "Never underestimate why someone's doing a job," says Wells. "Everyone deserves a smile." ■