It was love at first sight.

Bobbi Pritt, M.D.’01, was drawn to pathology the minute she looked through a microscope at slides of human tissue. “I thought they were just beautiful,” Pritt recalls today. “In tissue pathology, we use all these stains. So there were these brilliant pinks and purples, blues, reds—beautiful colors—and I thought it was very pretty. I liked the structure of the tissue. It kind of got back to my artistic side, I guess. It’s a very visual field.”

It might seem odd that a woman of science—and one of the foremost experts in parasites and diseases carried by ticks and mosquitoes—would highlight the visual artistry of her field over the technical aspects. Pritt, though, has taken a unique approach to medicine from the start and a somewhat circuitous route to her successful career.

A pathologist and microbiologist who graduated from the Larner College of Medicine in 2001, Pritt is now director of the Clinical Parasitology Laboratory and co-director of Vector-Borne Diseases Laboratory Services at Mayo Clinic in Rochester, Minn. Mayo’s lab is among the largest clinical parasitology laboratories in the world, serving as an international reference center, and testing patient specimens from all 50 states and across the globe.

Pritt’s early interest in art threads throughout her career trajectory. It spurs her imaginative outlook, innate curiosity and hunger for discovery.

In the past decade, Pritt has gained international recognition for leading teams that found two never-before-identified bacterial organisms carried by ticks that sickened patients in Wisconsin and Minnesota. These pathogens differ from the one that’s best known as the source of Lyme disease, Borrelia burgdorferi, the most common tick-transmitted bacteria in the United States.

The discovery of these new organisms began with a little boy who presented at the Mayo Clinic; physicians couldn’t figure out why he was so sick. They ordered several tests, including a specialized assay that Pritt offered in her lab to distinguish between different species of bacteria. Unexpectedly, the test came back positive with an unusual result. This prompted Pritt to investigate further, within two months, state health departments and the federal Centers for Disease Control helped identify five more patients who had the same organism. This team of investigators eventually proved that the patients were sick from a new organism, which was named Borrelia mayonii in honor of the Mayo brothers who founded Mayo Clinic.

The buzz around this latest discovery, described in a paper in The Lancet Infectious Diseases in 2016, spurred further investigations by other labs. Commercial developers contacted Pritt to see if their tests could detect the new culprit, which fortunately responds to the same drug to treat Lyme, doxycycline.

“That was the goal,” Pritt says. “We wanted to get the news out there so that people knew about it, so that physicians would think of it when they were seeing patients that were sick with something and they didn’t know what the patients had.”

Christopher Paddock, M.D., a pathologist and rickettsiologist who also specializes in tick-borne diseases at the CDC in Atlanta, knew of Pritt and her work before he met her in person in 2011 on the way to a conference they were both attending in Greece, where she presented the findings on the first discovered organism, Ehrlichia muris eauclairensis. She has since collaborated frequently with Paddock, and her eagerness to share samples and information is critical, he says.

“Her background and interest are exceptionally important in terms of her discovery of new agents,” Paddock says. “There’s just not a lot of expertise out there, and she’s one of the few people who has that expertise.” Paddock is a member of the department that published with Pritt on the new Ehrlichia organism in the New England Journal of Medicine.
Bobbi Pritt, M.D. D17, receives the 2016 UVM Medical Alumni Association Early Achievement Award from Dean Rick Morin, M.D. (at left), and Marga Sproul, M.D. (at right).