



## The Long View of a Fast-Striking Disease

Andrew Artenstein '81 tells the story of scientists' two-century battle against bacterial meningitis.

By Karen McCally '02 (PhD)

BACTERIAL MENINGITIS—A DISEASE THAT strikes without warning and can kill within hours—ranks among the most feared of the infectious diseases that can strike humans. Its risk factors include some of the most mundane circumstances and activities—living in a college dormitory or attending summer camp—and some of the most exalted, such as undertaking the Hajj, the pilgrimage to Mecca made by more than 2 million Muslims each year.

**Andrew Artenstein** '81, an infectious diseases specialist and chair of the department of medicine at the Tufts University-affiliated Baystate Health, has long had an interest in the disease. He's the son of the late Malcolm Artenstein, an infectious

▲ **STUTTERING SCIENCE:** Breakthroughs in medical science are part of a “stuttering process” that includes small advances and setbacks, often over the course of hundreds of years, says Artenstein, an infectious diseases specialist and medical historian.

diseases expert who helped develop the vaccine for one form of bacterial meningitis, meningococcal meningitis, at the Walter Reed Army Institute of Research in the 1960s. “It was a very exciting time,” Artenstein recalls. “I was young, but I remember it vividly. It seemed that everything was out there to be discovered and to be solved.”

In a book released last fall, Artenstein tells the story of the disease and efforts to control it, from the very first descriptions of the malady in the early 19th century to the present. Steven Opal, an infectious diseases specialist at Brown University, where Artenstein served for 10 years before joining Baystate Health, praises the scope of the book, which places the work of scientists against bacterial meningitis within the broader context of the development of microbiology and immunology. “It’s a ‘must-read’ for medical history buffs,” he says.

Though bacterial meningitis has always been uncommon, the stakes for preventing it are enormous given how often, and how quickly, it turns deadly. Artenstein begins the book—aptly titled *In the Blink of an*

*Eye: The Deadly Story of Epidemic Meningitis* (Springer)—with the story of Michael Gomes, a high school sophomore in New Bedford, Mass., who awoke one spring morning with a severe headache and neck pain.

What followed is a textbook example of the progression of bacterial meningitis. Gomes took Advil and went out for a game of pick-up basketball. But the Advil did little to alleviate his pain. During the game, he began to feel cold. On the walk home, he developed nausea, and vomited on the sidewalk. At home, he closed his shades (meningitis can make victims highly sensitive to light) and went to sleep.

When Gomes's mother came home late in the afternoon, she found him difficult to rouse. When he arrived at the emergency room, he was losing consciousness.

Doctors performed a spinal tap and found the fluid surrounding Gomes's spine—which would normally be clear—to be a cloudy white. “Michael had pyogenic meningitis, a bacterial infection that affects the tissues—the meninges—that cover the brain and spinal cord in the central nervous system,” Artenstein writes. “Despite the best efforts of modern medicine and powerful treatments that were brought to bear in

the case of Michael Gomes, he died within 24 hours. A healthy, 16-year-old boy playing basketball with friends one day, gone the next—in the blink of an eye.”

Why does bacterial meningitis strike one healthy young adult and not another? The reason lies in characteristics of both the bacterial organism and the human host. “Most of the time,” Artenstein writes, “whether the human host or the bacteria gain the upper hand in their struggle for dominance is a matter of luck and timing.”

The tragic story of Michael Gomes shows bacterial meningitis in its episodic form, which kills many thousands of individuals every year around the globe. But the disease also has an epidemic form, in which it can spread rapidly, having the potential to kill in much higher numbers.

From the early 19th century onward, outbreaks have occurred often among troops housed in barracks. It’s no accident that the first successful meningitis vaccine was developed at a military medical facility.


“The military is a microcosm for addressing infectious diseases,” Artenstein says. “It puts people in new habitats. It crowds people together. And the whole mission of military medicine is preserving the force, so prevention, the key to attacking infectious diseases, has always been huge.”

After graduating from medical school at Tufts, Artenstein followed his father’s path and became an Army doctor and researcher at Walter Reed. He spent 10 years there, treating military personnel and their families around the world.

Artenstein says that while the vaccine developed by his father’s team in the 1960s made huge strides in preventing outbreaks of meningitis, it was not effective in preventing all strains of the disease.

“Science is a stuttering process,” he says. “You make incremental advances, you go back a few steps, then finally there’s some big breakthrough and the whole field moves in a certain direction.”

Since the breakthrough of the late 1960s, the quest to eradicate bacterial meningitis has continued to make incremental advances, especially in the so-called “meningitis belt” in sub-Saharan Africa.

Forty-plus years may seem like a long time, but Artenstein takes a long view. “I’m a student of history as well as a practitioner in the present,” he says. The battle against bacterial meningitis has taken place “only over a couple hundred years. In the scheme of things, that’s a really short time frame.” 

# The Business of Books

Literary agent Meredith Goodman Bernstein ’68 reflects on reading, writing, and publishing in the digital age.

Interview by Karen McCally ’02 (PhD)

**MEREDITH GOODMAN BERNSTEIN** ’68 remembers her first job in the business of books and literature. A clerical assistant for a literary agent in New York City, she was on the job just three months before she landed a client, and made a successful pitch, all on her own.

In 1981, she opened her own agency, the Meredith Bernstein Literary Agency. From her office on Broadway, on the Upper West Side of Manhattan ([www.meredithbernsteinliteraryagency.com](http://www.meredithbernsteinliteraryagency.com)), she’s discovered and nurtured authors who are now well-recognized and widely acclaimed.

They include P.C. Cast and her daughter, Kristin Cast, coauthors of the House of Night series of *New York Times* best-selling teen vampire novels; crime novelist Nancy Pickard; best-selling romance writer Sharon Sala; and others in the fiction, thriller, mystery, and romance genres, as well as in nonfiction.

She says she’s always on the lookout for new talent, and since 1986, has endowed the Meredith Goodman Bernstein Prize, awarded annually by the English department to an undergraduate for the best piece

of writing in fiction, poetry, or nonfiction. Among the past winners is **Benjamin Anastas** ’91, who later published two novels and most recently, a memoir, *Too Good to Be True* (Houghton Mifflin).

In her 30-plus years in business, Bernstein has witnessed stark changes in reading and book-buying habits, popular tastes, and in publishers’ means of producing and distributing titles. In fact, the printed book—once the definitive product of the joint efforts of authors, agents, editors, and publishers—is today merely one “format.”

These changes don’t spell the demise of book publishing, Bernstein says, but rather, “only book publishing in the format we’ve been familiar with.”

## Should we lament the decline of print publishing?

My personal feeling is that I’m very sad about the demise of book publishing as it was, because I think what bookstores have offered is discoverability. You can walk into a bookstore, and even if no one told you to look at this shelf or that shelf, or this book table or that book table, your eye has drawn you there. When you go to a website and search for things that you think you’re



**STILL IN PRINT:** In her fourth decade in the business, literary agent Bernstein says digital formats have made more titles available than ever before. But the decline of print and bookstores, she adds, could make it less likely many readers will discover them.