



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), 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



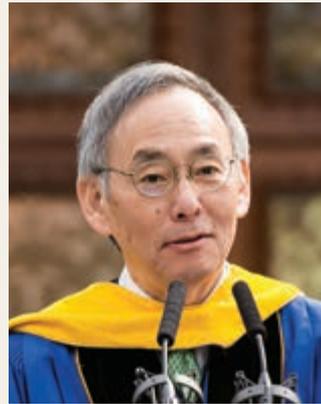
STILL IN PRINT: In her fourth decade in the business, literary agent Bernstein says digital formats have made more titles available than ever before. But the decline of print and bookstores, she adds, could make it less likely many readers will discover them.



John Aldrich '75 (PhD)



Miguel Alonso '96 (PhD)



Steven Chu '70



Joan Feinbloom

COMMENCEMENT

Honorees & Guests

Rochester alumni, faculty, and friends were recognized for their achievement and service during commencement ceremonies this spring.

ARTS, SCIENCES & ENGINEERING

Miguel Alonso '96 (PhD)

Edward Peck Curtis Award for Excellence in Undergraduate Teaching

An associate professor of optics at Rochester, Alonso joined the faculty in 2003.

Steven Chu '70

Eastman Medal

A 1997 Nobel laureate in physics and this spring's commencement keynote speaker, Chu served as secretary of energy from 2009 until last April. Chu received an honorary degree in 1998.

Harold and Joan Feinbloom

George Eastman Medal

Longtime civic leaders and philanthropists in Rochester, the Feinblooms are widely recognized for their support of the arts, education, and community health. They have served in several leadership positions at the Memorial Art Gallery and the Medical Center.

Rev. James Alexander Forbes Jr.

Doctor of Divinity (Honorary)
The Harry Emerson Fosdick

Distinguished Professor of Homiletics at Union Theological Seminary, Forbes was the first African American to serve as minister of the Riverside Church in New York City.

Susan Hockfield '73

Doctor of Science (Honorary)

The Marie Curie Visiting Professor at Harvard's Kennedy School of Government, Hockfield served from 2004 to 2012 as the president of the Massachusetts Institute of Technology, where she was the first woman and first life scientist to lead MIT.

Dahpon Ho

G. Graydon Curtis '58 and Jane W. Curtis Award for Nontenured Faculty Teaching Excellence

A specialist in East Asian history, Ho joined the faculty in 2010 as an assistant professor of history.

Norman Leenhouts '56

Charles Force Hutchison and Marjorie Smith Hutchison Medal
Leenhouts is director and chief investment officer of the family-owned Broadstone Real Estate Inc. Along with his twin brother, Nelson '56, Leenhouts founded what is now Home Properties Inc. He is a life trustee of the University.

Jie Zhang

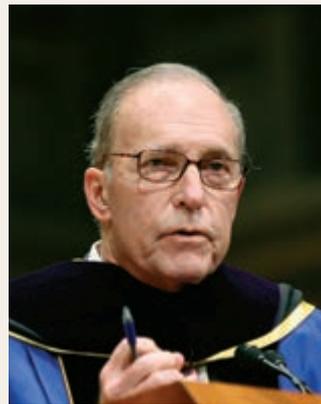
Doctor of Science (Honorary)
Zhang has served as president



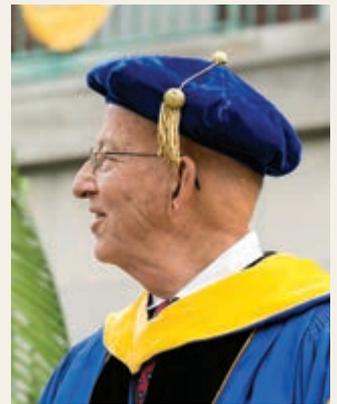
Rev. James Alexander Forbes Jr.



Susan Hockfield '73



Lawrence Kudlow '69



Norman Leenhouts '56



Edward Miller '68M (MD)



Jie Zhang

of Shanghai Jiao Tong University since 2006, when he became the youngest person to lead the Chinese university since 1949. A physicist, he previously held several positions in the Chinese Academy of Sciences.

DOCTORAL CEREMONY

Govind Agrawal

William H. Riker University Award for Excellence in Graduate Teaching

A professor of optics and of physics and astronomy, Agrawal has been a member of the faculty for nearly 25 years. He is also a senior scientist at the Laboratory for Laser Energetics.

John Aldrich '75 (PhD)

Distinguished Scholar Medal

A leading scholar of American political behavior and institutions who's widely known for his book *Why Parties?*, Aldrich is the Pfizer-Pratt University Professor at Duke University.

Richard Aslin

Lifetime Achievement Award in Graduate Education

The William Kenan Jr. Professor in the Department of Brain and Cognitive Sciences, Aslin directs the Rochester Center for Brain Imaging. He is also a member of the Center for Visual Science.

SCHOOL OF MEDICINE AND DENTISTRY

Edward Miller '68M (MD)

Charles Force Hutchison and Marjorie Smith Hutchison Medal

Arriving at Johns Hopkins in 1997, Miller was the first CEO of Johns Hopkins Medicine, the 13th dean of the Johns Hopkins medical school, and vice president for medicine at Johns Hopkins until his retirement in 2012.

SIMON SCHOOL OF BUSINESS

Lawrence Kudlow '69

Doctor of Laws (Honorary)

CEO of the economic research firm Kudlow & Co. and host of CNBC's *The Kudlow Report*, Kudlow is a nationally syndicated columnist and contributing editor of *National Review* magazine, and columnist and economics editor for *National Review Online*.

For more about this spring's commencement ceremonies, visit www.rochester.edu/commencement/2013.

looking for, even if Amazon, for example, makes recommendations for you based on your previous searches, the issue is, how are you going to be aware of titles you might see by walking into a brick and mortar store?

But a lot of people don't feel this way. A lot of people feel that there's more product than ever, more choice than ever, and that's probably true.

Has the rise of self-publishing had any notable impact on literary agents? Have you personally experienced any impact?

It's having a big impact. As agents, we're going to have to decide what we can do for clients. Will we be doing more in terms of shaping marketing plans? Will we be doing more editorial work? Not that we haven't been involved in some aspects of that all along, but will we have to be more active?

And what happens when existing clients of mine decide they want to self-publish? If I'm helping them get published, then it's perfectly reasonable for me to get a commission, but if I'm not, should I get a commission or not? And the argument among many agents is, "I've built your reputation for the most part. I got you published for the first time. And I've been nurturing your career all this time."

Why should writers with a book manuscript still seek out an agent?

For many reasons. First, the literary agent is going to make the match. You know all the editors who would possibly like the material. You have personal relationships with them. Then, after you find hopefully more than one person who wants to buy the book, it's your job to be the negotiator and to figure out what's the best possible contract you can get for your client. After that, your job is to follow up on all of the details that go into making sure the book is published properly, making sure it's sold to the foreign rights markets, making sure if it warrants film or television exposure that it gets that. Not to mention chasing down the money, making sure your client gets paid, and keeping track of their payments. It's a lot of detail work.

It's often said the fiction market is in decline. Do you agree?

No, there's nothing wrong with the fiction market. The fiction market is perfectly fine. People do ask me, "Well, what are the trends?" And my answer is, "Look at a best-seller list and that will tell you what kinds of fiction people are being drawn to."

Leisure Reading: 10 Picks

As a literary agent, Bernstein reads all the time for work. Does she have time to read for enjoyment when the workday is over?

"I do," she says. "It's hard, but I do. It's really something I always loved to do, and I don't want to lose that pleasure just because I have so much I have to read for work."

Bernstein says she reads books that come recommended by others, or books that she reads about and thinks might be intriguing. She also belongs to a book club—a group she joined on a friend's recommendation that employs a professional facilitator and has been meeting since 1997.

She offers a few of her favorite titles.

- *A Fine Balance* by Rohinton Mistry (Vintage International, 2001)
- *The Brief Wondrous Life of Oscar Wao* by Junot Diaz (Penguin, 2008)
- *Angle of Repose* by Wallace Stegner (Doubleday, 1971; Penguin Twentieth-Century Classics, 2000)
- *The Thousand Autumns of Jacob de Zoet* by David Mitchell (Random House, 2011)
- *Gone Girl* by Gillian Flynn (Crown, 2012)
- *Wild: From Lost to Found on the Pacific Crest Trail* by Cheryl Strayed (Vintage, 2012)
- *Defending Jacob* by William Landay (Delacorte, 2012)
- *Swamplandia* by Karen Russell (Vintage, 2011)
- *Tenth of December* by George Saunders (Random House, 2013)
- *The Yellow Birds* by Kevin Powers (Back Bay Books, 2013)

The young adult market has been very hot ever since J.K. Rowling's *Harry Potter*. *Harry Potter* really created, I think, the craze for great young adult fiction. And book clubs have played a role—most notably Oprah's Book Club, which was very, very significant. Oprah pretty much created best-sellers with every book she selected. She had a committee to make recommendations, and she would read and select titles from among those. And when I go to writers' conferences, I tell people I'm looking for "Oprah-esque fiction," which is fiction with fabulous characters, written by a wonderful storyteller, with an intriguing voice. These are the things that make great fiction. **R**