

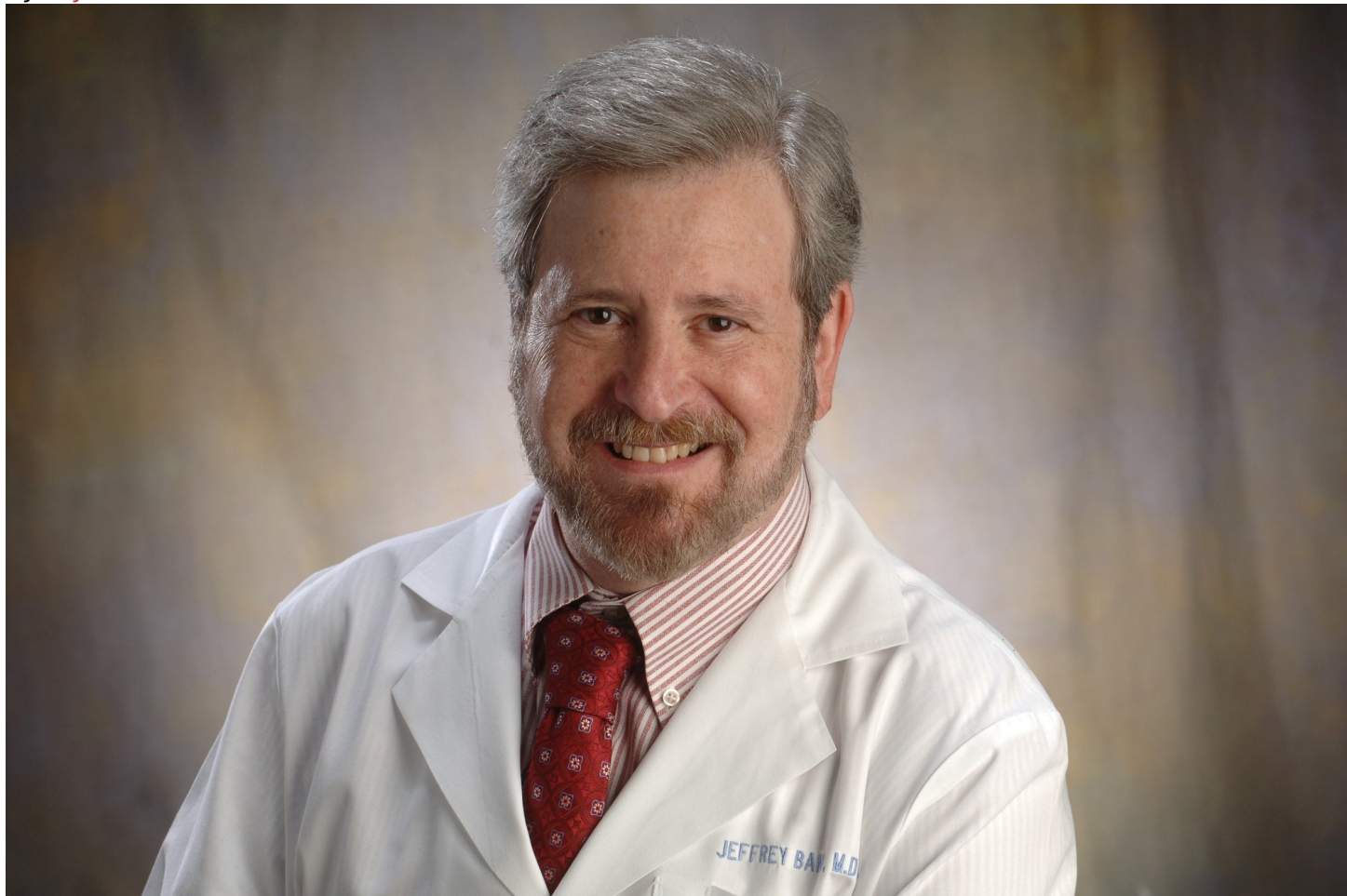
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A distinguished career as a disease detective

By [Jay Greene](#)



Beaumont Health **Jeff Band, M.D.**, retired from Beaumont Health in 2016.

When I first met Dr. Jeffrey Band in 2013 to interview him as a *Crain's Health Care Hero*, he was head of Beaumont Health's epidemiology department and going strong after more than three decades as a doctor.

He was excited to receive the *Crain's* award but was more interested in attributing any success he had in identifying mysterious infections in hospitals to others on his team.

Like many of our humble Health Care Heroes, Dr. Band had to be reminded that his name, not his team's, is on the award. During the interview, I asked him how he approached his job and successes he had during his

career. While he didn't compare himself exactly, I could tell he saw himself as a doctor-detective, something in the mold of Lt. Columbo or Hercule Poirot.

"The process of problem-solving and becoming a medical detective was a natural to me," said Dr. Band.

I recall it was a fascinating interview because, as he talked about being an infectious disease specialist seeking answers to mysterious outbreaks, it struck a note with me because I always thought myself as a sort of a journalist-detective from the Paul Drake school of sleuthing.

So when Dr. Band contacted me last month about being notified by the University of Michigan Medical School, his alma mater, that he would receive later this fall the prestigious Michigan Medicine Alumni Society Distinguished Service Award, I gave him a call.

The **award** is given to a University of Michigan graduate for outstanding contributions to the medical community and public health. Dr. Band, who will receive the award Oct. 4 at the banquet, graduated from UM medical school in 1972.

When we talked, I found out that while he had retired from Beaumont in 2016, he still has quite a schedule. He is a professor of medicine at Oakland University William Beaumont School of Medicine and Wayne State University School of Medicine, plus he still sees patients, testifies as a medical expert and is still involved with research, although he plans to give that up this year.

"I have finally given up all administrative duties at Beaumont and time now for family, friends, travel and hobbies," Dr. Band said.

A self-described workaholic after years of 60-65 hour workweeks, "I have cut my time spent on medicine to 20 percent to about eight to 10 hours per week," he said. "I've had two papers published this year already, and I am text editor for a very interesting book to help prepare medical students to take part two and three" of the U.S. Medical Licensing Exam.



Jeff Band

But Dr. Band, now 70, is doing more traveling with his wife, Meredith. In June, they visited the Amazon and Galapagos Islands. Over 44 years, "I never had more than a seven-day vacation. I was always on call when on vacations and was called back three times for problems. The first vacation to South America we took three weeks."

Two of the "highlights" of his vacation down the Amazon on a motorboat was when he encountered a small 6-foot anaconda next to his suitcases and also saw more a dozen large tarantulas "the size of my hand" crawling around "walkways, trees and rooms ... they were everywhere."

The couple plans to book a trip next year to Kenya to take a ride through the Serengeti plains during animal migration and then they are off to see several of the magical gardens in Japan. "We take turns deciding where we go," he said.

Dr. Band also has more time to participate in his 43-year hobby — investing in the stock market, a hobby that enabled him to pay off his medical school debt in two years. "I buy and hold. I am very patient. I have 30 rules I adhere to and have been very fortunate to have a good return from that. To me, the fun is to do the research."

Reaction to the UM alumni award

When I asked Dr. Band about his reaction to the UM distinguished service award, he said he was "shocked, honored and humbled."

"It was such a surprise to me. I have such a strong attachment to UM. I was there eight years as an undergrad and medical school, and to out of the blue be recognized by the medical center, I was shocked," he said.

Then he looked to see who else will be recognized. They are Dr. Edward Bove, a pediatric heart surgeon, for distinguished achievements; Dr. John Cropsey, an ophthalmologist, for humanitarian work in Africa; and Dr. Wendy Armstrong, who won the Young Distinguished Career Award.

"I am very proud," Band said. "Somebody, a backer who rounded up the troops and sent letters of recommendations, did that for me."

Medical expert, Legionnaires' testimony

His love of research and investigating outbreaks led to Dr. Band agreeing to testify as an expert witness on behalf of embattled state health czar Nick Lyon, who has been on trial for what amounts to not doing enough to inform the public of an outbreak of Legionnaires' disease in 2014 and 2015, when at least 12 people died and more than 100 were infected.

Dr. Band is a nationally known expert on Legionnaires', being part of the team that discovered it in 1976 at the Centers for Disease Control and Prevention.

"I have been on the witness stand on some very big, precedent-setting cases," said Dr. Band, who added he doesn't like to testify in medical malpractice cases against doctors.

"It my least favorite thing if malpractice is done. I hate to see how patients are treated poorly. I would do it (testify against doctors) if there was bad care. But if a case is defensible, I would do it (testify for doctors). Sometimes doctors who did a fabulous job still get sued."

For example, several years ago, a Red Lobster restaurant in Michigan was sued in a wrongful death case for allegedly serving raw oysters that were tainted with salmonella.

"I was asked to be expert for defense. I looked at all data. I have an investigative nature. I love solving problems. The oysters were harvested from approved USDA waters. Everything was done properly. The bacteria that led to person's death was not an abnormal organism. On rare occasions, one in million, people who eat oysters can develop life-threatening conditions."

Dr. Band said the person who died appeared healthy before, but was discovered to have had leukemia on autopsy.

"The widow was offered \$1 million settlement. I spent six hours on the stand. The jury came out the next day with zero. It was not food poisoning, not salmonella. It was a normal organism with mollusks. Now all the restaurant menus say to not eat (raw seafood) if you have life-threatening problem."

When Dr. Band was contacted to testify for Lyon, and Eden Wells, M.D., the state's chief medical executive, he said he first wanted to look the evidence and then he had one condition.

"I got called by the lawyers because of my knowledge with Legionnaires', epidemiology and public health," Dr. Band said. "I agreed but I needed to make sure that my testimony was totally focused on the Legionnaires' outbreak and unrelated to the Flint lead issues."

After studying hundreds of pages of documents over many hours, Dr. Band said, he became comfortable with testifying to the position that Lyon and Wells did nothing wrong. The two state officials were charged by Attorney General Bill Schuette with involuntary manslaughter in the cases of two elderly patients who had underlying diseases.

"There were problems with interactions of people at the state and (Genesee County) health department level, but "there was no way I thought the charges against Lyon and Eden should lead to 15 years in prison."

"My conclusion was there was nothing criminally done. The health department was very active and early on and they offered all the assistance they could to the county health department, which had jurisdiction," Dr. Band said. "The politics between the county and state took over a little bit."

From an epidemiology standpoint, Dr. Band said he answered controversial questions.

"Legionnaires' is airborne disease caused by an organism that is ubiquitous and present in most rivers and lakes. You don't get it by drinking water. The whole relationship with the Flint water system and the outbreak. It would take a lot. There would have to be a way for the Flint water to get aerosolized (usually in warm water) and disseminated (in cooling systems, whirlpools or fountains) for there to be this kind of outbreak. I never heard of it before."

But Dr. Band said about 55 percent of the nearly 100 infected with Legionnaires' visited one of the two hospitals that reported cases of Legionnaires — McLaren Flint and Hurley Medical Center.

"The major hospitals took immediate actions to eliminate any legionella from their water system," he said. "Of the remaining 45 percent of cases that were not health-care associated, more than two-thirds of those affected did not receive municipal water from the Flint river nor worked in the city of Flint. They had no exposure to Flint River water. It would be hard to blame the outbreak on the Flint water system."

The 2011 Beaumont outbreak solved

A Detroit native, Dr. Band has been recognized for multiple achievements during his 35-year career at Beaumont, where he was corporate director of health care epidemiology at Beaumont Health Systems from 1983 to 2016. He also was director Beaumont Royal Oak's infectious diseases division from 1985 to 2013 and the infectious diseases training program from 1983 to 2005.

He completed his training in internal medicine at the University of Missouri- Columbia and post-graduate fellowship in infectious diseases and hospital epidemiology at the University of Wisconsin-Madison and the Centers for Disease Control and Prevention.

In 1981 won a commendation medal for his groundbreaking work in identifying toxic shock syndrome in menstruating women.

But at Beaumont Hospital in December 2011, Dr. Band was challenged when an unusually high number of patients were becoming ill with a mysterious infection after undergoing cardiovascular surgery.

He personally recruited a 15-member team to investigate and identified a fivefold increase in patients testing positive for bacteria called pseudomonas aeruginosa, which can cause pneumonia, urinary tract and blood infections.

The infected patients also had a procedure performed during surgery called an "intraoperative transesophageal echocardiogram." The procedure consists of inserting an ultrasound probe into a patient's

throat and esophagus, creating an image of the heart for the surgeon.

"We found the longer the probe was in place, the more the chance of infection," Band said.

But tests showed all ultrasound devices were negative for pseudomonas. It had to be the ultrasound gel, he concluded.

"We got rid of all the gels, and almost immediately we had no cases," said Dr. Band, noting that it took a brief three weeks to complete the investigation.

Culture tests on the gels came back positive for pseudomonas and were confirmed by DNA fingerprinting to be the strain found in patients.

"The unopened gels had the same DNA molecular type" as found in the patients, thereby providing a link to the manufacturer of the gel, he said.

Band already had alerted the CDC, Michigan Department of Community Health and U.S. Food and Drug Administration. Warnings were quickly posted on the CDC's Mortality and Morbidity Weekly Report — the "bible for chiefs like me," Dr. Band said.

The FDA shut down the gel manufacturing plant in April 2012 and issued its own safety warning not to use the product. The plant remains closed, Band said.

"I had the privilege of investigating many cases. It is just like reporting, you need to know who, what when and how and apply it medically. You have to be thorough and detailed," said Dr. Band, adding that he never gives up once he is on a case.

"I have a 100 percent rate in solving outbreaks. The national rate is 50 percent," he said.

Not bad. By the way, I think Columbo and Poirot had similar crime-solving rates.

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