

Food fighter: Oregon's William Keene among the nation's 'food safety heroes



William Keene, senior epidemiologist at the Oregon Public Health Division at his office in Portland. Over the past 20 years, he's solved or helped solve many outbreaks, gaining the respect of his peers across the country and bolstering the state's stature as a leader in identifying tainted food. The photograph on the file cabinet below Keene's elbow is of him on the job, investigating an outbreak of listeria in Oregon which resulted in one death. (*Jamie Francis/The Oregonian*)

[By Lynne Terry, The Oregonian](#)

The bookshelves in William Keene's small, crowded office are stocked with an odd assortment of food. Packages of Dole spinach and lettuce sit near a jar of Peter Pan peanut butter. Tubs of Nestlé Toll House cookie dough stand next to a box of Clif bars. There's also a bottle Odwalla apple juice, boxes of Austin peanut butter crackers and a can of **Castleberry chili**.

Want Trader Joe's almonds or **Daniele salami**? He's got those, too.

But this is not a pantry. It's a museum marking Keene's career.

He's Oregon's top food-borne illness detective. During the past 20 years, he's solved or helped **solve many outbreaks**, gaining the respect of his peers and bolstering the state's stature as a leader in identifying tainted food.



[View full size](#) Jamie Francis/The Oregonian An "action figure" version of William Keene stands among some of the products that he has investigated during his years as one of Oregon's top food detectives.

"He's one of the food safety heroes in the U.S.," says **Michael Osterholm**, head of the **Center for Infectious Disease Research and Policy** at the University of Minnesota.

Every year, hundreds of thousands of Oregonians come down with food poisoning and as many as 50 die.

Although Keene works out of the public eye, he's directly affected consumers by preventing even more illnesses.

"He's uncovered outbreaks that might have gone on and made people sick for long periods of time at low levels," said **Dr. Paul Cieslak**, who leads the communicable disease program in the state **Public Health Division**.

Case in point: a **salmonella** outbreak in 2004.

Over several months, a trickling of people in Oregon were sickened by salmonella enteritidis. There were cases in other states as well but because it was a relatively common strain of salmonella, epidemiologists did not connect them.

Keene's office did. In fact, it cracked the case using his "shotgun" questionnaire.

He crafted the nine-page survey to help epidemiologists pinpoint the source of an outbreak by having patients answer questions about what they they've eaten and where they've dined.

When a colleague questioned Oregon's five patients in the outbreak, all said they had consumed raw almonds from Costco.

When the news came in, Keene called the company's head of food safety, who initiated a recall of the nuts from **Paramount Farms north of Los Angeles**. Keene later visited the manufacturer's facility in California as part of the investigation.

In the end, an outbreak that epidemiologists suspect had sickened people for years ended and a new phase in almond safety began. The **Almond Board of California**, which had marketed the nuts as a healthy snack, decided that all almonds sold directly to consumers would be treated to kill bacteria.

Keene, 53, refuses to take direct credit for cracking the case.

"No one by themselves is a food-borne disease outbreak army," Osterholm says. "It really does take a team. But you have to have someone lead that team, and Bill's overall expertise is critical."

E. coli vanity plates



William Keene's enthusiasm for his work is reflected in his license plates. O157:H7 is the deadliest strain of E.coli.

Keene, a bear of a man with a big beard, has a zest for cracking food poisoning cases that is evident on his vanity license plate, named after the deadliest strain of **E. coli: O157:H7**. He works sometimes round-the-clock, showing up at the office in green clogs and khaki pants. He's surrounded by images from his work yet keeps one drawer stocked with exotic teas that he serves to colleagues from a white porcelain pot.

His casual manner reflects his upbringing in the Northwest. He grew up in Seattle in a middle class family -- his father was an accountant at **Boeing** and his mother a homemaker -- and he devoured detective stories as a youth.

After high school, he went to **Yale University**, where he earned a bachelor's degree in anthropology in 1977. He later spent two years in India and Pakistan researching monkeys.

"I lived in the **Himalayan foothills** the '70s, chasing wild rhesus monkeys," he says. "It was fun."

On his return to the states, he got a job as a lab technician at the **University of California at San Francisco** and became interested in parasites. He started graduate school at **Johns Hopkins University** in Baltimore in parasitology but transferred to the **University of California at Berkeley**. In 1989, he graduated from Berkeley with a doctorate in microbiology and a masters in public health.

A year later, he landed essentially the same job that he has today.

"This is my first epidemiology-related job and here I sit," he says. "I was very lucky."

The work is challenging -- new food culprits pop up all the time -- and relentless. He tackles about 200 outbreaks a year.

On vacation, he often works for the **World Health Organization**. He traveled to Indonesia after the 9.1 magnitude earthquake in 2004 and has worked on food safety issues in Sudan, Iran, Pakistan, India, Sri Lanka, Nepal and Thailand.

"I've been lucky to be able to travel and see how public health works in some other parts of the world or how it doesn't work," Keene says. "I always come back and think we always complain with how things work here but it's really not that bad compared to a lot of the world."

Keene's own style

Keene spends a lot of time working the phones, crunching data and devising new investigative tools. He works closely with colleagues in Oregon and other states, trying to crack outbreaks.

"Sometimes there's a bit of arm twisting and cajoling," he says. "I try to bring people together and move these investigations along."

He often takes an unconventional approach. Traditionally, epidemiologists have compared sick people to a control group to crack an outbreak, but Keene doesn't do that when the answer seems obvious.

"He zeros in on certain items in a way that a lot of places don't because they're still slavishly going through their control study to see if they have statistical significance," Cieslak says. "He's zealous. Energetic. Dedicated. Diligent. He pursues it until he finds it."

But not every case gets cracked.

"There are a lot of things that get away," Keene says. "And sometimes we have partial success."

But if he weren't on the job a lot more cases would go unresolved, experts say.

"You want to stop the outbreak as quickly as possible to minimize the number of people who get sick," he says.

-- **Lynne Terry**