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The Public's Quiet Savior from Harmful Medicines

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CHEVY CHASE, Md. — She is unlikely to be mentioned at any 50th-birthday parties this year, but she is the reason many of those celebrations will take place. Dr. Frances Oldham Kelsey is 96 now, nearly deaf and barely mobile, as modest as her faded house in this Washington suburb. And though her story is nearly forgotten, she was once America's most admired civil servant — celebrated for her dual role in saving thousands of newborns from the perils of the drug thalidomide and in serving as midwife to modern pharmaceutical regulation.

On Wednesday, Dr. Margaret Hamburg, commissioner of the Food and Drug Administration, will honor Dr. Kelsey with the first Kelsey award. It will be given to a F.D.A. staff member annually. The award will come 50 years after Dr. Kelsey, then a new medical officer at the agency, first sat down to consider an application from the William S. Merrell Company of Cincinnati to sell a sedative named Kevadon, which was widely prescribed in Europe for morning sickness in pregnancy.

As it turned out, the drug (better known by its generic name, thalidomide) would cause thousands of children in Europe to be born limbless or with flipper-like arms and legs. With her probing analysis of Merrell's application and her insistence on scientific rigor, Dr. Kelsey ensured that the effects in the United States were far more limited.

The thalidomide disaster led Congress to pass legislation giving the F.D.A. authority to demand that drug makers prove their products safe and effective. Moreover, Dr. Kelsey helped write the rules that now govern nearly every clinical trial in the industrialized world, and was the first official to oversee them.

"She had a huge effect on the science that we all take for granted today," said Daniel Carpenter, a professor of government at Harvard and the author of "Reputation and Power" (Princeton, 2010), a definitive history of the F.D.A.

The inauguration of the Kelsey award may also be a telling sign of where Dr. Hamburg stands in a series of internal agency struggles. For much of the past two decades, the F.D.A. has emphasized speed over certainty in its decisions — an industry-friendly stance that plays down safety concerns in favor of getting potential cures to the market as swiftly as possible.

But a series of drug, medical-device and food-safety controversies have led some agency medical officers to insist on better information before approving products and to lobby

internally for risky products to be pulled from the market, putting the speed-oriented old guard on the defensive. A celebration of Dr. Kelsey, the patron saint of the agency's safety-first faction, is bound to cheer those calling for greater caution.

Dr. Kelsey might never have reached the F.D.A. in the first place if her first name hadn't sounded like a man's.

Born in 1914 in British Columbia, Frances Kathleen Oldham was sent to a private boys' school because her parents expected her to become as educated as her older brother. She was hired sight unseen by Dr. Eugene Geiling, a renowned pharmacology professor at the University of Chicago, because he read her name as Francis. When she got the acceptance letter, in 1936, she realized his mistake and asked a professor at McGill University whether she could accept the job.

"When a woman took a job in those days, she was made to feel as if she was depriving a man of the ability to support his wife and child," Dr. Kelsey said in an interview at her home. "But my professor said: 'Don't be stupid. Accept the job, sign your name and put "Miss" in brackets afterward.' "

She was soon put to work helping Dr. Geiling establish the toxicity of elixir of sulfanilamide, a medicine that would be linked with scores of deaths because it contained a deadly industrial solvent. The scandal led Congress to strengthen drug regulations, giving her a role in two of the three seminal events in F.D.A.'s history.

While at Chicago, Miss Oldham earned a Ph.D. and soon became enamored of a fellow member of the pharmacology faculty, Fremont Ellis Kelsey. About that time, she tried an experimental malaria drug and turned entirely yellow. She was asked to provide urine samples every 24 hours, and one of the collection times coincided with a play to which he had invited her.

"So I had my little jar with a tight sealing top and a paper sack, and during intermission, I went to the toilet," Dr. Kelsey said with a smile. "And then I got panic-stricken. Could I get to my seat without dropping this thing?

"So I walked out the bathroom door, and there was my future husband, who relieved me of the bag. I thought it was the most thoughtful thing he could do. He knew I would be worried."

She arrived at the F.D.A. in 1960 as part of a new cadre of scientists who had begun insisting that drugs show clear evidence of effectiveness as a condition for approval, even though Congress had yet to grant the agency explicit authority to enforce that. Drugs could be sold 60 days after their makers filed information with the agency as long as it did not object;

companies routinely sent new remedies to doctors and asked them to try the medicine in patients. Such testing was uncontrolled and entirely anecdotal.

Dr. Kelsey demanded better tests for thalidomide. She also distrusted Merrell, a company that had a history of confrontations with the F.D.A. She soon discovered that Kevadon had been linked in Europe with reports of nerve damage — reports the company had failed to provide her.

“I had the feeling throughout the day,” she wrote after a meeting with company executives, “that they were at no time being wholly frank with me and that this attitude has obtained in all our conferences, etc., regarding this drug.”

Company officials complained about Dr. Kelsey to her superiors, who supported her. When evidence became irrefutable that Kevadon caused horrendous birth defects, the company quietly withdrew its application.

Merrell executives had been insisting that “I was depriving people of this thing,” she said in the recent interview. “And then when it happened, I was so relieved to get them off my back. Amazing.”

Dr. Kelsey’s role in the saga would have remained little known if not for a front-page article in The Washington Post — which, in turn, led to legislation giving the F.D.A. far more power over the drug industry. President John F. Kennedy gave Dr. Kelsey the Distinguished Civilian Service Medal, and a picture of her accepting the award wearing a black dress, holding a white purse and looking demure but competent became the iconic image of the agency.

With the F.D.A. given far more power, Dr. Kelsey set about with others at the agency to write rules for medical testing that created three distinct phases for human trials and strengthened rules for human protections and conflicts of interest. These rules have since been adopted worldwide. As the historian Dr. Carpenter put it:

“She and the F.D.A. had a huge role in determining the terms and sequence of what is now modern clinical science.”

This article has been revised to reflect the following correction:

Correction: September 17, 2010

An article on Tuesday about Dr. Frances Oldham Kelsey, who received a Distinguished Civilian Service Medal from President John F. Kennedy in 1962 for her role in exposing the dangers of thalidomide, included a quotation that misstated the location where the medal was presented. The ceremony was at the White House, not in Maine.