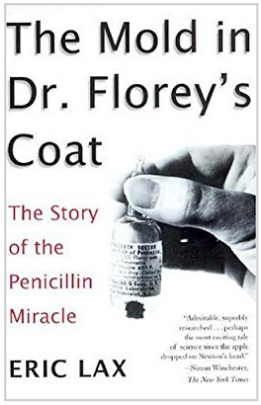

The Mold in Dr. Florey's Coat: The Story of the Penicillin Miracle

By Eric Lax

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"Admirable, superbly researched . . . perhaps the most exciting tale of science since the apple dropped on Newton's head."
?Simon Winchester, *The New York Times*

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Yet credit for penicillin is largely misplaced. Neither Fleming nor Florey and his associates ever made real money from their achievements; instead it was the American labs that won patents on penicillin's manufacture and drew royalties from its sale. Why this happened, why it took fourteen years to develop penicillin, and how it was finally done is a fascinating story of quirky individuals, missed opportunities, medical prejudice, brilliant science, shoestring research, wartime pressures, misplaced modesty, conflicts between mentors and their protégés, and the passage of medicine from one era to the next.

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Editorial Review

From Publishers Weekly
This book sets out to correct the misapprehension that Alexander Fleming, the first scientist to discover the antibacterial properties of the mold Penicillium notatum, was also responsible for developing the wonder drug that saved countless lives and ushered in the era of modern medicine. Although Fleming coined the term "penicillin," his tentative research on the mold produced few valuable results and was prematurely abandoned. More than a decade later, in 1940, a pathology team at Oxford University—headed by Howard Florey, Ernst Chain and the now almost forgotten Norman Heatley—resumed Fleming's preliminary work and eventually developed the world's first viable antibiotic. Although Fleming, Florey and Chain shared a Nobel Prize in 1945 for their revolutionary work, accolades and media attention were disproportionately bestowed on Fleming, and in the popular imagination he was transformed into the sole creator of penicillin. Lax (Woody Allen; Life and Death on 10 West) has written a commendable account of this historical oversight, conveying the thrill of discovery during the upheaval of WWII and skillfully translating the abstruse technicalities of lab work and medical jargon into enjoyable prose. Yet this book also shows that monumental discoveries are not always born of monumental stories, and the narrative contains trivial details and petty grievances that made up these scientists' circumscribed lives. Lax's treatment is disciplined and focused, but it would have been improved by a broader historical sweep and more involved discussions of penicillin's impact on the pharmaceutical industry. 18-page b&w photo insert not seen by PW.

From The New England Journal of Medicine
Alexander Fleming may be one of only two Nobel laureates in medicine (the other being Ivan Pavlov) whose name is well known to the general public. In contrast, his co-laureates Howard Florey and Ernst Chain and their vital contributions to the translation of Fleming's 1928 observation of the antibiotic qualities of a penicillium mold into the lifesaving drug penicillin are little remembered. The discovery has been both lauded by hagiographers and dissected by revisionists, foremost among the latter being Gwyn Macfarlane, whose biographies, first of Florey and then of Fleming, did much to broaden the story. It is the reflective, analytic tone of Macfarlane's books that Eric Lax adopts. He not only affirms the roles of all three Nobel Prize winners but also brings into the foreground the "fourth man" of penicillin, Norman Heatley, who was a major source for this book before his death early this year. (Figure) Although Fleming recognized the possibilities of penicillium, his kitchen chemistry experiments produced gallons of "mold juice" that had inconclusive effects. Poor experimental design combined with weak presentation skills and a literary style that Lax describes as "miserly" did little to stimulate others' interest. It was not until 1939 that Florey, Chain, and Heatley took up the work of chemical extraction in Oxford, England. The technical problems were immense; the relationship between Florey, a brash Australian, and Chain, a temperamental German-Jewish refugee, was difficult; and in the wartime conditions, equipment and supplies became increasingly scarce. On May 25, 1940, one of the most famous animal experiments in medical history took place. Eight mice were inoculated with a fatal dose of streptococcus. Four were also injected with a crude penicillin extract. Within hours, the untreated mice were dead and the penicillin-treated mice were still alive. Penicillin's spectacular possibilities were obvious. Weeks later, France fell to Germany, and Britain was left to fight alone in the war. The Oxford group of scientists realized that if the city were invaded, they would have to destroy their work to prevent it from falling into enemy hands. At Heatley's suggestion, they rubbed their jackets with the penicillium spores so that if they had to flee, they could carry the secret with them. A year later, with the help of the Rockefeller Foundation, Florey and Heatley carried the secret to the United States to persuade scientists and companies to undertake the production work that had been so crippled by shortages in the

United Kingdom. The entry of the United States into the war in December 1941 altered the course of history in regard to penicillin, and by the end of 1943 its production was the second-highest priority of the U.S. War Department. New climates and traditions of research then clearly emerged -- for instance, the British Medical Research Council believed that patenting medicines was unethical. They rejected Chain's urgent requests that the work be protected -- a refusal that bore, Lax suggests, more than a hint of anti-Semitism. American companies patented their production techniques, and Chain's prophecy that he would have to pay royalties to use his own invention proved correct, although whether the Oxford scientists could have patented their preliminary work remains debatable. The powerful personalities and the extraordinary circumstances in which they struggled on both sides of the Atlantic richly embellish this fresh and hugely enjoyable account of an important episode in medical history. *Tilli Tansey, Ph.D.*

From Bookmarks Magazine
Eric Lax, biographer of Woody Allen and Paul Newman, tells a riveting tale of the uncelebrated in *The Mold in Dr. Florey's Coat*. Critics generally praise his focus on the personalities behind the science, especially his treatment of Heatley, a heretofore-anonymous chemist who was passed over for the 1945 Nobel Prize won by Fleming, Florey, and Ernst Chain. Reviewers disagree about Lax's balance between hard scientific information and personal history; a few critics wished for more science at the expense of a human-interest (and highly readable) story. Overall, Lax overwhelmingly succeeds in evoking the monumental importance of the Oxford scientists' work.

Users Review

From reader reviews:

John Long:

A lot of people always spent their very own free time to vacation or go to the outside with them friends and family or their friend. Do you know? Many a lot of people spent they will free time just watching TV, or perhaps playing video games all day long. If you wish to try to find a new activity that is look different you can read the book. It is really fun to suit your needs. If you enjoy the book you read you can spent all day long to reading a e-book. The book The Mold in Dr. Florey's Coat: The Story of the Penicillin Miracle it is quite good to read. There are a lot of those who recommended this book. These were enjoying reading this book. Should you did not have enough space to create this book you can buy the particular e-book. You can m0ore effortlessly to read this book from the smart phone. The price is not very costly but this book features high quality.

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