

# Discovering Tuberculosis

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A GLOBAL HISTORY  
1900 TO THE PRESENT

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Christian W. McMillen



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*A Global History, 1900 to the Present*

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Yale

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For Stephanie, Maya, and Olin



## *Acknowledgments*

The amount of help I received when researching and writing this book has been humbling—humbling because I needed so much of it and because I was reminded repeatedly how much in awe I am of the people working every day on tuberculosis and HIV. This project was a departure for me. Because of that I relied on friends, family, colleagues, and institutions to help me learn as much as I could about something I initially knew so little about.

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me to say I have anything remotely like a complete understanding of the day-to-day challenges of controlling TB. I don't. But my two visits were immeasurably helpful in gleaning even a little insight. My observations, conversations, and encounters shaped much of the tenor and focus of the book. I imposed on many, many people. For their help with organizing my visits, for making me feel welcome when in South Africa, and for opening up their work to me, and in some cases their homes, I would like to thank Sheila Bamber, Stephan Lawn, Keren Middelkoop, Sheela Shennoi, Tania Thomas, Scott Heysell, Gerald Friedland, Tony Moll, Gavin Churchyard, Richard Chaisson, Jonathan Golub, Marianne Felix, and Amanda Miya. In this regard, I am also grateful to the Mellon Foundation. My New Directions Fellowship made it possible for me to take courses at Johns Hopkins in the epidemiology of TB and AIDS and funded my two trips to South Africa. The fellowship allowed me to learn about TB and HIV in a way I would never have been able to with conventional historical research funding. It provided me with an opportunity that changed the course of my research. For this I am grateful.

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# Discovering Tuberculosis



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# Introduction

In the first two decades of the twenty-first century one billion people will become infected with tuberculosis. Two hundred million of them will live with active disease. By 2020, some estimate that thirty-five million of those will die; others think that it will be seventy million. History's most deadly disease remains so in the present and very likely will remain so in the future (see figure 1).<sup>1</sup>

Why? There's been plenty of time to learn TB's secrets and plot its demise. It's been a well-known human disease for millennia and has been well understood since the end of the nineteenth century. Its microscopic cause—*Mycobacterium tuberculosis*—was revealed by Robert Koch in 1882. A vaccine has been in use for almost a century. And antibiotics—drugs that actually kill the disease and cure the patient—have been around for more than six decades. They work.<sup>2</sup> Yet 1.5 to 2 million people, most of whom are in the developing world and many of whom also have HIV/AIDS, die of the disease each year. Like malaria, with which it shares its intractability and ability to prey upon poor people, TB has been and is again (finally!) the focus of attention. The World Health Organization's Stop TB Strategy addresses long-ignored problems like TB's synergistic relationship with HIV as well the ever-growing drug-resistant-TB crisis.<sup>3</sup> The Gates Foundation, too, devotes considerable time to the disease. And there's now even an international organization, the Global Fund to Fight AIDS, Malaria, and TB, that gives the disease a top spot in the pantheon of contemporary killers.

But in the developing world, especially sub-Saharan Africa, TB has never been under control (see figure 2). If you harbor the notion that at one



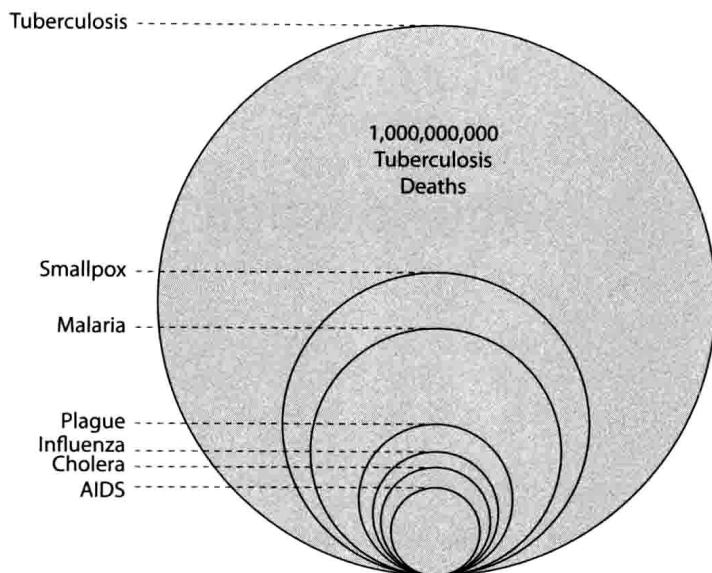


Figure 1. Deaths worldwide from tuberculosis compared to deaths from other infectious diseases in the past 200 years. (From Tom Paulson, “Epidemiology: A Mortal Foe,” *Nature* 502 [10 October 2013]: S2–S3, copyright 2013, adapted by permission from Macmillan Publishers Ltd.)

time TB was diminishing in force, abandon that notion now. We did not harness the disease and then let go of the reins; we’ve never even been able to hold on. One reads time and time again that TB is a treatable disease, that the drugs exist to cure it. With profound indignation people ask why, then, it remains such a scourge. It’s true: the drugs do exist; they can work. They cure TB. All the outrage over the existence of a curable disease that nonetheless still kills millions is understandable, even expected. These theoretically avoidable deaths smack of a striking failure of political will and an almost deliberate disregard for the millions and millions of people at risk. It’s sometimes hard to see things otherwise.

This book asks one question: why can’t we control TB? It’s mostly a historical book, and it looks to the past for the answer. Unfortunately, it’s mostly about failures. By writing about TB control as a failure, I have not jettisoned alternative ways of telling the tale; there aren’t any. To be sure, there is no TB epidemic in places such as well-off Western Europe, the United States, Japan, and Australia. And, miraculously, given the 1994 genocide and its aftermath—increased rates of TB, HIV, infant mortality, cholera—Rwanda has proved something of an African outlier. TB has been