

From Medieval Microbiology to Modern Medicine: A Concise History of How We Got to Where We Are Today

DOI: <http://dx.doi.org/10.1128/jmbe.v13i1.397>

Review of: *Germ Theory: Medical Pioneers in Infectious Disease*; Robert P. Gaynes; (2011). ASM Press, Washington, DC. 342 pages.

If one studies microbiology or medicine at all, prominent names and stories promptly rise to the surface. In this concise history of microbiology and medicine, the author brings those familiar stories to life. This is a well-written—even intriguing—historical chronicle of medical advances and microbial understanding. Robert Gaynes' illuminating discussion ranges from Hippocrates' foundational concepts of medicine to the challenges of creating an effective HIV vaccine.

Being a 'late adopter' of a love for history, I now find books such as this informative and enlightening sources of accurate historical insight. Having taught microbial history to untold numbers of undergraduate students, many names and details were very familiar. Within the pages of this well-crafted discourse, Gaynes includes curious and sometimes intimate details about the people and discoveries which have sculpted the faces of microbiology and modern medicine.

Including detailed chapters on the thoughtful discoveries, lives and sometime even peculiar habits of Hippocrates, Avicenna, Fracastoro, van Leeuwenhoek, Jenner, Semmelweis, Pasteur, Koch, Lister, Ehrlich, Fleming, and Wald,

the book provides an interesting read through thousands of years of medical history. In Gaynes' own words, "This book is intended not just for the physicians or students of medicine but to be accessible to anyone with an interest in microbiology, infectious disease, (and) medical history." The language and style Gaynes has chosen make this book an excellent historical source for introductory undergraduate microbiology students. Likewise, medical students and public health professionals will undoubtedly learn much about the history behind their chosen profession by reading this book.

The book is packed with details which I found new and enlightening, even after over 30 years of studying and teaching microbiology. One salient example surrounds the development and promotion of the smallpox vaccine by Edward Jenner. I had not realized the personal financial investment and travel commitments which Jenner necessarily made in the promotion and adoption of his newly developed vaccine. I had not known that the British government was hesitant to finance the production and distribution of the vaccine.

Gaynes includes the text of a personal letter written by United States President Thomas Jefferson to Edward Jenner. Jefferson wrote, "Having been among the early converts, in this part of the globe, to (your vaccine's) efficiency, I took early part in recommending it to my countrymen." In that same letter Jefferson continues his communication to Jenner: "Yours is the comfortable reflection that mankind can never forget that you lived."

Gaynes' elucidation throughout the chapters of this book should ensure the same outcome for each discovery, contribution, and scientist discussed.

Gaynes has crafted a book which I certainly will find myself reading again and again. It is a book in which anyone, from medical professionals to introductory microbiology students, will discover 'new' scientific and medical intrigue. This book is highly recommended for any educator or student of microbiology, public health or medicine. Educators at the high school, undergraduate, graduate, and medical school levels will benefit from reading *Germ Theory*. It is similarly well-suited for microbiology, biology, and medical students at these same levels.

Find a copy soon. You will have your eyes opened, and be glad you did.

Gregory D. Frederick

University of Mary Hardin-Baylor, Belton, TX
E-mail: Greg.Frederick@umhb.edu

History of medicine, the development of the prevention and treatment of disease from prehistoric times to the 21st century. Learn about medicine and surgery before 1800, the rise of scientific medicine in the 19th century, and developments in the 20th and 21st centuries. Unwritten history is not easy to interpret, and, although much may be learned from a study of the drawings, bony remains, and surgical tools of early humans, it is difficult to reconstruct their mental attitude toward the problems of disease and death. It seems probable that, as soon as they reached the stage of reasoning, they discovered by the process of trial and error which plants might be used as foods, which of them were poisonous, and which of them had some medicinal value. Modern medicine, or medicine as we know it, started to emerge after the Industrial Revolution in the 18th century. At this time, there was rapid growth in economic activity in Western Europe and the Americas. During the 19th century, economic and industrial growth continued to develop, and people made many scientific discoveries and inventions. You can learn more about how we ensure our content is accurate and current by reading our editorial policy . Bosely, S. (2007, January 5). Milestones that showed the way to modern medicine <https://www.theguardian.com/science/2007/jan/05/medicineandhealth.health>. History of medicine timeline. Heart Views, 16(1), 43-45 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4379645/>. History of medicine. Quite the same Wikipedia. Just better. But today, we're going to focus on systems of medicine as world-ordering theories, or epistēmā. These theories were built up into a textual tradition, in which doctors wrote down what they saw and cited earlier doctors when explaining their treatments. So let's turn to medical education. But Galen definitely got some things wrong. One reason is that human dissection was illegal in imperial Rome and the states that succeeded it. So a lot of anatomy was still guesswork based on observations of animals. Learn and revise about medicine through time in the UK with BBC Bitesize KS3 History, from Medieval surgery to modern day scientific discoveries. Medicine through time. Advances in medical procedures and medicines means that today, you are likely to be healthier and live longer than at any other time in human history. Part of. History. Medieval and Renaissance medicine. Add to My Bitesize. Add to My Bitesize. Revise.