a stark reminder of the importance of tracing the origins of ideas and critically examining assumptions in biology.

Although this has not yet been experimentally demonstrated, human somatic cells are likely capable of differentiating into germ cells. It is important to remember though that cells function within a whole organism and various mechanisms have likely evolved to safeguard cells from transdifferentiating into other cell types or reverting to a pluripotent state. Heeding MacCord's warning, understanding these safeguarding mechanisms emerges as a priority so we can avoid inadvertently creating a situation where somatic cells would more readily transform into germ cells.

YUICHIRO SUZUKI, *Biological Sciences, Wellesley College, Wellesley, Massachusetts*

HUMAN BIOLOGY AND HEALTH

ENDING EPIDEMICS: A HISTORY OF ESCAPE FROM CONTAGION.

By Richard Conniff. Cambridge (Massachusetts): MIT Press. $34.95. xvi + 353 p.; ill.; index. ISBN: 9780262047968 (hc); 9780262373852 (eb). 2023.

It can be easy to take our relatively infectious disease-lite lives for granted. It is easy to forget that it was never a sure thing that our children, siblings, and friends would make it out of childhood, much less to an old age, and that a significant proportion of those who were born would succumb in early age to now preventable (or outright eradicated) diseases. The biomedical and public health advancements that made variolation, vaccination, and antibiotics possible have brought on a world of curtailed epidemics at one major cost: most people today who will never suffer or die from one of these plagues will also never understand the long journey that brought on this privileged reality.

Conniff's mission statement and underlying motivation for *Ending Epidemics: A History of Escape from Contagion* is simple: this book is a conscious effort to remember (p. xii). Infectious diseases of all etiologies have been close partners of humans for millennia, yet most of us have never lived in a world without penicillin, and those of us younger than 44 years old have never lived in a world *with* smallpox. Regarding the latter, there is a 31-year gap between the elimination of smallpox in the U.S. (1949) and when it was declared eradicated in nature worldwide (1980). In practice, this means that a full generation was born and grew to adulthood in the U.S. without the threat of smallpox. During that time, the forgetting was already in full force.

Throughout the volume, the author seeks to elevate all of the hard work, many starts and stops, and sometimes outright luck that led to the point where antibiotics and vaccinations became the norm. The text spans three centuries, beginning with Antoni van Leeuwenhoek's observations of our microscopic world (Chapter 1) and ending with the massive global smallpox eradication campaign (Chapter 31). Along the way, Conniff highlights the 11th-century Chinese origins of variolation (p. 41), the full team of scientists behind John Snow's famous epidemiological study of cholera (p. 110), Agnes Lister's (Joseph Lister's wife) invaluable contributions to the research leading to more widespread acceptance of germ theory (pp. 135–136), or that women—Pearl Kendrick and Grace Eldering—were behind the vaccine that led to the global decline in childhood whooping cough mortality (p. 240). My only criticism of this book draws from the initial item in this list of examples: there were not nearly enough examples of non-Western advances in fighting epidemics.

This volume may fit snugly into a history of medicine, history of public health, or plagues and peoples syllabus with a general student audience interested in infectious disease history and the uniquely human experience with pathogens, epidemics, and pandemics. Chapter 31, titled Zero Pox, may be of high value to young people who know nothing of the efforts to eradicate smallpox or who may feel the fight against epidemics is futile. And yet, through the conscious effort to remember, Conniff calls on these very people: "young people who do not know it cannot be done" (p. 310).

TAYLOR P. VAN DOREN, *Institute for Circumpolar Health Studies, University of Alaska, Anchorage, Alaska*

RETINAL DISORDERS: GENETIC APPROACHES TO DIAGNOSIS AND TREATMENT. *Second Edition. Cold Spring Harbor Perspectives in Medicine.*

Edited by Eyal Banin, Jean Bennett, Jacque L. Duncan, Botond Roska, and José-Alain Sahel. Cold Spring Harbor (New York): Cold Spring Harbor Laboratory Press. $55.30. x + 565 p.; ill.; index. ISBN: 9781621824626 (hc); 9781621824633 (eb). 2024.