

transplantation immunology, the cloning of the T-cell-receptor genes is ancient history and the questions and personalities that populate *A History of Transplantation Immunology* will seem even more remote from the job at hand. The students and fellows who could have benefited most from Brent's wisdom are now in their middle years, and for those still engaged in the field this quirky gem of a book provides a second opportunity to get the history straight.

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**ON THE ORIGIN OF SPECIES BY MEANS OF
NATURAL SELECTION, OR THE PRESERVATION OF
FAVOURABLE RACES IN THE STRUGGLE FOR LIFE**

(Collector's Edition.) By Charles Darwin. 470 pp., illustrated.

Norwalk, Conn., The Easton Press, 1997. \$43.25.

No ISBN.

THE *Origin of Species* is the most radical reconfiguration of our place in the universe — as individuals and as a single species — since Moses brought down the Torah from Sinai. It remains today what it was on the day it was published in 1859: a model of clear thinking and close observation, a set of predictions that seem to be borne out by experiment whenever they have been tested, and a vision of our origin that offers us no hope of finding purpose or perfectibility in the biology of our species, or in that of any other.

The argument of the book is as simple and lifeless as a crystal: all life shares a common ancestry; all differences among today's living things are the result of differential viability among the variants of previous forms; variation is intrinsic to life; and therefore a species can attain neither perfect form nor perfect stability. Until the past few decades, a serious person could take refuge from Darwin by claiming that the gene — the unit of inheritance of both stability and variation — could not be a simple chemical and that, therefore, the motor of natural selection might not be random mutation alone but might, instead, have an intrinsic direction. But DNA does what Darwin asked it to do, and today we cannot avoid accepting that life is, at the level of chemistry anyway, just DNA's way of making more DNA.

There are two excellent reasons for every practicing physician to own and read a copy of *The Origin of Species*. First, the Hippocratic oath and medicine itself are triumphs of our species' capacity to work against natural selection. Only by hundreds of thousands of years of suffering and dying can natural selection have winnowed out our ancestors from among their primate competitors. Every patient whose life is extended, whose quality of life is made better, whose suffering is reduced, is a novel interference with this ongoing process. Some may worry that interference of this sort will lead to the loss of our species' vitality; I see it as the very essence of our success.

The second reason for doctors to read Darwin is to see

how different their job would be if his view of life were as complete as it is accurate. Simply put, Darwin ignored microbes. Every case of infectious disease — whether caused by virus, mycoplasma, bacterium, mold, or protist — is a little sampling of how natural selection works. The strategy our ancestors have followed since they first assembled into multicellular creatures bets on genetic stability and complexity to create a species made up of individuals, each with a reasonable chance of survival. The microbial strategy takes the opposite tack. Their genetic simplicity and malleability allow them to discard almost all progeny, always leaving a few genetic variants to survive any contingency.

If doctors today were able to show Darwin what they know about infectious disease, I am sure he would agree that the biggest threat natural selection poses to our species is neither another animal nor any possible "next step" born from us, but the invisible species that have been with us and in us from the beginning. The microbes' profligate strategy precedes ours, and there is no reason to think that we will ever design chemicals to outwit it; our immune system is our first, and remains our best, defense. Darwin would have really loved the idea of a vaccine. To see why, read the book; if you do not already have a copy handy, this is a particularly handsome edition to have.

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**MAKING MEDICAL HISTORY: THE LIFE AND TIMES
OF HENRY E. SIGERIST**

Edited by Elizabeth Fee and Theodore M. Brown. 387 pp.

Baltimore, Johns Hopkins University Press, 1997. \$39.95.

ISBN 0-8018-5355-9.

FEW historians have enjoyed so enviable a reputation in their own day as Henry Sigerist. Born in Paris, raised in Zurich, and educated at Leipzig, Sigerist studied under the great medical historian Karl Sudhoff, whom he succeeded as director of the Institute for the History of Medicine, then the leading center of medical-historical research in Europe, at only 34 years of age. In 1932 Sigerist was invited to become director of the newly founded Institute for the History of Medicine at Johns Hopkins, where he remained until 1947. Determined to make Hopkins a national center of medical history and to professionalize the field, which in America was still dominated by amateurs, Sigerist attracted several promising young medical historians to Baltimore from Germany. He founded a journal, the *Bulletin of the History of Medicine*, which he hoped would create a high scholarly tradition, and he was instrumental in transforming the American Association for the History of Medicine from a gentlemen's club into a national professional organization.

Sigerist combined academic brilliance with an urbane and cosmopolitan personality. A historian of unusual breadth, an outstanding lecturer, and a gifted propagandist, he was inundated with invitations to speak all over North Ameri-