

## Blood

AN EPIC HISTORY OF MEDICINE AND  
COMMERCE

by Douglas Starr

Alfred A. Knopf, \$27.50, 441 pp.

ISBN 0-679-41875-X, 1998

REVIEWED BY HERBERT A. PERKINS

*Blood Centers of the Pacific, Irwin Center  
270 Masonic Avenue  
San Francisco, CA 94118*

In his book *Blood: An epic history of medicine and commerce*, Douglas Starr addresses the reasons for the mixed response to the dangers of HIV transmission by blood transfusion in the early 1980s. He begins his story in the distant past, arguing that the problems of HIV transmission by blood transfusion were the result of (1) the scientific development of transfusion therapy (2) the evolution of blood banking and plasma fractionation into major industries and (3) the symbolism of blood as a life source.

The stories about blood have been told many times, but not all in one place. Although, this book is well written and includes many details not readily available elsewhere and the breadth of international coverage is particularly noteworthy from a historical point of view, it is a very uneven document. The author focuses on particular episodes and individuals, guided to some extent by the people he interviewed. He expands stories likely to interest the reader at the expense of developments that are more important to the history of blood transfusion.

For example, the discovery of the ABO blood group antigens by Karl Landsteiner gets appropriate emphasis, but the discovery of the Rhesus (Rh) factor by Alexander Wiener and Philip Levine is mentioned only in the footnotes. Garrett Allen receives recognition for his warnings about the dangers of hepatitis transmission during his tenure as director of the blood bank at the University of Chicago in the 1950s, he was hardly the only scientist issuing such cautionary statements at the time.

After detailing the progress of blood transfusions during World War II, Starr switches emphasis from the important scientific discoveries about blood to its commercialization. He discusses the squabbles between the American Red Cross and the American Association of Blood Banks, the problems created by for-profit blood

banks, the use of paid blood donors and the US Federal Trade Commission's attempt to find blood banks and hospitals in restraint of trade because of their refusal to accept blood from certain for-profit centers. The author also mentions the abuse of plasma donors in undeveloped countries and the risks associated with the collection of blood from prisoners in the United States.

Three chapters of Starr's book discuss the transmission of HIV through transfusion of contaminated blood in a number of countries during the 1980s, and the court cases that ensued. The AIDS epidemic and its effect on blood transfusion in the United States are detailed, with much emphasis placed on the allegations of plaintiffs' expert witnesses from later trials. The author repeats the claims of negligence and unnecessary delay despite the fact that the actions by blood banks conformed with the requirements and statements of all US federal health agencies at that time.

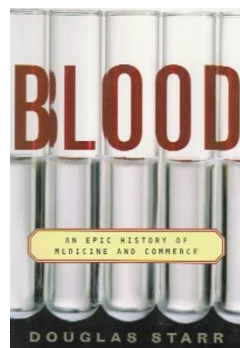
This book is very useful in bringing together in one place the actions (and failures to act) of blood banks in many different countries in response to the AIDS epidemic. It is clear that in comparison to those in other countries, US blood banks were the most swift in ensuring the safety of the blood supply. Whether or not there is agreement that additional measures should have been taken in the United States, the events of the early 1980s did

lead to greater user input in making decisions, with the resulting goal of zero risk regardless of the cost to the patient or the availability of blood components.

There are a number of errors in this book, no doubt the result of the author's lack of expertise in this field. Levine and Wiener are incorrectly credited with showing that the infusion of Rh antibody into Rh-negative mothers prevents hemolytic disease of the newborn. And the chapter entitled 'Blood in a post-AIDS society' states that introduction of the blood test for p24 HIV antigen could prevent 68 cases of transfusion-associated AIDS per year: 6 to 8 cases is more likely. In the three years

since the introduction of the p24 antigen test by US blood banks, only four donors tested antigen-positive who would not have tested positive with the anti-HIV test already in routine use.

Starr concludes his book by pointing out that blood is both the gift of the donor and a commodity. He points out that pride in local volunteer blood donors actually delayed the introduction of safer products in some countries other than the United States while economic concerns lead plasma collection centers to exploit donors in the Third World and in US prisons. Certainly, the risks associated with the view of blood as a symbol and as a commodity have to be recognized and controlled.



## What remains to be discovered

MAPPING THE SECRETS OF THE UNIVERSE,  
THE ORIGINS OF LIFE AND THE FUTURE OF  
THE HUMAN RACE

By John Maddox

The Free Press, \$26, 434 pp.

ISBN 0-684-82292-X, 1998

REVIEWED BY FLOYD E. BLOOM  
*Chairman, Department of Neuropharmacology  
The Scripps Research Institute  
La Jolla, California and  
Editor-in-Chief, Science*

During his two terms as Editor of *Nature* (1966–1973 and 1980–1995) John Maddox gained an impressive vantage point

from which to view what he calls the steady rivers of discovery that have permeated all branches of scientific research over the past 30 years. No reader who tackles his new book, *What remains to be discovered*, is left wondering whether old Editors, like Indians and generals, just fade away. As strong of mind as he is of opinion, wisdom and focused perspicacity for the big problems of the future, Maddox will allow no one to forget his well-earned reputation for stubborn independence of viewpoint.

Readers may well find that his book offers a bigger intellectual meal than they are prepared to digest. But should they sample its intellectual delights, they will come away with a splendid and broad overview of the panorama of scientific discourse, and quite an earful of assertions as to what still needs to be done.

Based on a series of lectures at the