

KEY TERMS

Al-Hawi	Diagnostic	Pharmakon
Alternative medicine	Drug/ <i>droog</i>	Porcine
Antineoplastic	Ebers Papyrus	Prophylactic
Bovine	Palliative	Replacement drugs
Curative	Pharmacodynamics	Synthetic drugs
Destructive	Pharmacology	

■ HISTORY OF PHARMACOLOGY

The history of pharmacology helps us to understand that even though there have been huge advances in medications, scientists are coming to understand that by disregarding ancient practices, they have been missing a treasure trove of useful medications. Many practitioners are utilizing **alternative medicine** to maximize their patients' health, and scientists are looking to older remedies to see if and why they work and how to reproduce them in the modern world. We as practitioners also need to understand that many patients are using many different forms of self-medication, from home remedies to substances they learned about on an infomercial that promise to cure all types of problems; if these substances are not understood, they may interfere or counteract a prescribed pharmaceutical medication. In other words, we need a complete picture of every substance patients are taking in order to assist in their care.

The term **pharmacology** is of Greek origin from two words: **pharmakon**, meaning “medicine,” and *ology*, meaning “the study of.” **Pharmakon** also meant poison *and* remedy, poison because some of the early medicines were toxic enough to kill, and remedy because, at times, early medicines cured the illness. The word **drug** has a Dutch origin in which **droog** meant “dry” as in the use of dry herbs.

Most ancient societies had little knowledge about the human body and how it worked, so treating illness was often based on trial and error. Early records document that treatments consisted of plants, minerals, and animal products because no other sources were available. “Healers” were known as wise men, shamans, witch doctors, medicine men and women, and so on (Fig. 1-1), depending on the culture, and were chosen based on their knowledge of which plants or other substance to use, how to prepare it, and how much to give the patient.

Pharmacology in Ancient Times and Cultures

Early documentation of medicine and various remedies is evident in several cultures. For example, “The Yellow Emperors’ Inner Classic,” a Chinese document, was a very early discussion of yin-yang and acupuncture. The first Chinese manual on pharmacology was written in the first century A.D. and included 365 medicines, 252 of which were herbs. In Egypt, a medical document called the **Ebers Papyrus** was written circa 1550 B.C. and lists about 700 “recipes” for a host of illnesses, from crocodile bites to psychiatric illnesses. Another document, the **Al-Hawi**, is a large, 20-volume medical book written by the physician Al-Razi in ancient Persia (Iran). It was translated into Latin in the 13th century and greatly influenced medicine in medieval Europe.

The contributions from these cultures led to the advancement of pharmacology. When treatments for many conditions were discovered, the findings were recorded on papyrus or paper to pass on to future generations. Documenting this early information was extremely important, as belief systems changed over time. Without these earlier writings, traditional oral knowledge might have been lost or suppressed and much progress could not have been made.

During the 17th and 18th centuries, there was a real lack of knowledge in the use of medications and their dangers. A prime example of this is mercury, which was used for a variety of ailments from skin conditions to syphilis. Specifically, in the late 1700s a prominent physician, Dr. Benjamin Rush used a mercury compound in high doses to treat yellow fever patients. Of course, it has since been discovered that mercury is so harmful to humans that we no longer use mercury blood pressure cuffs or thermometers for fear of exposure.