

noisome materials, and the administration of specific herbs or plant materials.

## The First Apothecary

Before the days of the priestcraft, the wise man or woman of the tribe, whose knowledge of the healing qualities of plants had been gathered through experience or handed down by word of mouth, was called upon to attend to the sick or wounded and prepare the remedy. It was in the preparation of the medicinal materials that the art of the apothecary originated.

The art of the apothecary has always been associated with the mysterious, and its practitioners were believed to have connection with the world of spirits and thus performed as intermediaries between the seen and the unseen. The belief that a drug had magical associations meant that its action, for good or for evil, did not depend upon its natural qualities alone. The compassion of a god, the observance of ceremonies, the absence of evil spirits, and the healing intent of the dispenser were individually and collectively needed to make the drug therapeutically effective. Because of this, the tribal apothecary was one to be feared, respected, trusted, sometimes mistrusted, worshipped, and revered, for it was through his potions that spiritual contact was made, and upon that contact the cures or failures depended.

Throughout history, the knowledge of drugs and their application to disease has always meant power. In the Homeric epics, the term *pharmakon* (Gr.), from which our word pharmacy was derived, connotes a charm or a drug that can be used for good or for evil. Many of the tribal apothecary's failures were doubtless due to impotent or inappropriate medicines, underdosage, overdosage, and even poisoning. Successes may be attributed to experience, mere coincidence of appropriate drug selection, natural healing, inconsequential effect of the drug, or placebo effects, that is, successful treatment due to psychologic rather than therapeutic effects. Even today, placebo therapy with inert or inconsequential chemicals is used successfully to treat individual

patients and is a routine practice in the clinical evaluation of new drugs, in which subjects' responses to the effects of the actual drug and the placebo are compared and evaluated.

As time passed, the art of the apothecary combined with priestly functions, and among the early civilizations, the priest-physician became the healer of the body as well as of the soul. Pharmacy and medicine are indistinguishable in their early history because their practice was the combined function of the tribal religious leaders.

## Early Drugs

Because of the patience and intellect of the archaeologist, the types and specific drugs used in the early history of drug therapy are not as indefinable as one might suspect. Numerous ancient tablets, scrolls, and other relics as early as 3000 BC have been uncovered and deciphered by archaeological scholars to the gratitude of historians of both medicine and pharmacy (Fig. 1.1).

Perhaps the most famous of these surviving artifacts is the Ebers papyrus, a continuous scroll some 60 feet long and a foot wide dating to the 16th century BC. This document, which is now preserved at the University of Leipzig, is named for the noted German Egyptologist Georg Ebers, who discovered it in the tomb of a mummy and partly translated it during the last half of the 19th century. Since that time, many scholars have participated in the translation of the document's challenging hieroglyphics, and although they are not unanimous in their interpretations, there is little doubt that by 1550 BC, the Egyptians were using some drugs and dosage forms that are still used today.

The text of the Ebers papyrus is dominated by drug formulas, with more than 800 formulas or prescriptions being described and more than 700 drugs mentioned. The drugs are chiefly botanical, although mineral and animal drugs are also noted. Such botanical substances as acacia, castor bean (from which we express castor oil), and fennel are mentioned along with