

**GRECO-ARAB AND
ISLAMIC HERBAL
MEDICINE**

GRECO-ARAB AND ISLAMIC HERBAL MEDICINE

**TRADITIONAL SYSTEM, ETHICS,
SAFETY, EFFICACY, AND
REGULATORY ISSUES**

By

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FOREWORD

There was a huge enlightenment in the Arab world at a time when Europe was in the grip of the Dark Ages, stifled by Church authority. A major part of this explosion of intellectual freedom was the creation of an entirely new coherent medical system, based on the medicine of the Greeks, the Egyptians, and even of India, that developed into a rational, experimental, and thorough corpus with its theories and treatment protocols, pharmacies, hospitals, libraries, and thousands of new medicines and combinations used for the first time along with differential diagnosis. It became a foundation stone of modern medicine and also of herbal medicine in the West. And it still exists. Arabic medicine today stands alongside Ayurvedic and Chinese medicine as one of the great traditional medical systems of the world and is popularly used in all Muslim countries from Pakistan to Morocco. However, it is relatively unknown and unappreciated as a system in its own right, and today, at a time when natural medicine is a primary source of new therapies and remedies, there is still a great deal to be learnt from it.

This book sets out to reveal the potential of Arabic medicine and especially medicinal plants as a living and vital medical resource today. In this it is quite unique, especially because of its coverage of research on the herbs, and much of it was carried out in the authors' own labs. As far as I am aware, no other professional-level book covers the pharmacology and science of so many important herbs that are widely used in Arabic countries but are still relatively unknown in the West. Take, for example, *Nigella* (black seed). It is a central herb in Arabic medicine used as a powerful anti-inflammatory and antiseptic. The authors have researched this herb and there are also hundreds of papers, including clinical studies, published on it in the world scientific literature, yet the herb is still unknown and unused in the West except as a spice. This book might well raise its profile worldwide. There has been an assumption in the past that all the herbs of Arabic medicine are already known and used in modern professional herbalism and the health industry. This is not so [1], and this book can be very helpful in introducing a host of novel plants, together with research on them.

Professor Bashar Saad and Dr. Omar Said have written what may well become a classic text on Arabic medicine, not only because of its pharmacological and scientific material, but also because of its interdisciplinary nature. It is a fascinating exploration of the richness of the past knowledge, combined with ethnopharmacology of Arabic medicine today, safety and pharmacology of Arabic medicinal plants, botany, clinical aspects, Arabic medical principles, and so on. The authors are uniquely qualified to write this book, because they themselves embody the interdisciplinary wisdom

needed for it. Indeed, they would stand alongside some of the greats of ancient Arabic medicine, who transcended boundaries of subject and discipline. Many times I have walked with the authors over the Galilee hills and listened as they picked out a small hidden herb, identified it, described its Latin, Arabic, English, Hebrew, and ancient names, described its uses and the debates surrounding it in the ancient literature, told me what is in it chemically, described how it performs in the lab and how it should be formulated into a finished remedy, and told stories of, for example, of how the Bedouin of the Negev desert or the Druze of Syria might use it today. The authors are accomplished scientists in the fields of pharmacology, cell biology, and immunology and bring this unique and original aspect of modern science to the herbal wisdom. Besides, the authors are involved in the Galilee Society's botanical garden of medicinal plants, the largest garden devoted to medicinal plants in the Middle East. Thousands of children go there every year and are taught about the traditional medicine of the region. And it should also be mentioned that working and researching on traditional Arabic medicine in Israel and Palestine, regions of conflict, has not been easy.

Today, it is acknowledged that much of modern drug discovery depends on natural product concepts. The first steps are usually the work by ethnopharmacologists in the field and pharmacologists in the lab. This book breaks new ground in opening up a forgotten resource for both drug discovery and new natural product medicines.

STEPHEN FULDER

REFERENCE

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PREFACE

At the beginning of the twenty-first century and despite the great progress in modern medicine, traditional Arab–Islamic medicine continues to be practiced within the Mediterranean as well as most Arab and Islamic countries. A very important factor that has enhanced the present popularity and widespread use of Arab herbal-based medicines is the belief that they are prepared according to the principles of Greco-Arab and Islamic medicine, which was developed during the Golden Age of Arab–Islamic civilization. This civilization spanned from the seventh to the fifteenth century and extended from Spain to Central Asia and India. It became a wellspring of brilliant medical developments and innovations, as well as of great achievements in astronomy, mathematics, chemistry, philosophy, and arts. Arab and Muslim scientists significantly contributed to the development of modern Western medicine, accomplishing far more than mere translation. A closer look at their activity during the medieval period shows that they translated classical medical texts not only from Greece, but also from Persia, India, and China. From this, Arab and Muslim scientists were able to synthesize and develop a rich and universal medical system based on scientific methods and experimentation. The works of Arab and Muslim scholars gained widespread use and were used in European medical schools. For instance, the Arab and Muslim physicians Al Tabbari, Rhazes, Al-Zahrawi (Albucasis), Al-Biruni, Avicenna, Ibn al-Haitham, Ibn al Nafees, Ibn Khaldun, and Ibn Zuhr (Avenzoar) are regarded as among the great medical authorities of the ancient world and the medieval world, physicians whose textbooks were used in European universities up to the sixteenth century. They were among the first to make accurate diagnoses of plague, diphtheria, diabetes, gout, cancer, leprosy, rabies, and epilepsy. Avicenna’s and Rhazes’s works on infectious diseases led to the introduction of quarantine as a means of limiting the spread of these diseases. Arab physicians laid down the principles of clinical investigation and drug trials, as well as animal tests. They mastered operations for hernia and cataracts, filled teeth with gold leaf, and prescribed spectacles for defective eyesight. The physicians and scientists of the Islamic Golden Age, who were of diverse religious and ethnic backgrounds, passed on rules of health, diet, and hygiene that are still largely valid.

The high degree of development achieved in Greco-Arab and Islamic medicine is observable in a statement of Avicenna (980–1037), who defined medicine in his *Canon of Medicine* as “the science from which we learn the states of the human body with respect to what is healthy and what is not; in order to preserve good health when it exists and restore it when it is lacking.” He further stated that “we have to understand

that the best and most effective remedy for the treatment of patients should be through the improvement of the power of the human body in order to increase its immune system, which is based on the beauty of the surroundings and letting him listen to the best music and allowing his best friends to be with him.” Another statement concerning therapeutic methods was made by Rhazes (846–930): “if the physician is able to treat with foodstuffs, not medication, then he has succeeded. If, however, he must use medications, then it should be simple remedies and not compound ones.” Arab–Islamic medicine influenced Western medical circles to such an extent that it was included in the curriculum of European medical schools for many centuries. It became a foundation stone of modern medicine and also of herbal medicine in the West. And it still exists. Arab-Islamic medicine today stands as one of the great traditional medical systems of the world and is popularly used in all Arab and Islamic countries from Pakistan to Morocco.

The Eastern region of the Mediterranean is covered with at least 3600 plant species of which 700–800 are noted in medieval medical books for their use as medicinal herbs. Recent ethnopharmacological studies have demonstrated that more than 450 medicinal plants have continued to be employed in the treatment and prevention of human diseases within the Mediterranean as well as most Islamic countries. Some of these plant species have been investigated and their bioactive ingredients extracted to treat various human diseases.

This book is the first academic book in the field of Arab herbal medicine that explores and introduces aspects of Arab herbal medicine using original ethnopharmacological surveys conducted by our group in the Mediterranean area. This book includes 19 chapters, embracing particularly historical aspects and present uses of traditional Arab–Islamic herbal medicine. Chapters 1–5 focus on historical background, medical innovations introduced by Arab physicians, common roots of Arab medicine and Western medicine, and methodology of drug discovery and therapy in Arabic and Islamic medicine. Chapters 6–10 present a comprehensive review of the methodology of drug discovery, method of therapy, and commonly used herbal medicines in the Arab–Islamic world and their tremendous potential in modern drug discovery. Chapters 11–14 combine overviews of state-of-the-art *in vitro* and *in vivo* techniques, as well as clinical trials of traditional herbal medicine. Chapters 15 and 16 cover medical ethics in Arabic and Islamic medicine, uses of medicinal plants, and methods of extracting their active ingredients. Chapter 17 examines the use of food therapy in Arab–Islamic medicine. Chapters 18 and 19 focus on demographic and regulatory issues, as well as on drug development from herbal sources.

For convenience, all dates given in book are those of the Christian calendar, unless otherwise specified. The designation AD is used only when there is a need to distinguish a date from an earlier BC date. General references to a century rather than to a specific year refer to centuries of the Christian era.



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