

# Garcia de Orta: The World of Medicinal Plants

Groundbreaking 16<sup>th</sup> century Portuguese research into oriental medicine



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With the Renaissance and maritime discoveries during the 16<sup>th</sup> century, the geography of medicine was in frank expansion and new horizons were opening up in the healing arts. New discoveries and concepts were now exerting an impact on the use of medicinal plants and their study, which had begun in ancient Egypt and Greece (as early as 1300 BC with the Ebers papyrus and its predecessors) and had been preserved unchanged for centuries by monks and herbalists.

Garcia de Orta was perhaps the ultimate expression of these advances. His work *Coloquios dos Simples e Drogas e Cousas Medicinais da Índia* [Conversations on the Simples, Drugs and Medicinal Substances of India], the first treatise on tropical medicine, established the foundations of modern phytotherapy and pharmacology. It established a system and therapeutic practice based on plant preparations and derivatives studied and manipulated through botany and chemistry – the precursors of pharmacology.

At the time, medicinal plants as well as animal and mineral products and thermal waters were being used to treat a variety of diseases, many of which today fall within the sphere of urology – urinary and venereal infections, tuberculosis, tropical infections,

stone and bladder maladies, impotence and sterility, battle injuries, accidental and surgical wounds, etc. Some of these plants were used as diuretics and still others as emetics or purgatives to treat different types of diseases. Doctors, some of whom were physicians or philosophers, others alchemists, healers or shamans, treated diseases with hygiene and dietetic measures and with these natural products, seeking out herbalists to prepare concoctions and sometimes barber-surgeons to perform procedures like bloodletting or cutting, like lithotomy.

## Garcia de Orta

Garcia de Orta was born in Castelo de Vide, Portugal, in the Alentejo region, around the year 1500. He was a New Christian, a converted Jew descended from Sephardi Jews (natives of the Iberian Peninsula). He studied in Salamanca and Alcalá de Henares, receiving his diploma in medicine and philosophy in 1523. He practised in Lisbon and was a professor at the University in 1530 (32?). In 1534 he set off for India with commander-in-chief Martim Afonso de Sousa, a personal friend of his, perhaps out of friendship, curiosity or adventure, being in search of a better life, because the Inquisition had been set up in Portugal, or for all of these reasons.

Goa was the main commercial hub of the east, a land rich in trade and a crossroads of peoples, languages, religions and cultures. The Inquisition had not yet arrived there and Garcia de Orta practised medicine and served as chief physician to viceroys, governors and local princes; but he was also attracted to the great variety of medicinal plants, most of which were unknown to Europeans. Garcia de Orta spoke many languages and conversed with Arabs and Hindus. He planted and sold spices and precious stones, planted a vegetable garden, a botanical garden (and several others later on) for cultivating and studying medicinal

and edible herbs, and he set up a scientifically organised, classified and catalogued herbarium.

He travelled throughout the Orient, dealing with travellers and merchants and practising trade, but all the while studying local diseases and their treatment. He compared and correlated what he found with what he had learned in Europe, with Dioscorides' Pharmacopeia and with Latin translations of Arabic and Medieval works. He observed, meditated, experimented and arrived at conclusions.

## The Coloquios

It was thus that over a period of thirty years he created what would be his legacy – the book he would write in the form of a dialogue, in Latin and later in Portuguese, *Coloquios dos Simples e Drogas e Cousas Medicinais da Índia* [Conversations on the simples, drugs and medicinal substances of India], where he tells of his science and his experience, describing hitherto unknown tropical diseases and many new plants and drugs that had never been used before in the west (the “conversations” are dialogues, and the “simples” are wild varieties of plants with medicinal properties and virtues).

The book was published in Portuguese in Goa in 1563. It was the third book to be printed in Asia after Saint Francis Xavier's Catechism and the first Archbishop of Goa's Spiritual Compendium. Written in the form of a dialogue, which was a common convention at the time, between Orta himself, a critical experimental scientist, and an imaginary physician Ruano (his alter ego) who had recently arrived from the Iberian Peninsula, the book has fifty-seven chapters and mentions, in alphabetical order, approximately six dozen drugs, minerals, plants and resins from Asia, including aloe, amber, benzoin, calamus, cinnamon, camphor, cardamom, cassis, stramonium, galangal,

Garcia (Avraham) de Orta,  
circa 1500-1568



ginger, opium, pepper, *Similax china*, rhubarb, sandalwood, senna, tamarind, etc., and their therapeutic effects. The original edition of this work was nearly lost forever due to the acts of the Inquisition, but the Flemish botanist Charles de l'Écluse (Carolus Clusius, 1526-1609) discovered and acquired a copy of the book while on a visit to Portugal in 1564 (this copy is currently housed in the University of Cambridge library) and translated it into Latin. A summarised and annotated version was published three years later in Antwerp and was widely disseminated throughout Europe.

Garcia de Orta died in 1568. During his lifetime he was not pursued by the Inquisition, but a few years after his death (in 1580), the Tribunal of the Holy Office of the Inquisition condemned him for the “crime” of Judaism and sentenced his mortal remains as well as his writings to be burned in the bonfires of Goa. Thanks to Charles de l'Écluse, however, his work was preserved and disseminated, and Garcia de Orta, a man who “had no hate except for errors, or love except for the truth,” an important figure whose landmark work of the 16th century, the Renaissance and the geographic expansion of medicine, endured and continued to convey original information of great value to the West in the fields of medicine, botany, chemistry, pharmacology and biology.

*Coloquios dos Simples e Drogas e Cousas Medicinais da Índia* (1563)

