

Preface

Until recently, sporotrichosis has been considered a neglected disease. Despite its worldwide spread with numerous hyperendemic areas, and being the most frequent subcutaneous mycosis in large geographical areas such as South America, as well as outbreaks occurring in several tropical and subtropical countries, references in the basic literature citing sporotrichosis as an example of human mycosis are still rare. Several factors have contributed to an increased interest in this disease. As an opportunistic infection, its incidence has been associated with risk groups such as patients infected with human immunodeficiency virus or receiving immunosuppressive therapies, and patients with chronic diseases, among others.

Another point of great interest regards sporotrichosis becoming an important zoonosis. This has changed the classic epidemiological pattern shaped by many years of soil-associated transmission, frequently through punctures from thorns; hence the name ‘rose gardener’s disease’.

Several advances have been made in terms of comprehending the biology of *Sporothrix schenckii* and the pathogenesis of sporotrichosis. This book aims to consolidate these major advances to date. Subsequently, nine chapters were conceived to cover the main areas in which the greatest progress has been made and highlighting others needing further development. In Chap. 1, a brief history of the disease is given, from its first description by Benjamin Schenck until the current state of its geographic distribution. Chapter 2 is devoted to the description of the causative agent and the progress made from its description until the recent identification of other species collectively known as the *S. schenckii* complex. Chapter 3 is dedicated to the structural aspects of the fungus’s immunomodulatory components that determine the immune response against *S. schenckii*; also mentioned are some of the virulence factors, which are further expanded in the next chapter. Chapter 4 refers to the aspects of interaction between *S. schenckii* and its environmental niche and how this interaction can determine the host response. The clinical aspects of human and animal sporotrichosis are embraced in Chaps. 5 and 6, respectively, whereas Chap. 7 is devoted to the more relevant aspects of the immune response against *S. schenckii*, mostly from results reported from our

laboratory. Chapter 8 covers the immunological diagnosis of the disease, and the last chapter describes current therapies and new developments in the fields of antifungal and immunostimulatory treatments.

It is our goal that this work serves as a reference for the study of sporotrichosis by medical students, general practitioners, infectious disease specialists, microbiologists, biomedical researchers, and others interested in this area. As the first edition and as an area of intense current investigation, this may not be a perfect work. We are aware that future editions will have to improve in several aspects, but with this first effort we hope to at least contribute to the scientific community learning more about this emerging disease and hopefully stimulate the interest of new research groups in order to sprout new research projects that will help to seek new and more effective tools for the diagnosis, prevention, and treatment of sporotrichosis.

I thank all the authors who contributed directly with their experience in writing the various chapters, as well as all those whose work, featured or not, allowed the existence of this book and also those who gave their suggestions for generally improving the book. Thanks also go to our numerous master and PhD students, postdoctoral researchers, and other collaborators over the years whose projects gave rise to many of the findings presented here. Finally, I dedicate a special acknowledgement to my friend Marisa Campos Polesi for the more than 20 years dedicated to the Immunology Laboratory of the School of Pharmaceutical Sciences, UNESP, and also for our equally long and lasting friendship, both being important elements driving my scientific accomplishments throughout these years. To all of them, my many thanks.

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