One of the main problems concerning therapeutic tools for the treatment of parasitic diseases, including leishmaniasis, is that some field parasites are naturally resistant to the classical drugs; additionally, current therapies may select parasites prone to be resistant to the applied drugs. These features are (at least partially) responsible for the disappointing persistence of the disease and resultant deaths worldwide. This book provides a comprehensive view of the pathology of the disease itself, and of parasitic drug resistance, its molecular basis, consequences and possible treatments. Scientists both from academic fields and from the industry involved in biomedical research and drug design, will find in this book a valuable and fundamental guide that conveys the knowledge needed to understand and to improve the success in combating this disease worldwide.