PREFACE

There has been a recent dramatic and unprecedented surge in interest in mycobacterial disease. Twenty years ago, mycobacterial diseases were the domain of a relatively small group of clinicians and researchers. Tuberculosis (TB) in the United States appeared to be coming under increasingly better control, and nontuberculous mycobacteria (NTM) generally were regarded as nonvirulent and not appreciated widely as human pathogens. It would be fair to say that mycobacterial diseases, as reflected by the amount of funds available for research in the field, were not perceived as either especially important or a high priority. Then, two inter-related developments occurred in the 1980s that completely altered perceptions about the importance of mycobacterial diseases.

First, the emergence of acquired immunodeficiency syndrome (AIDS) had a profound impact on the epidemiology of TB and NTM diseases. The rising incidences of mycobacterial diseases associated with AIDS demanded aggressive responses. Further, disseminated NTM infection in AIDS patients directly stimulated the development of improved therapy for NTM pathogens. During the same period, there also emerged a much wider appreciation for the role of NTM as pathogens in immunocompetent hosts. The last 20 years arguably have been a period that encompassed the greatest advances and most rapid progress in the understanding and treatment of NTM disease so far.

Second, the response to the TB epidemic that emerged in the mid 1980s resulted in not just the reversal of a declining public health infrastructure in the United States, but a stronger and energized public health effort that provided more effective TB treatment strategies. Additionally, funding for TB-related research, including investigations into the pathogenesis of TB and efforts to develop a more effective TB vaccine, significantly increased.

In the context of the recent impressive advances in mycobacterial diseases, it is reasonable to ask what is likely to come next. Can the momentum and
progress of the last 20 years be sustained? To a large degree, this issue of *Infectious Disease Clinics of North America* looks at the formidable challenges and opportunities that remain for furthering the understanding and improving management of mycobacterial diseases. The first four articles address the three most important factors that might thwart continued success in TB control. These factors are the worldwide TB epidemic (and its effect on US TB control), the ongoing worldwide AIDS epidemic, and the management of multidrug-resistant TB. The next two articles examine the impact of biotechnology on the fight against TB from clinical and research perspectives. The potential contributions of the TB genome project on essentially all aspects of TB management (epidemiology, diagnosis, treatment, and vaccine development) are especially exciting.

The NTM-focused chapters emphasize the impressive expansion of knowledge in this field and the significant challenges that remain. Although there has been a blossoming of interest in NTM disease in the last 20 years, it is still a relatively new area of investigation. Fully half of the known NTM species have been identified in the last 10 years. The understanding of the pathogenesis of NTM lung infection, although rapidly expanding, is only in the very early stages. Even the ability to diagnose disease caused by NTM in various settings continues to evolve. It is hoped that with continued rapid progress, all aspects of NTM disease can be revisited productively in the near future.

From a personal perspective, I am most fortunate to have had the opportunity to associate with and learn from a number of outstanding physicians and investigators interested in mycobacterial diseases, including the very talented and hard-working individuals who have contributed to this issue of *Infectious Disease Clinics of North America*. I am grateful to each of the authors for their outstanding contributions. I am especially in debt to my long-time friend and mentor, Dr. Richard J. Wallace, Jr., with whom I have had the privilege of working closely over the last 16 years. I would not be in a position to write these words without the considerable influence and generous support of Dr. Wallace.

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