THE ECOLOGY OF MYCOBACTERIA

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by

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PREFACE

This book represents an extraordinary work bridging gaps between a series of disciplines such as general and medical microbiology, ecology, clinical leprology, immunology and epidemiology as well as preventive medicine. It also bridges gaps in time since former days'observations and results are used by the author in an attempt to clarify the enigmatic ecology of mycobacteria.

In short, this research has lead to a series of important discoveries. Professor Kazda is the first to ascertain that the acid sphagnum biotope is a reservoir of mycobacteria, and that this reservoir might play a role in not only the spread of mycobacteria, but also mycobacterioses. Furthermore, five new mycobacterial species (*i.e. M. komossense, M. sphagni, M. cookii, M. madagascariense, M. hiberniae*) have been detected.

Among the highlights of this research is the demostration in the 1970s of environmental mycobacteria in various habitats around the world, and particularly, in the sphagnum vegetation of western Norway. Using animal models (nude mouse, armadillo) and molecular genetics methods Professor Kazda was able to show that some of these mycobacteria could not be differetiated from *Mycobacterium leprae*. Thus, an old "truth" within leprology was charged that *M.leprae* is not able to survive outside the human body.

I have had the privilege of working with Professor Kazda from as far back as the 1970s and have found his hypotheses both challenging and though-provoking. As the results were meticulously obtained, year after year, pieces of evidence were gradually unveiled. These became important elements in the induction of a theory addressing the etiology of leprosy and other mycobacterioses.

The findings brought the pathogenicity of *M. leprae* into focus which, together with non-microbial risk factors, constitutes the etiology of leprosy. The non-microbial risk factors comprise an important social complex in which nutrition seems to be essential. Thus, strategies of prevention and eventual eradication of this mycobacteriosis, as discussed by the author, represent a challenge far beyond the biology of bacteria.

The book does not only account for these important discoveries. It also represents a mine of information to everyone interested in mycobacteria and the etiology of mycobacterioses. It is my privilege to recommend the work to all scientists involved in this vast and increasingly important topic.

University of Bergen,
October 1998

Lorentz M. Irgens
MD, PhD, Professor