

PREFACE

Readers of the microbiological literature might be forgiven for thinking that there was little else to learn about bacterial respiration. The topic has been studied for decades ever since the pioneers of respiratory physiology, such as Keilin, Warburg, and Chance, recognized the merits of working with homogeneous suspensions of intact respiring microbes (for fascinating historical surveys, see Stephenson (1949) and especially Keilin (1966)). Many thematic volumes have been published before (Haddock & Hamilton, 1977; Knowles, 1980) and named lectures have featured this area while reflecting on its rich history (Ferguson, 2001).

This volume is not intended to be comprehensive or historical. Rather, it includes seven chapters from contributors to an international workshop held in Backagården, Sweden 2011, expertly organized by Jeff Cole and Lars Hederstedt. The meeting reinforced the view that microbiologists and biochemists find apparently inexhaustible riches in the field of bacterial energetics. The selection of topics illustrates this in chapters on signal transduction, gene regulation, electron transfer mechanisms, macromolecular organization, biosynthetic pathways, diversity and flexibility of respiratory chains, extremophiles and biotechnology, and ecology and symbioses. Respiratory physiology in bacteria is a microcosm of microbiology!

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REFERENCES

- Ferguson, S. J. (2001). Keilin's cytochromes: How bacteria use them, vary them and make them. *Biochemical Society Transactions*, 29, 629–640.
- Haddock, B. A., & Hamilton, W. A. (Eds.), (1977). *Microbial energetics*. Cambridge: Cambridge University Press.
- Keilin, D. (1966). *The history of cell respiration and cytochrome*. Cambridge: Cambridge University Press.
- Knowles, C. J. (Ed.), (1980). *Diversity of bacterial respiratory systems*. Boca Raton, FL: CRC Press, Inc.
- Stephenson, M. (1949). *Bacterial metabolism* (3rd ed.). London: Longmans, Green and Co.