

The past 20 years, since defensive mutualism first began receiving attention, have been marked by a deluge of research in a variety of organism kingdoms and much has been discovered about this intriguing behavior. **Defensive Mutualism in Microbial Symbiosis** includes basic ecological and biological information on defensive mutualisms, explores how they function, and evaluates how they have evolved. It also looks at the implications of symbiosis defensive compounds as a new frontier in bioexploration for drug and natural product discovery—the first book to explore this possibility.

The book expands the concept of defensive mutualisms to evaluate defense against environmental abiotic and biotic stresses. Addressing the topic of defensive mutualisms in microbial symbiosis across this wide spectrum, it includes chapters on defensive mutualistic associations involving multiple kingdoms of organisms in terrestrial and aquatic ecosystems—plant, animal, fungi, bacteria, and protozoans.

With chapters written by field authorities, this sharply focused work:

- Studies the basis for defensive mutualisms in different microbial associations and discusses their complex interactions
- Examines the impact on the ecology of organisms that exhibit defensive mutualisms, including multiple trophic effects
- Evaluates defense against environmental abiotic and biotic stresses as part of defensive mutualisms
- Analyzes the evolutionary backgrounds of defensive mutualisms and their applications for discovery of novel metabolites for medical and agricultural applications
- Explores the potential of defensive mutualists as biological control agents for use in agricultural applications

Defensive Mutualism in Microbial Symbiosis unifies scattered findings into a single compendium, providing a valuable reference for field researchers and those in academia to assimilate and acquire a knowledgeable perspective on defensive mutualism and its microbial partners.

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