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Sommario/riassunto	Orchids are fascinating, with attractive flowers that sell in the markets and an increasing demand around the world. Additionally, some orchids are edible or scented and have long been used in preparations of traditional medicine. This book presents recent advances in orchid biochemistry, including original research articles and reviews. It provides in-depth insights into the biology of flower pigments, floral scent formation, bioactive compounds, pollination, and plant-microbial interaction as well as the biotechnology of protocorm-like bodies in orchids. It reveals the secret of orchid biology using molecular tools, advanced biotechnology, multi-omics, and high-throughput technologies and offers a critical reference for the readers. This book explores the knowledge about species evolution using comparative transcriptomics, flower spot patterning, involving the anthocyanin biosynthetic pathways, the regulation of flavonoid biosynthesis, which contributes to leaf color formation, gene regulation in the biosynthesis of secondary metabolites and bioactive compounds, the mechanism of pollination, involving the biosynthesis of semiochemicals, gene expression patterns of volatile organic compounds, the symbiotic relationship between orchids and mycorrhizal fungi, techniques using induction, proliferation, and regeneration of protocorm-like bodies, and so on. In this book, important or model orchid species were

studied, including *Anoectochilus roxburghii*, *Bletilla striata*, *Cymbidium sinense*, *Dendrobium officinale*, *Ophrys insectifera*, *Phalaenopsis 'Panda'*, *Pleione limprichtii*.
