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Nota di contenuto	Prokaryotic development : strategies to enhance survival / Lawrence J. Shimkets and Yves V. Brun -- Actinomycete development, antibiotic production, and phylogeny : questions and challenges / Wendy Champness -- Developmental decisions during sporulation in the aerial mycelium in Streptomyces / Keith F. Chater -- Cyanobacterial phylogeny and development : questions and challenges / David G. Adams -- Heterocyst formation in Anabaena / C. Peter Wolk -- The paleobiologic record of cyanobacterial evolution / J. William Schopf -- Endospore-forming bacteria : an overview / Abraham L. Sonenshein -- Regulation of the initiation of endospore formation in Bacillus subtilis / William F. Burkholder and Alan D. Grossman -- Asymmetric division and cell fate during sporulation in Bacillus subtilis / Petra Anne Levin and Richard Losick -- Morphogenesis and properties of the bacterial spore / Adam Driks and Peter Setlow -- Introduction to the myxobacteria / Martin Dworkin Developmental aggregation and fruiting body formation in the gliding bacterium Myxococcus xanthus / Mandy J. Ward and David R. Zusman -- Cell-interactive sensing of the environment / Dale Kaiser -- Growth, sporulation, and other tough decisions / Lawrence J. Shimkets -- Development of Stigmatella / David White and Hans Ulrich Schairer -- The dimorphic life cycle of Caulobacter and stalked bacteria / Yves V. Brun and Raji Janakiraman -- Regulation of flagellum biosynthesis and motility in Caulobacter / James W. Gober and Jennifer C. England -- Signal transduction and cell cycle checkpoints in developmental regulation of Caulobacter / Noriko

Ohta, Thorsten W. Grebe, and Austin Newton -- Regulation of the Caulobacter cell cycle / Dean Hung, Harley McAdams, and Lucy Shapiro -- Swarming migration by Proteus and related bacteria / Gillian M. Fraser, Richard B. Furness, and Colin Hughes -- The chlamydial developmental cycle / Daniel D. Rockey and Akira Matsumoto Developmental cycle of Coxiella burnetii / James E. Samuel -- Differentiation of free-living rhizobia into endosymbiotic bacteroids / William Margolin.

Sommario/riassunto

Research on bacterial development has progressed at an impressive pace in the past ten years. This book describes the exciting advances that have occurred as a result of the transition from the almost purely genetic to the molecular analysis of bacterial development. Prokaryotic Development focuses on the experimental systems in which a great deal is known about the molecular mechanisms of development. It devotes several chapters to the organisms that have yielded the most mechanistic information, allowing more in-depth coverage of developmental processes than previously available in one place. Introductory chapters describe the biology of each group of organisms in order to place the molecular analysis in a biological and phylogenic perspective. Accessible to advanced undergraduate and graduate students, this volume will be especially helpful in courses dealing with microbial diversity and microbial development. It provides an excellent introduction to current research on prokaryotic development to new investigators, and will be a useful reference for more experienced researchers. This title is published by the American Society of Microbiology Press and distributed by Taylor and Francis in rest of world territories.
