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Sommario/riassunto	Micro-bioreactors offer unique opportunities to study biological systems under fluidic conditions. The concept of micro-bioreactors suggests that biological reaction conditions at a large scale can be scaled down to micro-volumes while maintaining performance and functionality. Models and operation principles can be simulated at a smaller scale, either by scaling down organs in the human body, or bioreactors for the production of biologics. This book highlights these issues with much focus on new engineering design approached. Initial chapters cover conceptual design of microbioreactors and organ-on-chips, and the role of microbioreactors in tissue engineering for the clinical and for therapeutic targets. Two chapters are dedicated to microbioreactors for implementing tumour models. Other chapters discuss three-dimensional models for hepatic and cardiac cells for toxicity testing and drug evaluation. Finally, the design of organ chips for cartilage scaffolds and integration of sensors are covered in separate chapters. We believe the book have substantial value for researchers active in bioreactor engineering, drug development and cell physiology as well as readers interested in the these topics.