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Nota di contenuto	Part-1: The Promise of the Blue Biotechnology. The Marine Ecosystem as a Source of Antibiotics.- Seaweeds: Valuable Ingredients for the Pharmaceuticals Industries.- Anti-Infective Compounds from Marine Organisms.- The Marine-Derived Filamentous Fungi in Biotechnology. - Aplysinopsins as Promising Marine Natural Product Drug Leads. - Potential of Hydrogen Fermentative Pathways in Marine Thermophilic Bacteria.- Anaerobic Digestion and Gasification of Seaweed -- Part-2: The Economic Potential of Marine Biotechnology. The Global Market for Marine Biotechnology: The Underwater World of Marine Biotech Firms.- How to Succeed in Marketing Marine Natural Products for Pharmaceutical, Cosmetics and Nutraceutical Markets.- EMBRC and EMBRIC: Two European Instruments to Promote the Blue Bioeconomy -- Part-3: Supporting the Development of Marine Biotechnology. Grand Challenges in Marine Biotechnology: Overview of Recent EU-Funded Projects.- SeaBioTech: From Sea-bed to Test-bed: Harvesting the

Potential of Marine Biodiversity for Industrial Biotechnology.
- BluePharmTrain: Biology and Biotechnology of Marine Sponges.
- ChiBio: An Integrated Bio-Refinery for Processing Chitin Rich Bio-Waste to Specialty Chemicals.- Utilization of Marine Genetic Resources: The Access and Benefit-Sharing Legal Framework.

Sommario/riassunto

This book serves as essential reading for research scientists and biotechnologists from both academia and industry working in marine biotechnology and related disciplines. The book discusses recent advances and challenges in terms of science, technology, innovation, and policy for the development of the field; and how marine biotechnology may provide new solutions to some of the grand challenges faced by our society. Written in an accessible language, the book is also recommended as a reference text for decision-makers in government and non-governmental organizations in their efforts to foster the development of a global blue economy. With less than 5 % of the vast and rich marine environment explored, our seas and oceans represent a virtually unexplored resource for the discovery of novel product, processes, and development of bio-inspired synthetic drugs with biotechnological potential. As such, the marine environment has been considered Earth's last frontier of exploration. Recent advances in molecular techniques are providing the necessary tools to access on a larger scale the still-untapped ocean resources and, consequently, unveil the promise of the blue biotechnology. Governments are recognizing the potential of marine biotechnology to provide solutions to some of the Grand Challenges of the 21st Century such as sustainable energy and food sources, identification of novel drugs for improved health treatments, and providing new industrial materials and processes. For this reason, advances in marine biotechnology may foster the much-needed source of innovation and economic growth in many countries, and pave the way towards the development of a global blue economy, i.e. a new economic model based on the sustainable exploration of our ocean ecosystems.