

1. Record Nr.	UNINA9910865279403321
Titolo	Cultivated Meat : Technologies, Commercialization and Challenges // edited by Carlos Ricardo Soccol, Carla Forte Maiolino Molento, Germano Glufke Reis, Susan Grace Karp
Pubbl/distr/stampa	Cham : , : Springer Nature Switzerland : , : Imprint : Springer, , 2024
ISBN	3-031-55968-1
Edizione	[1st ed. 2024.]
Descrizione fisica	1 online resource (440 pages)
Disciplina	664.9
Soggetti	Proteins Biomaterials Animal biotechnology Food science Biomaterials-Proteins Animal Biotechnology Food Engineering
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Introduction to new food systems -- Introduction to animal cell culture -- Cell lines for cultivated meat production -- Culture medium for cultivated meat -- Microcarriers and scaffolds in cultivated meat production -- Bioreactors for cultivated meat production -- Modeling and Simulation of Cell Cultures in Cultivated Meat Production.- Downstream processes for cultivated meat -- Ingredients and formulation of cultivated meat products.-Packaging, conservation and shelf life of cultivated meat -- Quality and Risk Control in Cultivated Meat Production -- Scaling up of cultivated meat production process -- Waste management in cultivated meat production -- Environmental Impacts of Cultivated Meat -- Regulatory Aspects of Cultivated Meat -- Forecasting the market potential and consumer acceptance of cultivated meat -- Cultivated meat and bioeconomy in tandem: unlocking the sustainability implications of transformative food supply chains -- Global and regional policies for cultivated meat -- Patents and innovations in cultivated meat production -- Future Feast: Mapping

the Cultivated Meat Sector -- Challenges and prospects for cultivated meat production.

Sommario/riassunto

Cultivated meat is an emerging substitute for conventional meat that is not associated with animal farming and slaughtering. Instead, animal cells are cultivated in bioreactors and post-processed into “artificial” meat products. Although this new technology solves several ethical and environmental problems, there are techno-economic challenges that need to be addressed to make the commercial-scale production of cultivated meat a real perspective. This book addresses fundamental aspects of new food systems, animal cell culture and cultivated meat production, including cell lines, culture media, microcarriers and scaffolds, bioreactors, downstream processes, formulation, packaging, quality control, scale-up, and waste management. Also, aspects related to commercialization, market, patents, legislation, global and regional policies, and sustainability metrics such as life-cycle assessment, together with a bioeconomy perspective analysis, are reviewed. Finally, case studies are presented and the challenges and future prospects for cultivated meat production are proposed. This book is a collection of 20 chapters written by specialists in the field.
