



# **Handbook of** **FOOD AND FEED** **FROM MICROALGAE**

Production, Application, Regulation, and Sustainability

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# Strategy and design of innovation policy road mapping for microalgae-based foods

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## 1 Introduction

Microalgae are photosynthetic organisms characterized as unicellular or simple multicellular, whose size ranges between 2 and 200 μm. They are polyphyletic and noncohesive, forming an artificial pool of carbon dioxide. They are mainly eukaryotic organisms, save a few exceptions such as prokaryotic cyanobacteria (blue-green algae) (Greenwell et

Extracts and/or isolated compounds obtained from microalgae and marine algae can be used as preservatives and pigments (dyes, antimicrobials); to improve the nutritional profile of foods (antioxidant bioactive compounds, polyunsaturated fatty acids, proteins, and essential amino acids); or to improve the technological characteristics of the products (emulsifiers, hydrocolloids, etc.). Furthermore, the use of these products can be of significant interest from

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lites is highly attractive because they often have exceptionally high market values (Koller et al., 2014).

panies while satisfying the consumers (Guiné et al., 2021, 2020, 2016; Nystrand and Olsen, 2020).