

In this issue

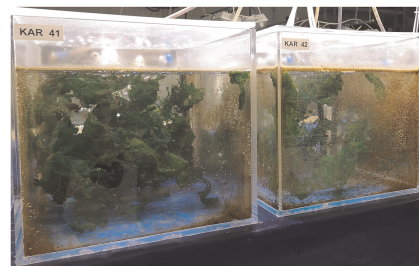
Ralf Rautenberger

Germanium dioxide as agent to control the biofouling diatom *Fragilariopsis oceanica* for the cultivation of *Ulva fenestrata* (Chlorophyta)

<https://doi.org/10.1515/bot-2023-0075>
Botanica Marina 2024; 67(2): 93–100

Research Article: Germanium dioxide (GeO_2) inhibits the proliferation of the biofouling marine diatom *Fragilariopsis oceanica*, while photosynthesis and growth of the green macroalga *Ulva fenestrata* remain unaffected.

Keywords: *Ulva*; macroalgal aquaculture; diatoms; biofouling; photosynthesis

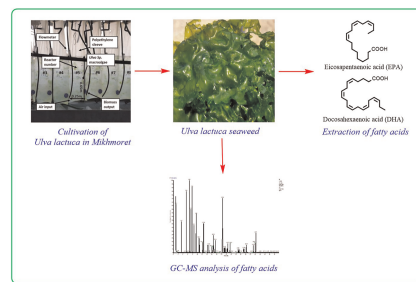


Nabeel Gnayem, Razan Unis, Rima Gnaim, Alexander Chemodanov, Álvaro Israel, Jallal Gnaim and Alexander Golberg
Seasonal and culture period variations in the lipid and fatty acid content of *Ulva lactuca* cultivated in Mikhmoret onshore (Israel)

<https://doi.org/10.1515/bot-2023-0027>
Botanica Marina 2024; 67(2): 101–114

Research Article: A quantitative examination of the lipid and fatty acid content in *Ulva lactuca* in different harvest seasons revealed that the maximum content of lipids was in the summer, and that of polyunsaturated fatty acids (PUFA) was in the winter.

Keywords: green seaweed; *Ulva lactuca*; seasonal variation; culture period variation; lipids; fatty acids

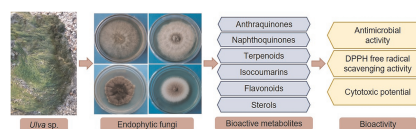


Sadia Noor, Mst. Nadira Begum, Satyajit Roy Rony, Mohammad Zashim Uddin, Md. Hossain Sohrab and Md. Abdul Mazid
Bioactivity and chemical screening of endophytic fungi associated with the seaweed *Ulva* sp. of the Bay of Bengal, Bangladesh

<https://doi.org/10.1515/bot-2023-0040>
Botanica Marina 2024; 67(2): 115–129

Research Article: Endophytic fungi, isolated from the marine green macroalga *Ulva* sp. of the Bay of Bengal of Bangladesh, were identified using morphological and phylogenetic analyses. These fungi produce bioactive metabolites with antimicrobial activity, DPPH free radical scavenging activity, and cytotoxic potential.

Keywords: seaweed; marine endophytic fungi; antimicrobial; DPPH scavenging activity; bioassay



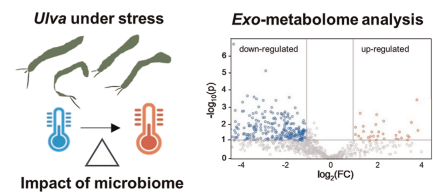
Imen Hmani, Fatemeh Ghaderiardakani,
Leila Ktari, Monia El Bour and
Thomas Wichard

High-temperature stress induces bacteria-specific adverse and reversible effects on *Ulva* (Chlorophyta) growth and its chemosphere in a reductionist model system

<https://doi.org/10.1515/bot-2023-0053>
Botanica Marina 2024; 67(2): 131–138

Short Communication: Essential bacteria provide algal growth and morphogenesis factors to the seaweed *Ulva*. As a result, both bacteria and algae must adequately respond to heat stress. Temperature affects bacteria-specific effects on propagule growth.

Keywords: algae–bacteria interactions; metabolome; morphogenesis; *Rathayibacter*; *Ulva*



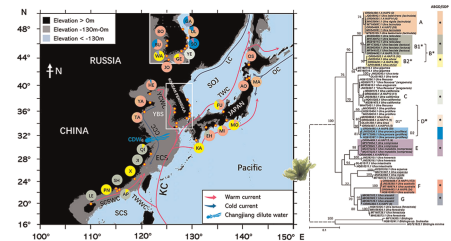
Kai-Le Zhong, Masanori Hiraoka, Xu Gao,
Bayden Russell, Zi-Min Hu, Weizhou Chen, Ju-
Hyoung Kim, Norishige Yotsukura,
Hikaru Endo, Naohiro Oka, Shinya Yoshikawa
and Juan Diego Gaitan-Espitia

Environmental gradients influence geographic differentiation and low genetic diversity of morphologically similar *Ulva* species in the Northwest Pacific

<https://doi.org/10.1515/bot-2023-0073>
Botanica Marina 2024; 67(2): 139–151

Research Article: Molecular markers allowed the detection of eight morphologically similar *Ulva* species along the northwest Pacific region. These species show different biogeographic patterns and low genetic variation that are likely explained by gradients in temperature and oceanic currents.

Keywords: biodiversity; China; genetic diversity; green tides; seaweed



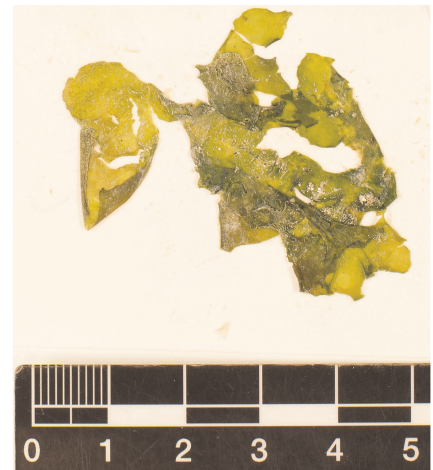
Paul W. Gabrielson, Anna Claire Smith,
John F. Bruno, Todd J. Vision and
Margarita Brandt

Taxonomic assessment of blade-forming *Ulva* species (Ulvales, Chlorophyta) in the Galápagos Archipelago, Ecuador using DNA sequencing

<https://doi.org/10.1515/bot-2023-0079>
Botanica Marina 2024; 67(2): 153–164

Research Article: DNA barcoding, the only reliable method to identify blade-forming *Ulva* species worldwide, found four species in the Galápagos Archipelago: *Ulva adhaerens*, the first report of this species in the southeast Pacific Ocean, *U. lactuca*, *U. ohnoi*, and *U. tanneri*.

Keywords: DNA barcoding; ITS; *rbcL*; *tufA*; *Ulva adhaerens*; *U. lactuca*; *U. ohnoi*; *U. tanneri*



Jeffery R. Hughey, Kathy Ann Miller and
Paul W. Gabrielson

**Genetic analysis of *Ulva* (Ulvaceae,
Chlorophyta) type specimens resolves
northeast Pacific blade-forming species**

<https://doi.org/10.1515/bot-2023-0072>
Botanica Marina 2024; 67(2): 165–179

Research Article: DNA sequencing of northeast Pacific *Ulva* type specimens revealed that *U. californica*, *U. dactylifera*, *U. stenophylla*, *U. taeniata* and *U. tanneri* are distinct species and that some GenBank sequences labeled as these species are misidentified.

Keywords: *Ulva californica*; *Ulva dactylifera*; *Ulva stenophylla*; *Ulva taeniata*; *Ulva tanneri*



Christine A. Maggs, Anne R. Bunker,
Francis Bunker, David Harries, John Kelly,
Frédéric Mineur, Jaanika Blomster, Pilar Diaz-
Tapia, Paul W. Gabrielson, Jeffery R. Hughey
and Juliet A. Brodie

**Updating the Ulvaceae in the green
seaweeds of Britain and Ireland**

<https://doi.org/10.1515/bot-2023-0078>
Botanica Marina 2024; 67(2): 181–203

Research Article: The Ulvaceae flora of Britain and Ireland is revised using DNA sequences that separate two species of *Ulvaria* and provide correct names for several *Ulva* species with reference to type materials.

Keywords: DNA sequences; taxonomy; *Ulva*; *Ulvaria*

