



THIS PAGE IS SECURE

Home / Persoonia - Molecular Phylogeny and Evolution of Fungi, Volume 33, December 2014



Moniliellomycetes and *Malasseziomycetes*, two new classes in *Ustilaginomycotina*

Download Article:



Download
(PDF 248.8 kb)

Authors: Wang, Q.-M.; Theelen, B.; Groenewald, M.; Bai, F.-Y.; Boekhout, T.

Source: Persoonia - Molecular Phylogeny and Evolution of Fungi, Volume 33, December 2014, pp. 41-47(7)

Publisher: Naturalis Biodiversity Center

DOI: <https://doi.org/10.3767/003158514X682313>



previous article



view table of contents

next article



ADD TO FAVOURITES

Abstract



References



Citations



Supplementary Data



Article Media



Metrics



Suggestions

Ustilaginomycotina (*Basidiomycota*, *Fungi*) has been reclassified recently based on multiple gene sequence analyses. However, the phylogenetic placement of two yeast-like genera *Malassezia* and *Moniliella* in the subphylum remains unclear. Phylogenetic analyses using different algorithms based on the sequences of six genes, including the small subunit (18S) ribosomal DNA (rDNA), the large subunit (26S) rDNA D1/D2 domains, the internal transcribed spacer regions (ITS 1 and 2) including 5.8S rDNA, the two subunits of RNA polymerase II (*RPB1* and *RPB2*) and the translation elongation factor 1- α (*EF1- α*), were performed to address their phylogenetic positions. Our analyses indicated that *Malassezia* and *Moniliella* represented two deeply rooted lineages within *Ustilaginomycotina* and have a sister relationship to both *Ustilaginomycetes* and *Exobasidiomycetes*. Those clades are described here as new classes, namely *Moniliellomycetes* with order *Moniliellales*, family *Moniliellaceae*, and genus *Moniliella*; and *Malasseziomycetes* with order *Malasseziales*, family *Malasseziaceae*, and genus *Malassezia*. Phenotypic differences support this classification suggesting widely different life styles among the mainly plant pathogenic *Ustilaginomycotina*.

Keywords: FUNGI; MOLECULAR PHYLOGENY; SMUTS; TAXONOMY; YEASTS

Document Type: Research Article

Publication date: 2014年12月10日

[More about this publication?](#)

We recommend

Towards a phylogenetic reappraisal of Parmulariaceae and Asterinaceae (Dothideomycetes)

E. Guatimosim et al., Persoonia - Molecular Phylogeny and Evolution of Fungi

Juglanconis gen. nov. on Juglandaceae, and the new family Juglanconidaceae (Diaporthales)

H. Voglmayr et al., Persoonia - Molecular Phylogeny and Evolution of Fungi

Phylogenetic position and taxonomic disposition of *Turraea breviflora* (Meliaceae), a hitherto enigmatic species

A.N. Muellner et al., Blumea - Biodiversity, Evolution and Biogeography of Plants

Revision of Lophiotremataceae (Pleosporales, Dothideomycetes): Aquasubmersaceae, Cryptocoryneaceae, and Hermatomycetaceae fam. nov.
A. Hashimoto et al., Persoonia - Molecular Phylogeny and Evolution of Fungi

Description and DNA barcoding of three new species of Leohumicola from South Africa and the United States
H.D.T. Nguyen et al., Persoonia - Molecular Phylogeny and Evolution of Fungi

Sequential treatment with afatinib and osimertinib in patients with EGFR mutation-positive non-small-cell lung cancer: an observational study [↗](#)
Maximilian J Hochmair, Future Oncology

Small Subunit Ribosomal DNA Sequence ShowsParacoccidioides brasiliensis Closely Related toBlastomyces dermatitidis [↗](#)
J Clin Microbiol

Phylogenetic relationships of Stereocaulaceae based on simultaneous analysis of beta-tubulin, GAPDH and SSU rDNA sequences [↗](#)
Leena Myllys et al., Taxon

Identification of grass-associated and toluene-degrading diazotrophs, Azoarcus spp., by analyses of partial 16S ribosomal DNA sequences. [↗](#)
Appl Environ Microbiol

Molecular Analysis of Fungal Microbiota in Samples from Healthy Human Skin and Psoriatic Lesions [↗](#)
J Clin Microbiol

Share Content

Access Key

F

 Free content

Partial Free content

N

 New content

O

 Open access content

Partial Open access content

S

 Subscribed content

Partial Subscribed content

T

 Free trial content

<i>Browse by</i> Publication
<i>Browse by</i> Subject
<i>Browse by</i> Publisher
Advanced Search
About us
Researchers
Librarians
Publishers
New featured titles
Help
Contact us



ingenta

COUNTER
CONSISTENT CREDIBLE COMPARABLE

Website © 2018 Ingenta. Article copyright remains with the publisher, society or author(s) as specified within the article.

[Terms and Conditions](#)

[Privacy](#)

[Information for Advertisers](#)

[Cookie Policy](#)