

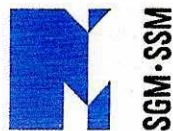
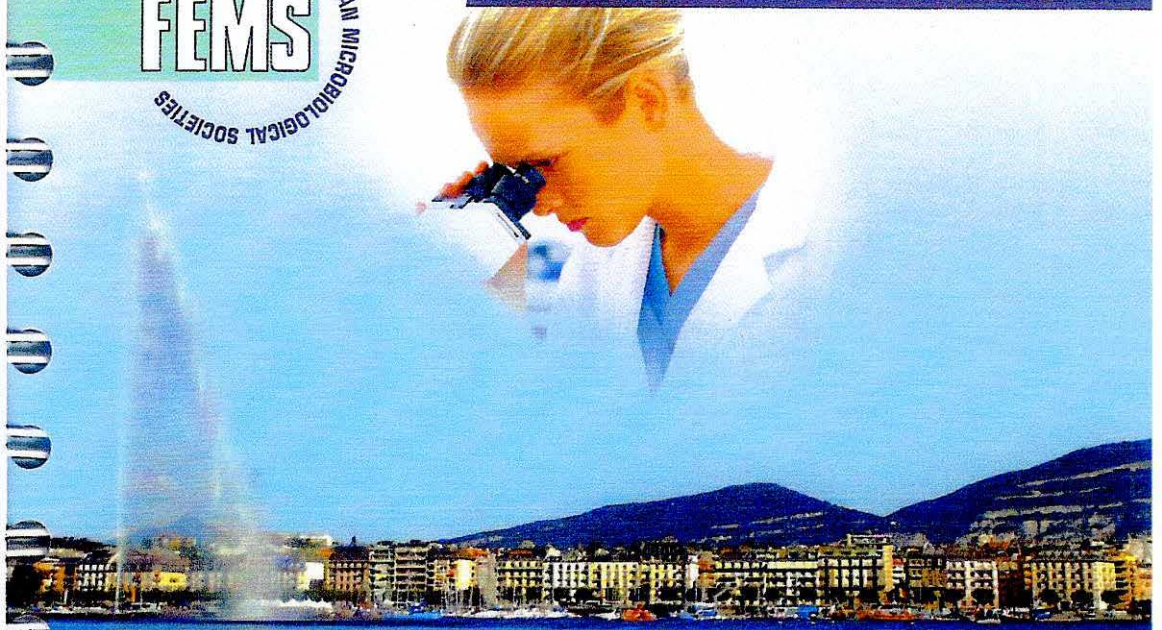
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IDENTIFICATION OF PENICILLIA SPECIES ISOLATED FROM SOUTHERN ATLANTIC OCEAN MARINE SPONGE USING A POLYPHASIC APPROACH INCLUDING MALDI-TOF ICMS

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In the last years the research concerning marine microorganisms has increased in number. However, the knowledge about the phylogenetic and diversity of this fungal community is still scarce. The reliable identification of filamentous fungi typically implies the analyses of a variety of morphological, biochemical and molecular traits. Recently, Matrix-Assisted Laser Desorption/Ionisation Time-Of-Flight Intact Cell Mass Spectrometry (MALDI-TOF ICMS) has been used to generate spectra of protein masses in a range from 2000 to 20000 Da that are a *taxa* specific fingerprinting. This technique has already shown high potentialities to discriminate very closely related *taxa* and, it has been used as a new tool in the polyphasic approach to identify this kind of microorganisms. The aim of the present study was investigate the diversity of 19 penicillia isolated from the southern Atlantic Ocean marine sponge *Drummacidon reticulate* using a polyphasic approach. The first approach was the sequence of ITS-rDNA gene region and to compare with sequence data available at NCBI-GenBank using BLAST_N. The putative penicillia species were further investigated using the phenotypic techniques: macro- and micro-morphologies and MALDI-TOF ICMS. From 19 isolates 9 ribotypes were obtained from the sequencing analysis. One ribotype after phenotypic analysis is a clearly new species and the remain ribotypes have their identification confirmed by micro- and macro-morphological and MALDI-TOF ICMS analyses. In conclusions, the MALDI-TOF ICMS is a sound technique for fungal identification and the new species is now under study to be formally described.