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Active metabolites of the marine strain *Streptomyces sundarbansensis* with highest and selective antibacterial activity against methicillin-resistant *Staphylococcus aureus* (MRSA)

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Four polyketides were isolated from the algal-derived endophytic actinomycete *Streptomyces sundarbansensis*, which represents the lacking member in the recently reported series of phaeochromycins A–E. We also proposed a method based on the comparison of experimental IR spectra with the DFT ones calculated in order to establish the tautomeric forms for these metabolites. The results indicated a γ -pyrone structure for these compounds, in analogy to the related polyketides mutactin and SEK34. Due to this study, it is possible to suggest that also the known phaeochromycins were isolated mainly in this tautomeric form, differently by the structures reported until now. Evaluation of IC₅₀ values on the pure and structurally defined metabolites as inhibitors of Gram positive and Gram negative bacteria, from where the new compound showed the highest and selective antibacterial activity against MRSA.

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