REVISED STEREOSTRUCTURES OF LUTEUSINS C AND D

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Absolute configurations at positions 2’ and 5’ in the two new azaphilones, luteusins C and D, from an Ascomycete, Talaromyces luteus, have been revised to (R) and (S) from (S) and (R), respectively.

KEY WORDS fungal metabolite; Ascomycete; Talaromyces luteus; luteusin; azaphilone

We reported the structures of luteusins C and D isolated from an Ascomycete, Talaromyces luteus.1) In the report, the structures of luteusins C and D ([Z]-isomer at position 11 of C) were deduced to be 1a and 2a, respectively. Absolute configurations at positions 8, 2’, and 5’ in 1a and 2a were deduced as (S), (S), and (R), on the basis of the nuclear Overhauser effects (NOE) between CH₃ attached to C-7 having (S) configuration and H-8, between H-8 and H-2’, and between H-2’ and H-5’ of the tetrahydro derivative of luteusin C.9) However, we recently received information from a Kyowa Hakko research group which led us to reexamine the NOE experiment, because no NOE were observed between H-8 and H-2’ in their compounds, similar to luteusins C and D, isolated from a microorganism.9) Our reexamination in a difference NOE experiment on luteusin A instead of the tetrahydro derivative showed no significant NOE between H-8 and H-2’, although significant NOEs were observed between CH₃ attached to C-7 and H-8, and between H-2’ and H-5’.

Thus, the absolute configurations at positions 2’ and 5’ in luteusins C and D are believed not to be (S) and (R), but (R) and (S), respectively. Accordingly, the absolute configurations of luteusins C and D should be revised to 1 being (7S,8S,9E,11E,13S,2’R,5’S) and 2 being (7S,8S,9E,11Z,13S,2’R,5’S), respectively.

REFERENCE AND NOTE
2) Private communication from Dr. Y. Uosaki, Kyowa Hakko Kogyo Co., Ltd., Asahi-cho, Machida, Tokyo 194, Japan.

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