THE IDENTITY OF ZYGOSPORIN A AND CYTOCHALASIN D

D. C. ALDRIDGE and W. B. TURNER

Imperial Chemical Industries Ltd., Pharmaceuticals Division, Alderley Park, Macclesfield, Cheshire, U. K.

(Received for publication November 29, 1968)

Workers at the Shionogi Research Laboratory have recently reported \(^1\) the isolation of zygosporin A, described as “a new antibiotic”. They pointed out the similarity between the biological properties of zygosporin A and those of the cytochalasins \(^2\), and noted that zygosporin A is isomeric with cytochalasins C and D \(^3\). They claim, however, that “the chemical property of zygosporin A was found to differ from those of cytochalasins C and D”.

In fact only one chemical reaction of cytochalasin C and none of cytochalasin D has been reported \(^2\), and it is quite clear from its published \(^1\) infrared spectrum and m. p. (268~270°C) that zygosporin A is identical with cytochalasin D \(^3\). The full chemical structures of cytochalasins C and D, which were first reported at a meeting at Sheffield University in September, 1967, are the subject of a paper submitted for publication in the Journal of the Chemical Society \(^4\).

In view of the similarity between the biological properties and molecular formula of zygosporin A and those of cytochalasins C and D it is unfortunate that the Shionogi group did not attempt to compare their compound directly with cytochalasins C and D before claiming it as a new compound, with the resulting confusion of nomenclature.

References


Added in proof: The structure of zygosporin A, derived by X-ray analysis, has been published \(^*\) and is identical with the structure derived chemically for cytochalasin D \(^4\).