Anachelin, the Siderophore of the Cyanobacterium *Anabaena cylindrica* CCAP 1403/2A

Hans Beiderbeck\(^a\), Kambiz Taraza, Herbert Budzikiewicz\(^a,\)* and Anthony E. Walsyb

\(^a\) Institut für Organische Chemie der Universität zu Köln, Greinstr. 4, D-50939 Köln, Germany. Fax +49-221-470-5057. \[E-mail: h.budzikiewicz@uni-koeln.de\]

\(^b\) School of Biological Sciences, University of Bristol, Woodland Road, Bristol BS8 1UG, UK. \[E-mail a.e.walsby@bristol.ac.uk\]

\(^*\) Author for correspondence and reprint requests

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A catecholate siderophore – anachelin – has been isolated from the cyanobacterium *Anabaena cylindrica* CCAP 1403/2A. The central part of the siderophore is a tripeptide consisting of \(l\)-Thr, \(d\)-Ser and \(l\)-Ser. Its C-terminus is linked amidically to a 1,1-dimethyl-3-amino-1,2,3,4-tetrahydro-7,8-dihydroxyquinolinium system and its N-terminus to 6-amino-3,5,7-trihydroxyheptanoic acid. The 7-hydroxyl group of the latter is esterified with salicylic acid whose carboxyl group is condensed with the 6-amino group to an oxazoline ring. Anachelin is the first genuine siderophore of a cyanobacterium whose structure has been elucidated.