Synthesis Addenda

Carbonylations of Alkenes in the Total Synthesis of Natural Compounds

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We regret that we unintentionally omitted to refer to the important pioneering work of James Leighton and his co-workers in our review. This group has substantially contributed both to the development of synthetic methodologies based on hydroformylation and to their application in the total synthesis of natural compounds. Therefore, we would like to add following sentences and references to the original manuscript:

Page 1576, left column, second paragraph: the first sentences should be changed to:

'An elegant approach to the synthesis of naturally occurring polyketides using catalytic C–C bond-forming reactions, including hydroformylation, was originally described by Leighton in 2011 and later by Krische and co-workers in the synthesis of (+)-zincophorin methyl ester (**23**).[20] The free acid of this compound is a highly potent antibiotic that was isolated from soil bacteria.[21] Krische's retrosynthesis is based on the construction of fragments A (**18**) and B (**22**) and their highly diastereoselective connection at the late stage of the synthesis (Scheme 5).'

Accordingly, the reference 20 should be changed to:

(20) (a) Harrison, T. J.; Ho, S.; Leighton, J. L. *J. Am. Chem. Soc.* **2011**, *133*, 7308. (b) Kasun, Z. A.; Gao, X.; Lipinski, R. M.; Krische, M. J. *J. Am. Chem. Soc.* **2015**, *137*, 8900.

Page 1579, left column, the first paragraph should end with the following sentence: 'Notably, Leighton et al. used ligand **54** in two enantioselective hydroformylation steps of an innovative step-economic (14 steps, longest linear sequence) total synthesis of dictyostatin.[i]'

Reference i: Ho, S.; Bucher, C.; Leighton, J. L. *Angew. Chem. Int. Ed.* **2013**, *52*, 6757.

Page 1584, right column, the last two sentences should be changed to: 'Notably, the Rh-catalyzed tandem hydroformylation–lactol formation reaction was initially successfully applied in the first total synthesis of leucascandrolide A by Leighton and co-workers in 2000.[58]'

The authors apologize for the mistakes.

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