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A - Papers appearing in refereed journals

Ward, J. L., Wu, Y., Harflett, C., Onafuye, H., Corol, D. I., Lomax, C., Macalpine, W. J., Cinatl, J., Wass, M. N., Michaelis, M. and Beale, M. H. 2020. Miyabeacin: A new cyclodimer presents a potential role for willow in cancer therapy. *Scientific Reports*. 10, p. 6477.

The publisher's version can be accessed at:

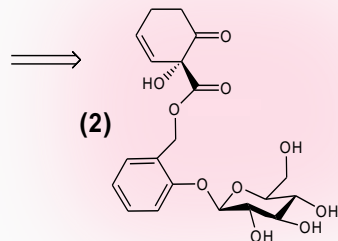
- <https://dx.doi.org/10.1038/s41598-020-63349-1>

The output can be accessed at:

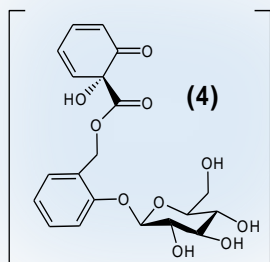
<https://repository.rothamsted.ac.uk/item/97670/miyabeacin-a-new-cyclodimer-presents-a-potential-role-for-willow-in-cancer-therapy>.

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Scenario 1- Salicortin **2** is a precursor of 'salicortenone' **4** and miyabeacin **3**



additional gene in *S. miyabeana* | oxidative dehydrogenation



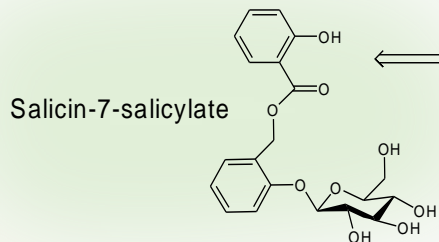
x2
[4+2]

(6) (7) + (8)
9:1

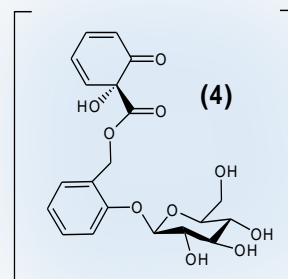
$h\nu$ [2+2] OH^- (1)

MIYABEACIN (3)

Scenario 2- 'salicortenone' **4** is a precursor of salicortin **2** and miyabeacin **3**



oxidative dearomatisation



x2
[4+2]

1,4 reduction | impaired in *S. miyabeana*

