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CORRECTION

# Correction to: Metacytofilin, a novel immunomodulator produced by *Metarhizium* sp. TA2759

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**Correction to**: *The Journal of Antibiotics* (1992) **45**, 1553–1556. https://doi.org/10.7164/antibiotics.45.1553

The authors of the above article misjudged the structure determination of MCF (metacytofilin). Our recent analyses using X-ray crystallography and NMR techniques revealed the correct structure as shown in Figs. 1, 2, and 3. The structure of MCF was identified with diatretol [1].

Single-crystal X-ray data were collected on a Rigaku R-AXIS RAPID diffractometer using filtered Cu–Ka radiation. The crystal data are: empirical formula: $C_{16}H_{22}N_2O_4$, FW 306.36, crystal color: colorless, habit: platelet, crystal dimensions: $0.300 \times 0.200 \times 0.030$ mm, crystal system: monoclinic, lattice type: primitive, lattice parameters: $a =$ 6.06079 (14) Å, $b = 17.1982$ (4) Å, $c = 9.1651$ (2) Å, $\beta =$ 108.523 (8)°, $V = 905.83$ (6) Å$^3$, space group: $P2_1$, $Z$ value: 2, $D_{calc}$: 1.123 g/cm$^3$, $F_{000}$: 328.00, $\mu$ (CuKa): 6.671 cm$^{-1}$. The structure was solved by direct methods [2] and expanded using Fourier techniques. The non-hydrogen atoms were refined anisotropically. Hydrogen atoms were refined using the riding model. The final cycle of full-matrix least-squares refinement [3] on F2 was based on 3233 observed reflections and 199 variable parameters and converged (largest parameter shift was 0.00 times its esd) with unweighted and weighted agreement factors of:

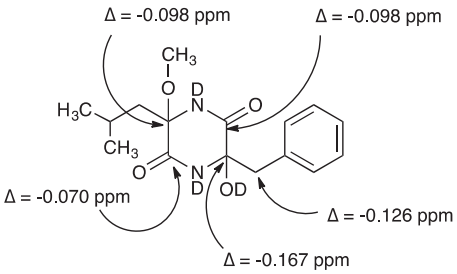


**Fig. 2** Deuterium isotope effects on $^{13}C$ chemical shifts of MCF observed in $CD_3OD$ and $CD_3OH$ solutions

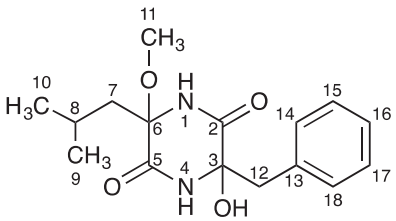

**Fig. 1** Structure of metacytofilin (MCF)

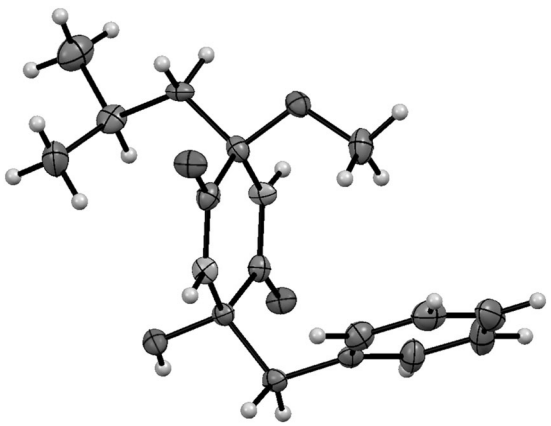

**Fig. 3** Molecular structure of MCF using SHELXT

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$$R_1 = S||\mathrm{Fo}|-|\mathrm{Fc}||/S|\mathrm{Fo}| = 0.0576,$$

$$wR_2 = \left[S\left(w\left(\mathrm{Fo}^2 - \mathrm{Fc}^2\right)^2\right)/Sw\left(\mathrm{Fo}^2\right)^2\right]^{1/2} = 0.1455.$$

## Compliance with ethical standards

**Conflict of interest** The authors declare that they have no conflict of interest.

## References

1. Arnone A, et al. Secondary mould metabolites, LII. structure elucidation of diatretol – a new diketopiperazine metabolite from the fungus *Clitocybe diatreta*. Liebigs Ann. 1996;1996:1875–77.
2. Sheldrick GM. SHELXT version 2014/5. Acta Cryst. 2014;A70: C1437.
3. Least squares function minimized: (SHELXL version 2014/7) *Sw* $(Fo^2\text{-}Fc^2)^2$ where $w$ = least squares weights.