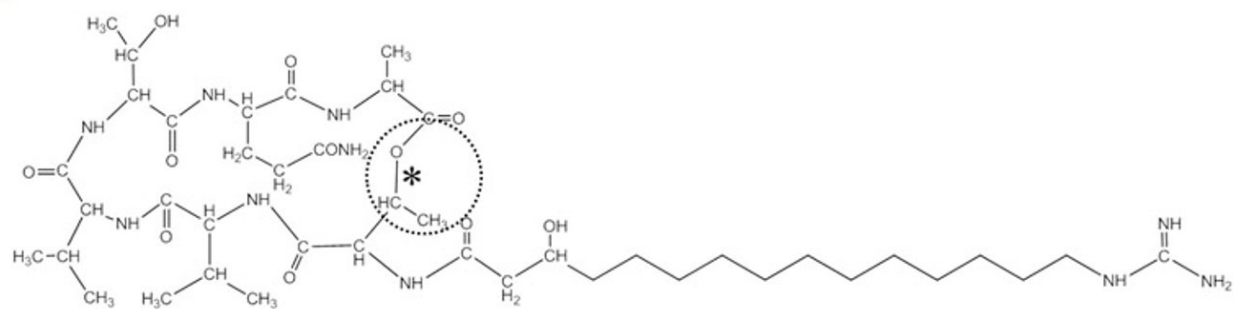
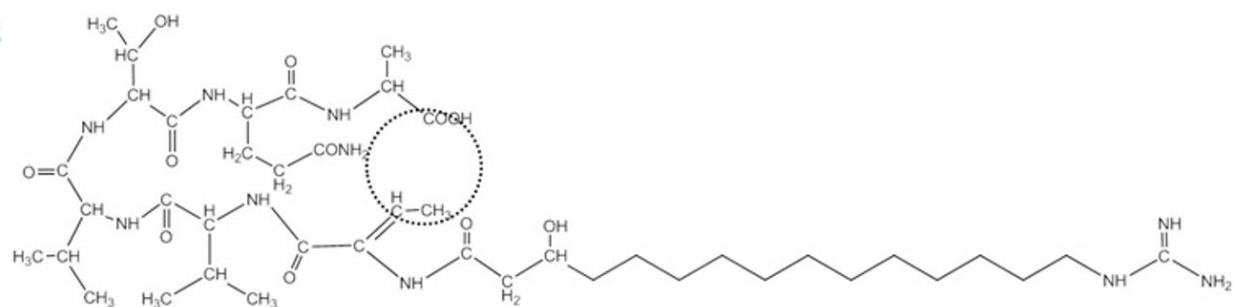


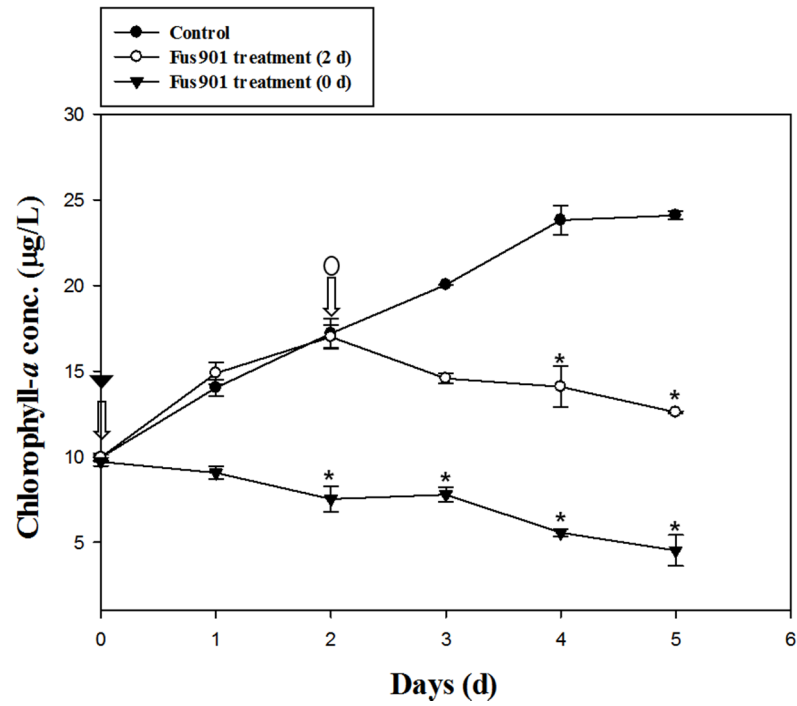
**Fig. S1.** Structure analysis of Fus901 by LC/MS/MS.

(A) LC/MS total ion chromatogram of Fus901 with MS/MS data at a retention time of 8.23 min. (B) LC-MS total ion chromatogram of fusaricidin and ring-opened fusaricidin. (C) MS/MS data of fusaricidin ( $m/z$  883 and 897), ring-opened fusaricidin by esterase ( $m/z$  915), and by NaOH ( $m/z$  915).

**A****B**

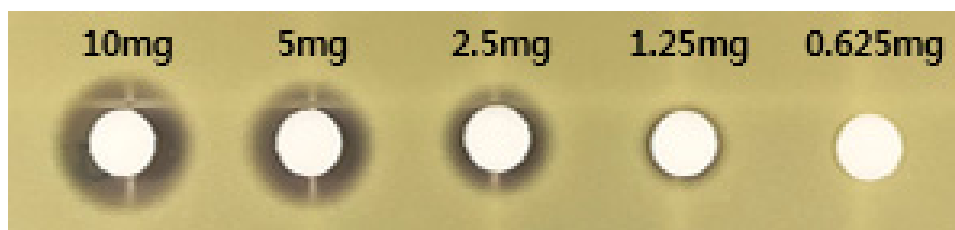
**Fig. S2.** Structural comparison between Fus901 and fusaricidin.

(A) fusaricidin B. (B) Fus901. Dot circles represent the structural difference between fusaricidin and Fus901.



**Fig. S3.** The chlorophyll-*a* concentration of *M. aeruginosa* KW when Fus901 was added at 0 d (initial treatment; ▼) and 2 d (intermediate treatment; ○) of the growth phase during the 5 days of cultivation.

Error bars indicate standard deviation (SD); \* significantly different ( $p < 0.05$ ) from control.



**Fig. S4.** Growth inhibition activity of Fus901 at various concentrations (0.625, 1.25, 2.5, 5.0 and 10 mg/ml) on the *M. luteus*.