

## SUPPLEMENTARY INFORMATION

### A co-culturing approach enables discovery and biosynthesis of a bioactive indole alkaloid metabolite

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CC2 #1168 RT: 16.59 AV: 1 NL: 1.07E6  
F: FTMS + p ESI Full ms [150.00-2000.00]

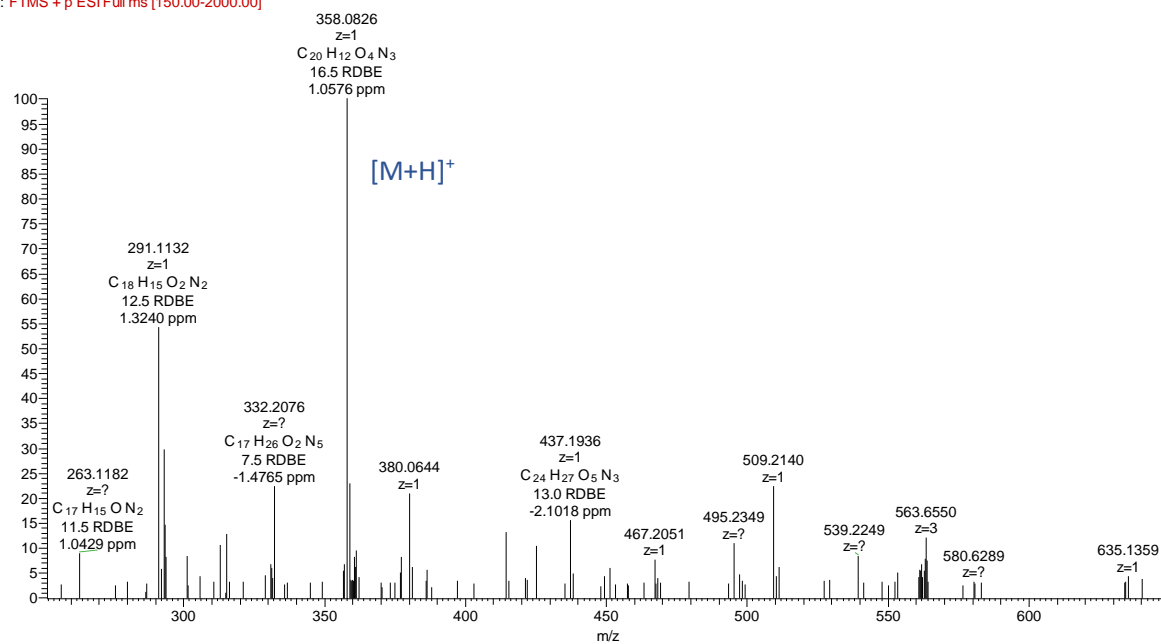


Figure S1. HR ESIMS of BE-13793C 1

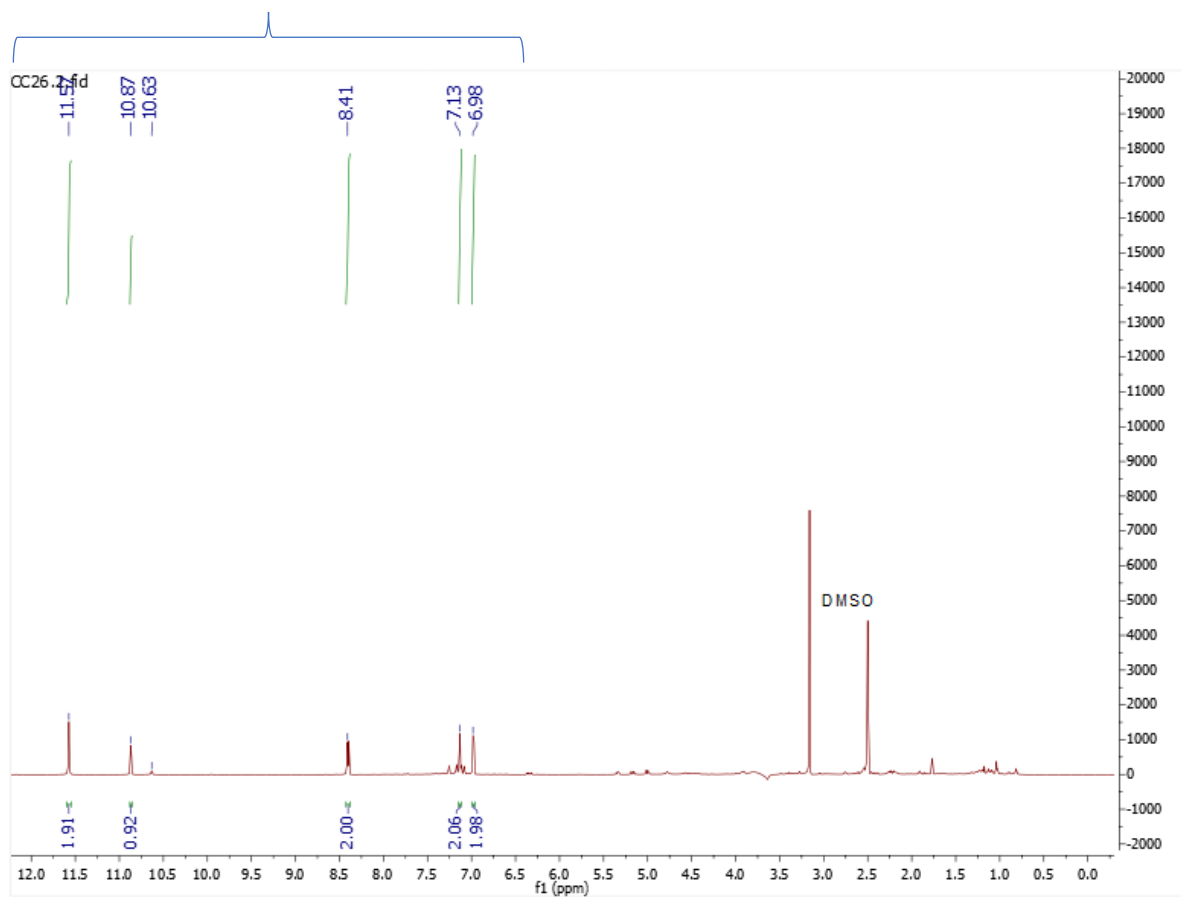
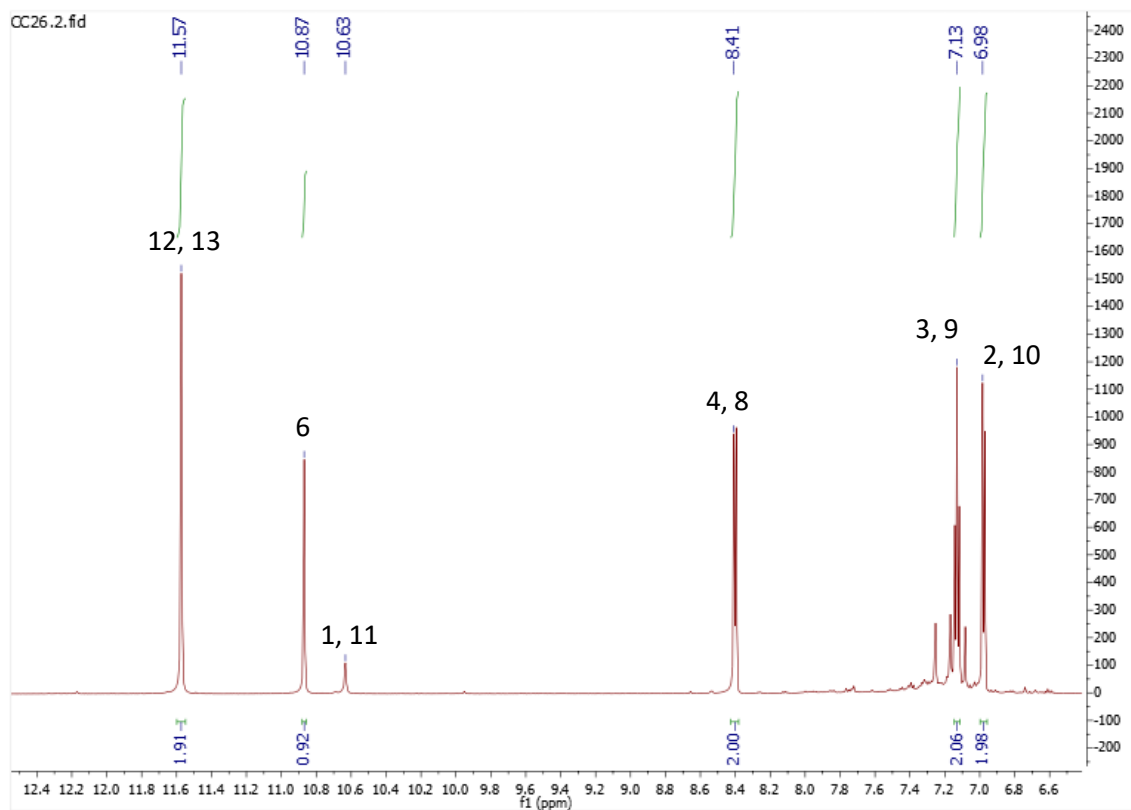


Figure S2: <sup>1</sup>H-NMR of BE-13793C 1 (DMSO-*d*<sub>6</sub>, 298K, 600MHz)

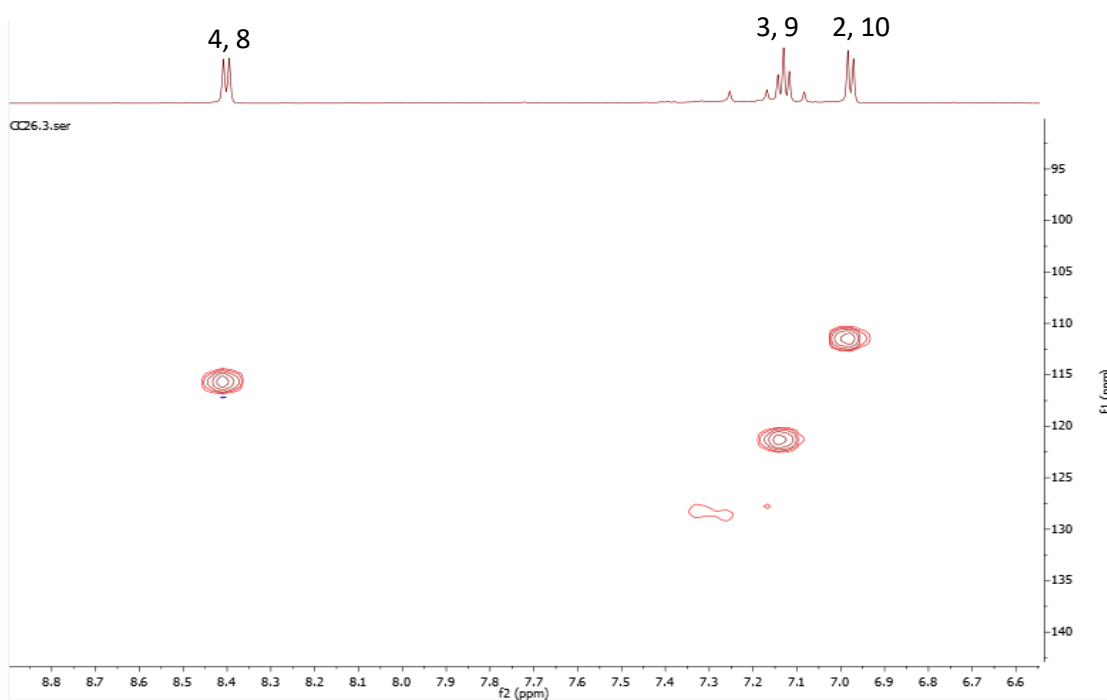


Figure S3: HSQC of BE-13793C **1** (CD<sub>3</sub>OD, 298K, 600MHz)

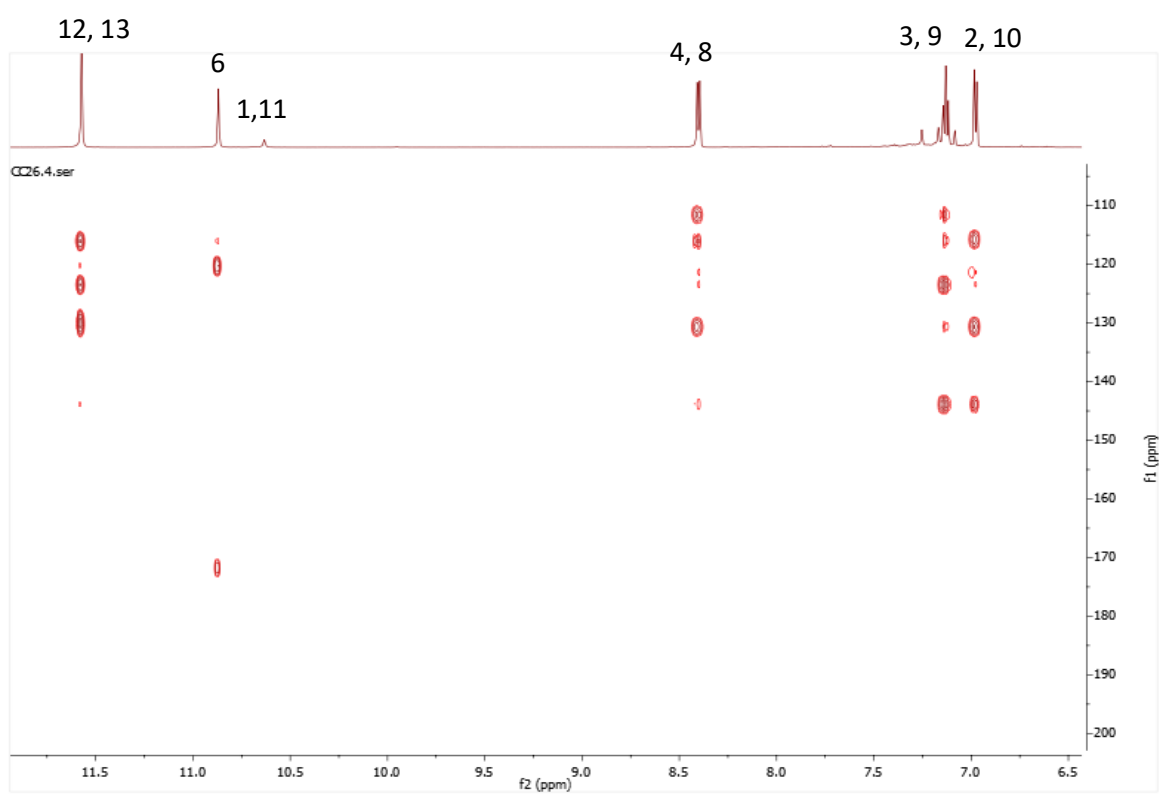


Figure S4: HMBC of BE-13793C **1** (DMSO-*d*<sub>6</sub>, 298K, 600MHz)

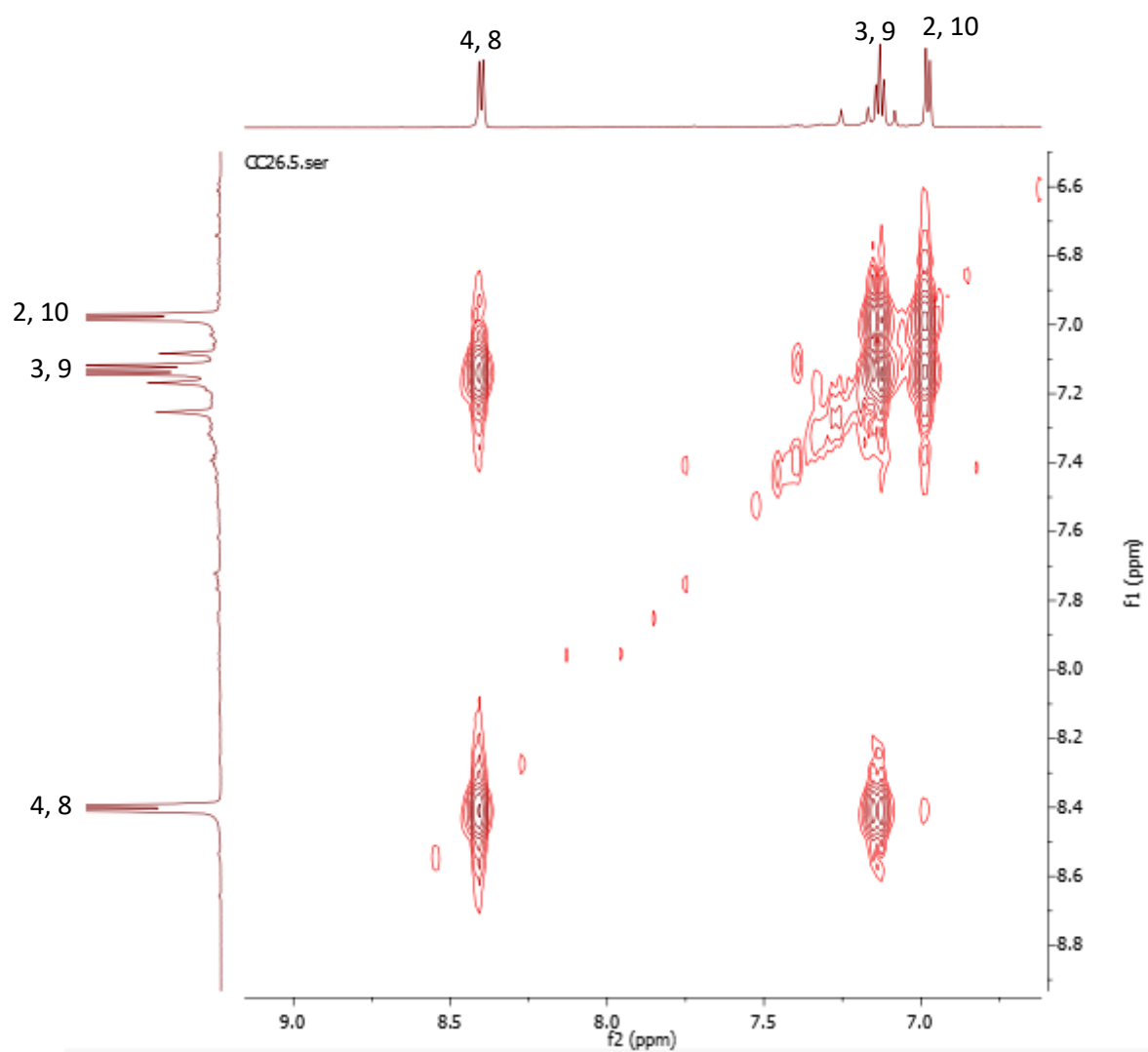
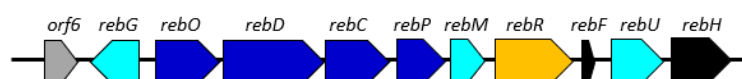


Figure S5: COSY of BE-13793C 1 (CD<sub>3</sub>OD, 298K, 600MHz)

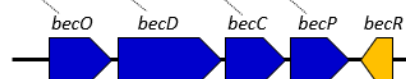
Table S1. Deduced functions of the ORFs in BE-13793C **1** (*bec*) biosynthetic gene cluster in *Streptomyces* sp. MA37 showing homology to the rebeccamycin (*reb*) BGC in *Lechevalieria aerocolonigenes* and staurosporine (*sta*) BGC in *Streptomyces* sp. TP-A0274

Gene	Deduced Function	AA	Staurosporine % Protein identity	Rebeccamycin % Protein identity
<i>becO</i>	FAD-dependent oxidoreductase	508	53%	56%
<i>becD</i>	bis-indole formation	1095	60%	54%
<i>becC</i>	FAD-binding monooxygenase	540	62%	61%
<i>becP</i>	cytochrome P450	417	51%	55%
<i>becR</i>	LuxR family DNA-binding response regulator	221	44%	31%

*Lechevalieria aerocolonigenes* (rebeccamycin)



*Streptomyces* sp. MA37 (BE-13793C)



*Streptomyces* sp. TP-A0274 (staurosporine)

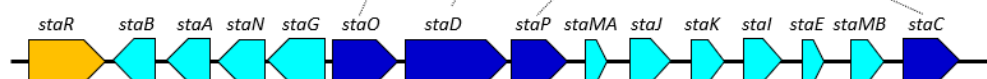


Figure S6: Biosynthetic gene cluster comparison of BE-13793C **1** in *Streptomyces* sp. MA37, rebeccamycin in *Lechevalieria aerocolonigenes*, and staurosporine in *Streptomyces* sp. TP-A0274

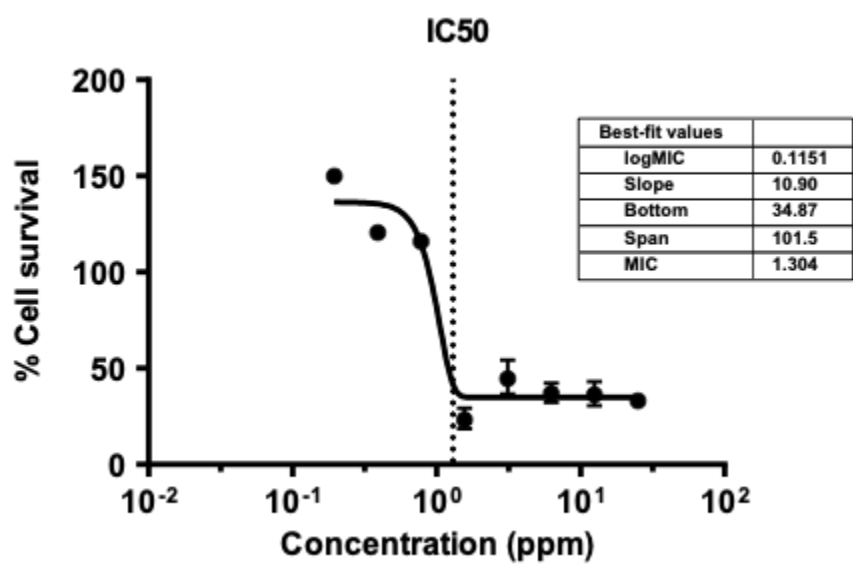


Figure S7. MIC curve of BE-13793C 1 against HT29 (ATCC HTB-38) colon cells