

**A Serendipitous Discovery of Isomotuporin-Containing Sponge Populations of
*Theonella swinhoei***

[Motuporin_v 4.0]

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Supporting Information

Table of Contents

	Page
Figure S1. ¹ H NMR comparison of motuporin (1) and <i>isomotuporin</i> (2).....	S2
Figure S2. Representation of gCOSY, gHMBC, and ¹⁵ N-HMBC correlations for <i>isomotuporin</i>	S3
Figure S3. Advanced Marfey analysis of 2 , (a) hydrolysis product of 2 derivatized with L-FDLA and (b) hydrolysis product of 2 derivatized with both D-FDLA and L-FDLA.....	S4
Figure S4. ¹ H NMR of <i>isomotuporin</i> (2).....	S5
Figure S5. ¹ H NMR of <i>isomotuporin</i> B (3).....	S6
Figure S6. ¹ H NMR of <i>isomotuporin</i> C (4).....	S7
Figure S7. ¹ H NMR of <i>isomotuporin</i> D (5).....	S8
Figure S8. Structures of compounds contained in Table 1.....	S9
Figure S9. Above and underwater photographs of all sponges studied.....	S10

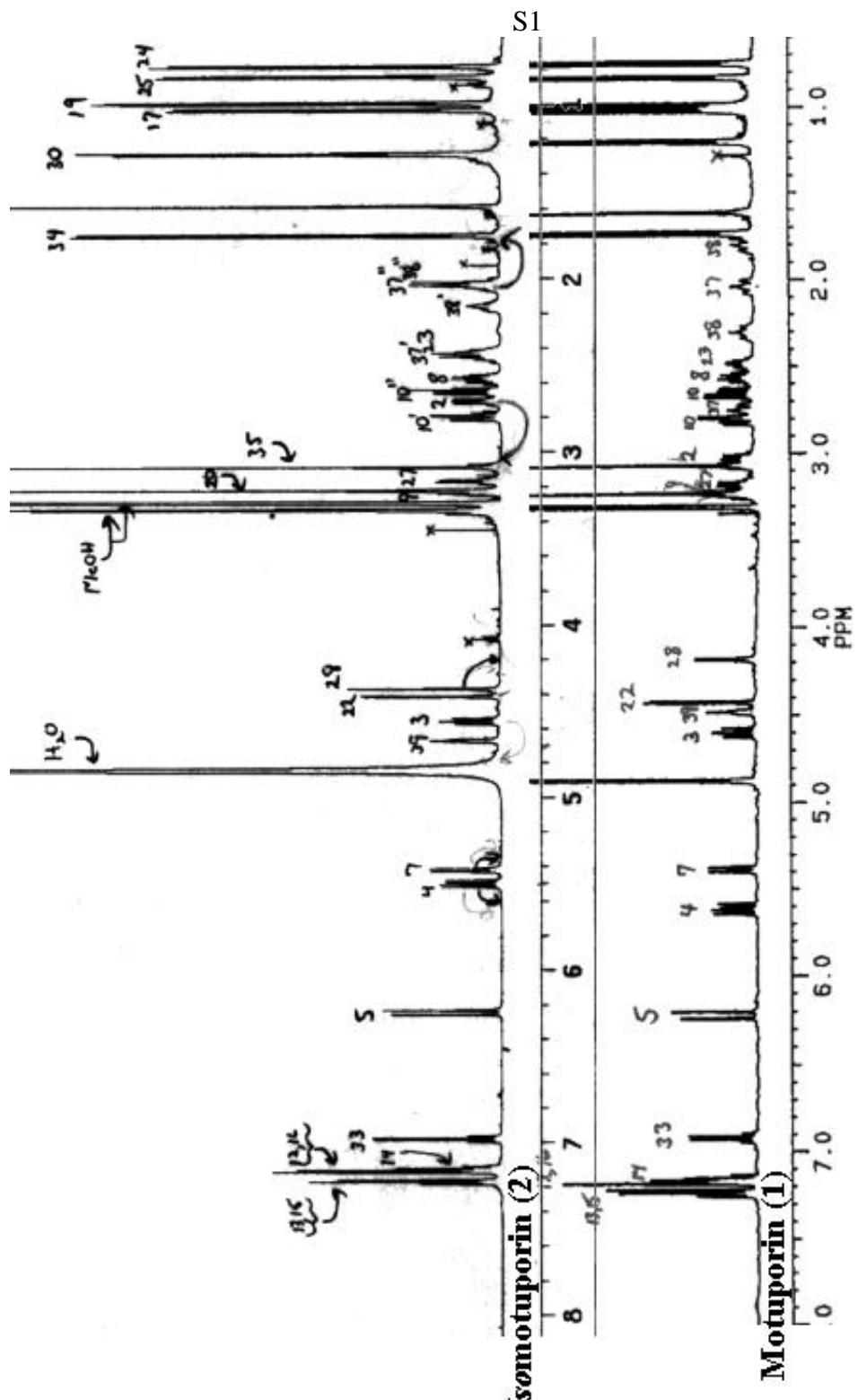


Figure S1. ¹H NMR comparison of motuporin (1) and isomotuporin (2) (The ¹H NMR for 2 was obtained from Ref 14).

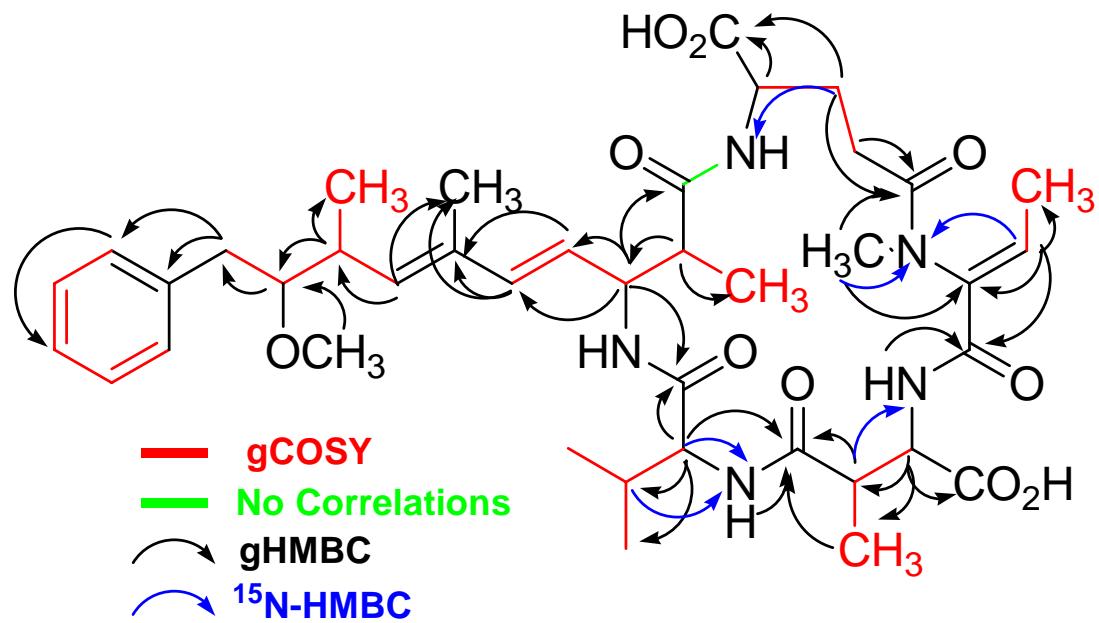


Figure S2. Representation of gCOSY, gHMBC, and ^{15}N -HMBC correlations for *isomotuporin* (**2**).

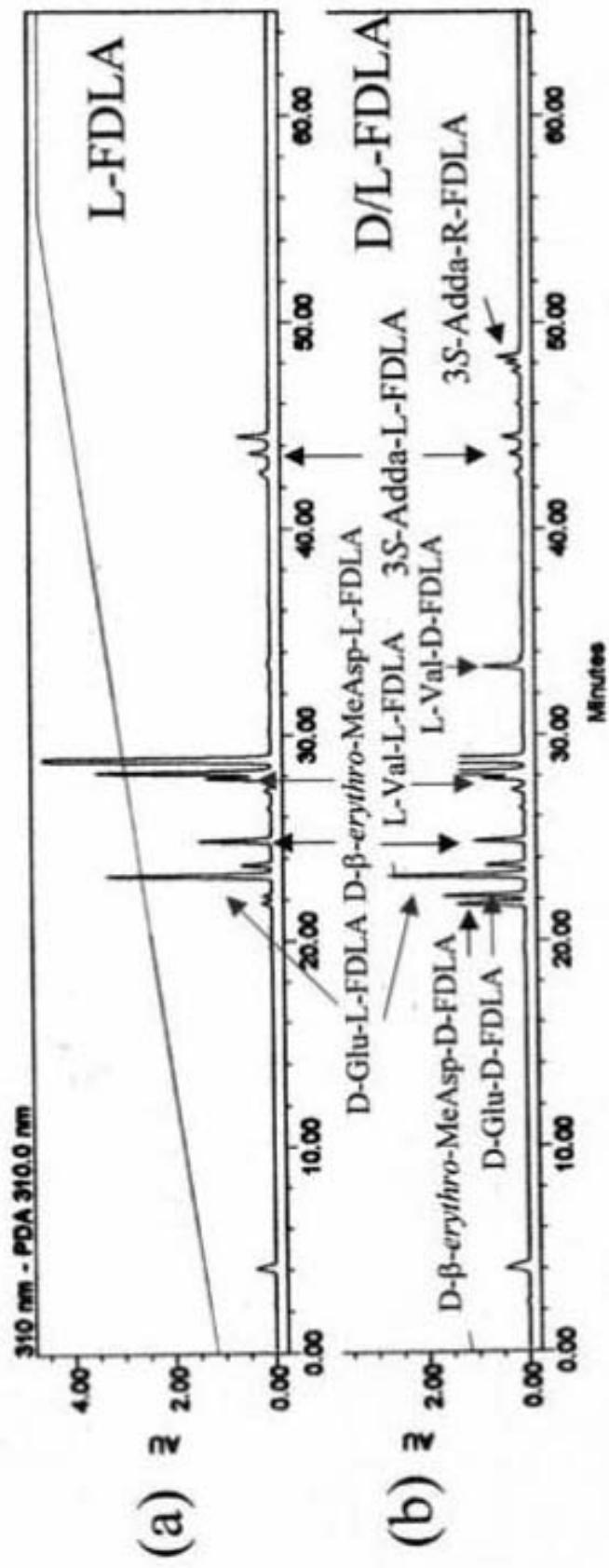


Figure 3. Advanced Marfey analysis of isomotuporin (**2**), (a) hydrolysis product of **2** derivatized with L-FDLA and (b) hydrolysis product of **2** derivatized with both D-FDLA and L-FDLA.

Figure S4. ^1H NMR of *isomotuporin* (**2**).

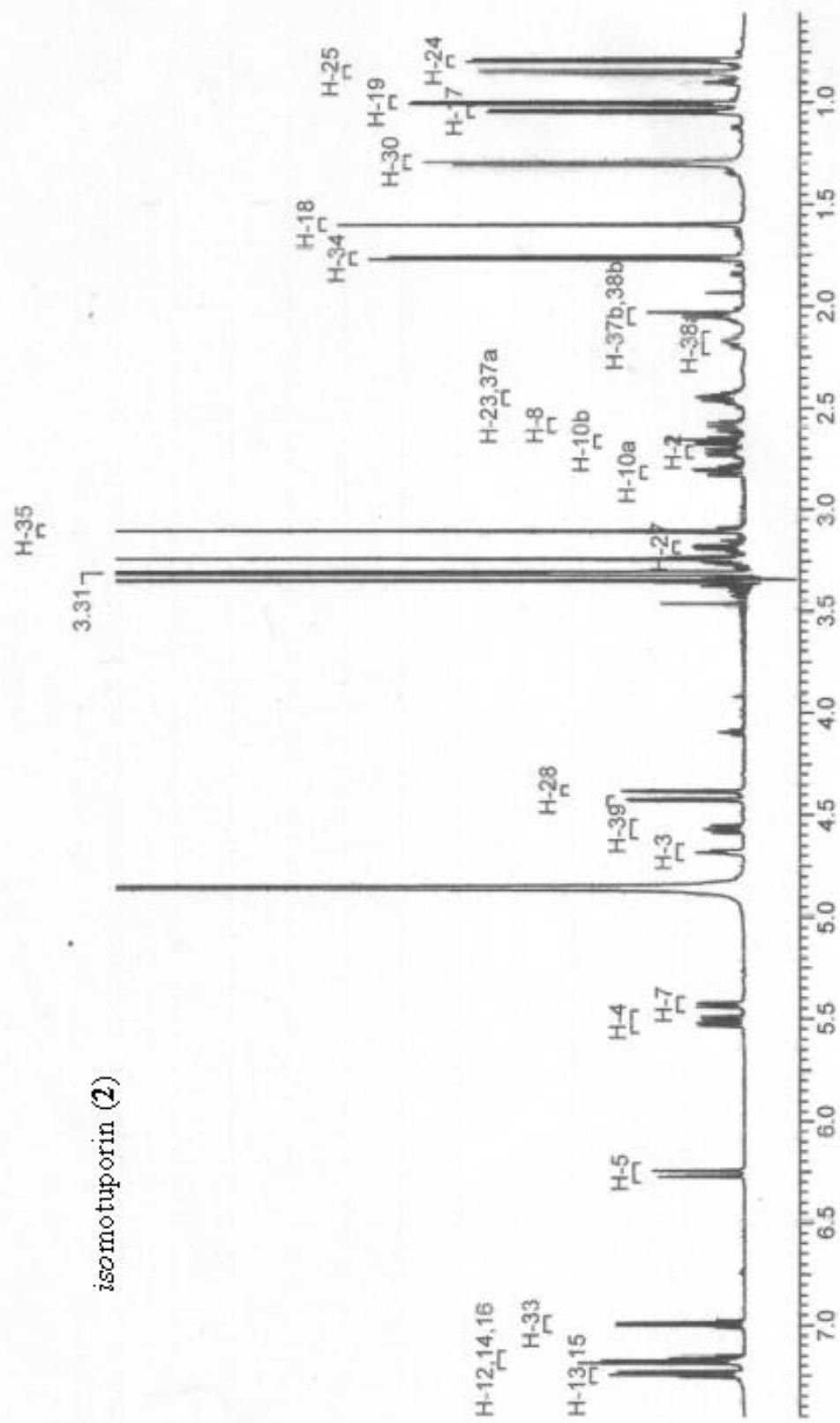


Figure S5. ^1H NMR of *isomotuporin B* (**3**).

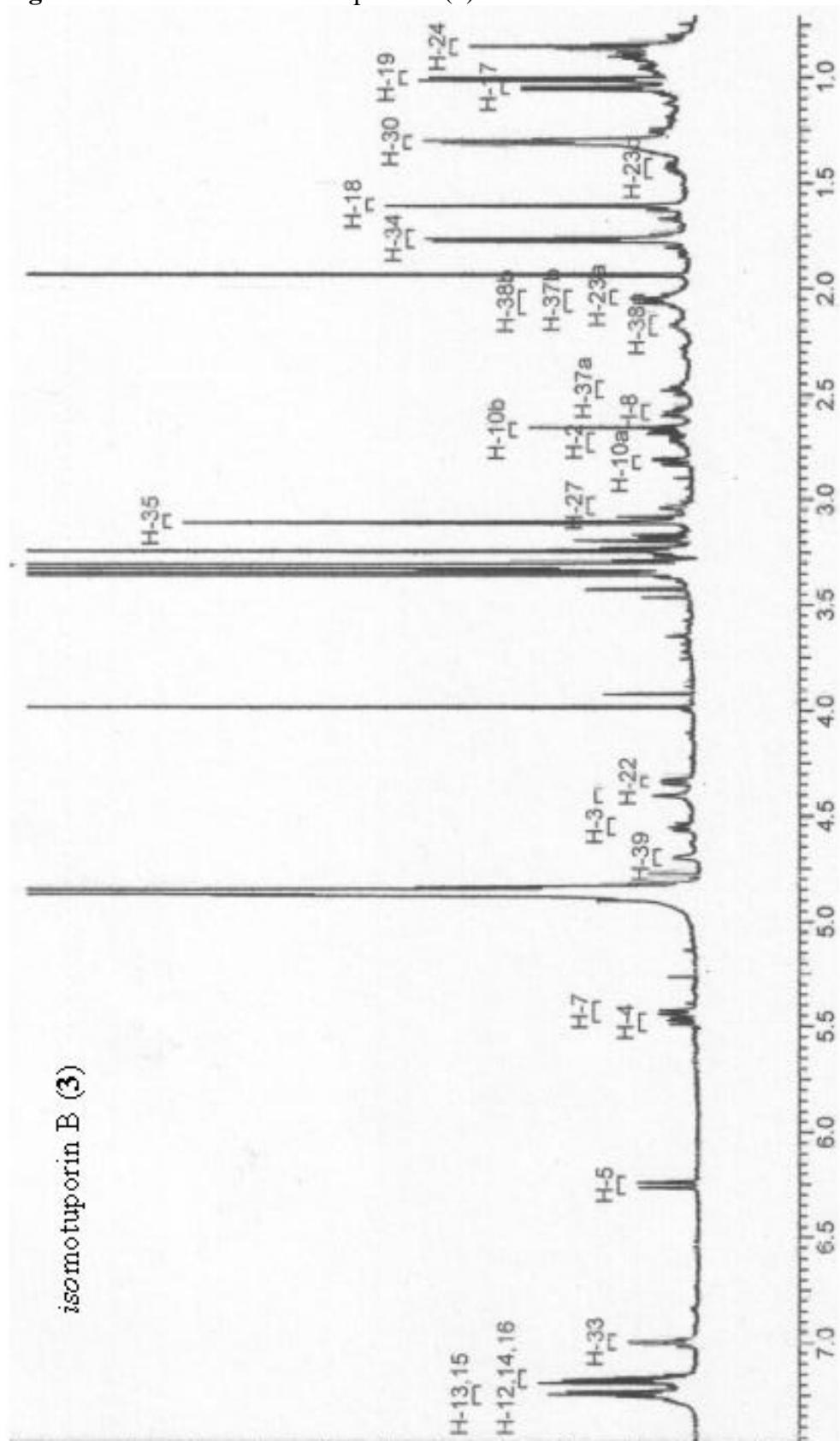


Figure S6. ^1H NMR of Iisomotuporin C (**4**).

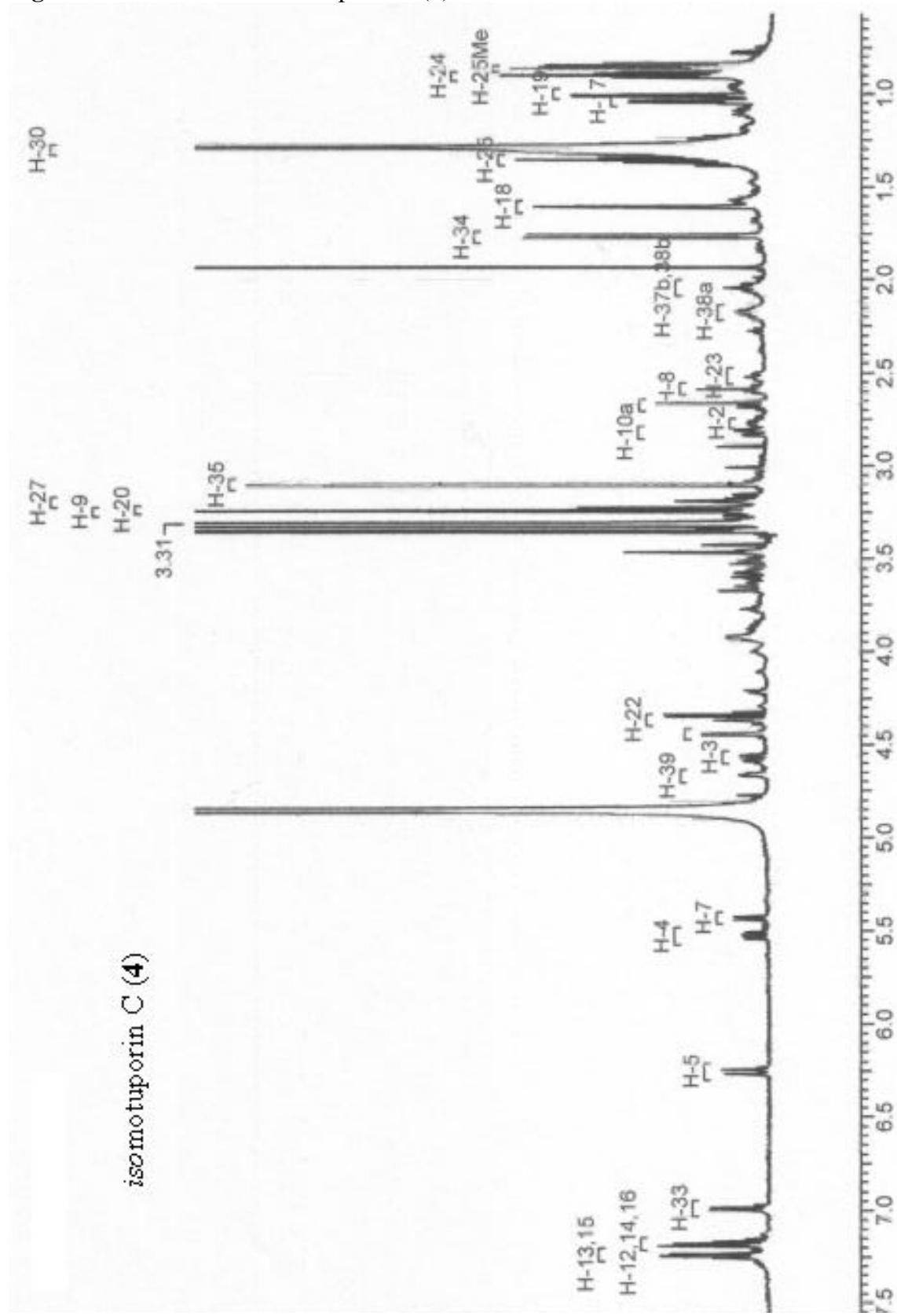
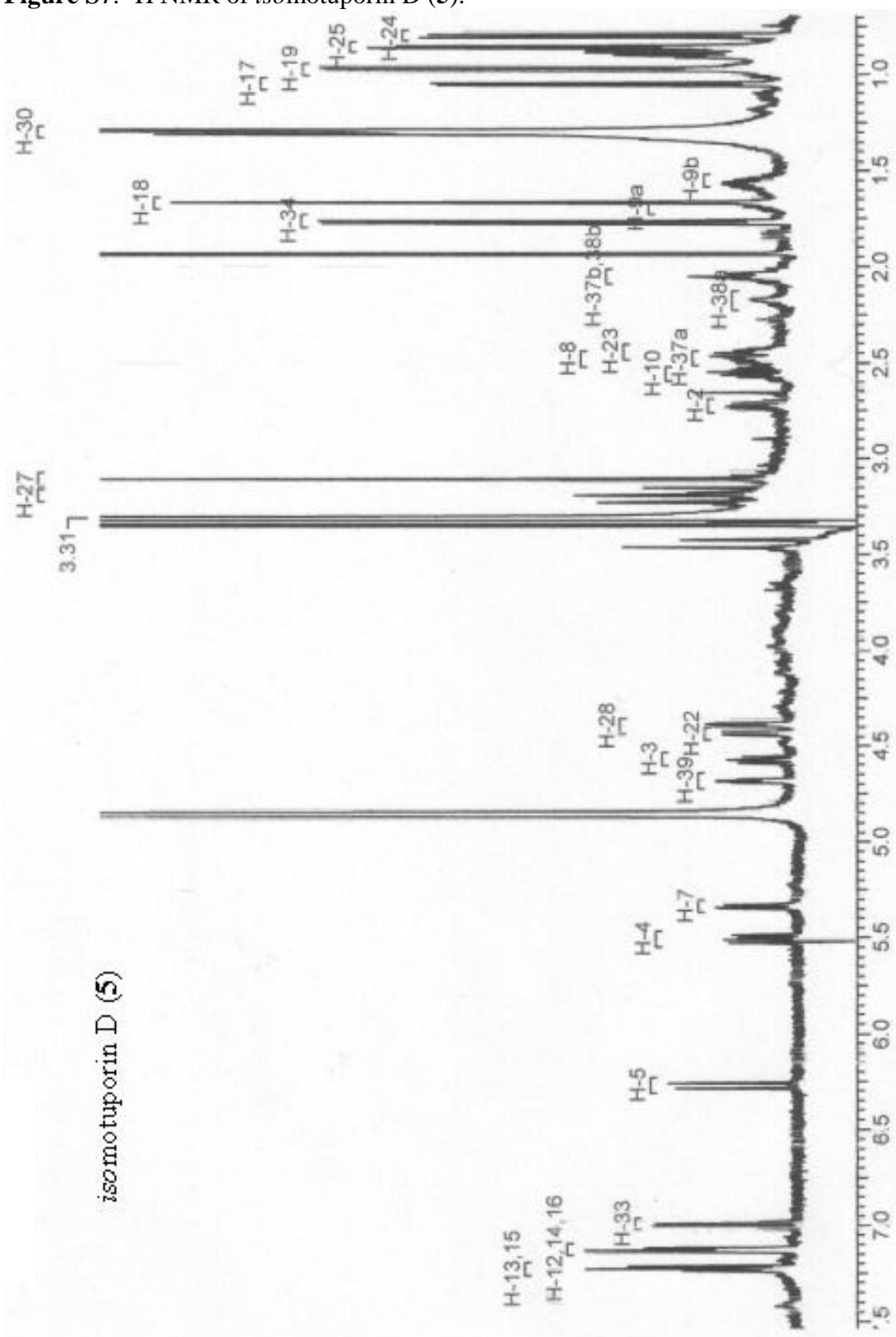
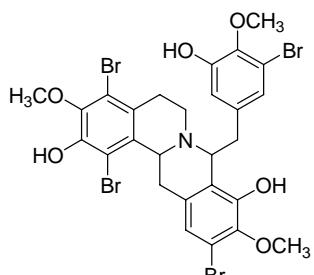
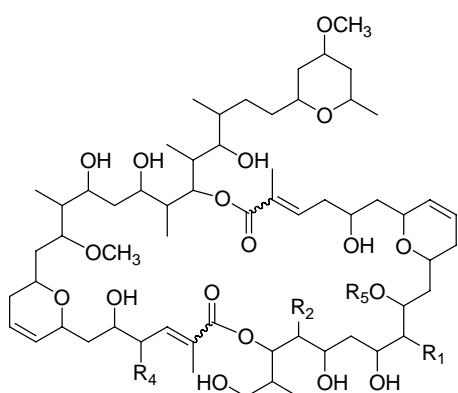


Figure S7. ^1H NMR of *isomotuporin D* (**5**).

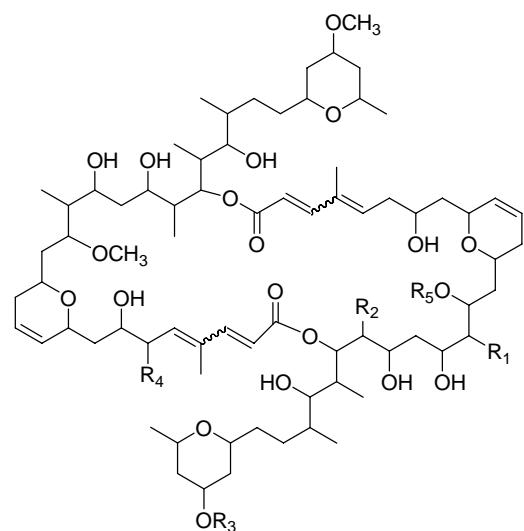




theoneberine

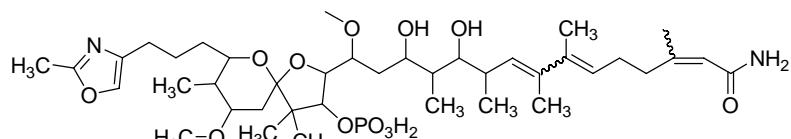


misakinolide A

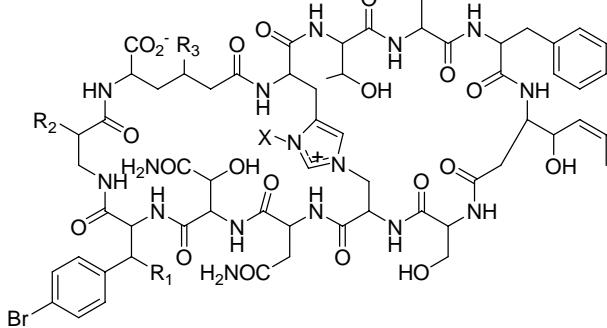


	R ₁	R ₂	R ₃	R ₄	R ₅
swinholide A	CH ₃	CH ₃	CH ₃	H	CH ₃
swinholide B	H	CH ₃	CH ₃	H	CH ₃
swinholide C	CH ₃	CH ₃	H	H	CH ₃
swinholide D	CH ₃	CH ₃	CH ₃	H	H
swinholide E	CH ₃	CH ₃	CH ₃	OH	CH ₃
swinholide F	CH ₃	CH ₃	CH ₃	H	CH ₃
swinholide G	CH ₃	H	CH ₃	H	CH ₃

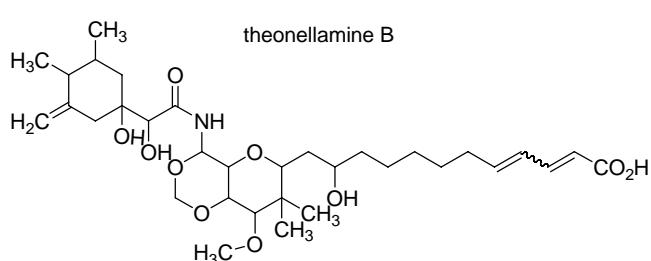
papuamide D



swinhoeiamide A



	R ₁	R ₂	R ₃	X
theonellamide A	H	H	OH	β -D-Gal
theopalauamide	CH ₃	OH	H	β -D-Gal



theonellamine B

theopederin J

Figure S8. Structures of compounds contained in Table 1.

Figure S9A.

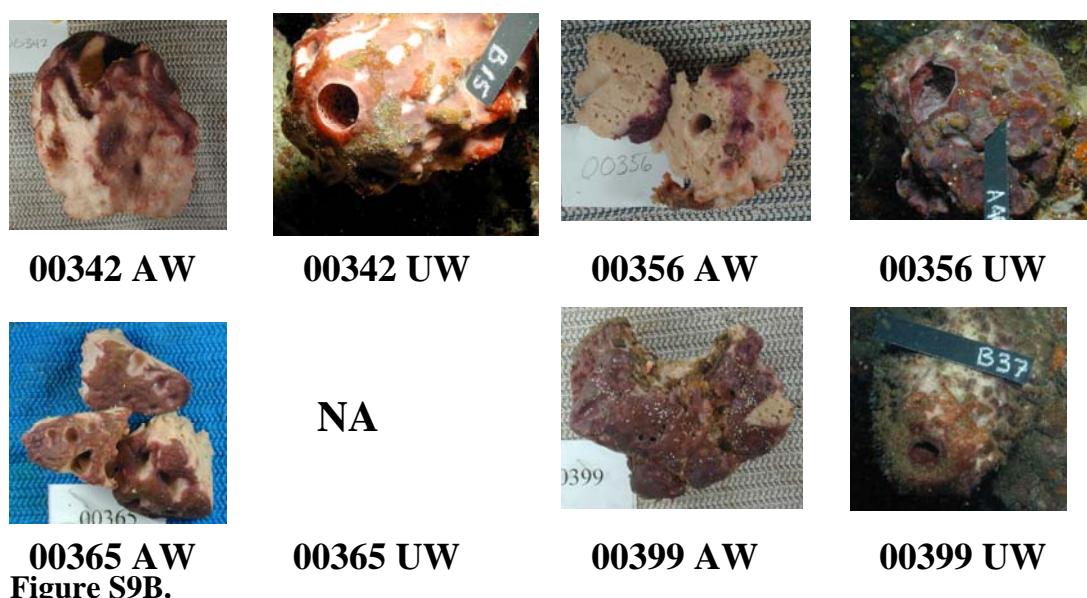


Figure S9B.

