Amphidinolides H2, H3, H4, H5, G2, and G3, New Cytotoxic 26- and 27-Membered Macrolides from Dinoflagellate *Amphidinium* sp.

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Table S1 ^1H - ^1H coupling constants of amphidinolides G (**2**), G2 (**9**), and G3 (**10**).

Figure S1 ^1H NMR spectrum of amphidinolide H2 (**5**) in CDCl_3 .

Figure S2 ^{13}C NMR spectrum of amphidinolide H2 (**5**) in CDCl_3 .

Figure S3 ^1H - ^1H COSY spectrum of amphidinolide H2 (**5**) in CDCl_3 .

Figure S4 C-H COSY spectrum of amphidinolide H2 (**5**) in CDCl_3 .

Figure S5 HMBC spectrum of amphidinolide H2 (**5**) in CDCl_3 .

Figure S6 NOESY spectrum of amphidinolide H2 (**5**) in CDCl_3 .

Figure S7 HETLOC spectrum of amphidinolide H2 (**5**) in CDCl_3 .

Figure S8 HETLOC spectra (parts) of amphidinolide H2 (**5**) in CDCl_3 .

Figure S9 ^1H NMR spectrum of amphidinolide H3 (**6**) in CDCl_3 .

Figure S10 ^{13}C NMR spectrum of amphidinolide H3 (**6**) in CDCl_3 .

Figure S11 ^1H - ^1H COSY spectrum of amphidinolide H3 (**6**) in CDCl_3 .

Figure S12 NOESY spectrum of amphidinolide H3 (**6**) in CDCl_3 .

Figure S13 ^1H NMR spectrum of amphidinolide H4 (**7**) in CDCl_3 .

- Figure S14 ^{13}C NMR spectrum of amphidinolide H4 (**7**) in CDCl_3 .
- Figure S15 ^1H - ^1H COSY spectrum of amphidinolide H4 (**7**) in CDCl_3 .
- Figure S16 NOESY spectrum of amphidinolide H4 (**7**) in CDCl_3 .
- Figure S17 ^1H NMR spectrum of amphidinolide H5 (**8**) in CDCl_3 .
- Figure S18 ^{13}C NMR spectrum of amphidinolide H5 (**8**) in CDCl_3 .
- Figure S19 ^1H - ^1H COSY spectrum of amphidinolide H5 (**8**) in CDCl_3 .
- Figure S20 NOESY spectrum of amphidinolide H5 (**8**) in CDCl_3 .
- Figure S21 ^1H NMR spectrum of amphidinolide G2 (**9**) in CDCl_3 .
- Figure S22 ^{13}C NMR spectrum of amphidinolide G2 (**9**) in CDCl_3 .
- Figure S23 ^1H - ^1H COSY spectrum of amphidinolide G2 (**9**) in CDCl_3 .
- Figure S24 NOESY spectrum of amphidinolide G2 (**9**) in CDCl_3 .
- Figure S25 HETLOC spectrum (part) of amphidinolide G2 (**9**) in CDCl_3 .
- Figure S26 ^1H NMR spectrum of amphidinolide G3 (**10**) in CDCl_3 .
- Figure S27 ^{13}C NMR spectrum of amphidinolide G3 (**10**) in CDCl_3 .
- Figure S28 ^1H - ^1H COSY spectrum of amphidinolide G3 (**10**) in CDCl_3 .
- Figure S29 NOESY spectrum of amphidinolide G3 (**10**) in CDCl_3 .
- Figure S30 ^1H NMR spectrum of the methanol adduct (**11**) of amphidinolide H (**2**) in CDCl_3 .
- Figure S31 ^1H NMR spectrum of the (*S*)-20-dihydro form (**12**) of amphidinolide H (**2**) in CDCl_3 .
- Figure S32 ^1H NMR spectrum of the (*R*)-20-dihydro form (**13**) of amphidinolide H (**2**) in CDCl_3 .
- Figure S33 ^1H NMR spectrum of the 26-*O*-(α -methoxy)isopropyl derivative (**14**) of

amphidinolide H (**2**) in CDCl_3 .

Figure S34 ^1H NMR spectrum of the peroxide (**15**) of amphidinolide H (**2**) in CDCl_3 .

Table S2. ^1H - ^1H coupling constants of amphidinolides G (**2**), G2 (**9**), and G3 (**10**).

positn.	2	9	10
6/7	15.5	15.6	^a
7/8	8.5	8.5	2.5, 8.8
8/9	2.4	2.3	2.5
9/10a	2.6	4.3	2.8
9/10b	9.2	7.1	8.8
10a/10b	13.6	12.7	13.5
10a/11	10.4	9.6	10.0
10b/11	3.5	2.1	3.0
11/12a	5.9	6.9	6.2
11/12b	9.6	7.8	9.5
11/28	6.4	6.3	6.4
12a/12b	13.7	13.3	13.5
16/17a	11.6	11.2	11.5
16/17b	4.3	4.5	4.2
16/31	6.5	6.7	6.6
17a/18	4.0	4.7	3.8
17b/18	8.5	9.5	8.6
17a/17b	14.0	13.8	14.2
18/19a	9.3	2.3	9.9
18/19b	2.4	9.4	1.8
19a/19b	16.5	16.3	16.0
21/22	1.7	1.6	1.0
22/23	5.0	8.3	7.2
23/24a	2.6	4.2	2.3
23/24b	7.0	6.3	7.0
24a/24b	14.4	14.8	14.8
23/32	6.8	6.3	6.8
24a/25	10.8	9.8	9.8
24b/25	2.6	2.1	2.2
25/26a	3.9	3.3	3.5
25/26b	3.1	5.1	2.5
26a/26b	11.3	11.3	11.3

^anot determined.

Figure S1 ^1H NMR spectrum of amphidinolide H2 (**5**) in CDCl_3 .

Figure S2 ^{13}C NMR spectrum of amphidinolide H2 (**5**) in CDCl_3 .

Figure S3 ^1H - ^1H COSY spectrum of amphidinolide H2 (**5**) in CDCl_3 .

Figure S4 C-H COSY spectrum of amphidinolide H2 (**5**) in CDCl₃.

Figure S5 HMBC spectrum of amphidinolide H2 (**5**) in CDCl₃.

Figure S6 NOESY spectrum of amphidinolide H2 (**5**) in CDCl₃.

Figure S7 HETLOC spectrum of amphidinolide H2 (**5**) in CDCl₃.

Figure S8 HETLOC spectra (parts) of amphidinolide H2 (**5**) in CDCl₃.

¹³C NMR spectrum (ppm) of compound 1. The spectrum shows peaks corresponding to various carbon environments, including alcohols (OH) and other functional groups. Key peaks are labeled with numbers and chemical groups.

Chemical Shift (ppm)	Assignment
~6.5	X
~6.2	3
~5.8	6
~5.2	14
~5.0	7, 25
~4.8	29a, 29b
~4.2	21 OH
~3.8	18
~3.6	26a
~3.4	26b OH
~3.2	22
~3.0	8, 9
~2.8	19a OH, 19b
~2.6	4b, 16
~2.4	12a, 23
~2.2	24a, 12b
~2.0	27
~1.8	30
~1.6	31
~1.4	32
~1.2	28
~1.0	10a, 17b
~0.8	11, 24b
~0.6	17a
~0.4	4a, 5a, 5b
~0.2	10b
0	1

Figure S10 ^{13}C NMR spectrum of amphidinolide H3 (**6**) in CDCl_3 .

Figure S11 ^1H - ^1H COSY spectrum of amphidinolide H3 (**6**) in CDCl_3 .

Figure S12 NOESY spectrum of amphidinolide H3 (**6**) in CDCl₃.

Figure S13 ^1H NMR spectrum of amphidinolide H4 (**7**) in CDCl_3 .

Figure S14 ^{13}C NMR spectrum of amphidinolide H4 (**7**) in CDCl_3 .

Figure S15 ^1H - ^1H COSY spectrum of amphidinolide H4 (7) in CDCl_3 .

Figure S16 NOESY spectrum of amphidinolide H4 (**7**) in CDCl₃.

Figure S17 ^1H NMR spectrum of amphidinolide H5 (**8**) in CDCl_3 .

Figure S18 ^{13}C NMR spectrum of amphidinolide H5 (**8**) in CDCl_3 .

Figure S19 ^1H - ^1H COSY spectrum of amphidinolide H5 (**8**) in CDCl_3 .

Figure S20 NOESY spectrum of amphidinolide H5 (**8**) in CDCl₃.

Figure S21 ^1H NMR spectrum of amphidinolide G2 (**9**) in CDCl_3 .

Figure S22 ^{13}C NMR spectrum of amphidinolide G2 (**9**) in CDCl_3 .

Figure S23 ^1H - ^1H COSY spectrum of amphidinolide G2 (**9**) in CDCl_3 .

Figure S24 NOESY spectrum of amphidinolide G2 (**9**) in CDCl₃.

Figure S25 HETLOC spectrum (part) of amphidinolide G2 (**9**) in CDCl₃.

Figure S27 ^{13}C NMR spectrum of amphidinolide G3 (**10**) in CDCl_3 .

Figure S28 ^1H - ^1H COSY spectrum of amphidinolide G3 (**10**) in CDCl_3 .

Figure S29 NOESY spectrum of amphidinolide G3 (**10**) in CDCl₃.

CDCl₃.

Figure S34 ^1H NMR spectrum of the peroxide (**15**) of amphidinolide H (**2**) in CDCl_3 .