

Supporting Information

UKIXANTHOMYCIN A: A HEXACYCLIC XANTHONE FROM THE MUDFLAT-DERIVED ACTINOMYCETE *STREPTOMYCES* SP.

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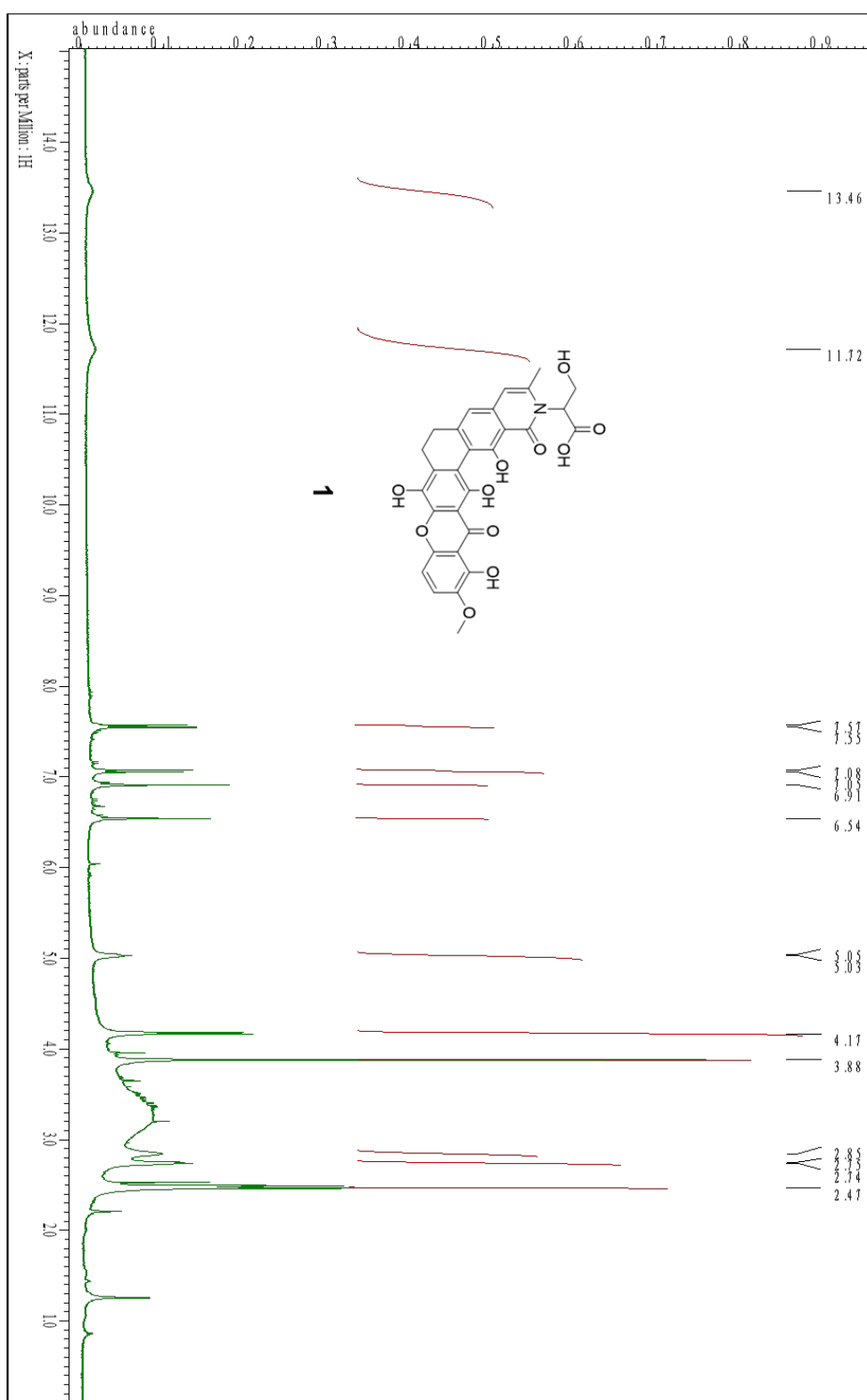


Figure S1. ^1H NMR spectrum of ukixanthomycin A (1) in $\text{DMSO-}d_6$ at $100\text{ }^\circ\text{C}$

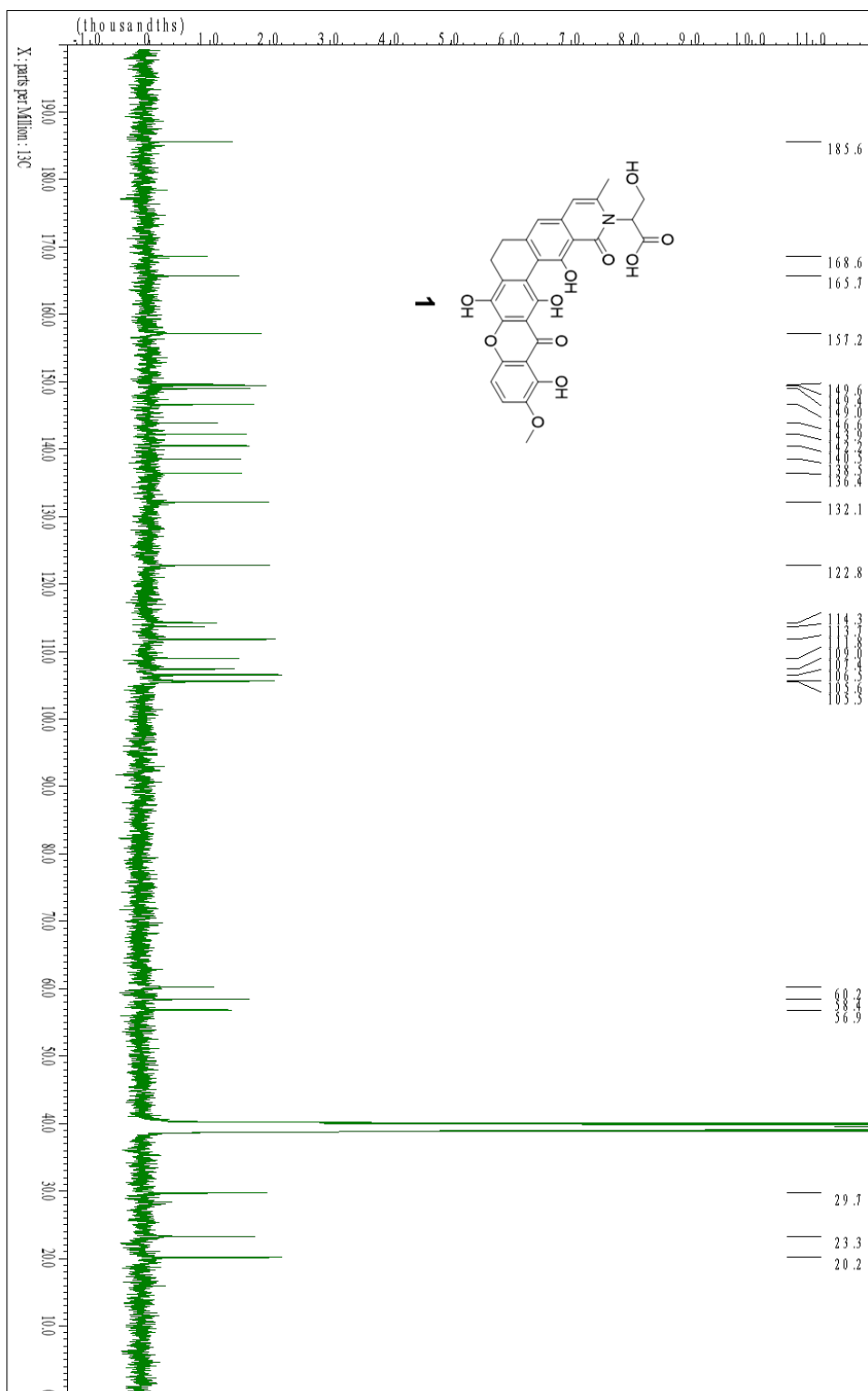


Figure S2. ^{13}C NMR spectrum of ukixanthomycin A (**1**) in $\text{DMSO-}d_6$ at $100\text{ }^\circ\text{C}$

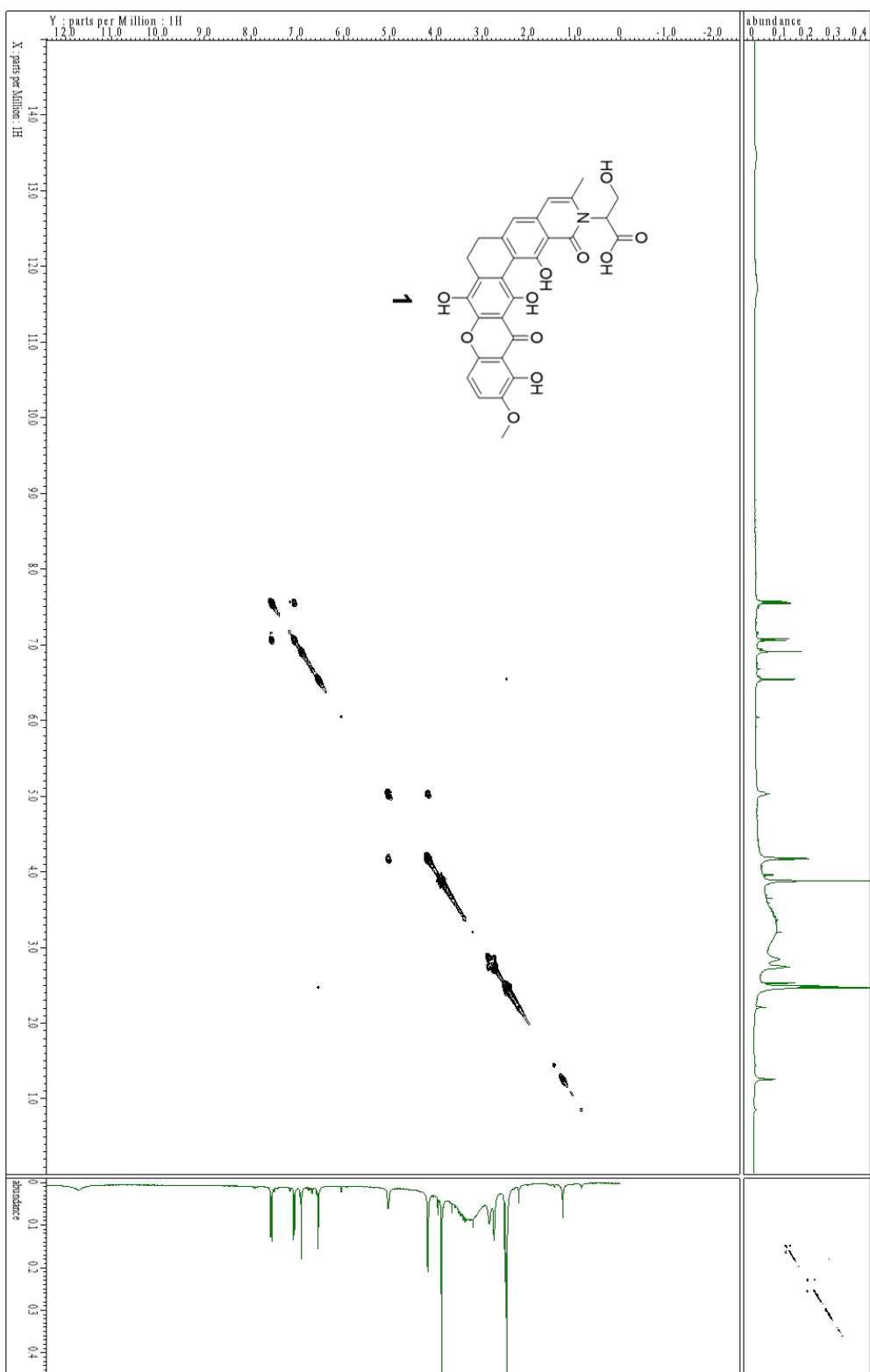


Figure S3. COSY spectrum of ukixanthomycin A (**1**) in DMSO-*d*₆ at 100 °C

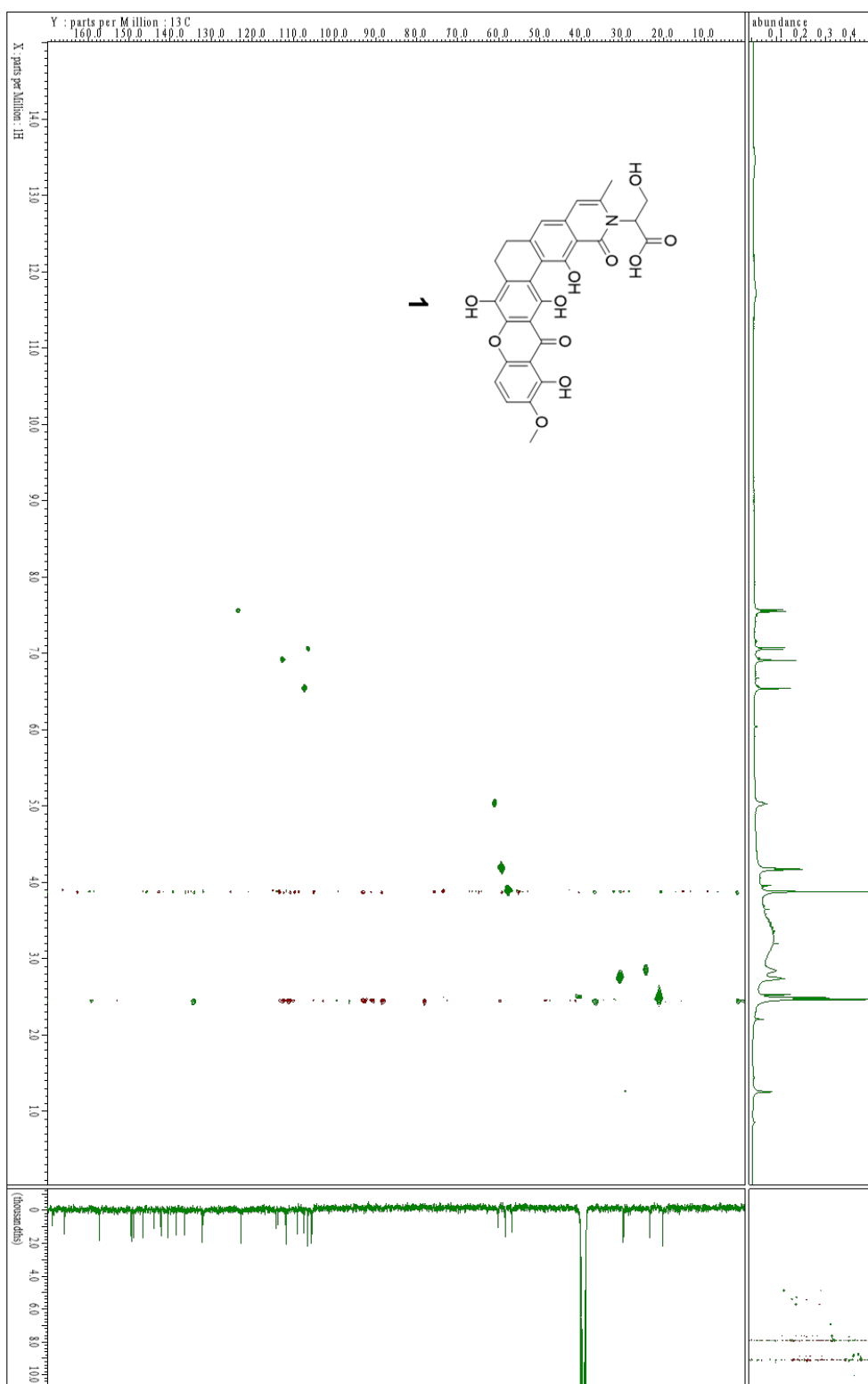


Figure S4. HSQC spectrum of ukixanthomycin A (**1**) in DMSO-*d*₆ at 100 °C

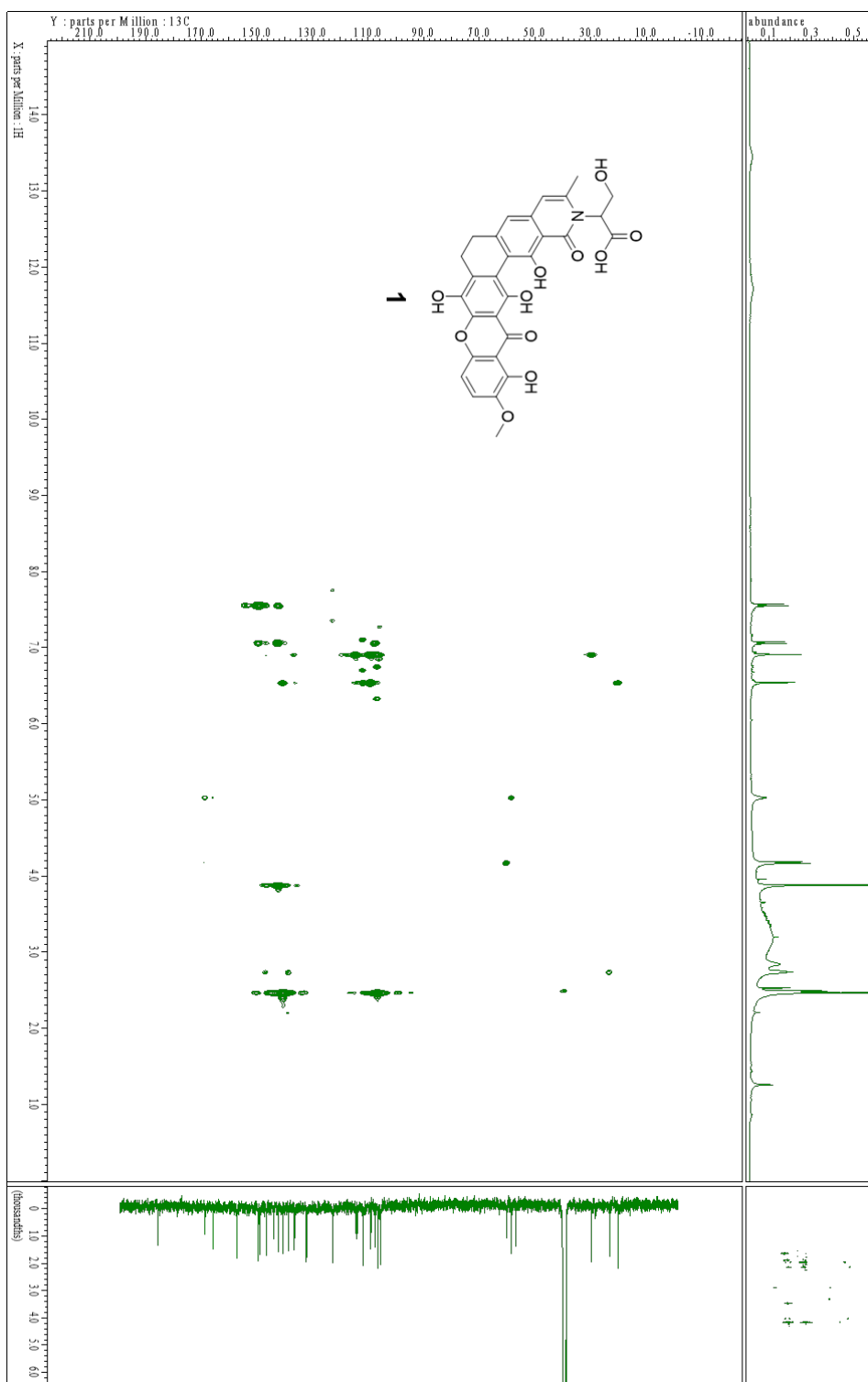


Figure S5. HMBC spectrum of ukixanthomycin A (**1**) in DMSO-*d*₆ at 100 °C

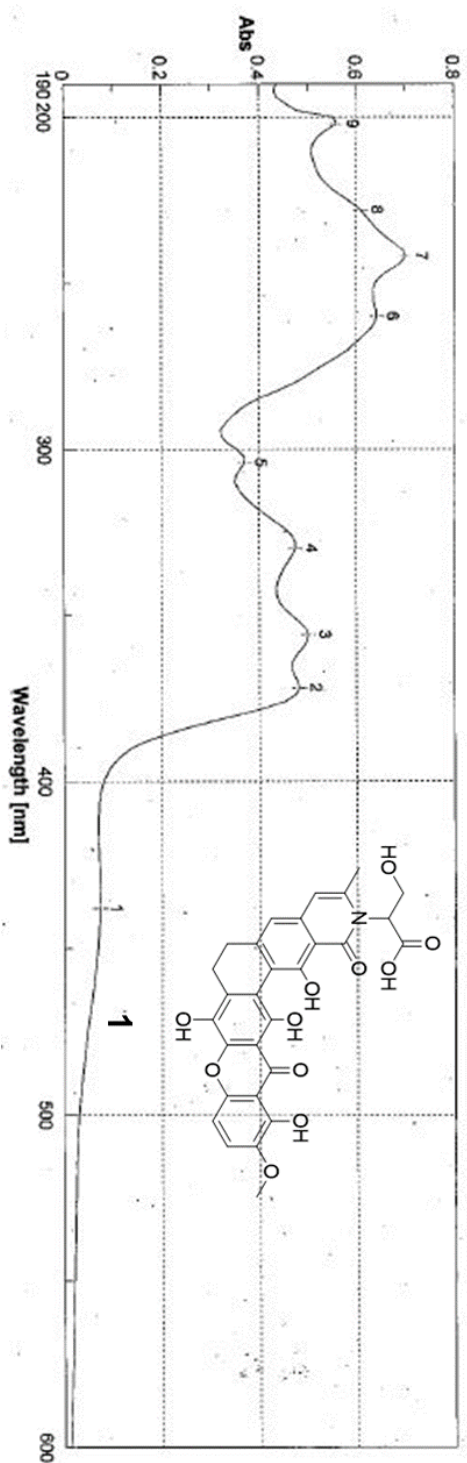


Figure S7. UV (MeOH) spectrum of ukixanthomycin A (**1**)

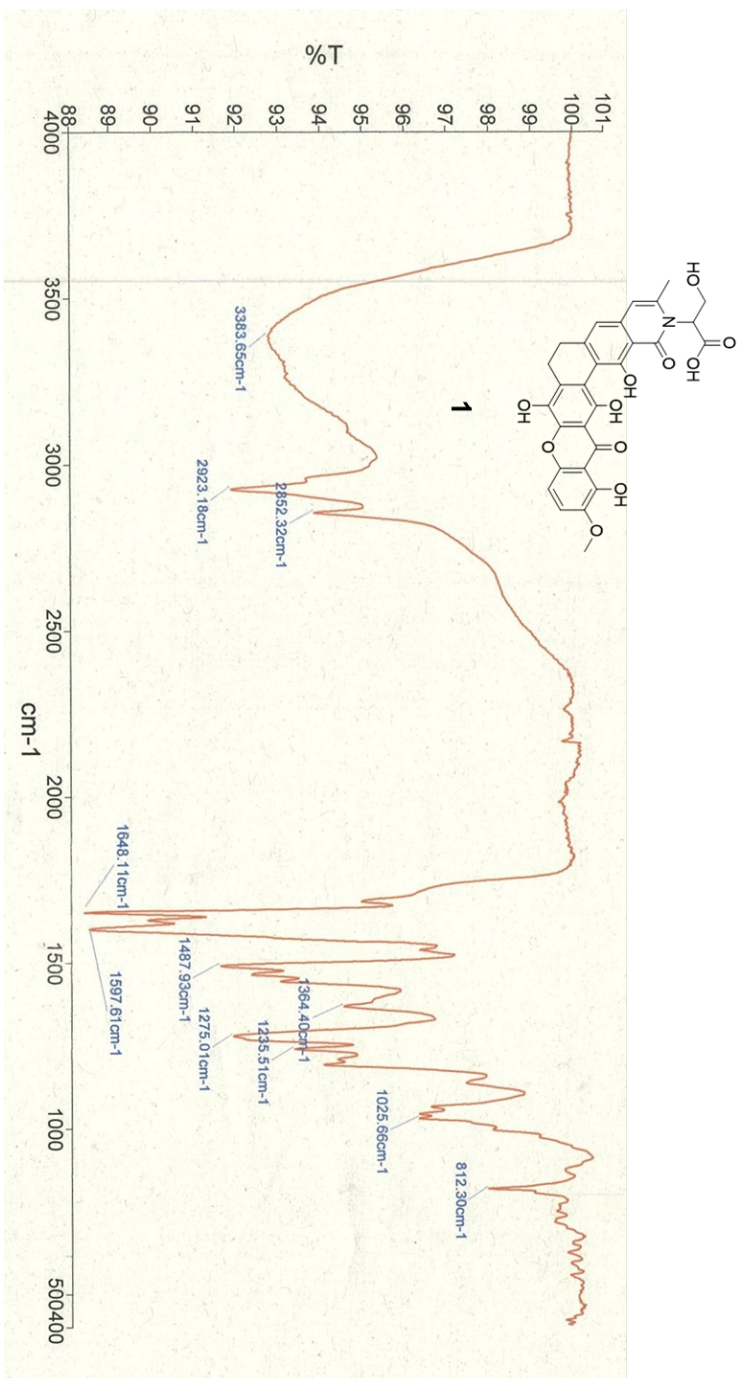


Figure S8. IR (film) spectrum of ukixanthomycin A (1)

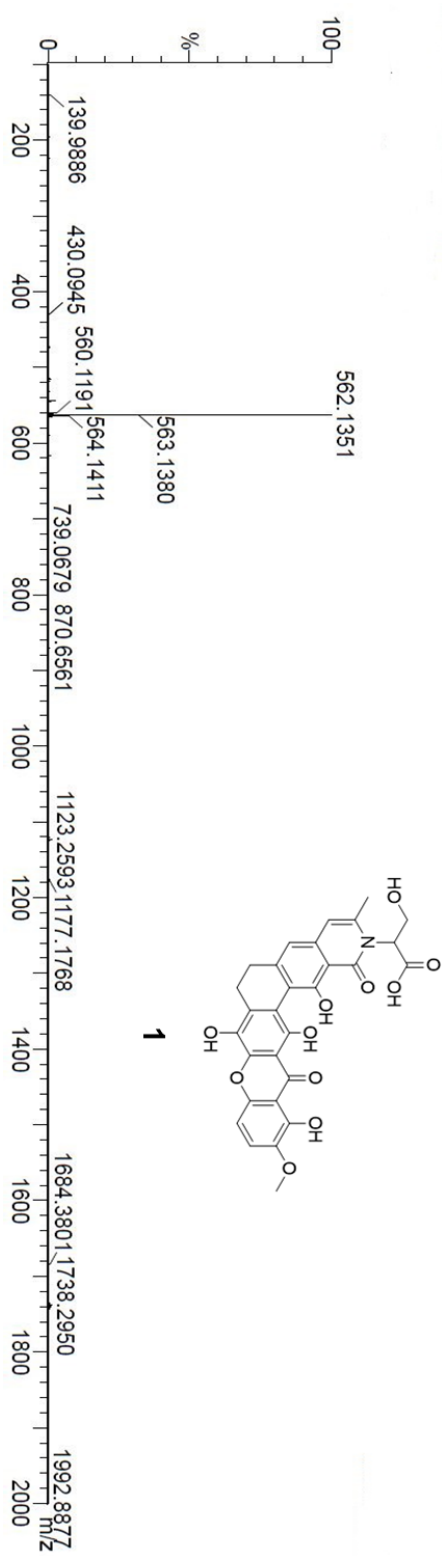


Figure S9. Positive HR-ESIMS spectrum of ukixanthomycin A (**1**)

Table S1. Experimental and calculated values of ^{13}C NMR chemical shifts of model **a**

Position	$\delta_{\text{exp.}}$	$\delta_{\text{calcd.}}$	$\Delta\delta_{\text{exp-calcd}}$
1	165.7	167.9	-2.2
1a	109.0	110.9	-1.9
2	157.2	161.5	-4.3
2a	114.3	117.3	-3.0
2b	113.8	118.5	-4.7
3	148.9	153.9	-5.0
3a	105.5	107.1	-1.6
4	185.6	188.6	-3.0
4a	107.5	109.7	-2.2
5	149.6	158.0	-8.4
6	142.4	142.7	-0.3
7	122.8	131.8	-9.0
8	106.5	104.2	2.3
8a	149.3	151.0	-1.7
9a	144.1	141.8	2.3
10	132.1	131.4	0.7
10a	138.5	138.2	0.3
11	23.2	24.0	-0.8
12	29.7	31.0	-1.3
12a	146.6	147.8	-1.2
13	111.7	112.0	-0.3
13a	136.6	138.6	-2.0
14	106.8	106.5	0.3
15	140.6	136.0	4.6
16	20.2	18.9	1.3
OCH ₃ -6	56.9	58.1	-1.2
SD			3.0

SD standard deviation

Table S2. Experimental and calculated values of ^{13}C NMR chemical shifts of model **b**

Position	$\delta_{\text{exp.}}$	$\delta_{\text{calcd.}}$	$\Delta\delta_{\text{exp-calcd}}$
1	165.7	168.8	-11.1
1a	109.0	110.0	-1.0
2	157.2	157.9	-0.7
2a	114.3	120.6	-6.3
2b	113.8	132.6	-18.8
3	148.9	151.0	-2.1
3a	105.5	108.9	-3.4
4	185.6	189.5	-3.9
4a	107.5	109.6	-2.1
5	149.6	155.0	-5.4
6	142.4	141.6	0.8
7	122.8	122.1	0.7
8	106.5	104.5	2.0
8a	149.3	150.9	-1.6
9a	144.1	148.0	-3.9
10	132.1	137.1	-5.0
10a	138.5	118.5	20.0
11	23.3	23.3	-0.1
12	29.7	32.1	-2.4
12a	146.6	152.1	-5.5
13	111.7	115.2	-3.5
13a	136.6	138.8	-2.2
14	106.8	107.0	-0.2
15	140.6	137.3	3.3
16	20.2	18.3	1.9
OCH ₃ -6	56.9	54.9	2.0
SD			6.2

SD standard deviation