

# **Actinopolysporins A-C and Tubercidin as a Pdcd4 Stabilizer from the Halophilic Actinomycete *Actinopolyspora erythraea* YIM 90600**

Li-Xing Zhao,<sup>†,‡</sup> Sheng-Xiong Huang,<sup>§,⊥</sup> Shu-Kun Tang,<sup>†</sup> Cheng-Lin Jiang,<sup>†</sup> Yanwen Duan,<sup>⊥</sup>  
John A. Beutler,<sup>||</sup> Curtis J. Henrich,<sup>||,▽</sup> James B. McMahon,<sup>||</sup> Tobias Schmid,<sup>○</sup> Johanna S. Blees,<sup>○</sup>  
Nancy H. Colburn,<sup>#</sup> Scott R. Rajski,<sup>‡</sup> and Ben Shen<sup>\*‡,§,⊥,§,¶</sup>

<sup>†</sup>Yunnan Institute of Microbiology, Yunnan University, Kunming, Yunnan 650091, People's Republic of China

<sup>‡</sup>Division of Pharmaceutical Sciences, University of Wisconsin-Madison, Madison, WI 53705, USA  
Departments of <sup>§</sup>Chemistry and <sup>¶</sup>Molecular Therapeutics and <sup>&</sup>Natural Products Library Initiative at  
TSRI, Scripps Florida, Jupiter, FL 33458, USA

<sup>†</sup>Hunan Engineering Research Center of Combinatorial Biosynthesis and Natural Product Drug Discovery, Changsha, Hunan 410329, People's Republic of China

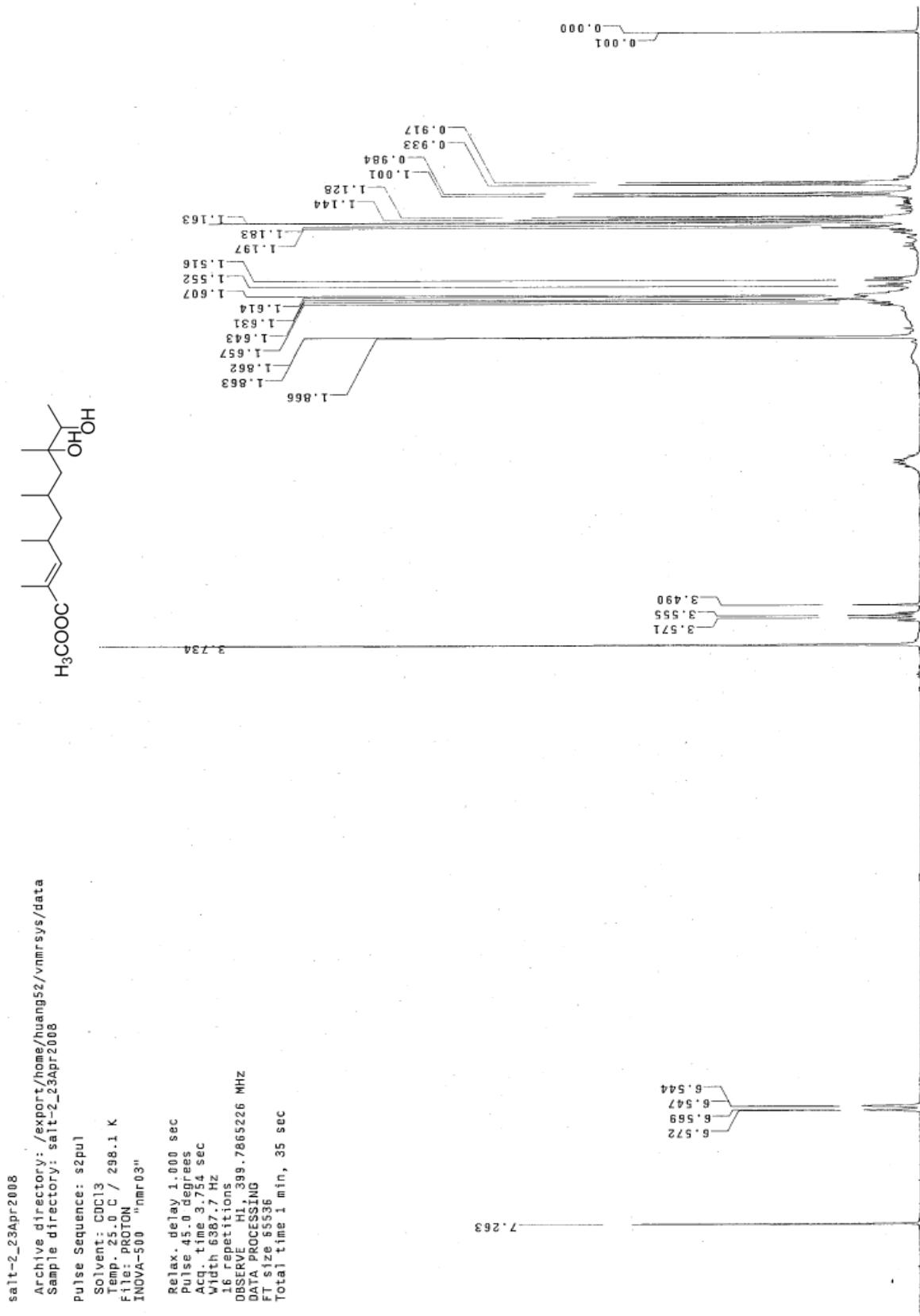
<sup>†</sup>Molecular Targets Laboratory, <sup>‡</sup>SAIC-Frederick, Inc., and <sup>#</sup>Laboratory of Cancer Prevention, NCI, Frederick, MD 21702, USA

<sup>o</sup>Institute of Biochemistry I/ZAFES, Faculty of Medicine, Goethe-University Frankfurt, 60590 Frankfurt, Germany

\*Author to whom correspondence should be addressed: Tel: (561) 228-2456, Fax: (561) 228-2472, E-mail: [shenb@scripps.edu](mailto:shenb@scripps.edu)

## Supporting Information

<b>Figure S1.</b> $^1\text{H}$ NMR spectrum of actinopolysporin A ( <b>1</b> ) in $\text{CDCl}_3$	S2
<b>Figure S2.</b> $^{13}\text{C}$ NMR spectrum of actinopolysporin A ( <b>1</b> ) in $\text{CDCl}_3$	S3
<b>Figure S3.</b> $^1\text{H}$ NMR spectrum of actinopolysporin B ( <b>2</b> ) in $\text{CDCl}_3$	S4
<b>Figure S4.</b> $^{13}\text{C}$ NMR spectrum of actinopolysporin B ( <b>2</b> ) in $\text{CDCl}_3$	S5
<b>Figure S5.</b> $^1\text{H}$ NMR spectrum of actinopolysporin C ( <b>3</b> ) in $\text{CDCl}_3$	S6
<b>Figure S6.</b> $^{13}\text{C}$ NMR spectrum of actinopolysporin C ( <b>3</b> ) in $\text{CDCl}_3$	S7



**Figure S1.** <sup>1</sup>H NMR spectrum of actinopolysporin A (**1**) in CDCl<sub>3</sub>

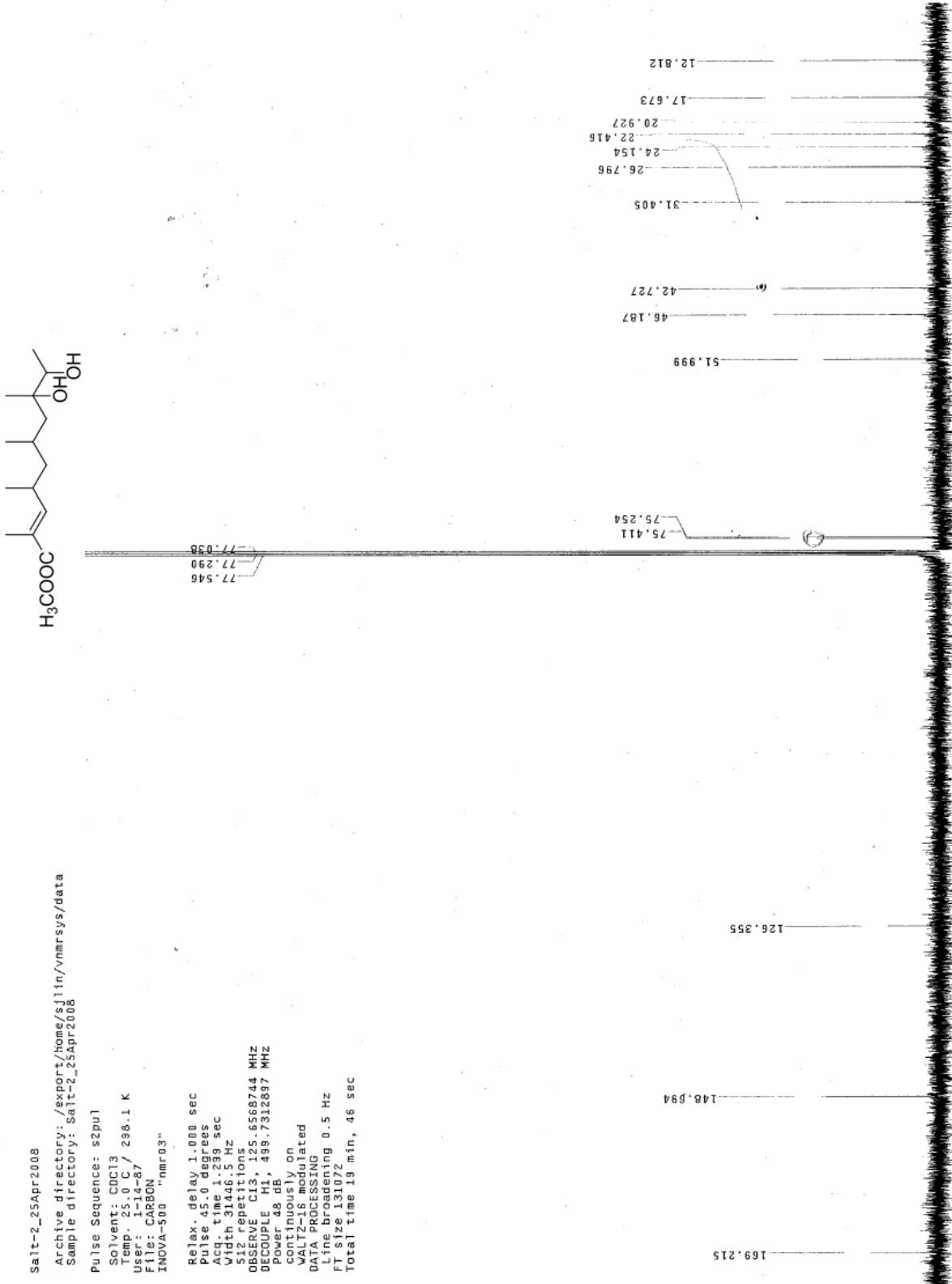
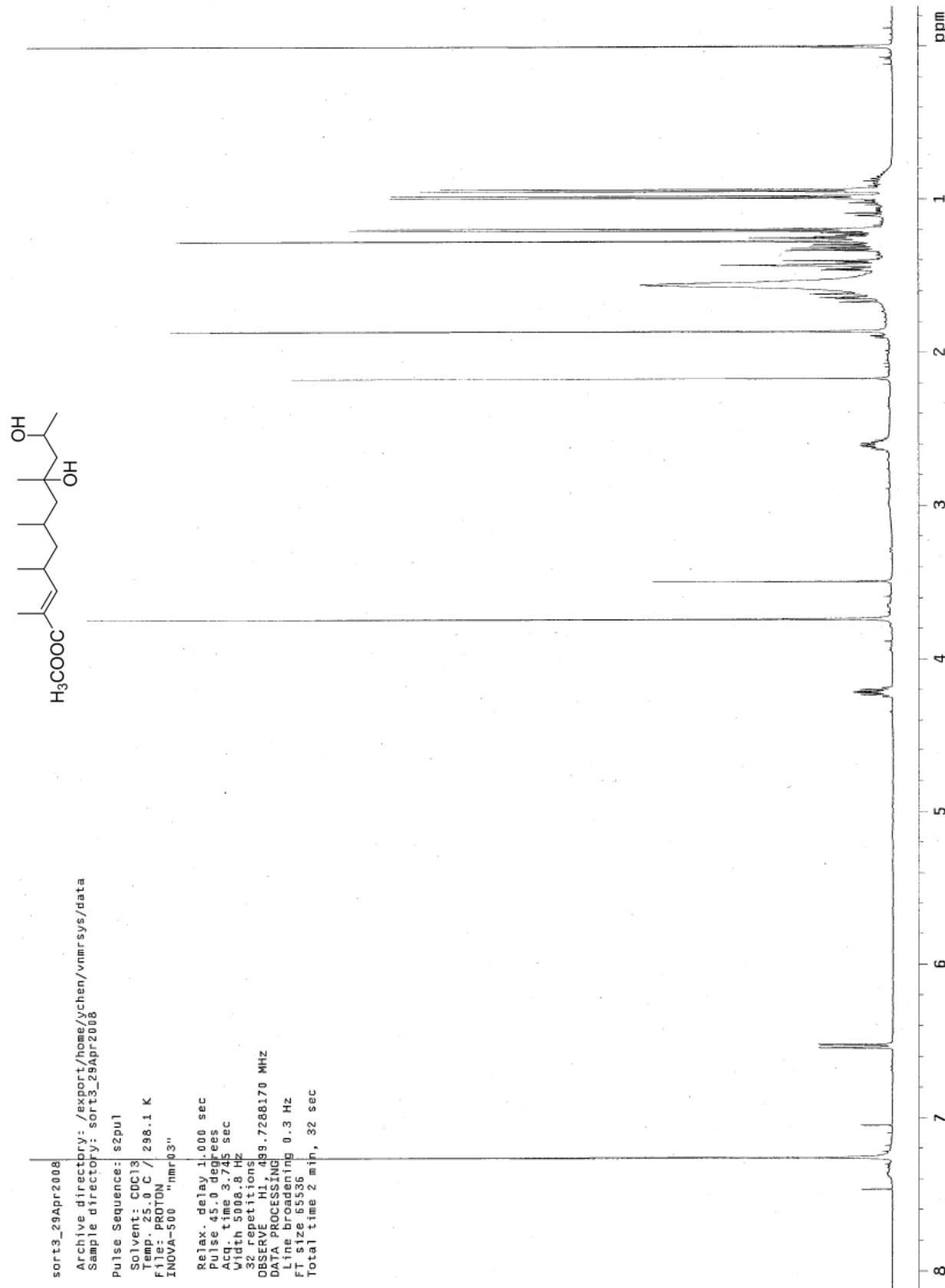


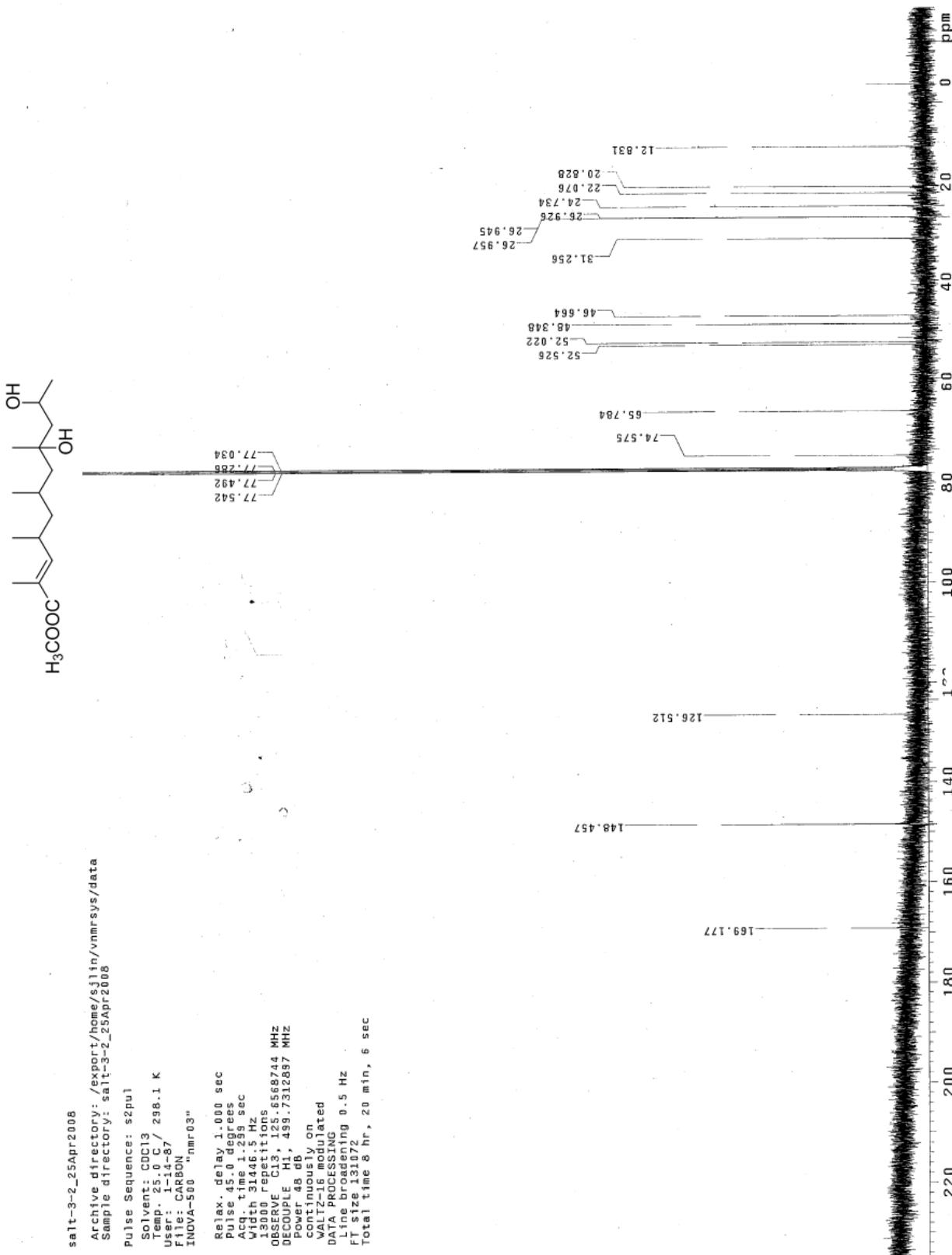
Figure S2. <sup>13</sup>C NMR spectrum of actinopolysporin A (**1**) in CDCl<sub>3</sub>



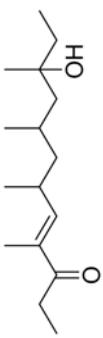
**Figure S3.**  $^1\text{H}$  NMR spectrum of actinopolysporin B (**2**) in  $\text{CDCl}_3$



salt-3-2\_25Apr2008  
Archive directory: /export/home/sjlin/vnmrsys/data  
Sample directory: salt-3-2\_25Apr2008  
Pulse Sequence: s2pu1  
Solvent: CDCl<sub>3</sub>  
Temp: 25.0 C / 298.1 K  
User: 1-14-8/  
File: CARBON  
INOVA-500 "nmr03"  
  
R1ax, delay 1.000 SEC  
Pulse 45.0 degrees  
Acc time 1.296 sec  
Width 314.6 Hz  
13600 rep/fg  
OBSERVE CDCl<sub>3</sub>, 125.5568744 MHz  
DECOUPLE H1, 499.732887 MHz  
power 48 dB  
continuously on  
WALTZ-16 modulated  
DATA PROCESSING 0.5 Hz  
FT size 131072  
Total time 8 hr, 20 min, 6 sec



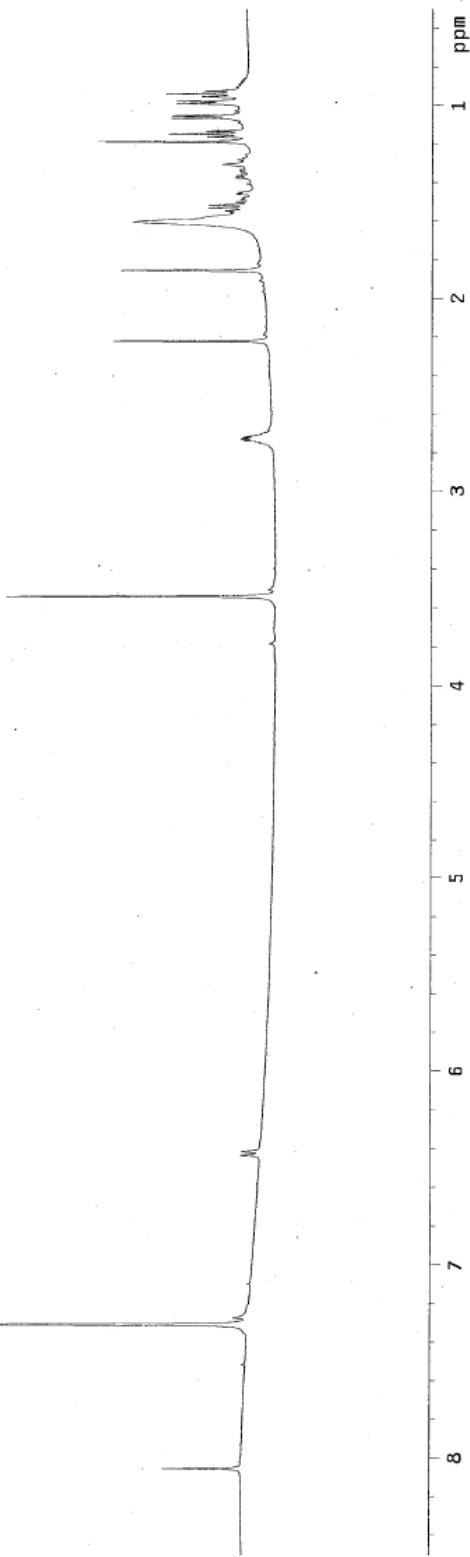
**Figure S4.** <sup>13</sup>C NMR spectrum of actinopolysporin B (**2**) in CDCl<sub>3</sub>



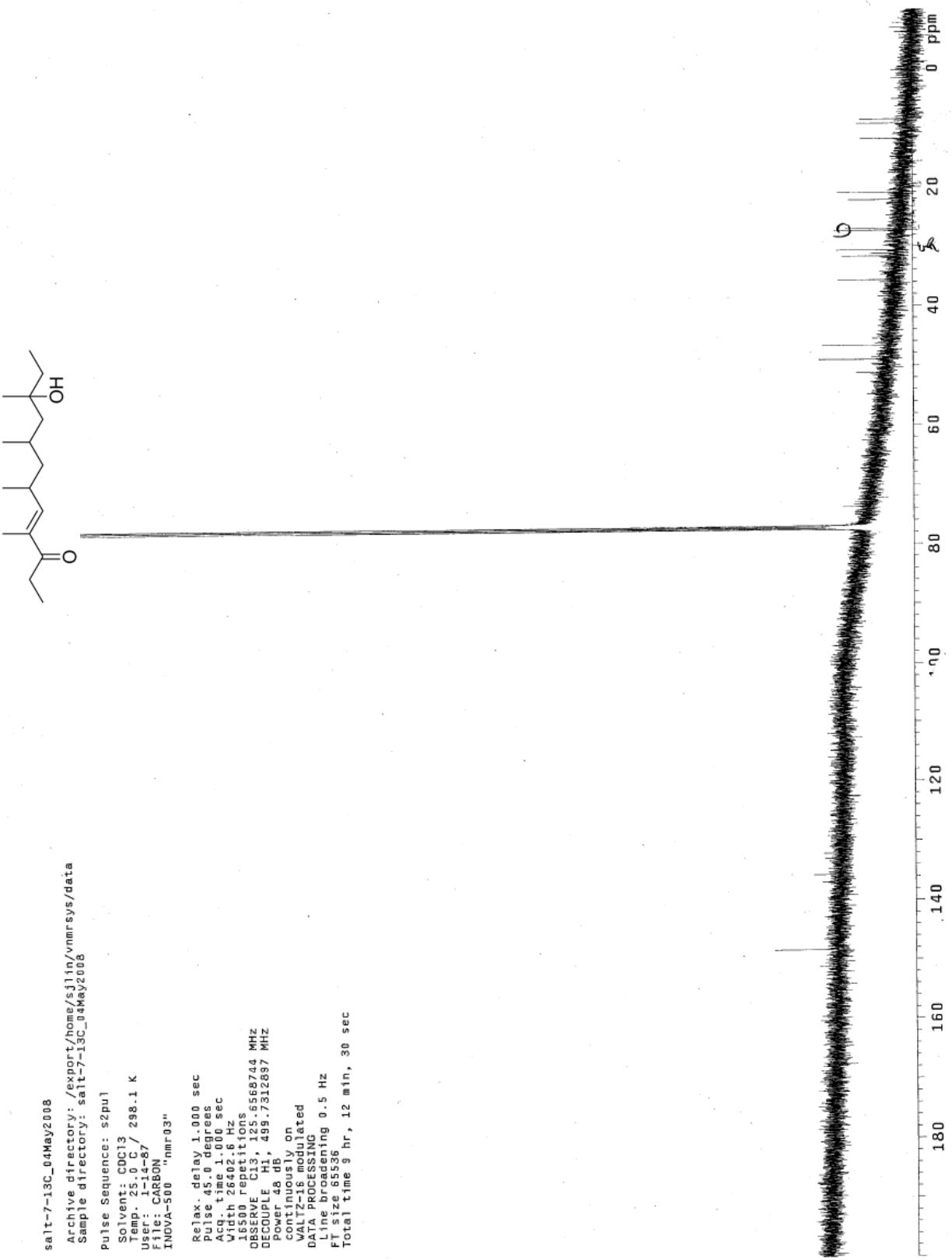
salt=7-H\_04May2008

exp5 s2pu]

SAMPLE	date	temp	temp	SPECIAL
	May 4 2008	CDC13	25.0	not used
solvent		gain		
file	/i510/export~	spin	20	
/home/jjljin/nmrsy~		hts	0.005	
\$/data/salt-^H 0.4~				
May2008/PPOTNA.Fid		p90	15.800	
ACQUISITION		efra	6.600	
sw	4000.4	flags		
at	3.748	i1		
np	29888	in	n	
tb	not used	dp	n	
bs	8	ns	y	
di	1.000	PROCESSING	nn	
nt	1b			
ct	0.53			
TRANSMITTER	32	tn	not used	
tn		DISPLAY		
sfrq		sp	248.8	
tof	499.731	wp	4000.2	
tpwr	-250.0	r[rf]	-248.6	
pw	63	r[rp	0	
DECOUPLER	7.900	rp	65.6	
dn	C13	PLOT	1.4	
dof	0	wc		
dm	nnn	sc	250	
dmm	c	vs	0	
dPWR	35	th	2336	
dmf	32258	cdc	32	



**Figure S5.**  $^1\text{H}$  NMR spectrum of actinopolysporin C (**3**) in  $\text{CDCl}_3$



**Figure S6.** <sup>13</sup>C NMR spectrum of actinopolysporin C (**3**) in CDCl<sub>3</sub>