

Table I. ^1H NMR Spectral Data of 1-4^a

assignment ^b	1	2	3	4
1	4.69	0.87	1.61	0.87
3	2.12	1.60	5.10	1.60
4	1.35, 1.47	1.21, 1.47	2.06	1.21, 1.47
5	1.89	2.05	1.97	2.04
7	5.10	1.59	5.12	1.60
8	1.91	1.29, 1.40	1.91	1.29, 1.41
9	1.37	1.09, 1.28	1.39	1.09, 1.28
11	5.33	5.31	5.33	5.32
12	5.18	5.16	5.19	5.16
13	2.04	2.09	2.04	2.09
14	0.98, 1.19	1.29	0.97, 1.18	1.30
15	1.44, 1.31	1.97	1.32, 1.43	1.96
16	1.63	5.11	1.63	5.13
18	2.07, 2.10	1.90	2.08	1.98
19	1.21, 1.47	1.36, 1.48	1.22, 1.46	2.06
20	1.62	2.12	1.61	5.11
22	0.87	4.69	0.87	1.61
23	1.66	0.74	1.69	0.74
24	1.58	4.52, 4.69	1.58	4.52, 4.68
25	1.08	1.05	1.08	1.05
26	5.81	5.78	5.81	5.78
27	4.95, 4.96	4.91, 4.93	4.94, 4.96	4.92, 4.94
28	0.95	0.97	0.95	0.97
29	4.52, 4.68	1.58	4.52, 4.68	1.59
30	0.75	1.67	0.74	1.69
31	1.01	0.78	0.78	0.78
32	0.78	1.02		

^aSpectra were taken in CDCl_3 with TMS as an internal standard on a Varian VXR-500 MHz spectrometer. ^bProton assignments refer to directly attached carbons.

were also observed for cleavage between C9 and C10. Similarly, isobraunicane (6) and isowolficane (7) diaste-

reomers had fragments at m/z 281 and 267 ($M - \text{C}_{12}\text{H}_{23}$), respectively, from cleavage between C9 and C10 with loss of the cyclohexane ring and ions at m/z 223 (loss of $\text{C}_{16}\text{H}_{33}$ for 6 and $\text{C}_{15}\text{H}_{31}$ for 8) resulting from cleavage between C10 and C11. Since those fragments that contained a degree of unsaturation also contained a cyclohexane ring, it was possible to establish regioisomeric relationships for the structures of 1-4.

Both possible C_{31} and C_{32} regioisomers formed by methylation and methylation/cyclization of the terminal trisubstituted double bonds in the parent C_{30} botryococene have now been isolated from stationary-phase cultures of the Berkeley isolate of *Botryococcus braunii*. Given the rich variety of methylation patterns in the hydrocarbons whose structures have been determined to date, it is quite possible that the methylase and methylase/cyclase enzymes in the alga have broad substrate specificities and there are not unique biosynthetic routes to the polymethylated botryococcenoids. It will be of interest to see if other varieties of *B. braunii* also produce botryococcenoids containing methylenecyclohexane moieties.

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Additions and Corrections

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Wim H. Kruijzinga, John Bolster, Richard M. Kellogg,*
Johan Kamphuis,* Wilhelmus H. J. Boesten, Emmo M.
Meijer, and Hans E. Schoemaker. Synthesis of Optically Pure
 α -Alkylated α -Amino Acids and a Single-Step Method for
Enantiomeric Excess Determination.

Page 1826. The final sentence of ref 5 should be replaced with
"The microorganism can be obtained from the American Type
Culture Collection (ATCC 25795)".