

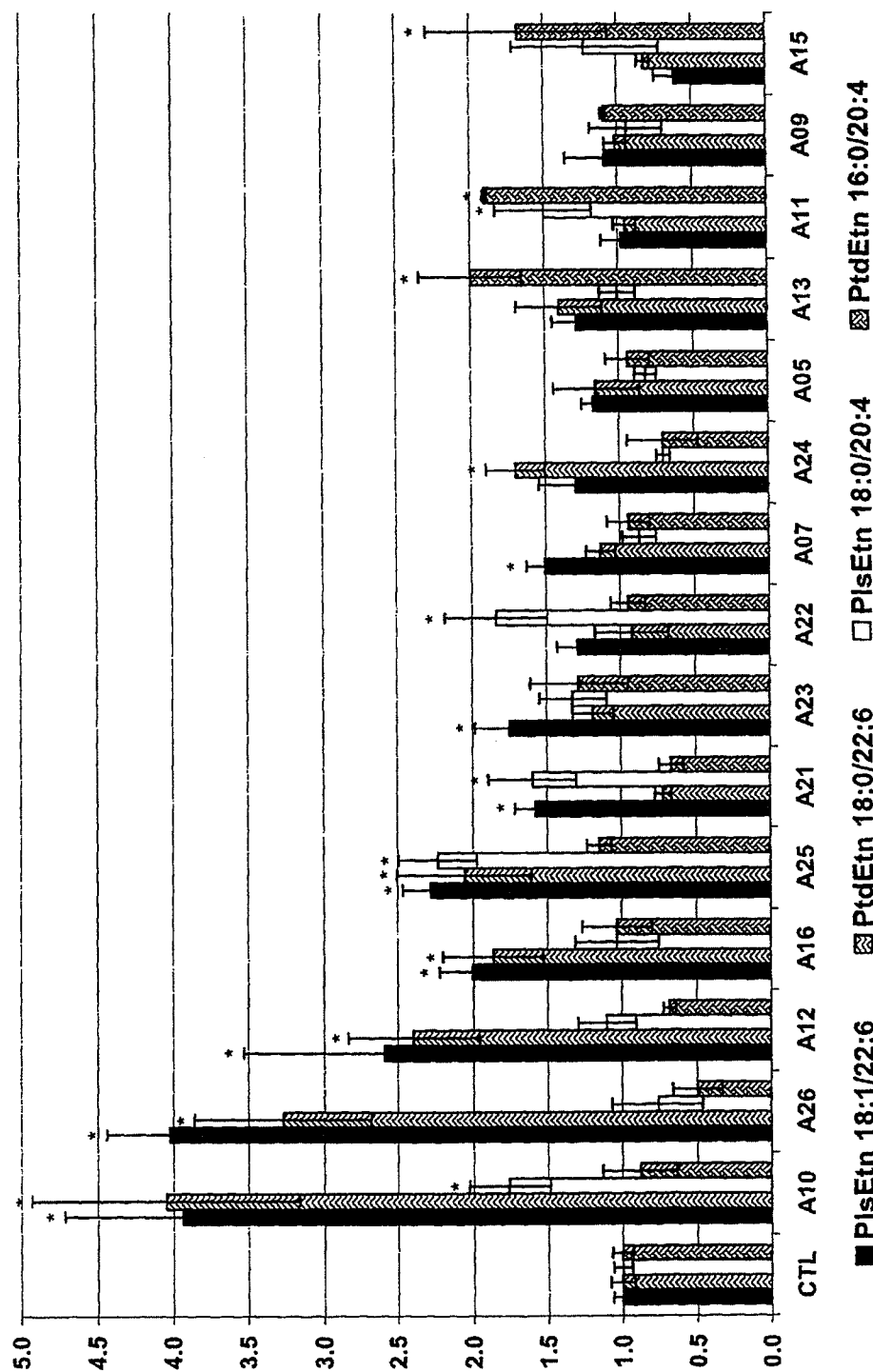
Figure 1

Autism vs. Control (No Carnitine)												
	C18	C20	C22	C24	C26	C28	C30	C32	C34	C36	C38	C40
0db	↑	↑	↑↑	↑	↑↑	↑↑	↑		↑	↑	↑	↑
1db	↓		↑	↑	↑							
2db						↑	↑					↑
3db	↓	↓	↓	↓								↑
4db	ND											
5db	ND			↑								
6db	ND	↑↑	↑↑	↑↑	↑	↑			↑			
Autism vs. Control (Carnitine)												
	C18	C20	C22	C24	C26	C28	C30	C32	C34	C36	C38	C40
0db							↑	↑	↑↑	↑	↑	↑
1db	↑↑					↑				↑		↑
2db	↑↑					↑	↑↑		↑		↑	
3db				↑	↑	↑	↑	↑	↑			↑↑
4db	ND	↑↑	↑	↑	↑	↑	↑	↑	↑↑	↑↑	↑	↑
5db	ND	↑	↑	↑	↑		↑	↑	↑			↑
6db	ND				↑	↑		↑	↑	↑		↑

↑ <1.5, p<0.05
 ↑↑ >1.5, p<0.05
 ↓ <1.0, p<0.05
 ND Not Determined

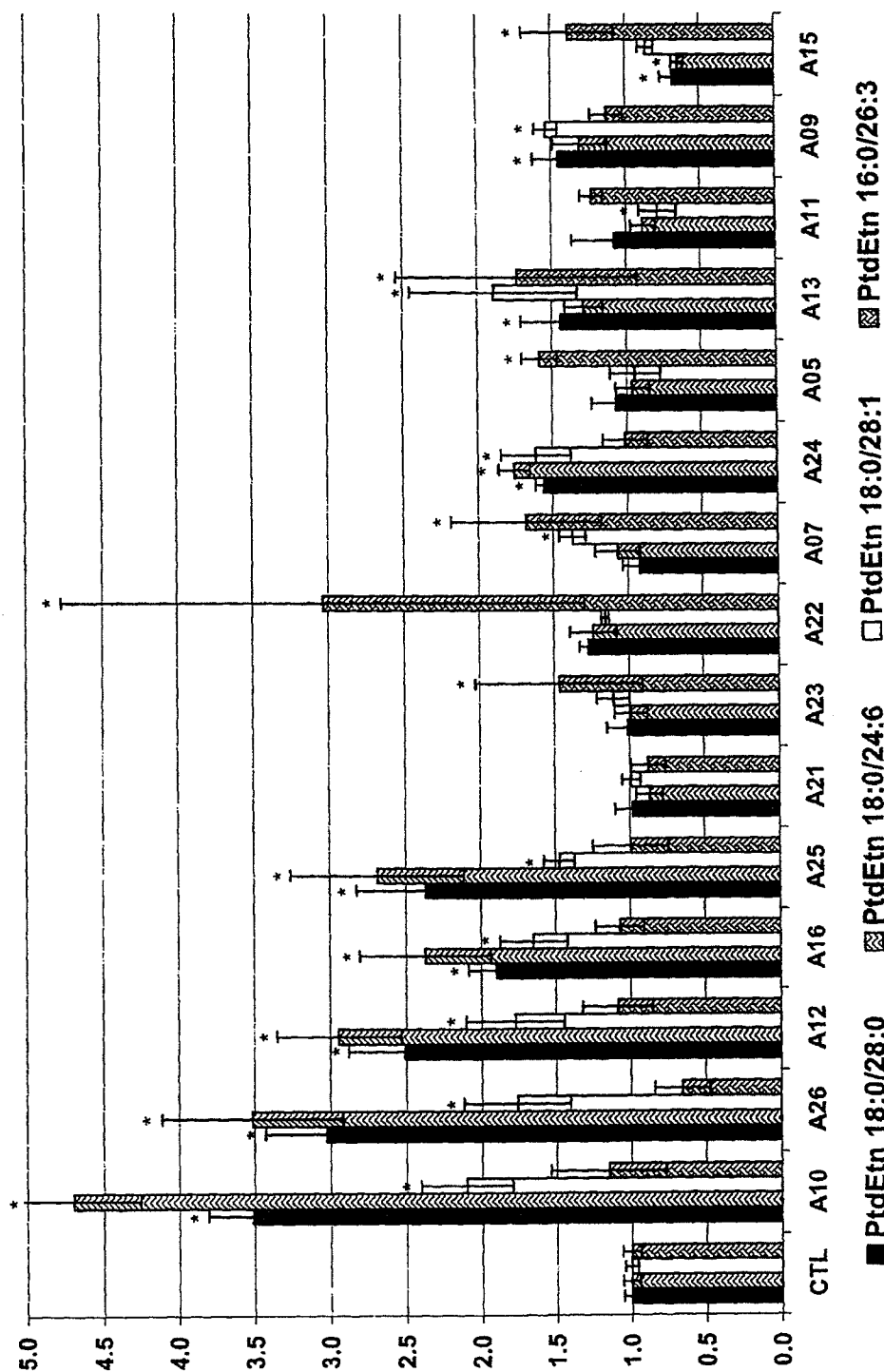
db = double bond

Figure 2



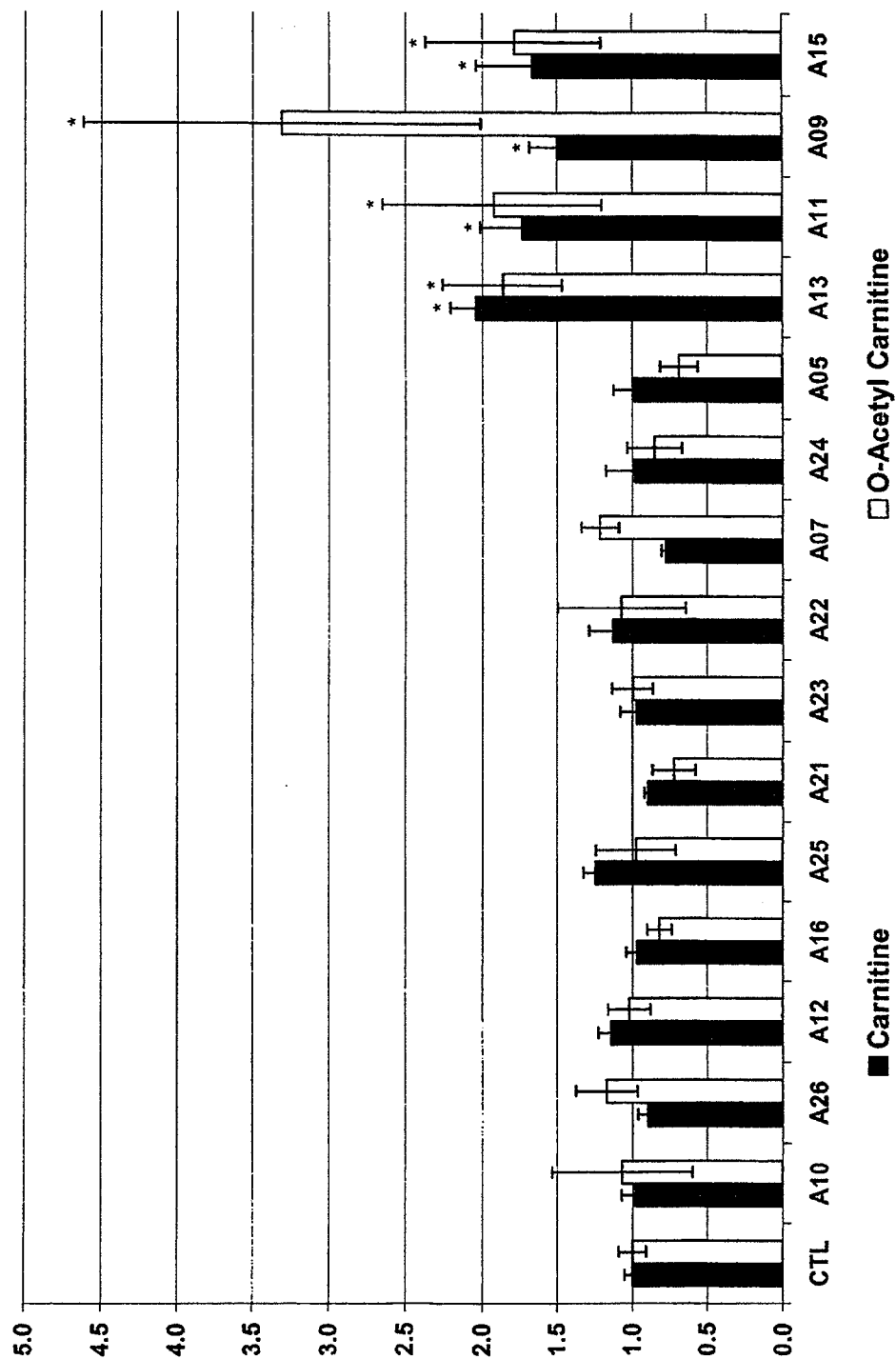
Levels of key DHA and AA containing PlsEtn and PtdEtn in longitudinal samples collected over the course of one year from individual subjects diagnosed with autism versus controls. Values are control-normalized and expressed as mean $\pm$ SEM of the ratio to PtdEtn 16:0/18:0, $n=3$ for each child, $n=30$ for controls, *, $p<0.05$ vs. control.

Figure 3



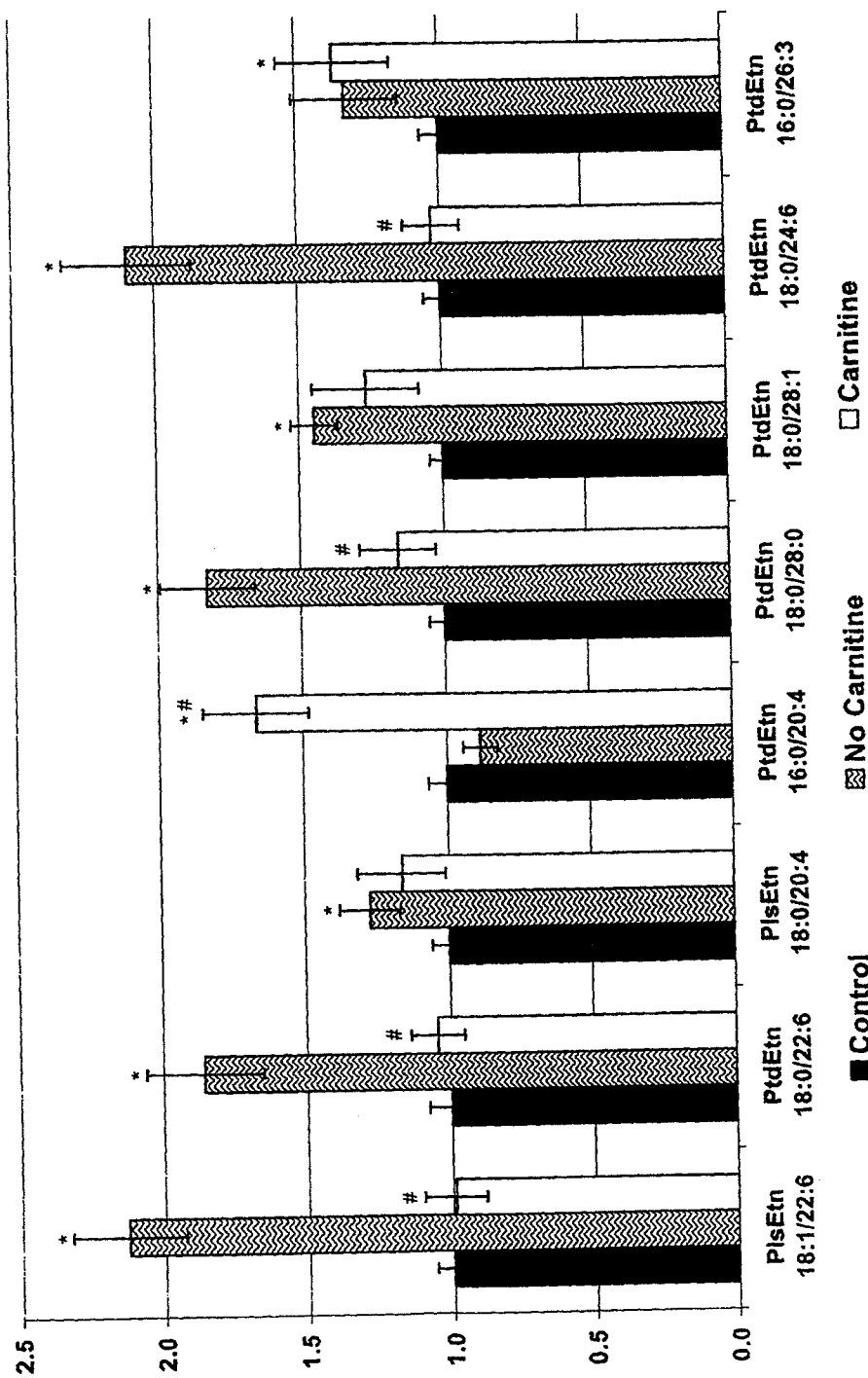
Levels of key VLCFA containing PtdEtn in longitudinal samples collected over the course of one year from individual subjects diagnosed with autism versus controls. Values are control-normalized and expressed as mean $\pm$ SEM of the ratio to PtdEtn 16:0/18:0, n=3 for each child, n=30 for controls, *, p<0.05 vs. control.

Figure 4



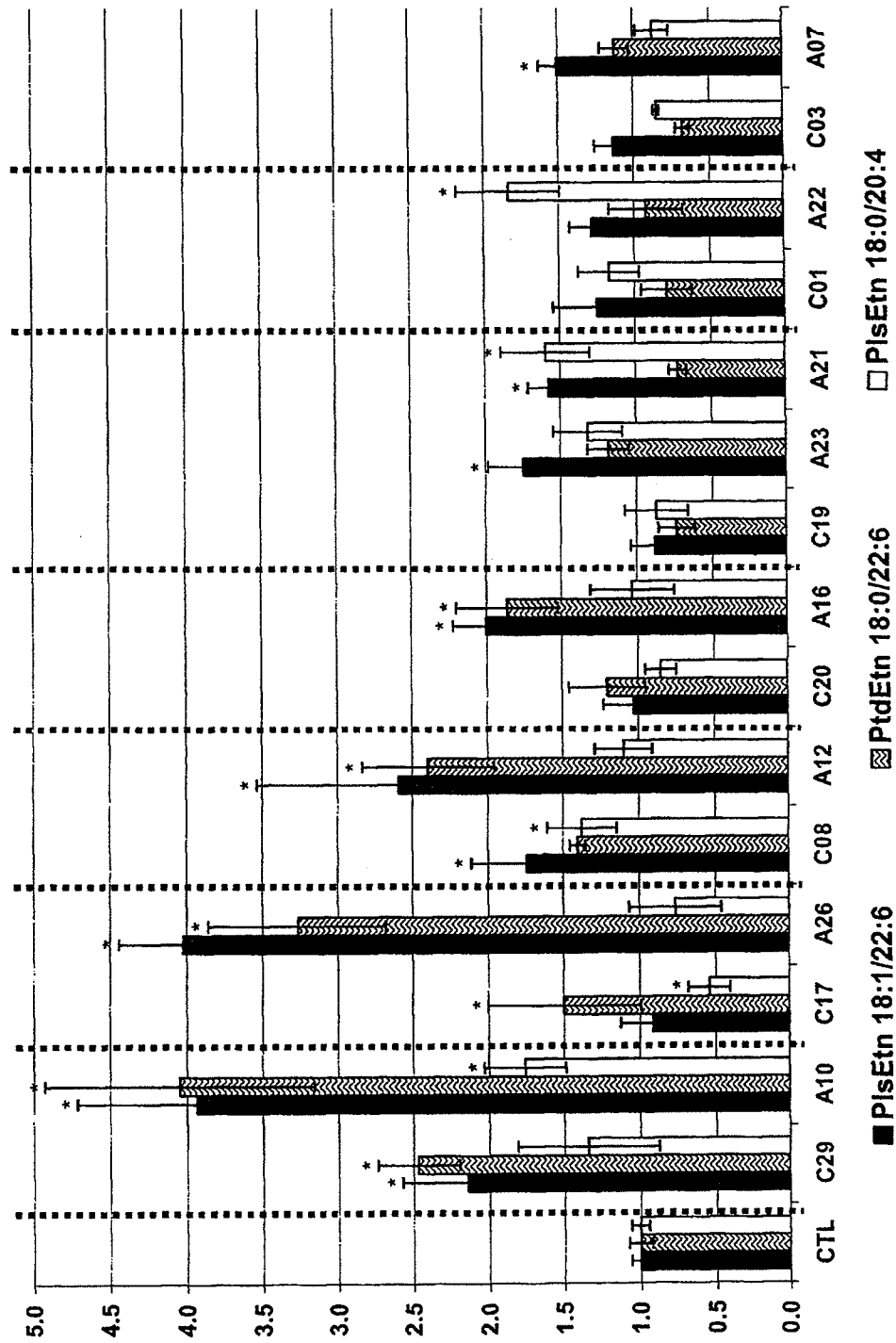
Levels of carnitine and O-acetylcarnitine in longitudinal samples collected over the course of one year from individual subjects diagnosed with autism versus controls. Values are control normalized and expressed as mean $\pm$ SEM, $n=3$ for each child, $n=30$ for controls, *, $p<0.05$ vs. control.

Figure 5



Levels of key DHA and AA containing PtdEtn and VLCFA in longitudinal samples collected over the course of one year from autistic subjects taking carnitine supplements [n=12 (4x3)] vs. subjects not taking carnitine supplements [n=33 (11x3)] and vs. controls [n=30 (10x3)]. Values control-normalized and expressed as mean $\pm$ SEM of the ratio to PtdEtn 16:0/18:0, *, $p < 0.05$ vs. control, #, $p < 0.05$ vs. autism, no carnitine.

Figure 6



Within family comparison of key DHA containing PIsEn and PtdEn and AA containing PIsEn in longitudinal samples collected over the course of one year from autistic subjects and their asymptomatic siblings. Values are control-normalized and expressed as mean $\pm$ SEM of the ratio to PtdEn 16:0/18:0. *, $p < 0.05$ vs. control.