

Correction to Probing the Influence of Stereoelectronic Effects on the Biophysical Properties of Oligonucleotides: Comprehensive Analysis of the RNA Affinity, Nuclease Resistance, and Crystal Structure of Ten 2'-O-Ribonucleic Acid Modifications

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We were alerted by Dr. Teruki Honma (Team Leader, Structure-based Drug Design Research Team, RIKEN Yokohama Institute, Systems and Structural Biology Center, 1-7-22 Suehiro, Tsurumi, Yokohama, Kanagawa, Japan) that the T_m values for native sequences M and N as well as the T_m and ΔT_m values for the 2'-O-DMAOE modification I are transposed in Table 1. The corrected Table 1 is given here with all affected values highlighted in bold.

Table 1. Effect of 2'-Modification on Duplex Stability against Complementary RNA^a

entry	T*	L ^b		M ^c		N ^d	
		T_m (°C)	ΔT_m per modification (°C)	T_m (°C)	ΔT_m per modification (°C)	T_m (°C)	ΔT_m per modification (°C)
	T	62.3		61.8		48.3	
A	2'-O-MOE- ⁵ MeU	65.8	0.88	65.3	0.88	59.8	1.15
B	2'-O-propyl- ⁵ MeU T	65.1	0.69	64.4	0.65	55.9	0.76
C	2'-O-butyl- ⁵ MeU T	64.6	0.58	64.1	0.57	56.6	0.83
D	2'-O-FEt- ⁵ MeU	67.9	1.40	66.3	1.12	61.6	1.33
E	2'-O-triFEt- ⁵ MeU	65.7	0.84	65.8	1.00	60.5	1.22
F	2'-O-allyl- ⁵ MeU	65.7	0.84	63.4	0.41	56.4	0.81
G	2'-O-propargyl- ⁵ MeU	65.0	0.68	63.2	0.35	53.7	0.52
H	2'-O-BnOEt- ⁵ MeU	64.2	0.47	64.5	0.68	56.6	0.83
I	2'-O-DMAOE- ⁵ MeU	66.9	1.12	—	—	62.9	1.46
J	2'-O-MAOE- ⁵ MeU	66.3	1.01	—	—	—	—
K	2'-O-ImEt- ⁵ MeU	67.9	1.40	66.3	1.12	53.6	1.33

^a T_m values were assessed in buffer containing 100 mM Na⁺, 10 mM phosphate, and 0.1 mM EDTA (pH 7) at 260 nm, and 4 μ M oligonucleotides and 4 μ M complementary length matched RNA. Standard deviations do not exceed ± 0.5 °C. ^bL, 5' T*CC AGG T*GT* CCG CAT* C 3'. ^cM, 5' CTC GTA CT*T* T*T*C CGG TCC 3'. ^dN, 5' GCG T*T*T* T*T*T* T*T*T* T*GC G 3'.

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