Supplementary data

Peptide foldamers composed of six-membered ring α,α-disubstituted α-amino acid with two changeable chiral acetal moieties

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Table S1. Crystal and diffraction parameters of peptides 7 and 8'.

	Dipeptide **7**	Tripeptide acid **8'**
empirical formula	$C_{39}H_{56}N_2O_{13}$, C_2H_6O	$C_{53}H_{77}N_3O_{18}$
*M*r	806.93	1044.18
crystal dimensions [mm]	0.50×0.40×0.30	0.40×0.40×0.15
crystal system	monoclinic	monoclinic
lattice parameters:		
a, *b*, *c* [Å]	36.527, 15.063, 17.016	10.0377, 19.7698, 28.323
α, β, γ [°]	90, 112.83, 90	90, 90.707, 90
V [Å^3]	8629	5620.1
space group	*C2*	$P2_1$
Z value	8	4
D_{calc} [g/cm^3]	1.242	1.234
μ(Mo$K\alpha$) [cm^{-1}]	0.93	0.93
no. of observations ($I > -10.0\ \sigma I$)	9175	10975
no. of variables	1026	1333
R_1, R_W	0.0626, 0.1386	0.0583, 0.1473
solvent	EtOH	petroleum ether/$CHCl_3$

Figure S1. (a) Plots of N-H chemical shifts in the ^{1}H NMR spectra of Cbz-{(*R*,*R*)-Ac$_6$c^{35dBu}}$_4$-OMe (**9**) as a function of increasing percentage of DMSO (*v/v*) added to the $CDCl_3$ solution and (b) plots of the bandwidth of the N-H protons of **9** as a function of increasing percentage of TEMPO (*w/v*) added to the $CDCl_3$ solution. One N-H proton overlapped with Cbz-protecting group. Peptide concentration 1.0 mM.

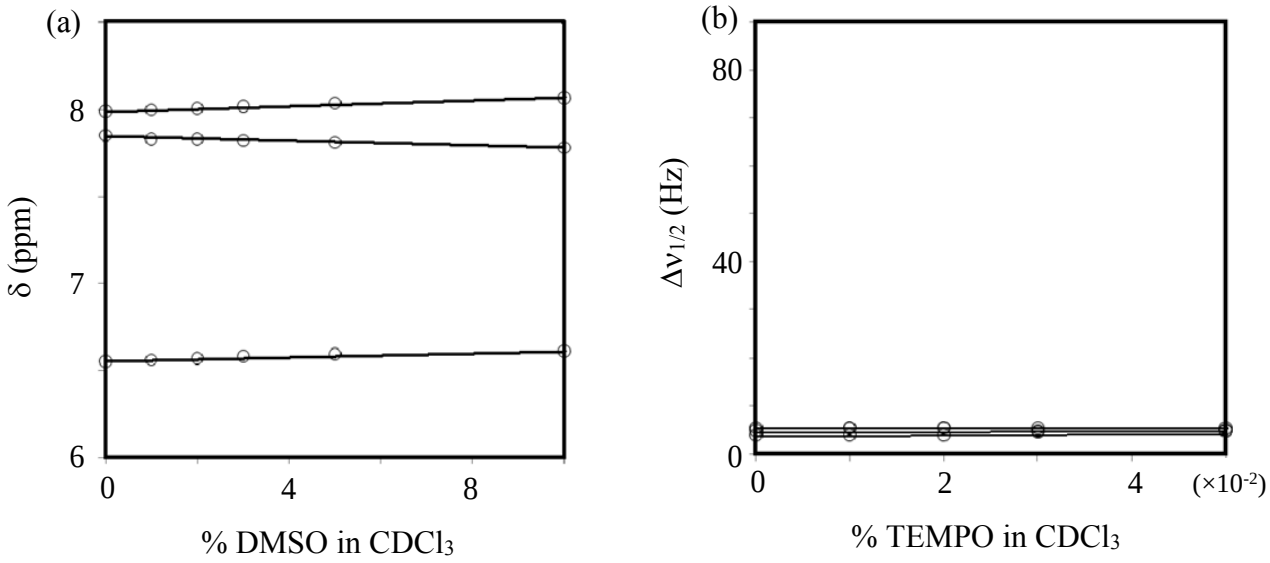


Figure S2. CD spectrum of Cbz-{(*R*,*R*)-Ac_6c^{35dBu}}$_4$-OMe in TFE solution. Peptide concentration 0.1 mM.

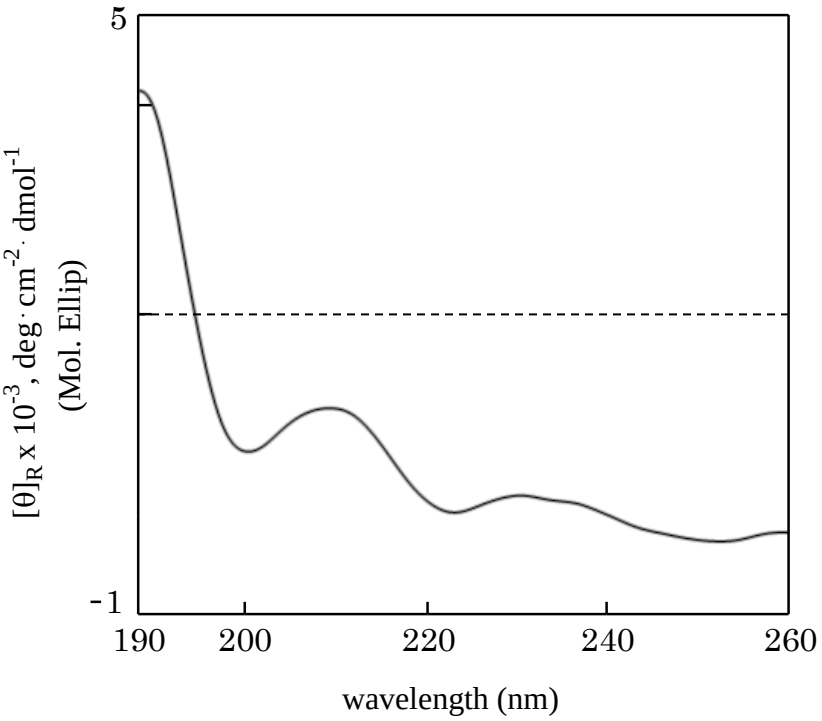
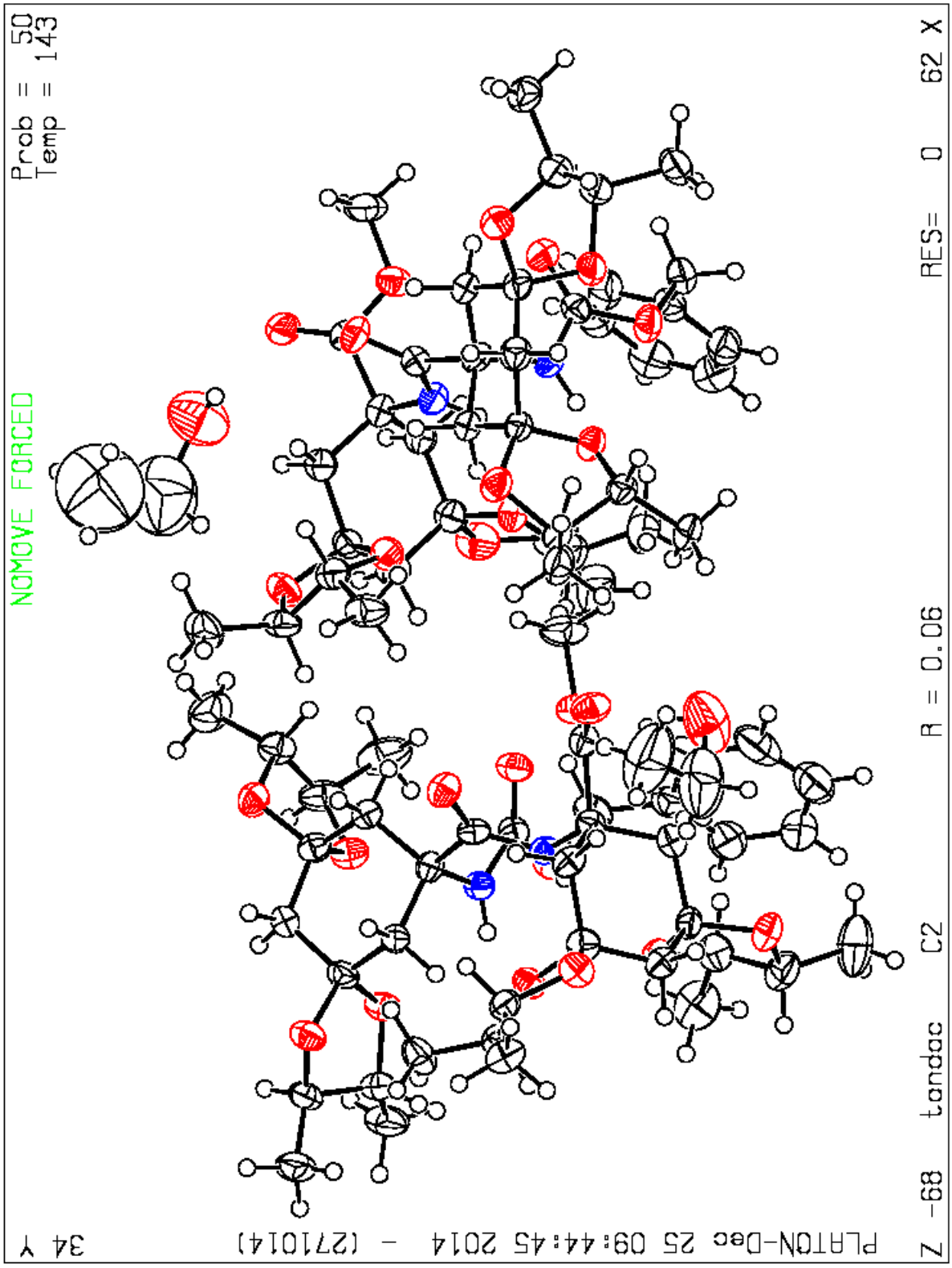


Figure S3. ORTEP drawings

a) Dipeptide (**7**)



b) Tripeptide acid (**8'**)