Supplementary Information

The 3-*N*-phenyl amide of *all-cis*-cyclopentane-1,2,3,4-tetracarboxylic acid as a potential pH-sensitive amine-releasing prodrug; intervention of imide formation around neutral pH

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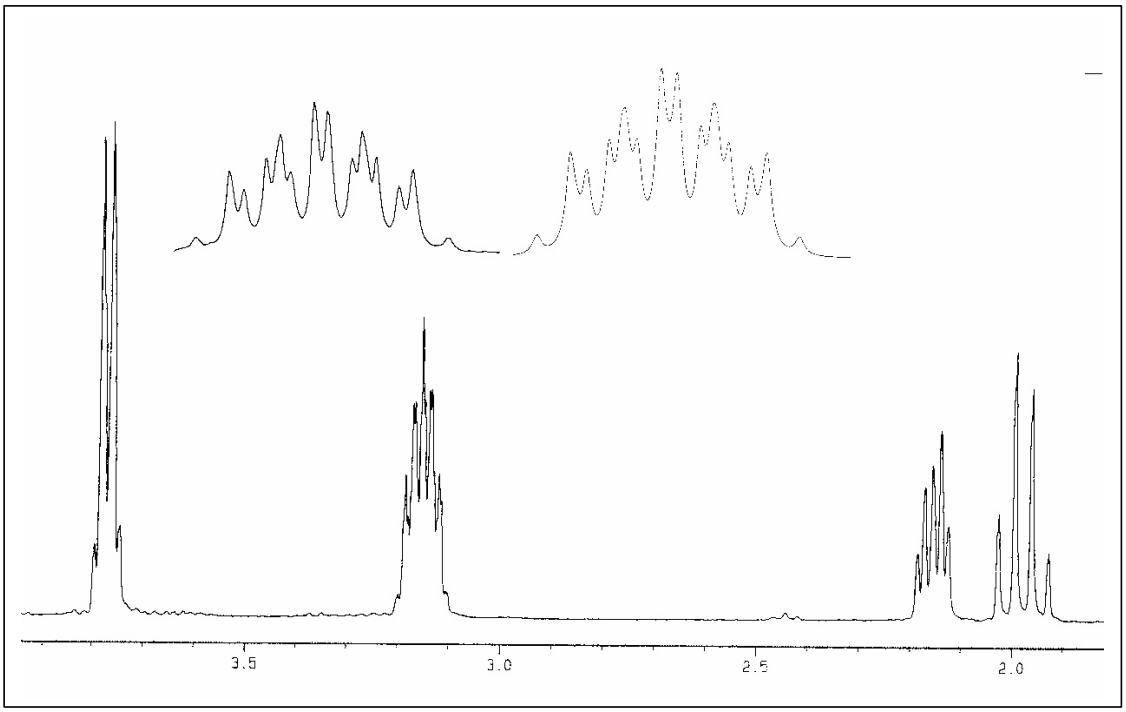
S1. ^{1}H-NMR spectrum for **13** in D_2O with 1.5 mol equiv. NaOD added
S2. ^{1}H-NMR spectral changes for **10** in D_2O with 2.7 mol equiv. NaOD added
S3. ^{1}H-NMR spectral changes for **10** in D_2O buffered with pyrophosphate
S4. ^{1}H-NMR spectrum for **10** in D_2O buffered with pyrophosphate at completion with product ratio calculation from integration
S5. ^{1}H-NMR spectrum for **10** in D_2O buffered with deuteroacetate at completion with product ratio calculation by integration

S1. ^{1}H-NMR spectrum for 13 in D_2O with 1.5 mol equiv. NaOD added, showing expanded multiplet for H2,3

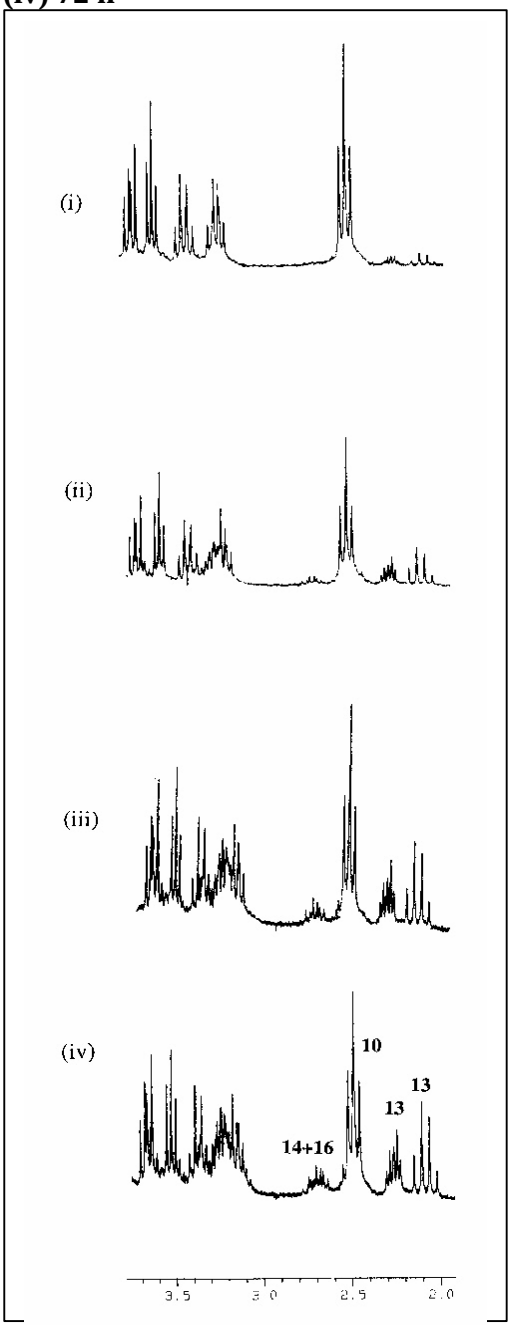
- *experimental* (on left)

- *simulated* (on right, based on coupling constants in the text)



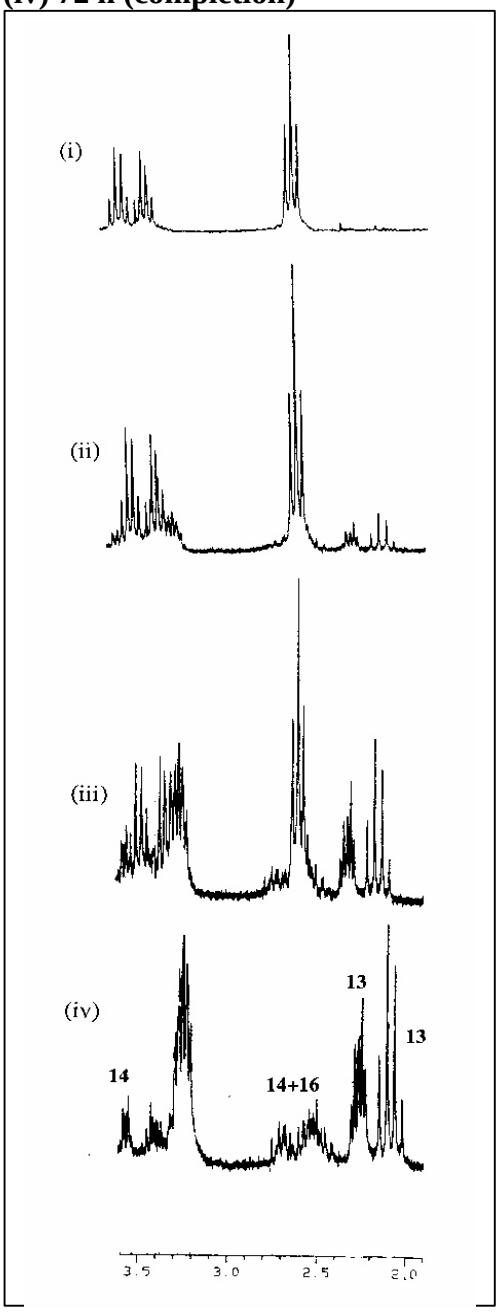
S2

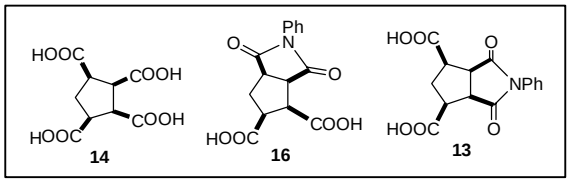
A ^{1}H-NMR spectral changes for the reaction of 10 in D_2O with 2.7 mol equiv. NaOD added:(i) 1.5 h; (ii) 6.5 h; (iii) 48 h; (iv) 72 h



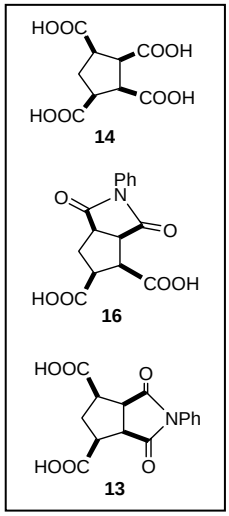
S3

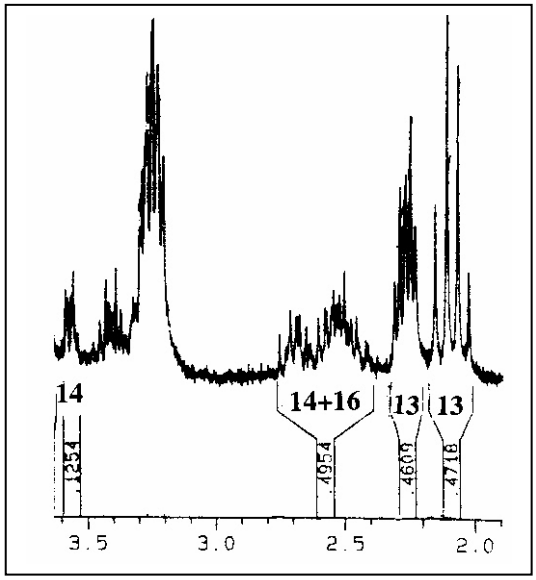
B ^{1}H-NMR spectral changes for the reaction of 10 in D_2O buffered with pyrophosphate: (i) 10 min; (ii) 2 h; (iii) 6.5 h (~ $t_{1/2}$); (iv) 72 h (completion)





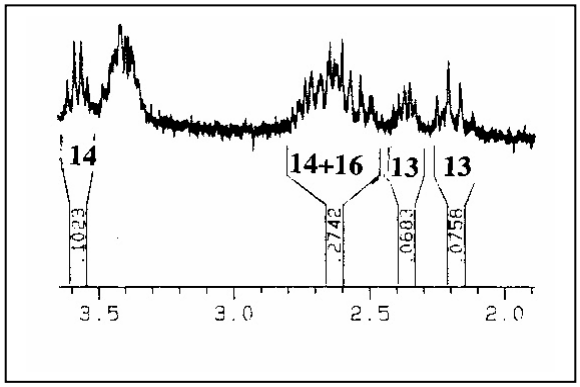
S4. ^{1}H-NMR spectrum for products from 10 in D_2O buffered with pyrophosphate (pD 6.53) at completion (72h), with product ratio calculation by integration (see table)





Pyrophosphate Buffer	**14** (2H)	**14** (2H) + **16** (2H)	**13** (2H)
Signal (δ)	3.5-3.6	2.4-2.75	2.0-2.3
Integral ratio	1.0	4.0	7.5
Proportionation	1.0	1.0 (**14**) and 3.0 (**16**)	7.5
Calculated Percentage (± 5)	10 (**14**)	10 (**14**) and 25 (**16**)	65 (**13**)

S5. ^{1}H-NMR spectrum for products from 10 in D_2O buffered with deuteroacetate (pD 5.02) at completion (72h), with product ratio calculation from integration (see table)



Acetate buffer	**14** (2H)	**14** (2H) + **16** (2H)	**13** (2H)
Signal (δ)	3.5-3.65	2.45-2.8	2.05-2.45
Integral ratio	1.0	2.7	1.4
Proportionation	1.0	1.0 (**14**) and 1.7 (**16**)	1.4
Calculated Percentage (± 5)	25 (**14**)	25 (**14**) and 40 (**16**)	35 (**13**)