Supporting Information

Design and Synthesis of Potent Macrocyclic HIV-1 Protease Inhibitors
Involving P1-P2 Ligands

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2. Copies of $^1$H and $^{13}$C spectra of compounds 7a-7d, 8a-8d, 23, 24a-24d-----------------------S2～S27

General experimental details. All reactions were carried out under an inert atmosphere, either N$_2$ or Ar, using magnetic stirring and oven-dried glassware. All solvents were anhydrous and distilled prior to use. Dichloromethane and triethylamine were distilled from calcium hydride. Tetrahydrofuran, diethyl ether, and benzene were distilled from sodium/benzophenone. All other solvents were HPLC grade or better. Flash column chromatography was performed using EM Science 60-200 mesh silica gel. Thin-layer chromatography was performed using 60 F-254 E. Merck silica gel plates. $^1$H- and $^{13}$C-NMR were recorded using Bruker AV-500, Avance DRX-500, Varian Mercury-Vx-300, and Gemini-2300 spectrometers and use Me$_4$Si as an internal standard. Infrared spectra were recorded on a ATI Mattson Genesis Series FT-IR. Optical rotations were recorded on a Perkin-Elmer 341 polarimeter. A Thermo Finnigan LCQ Classic mass was used for MS analyses.
 Compound 7a

3-hydroxy-2-(3-butene)-benzamide-(4-allyloxybenzene)-isostere-N-isobutyl-N-4-methoxysulfonamide
3-hydroxy-2-(3-butene)-benzamide-(4-allyoxybenzene)-isostere-N-isobutyl-N-4-methoxysulfonamide
3-butyl-ary-3-butyl-phenoxy

Compound 7b
Compound 7b
3-hydroxy-2-(3-buteryl)-4-(4-pentenyl)-phenylisostere

Compound 7c
3-hydroxy-2-(3-butenyl)-4-(4-pentenyl)-phenyl

Compound 7c
3-butenyl-(5-hexenyl)
Compound 7d
Compound 8a

H1 standard parameters, BBO probe.
Compound 8a
3-butenyl-0-3-butenyl-RCM product

Compound 8b

![NMR spectrum of Compound 8b]
Compound 8b
Compound 8c
Compound 8d

4 and 6 RCM product
Compound 8d
Compound 23
Compound 23
H1 standard parameters, cryoprobe (#02), CDC13.
Compound 24b
Compound 24b

137.694
130.308
129.496
127.691
126.479
118.627
117.240
116.848
114.533
77.314
77.061
76.808
73.608
68.183
59.064
55.682
54.076
53.941
34.634
29.093
28.053
27.368
26.761
24.020
20.192
19.928
4 and 5 RCM and H2 product

Compound 24c
Compound 24d
Compound 24d