Supporting Information

Pyrrolidine and Oxazolidine Ring Transformations in Proline and Serine Derivatives of α-Hydroxyphosphonates Induced by Deoxyfluorinating Reagents

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$^1$H, $^{13}$C, $^{31}$P and $^{19}$F NMR Spectra of Compounds
$^1$H NMR of 4

$^{13}$C NMR of 4
$^{31}$P($^1$H) NMR of 4

$^{19}$F NMR of 4
$^1$H-$^1$H NOESY of 4

$^{19}$F-$^1$H HOESY of 4
$^{31}$P{$^1$H} NMR of 5

$^{19}$F{$^1$H} NMR of 5
$^{19}$F NMR of 5

$^1$H NMR of 6a,b/7a,b
$^{13}$C NMR of 6a,b/7a,b

$^{31}$P/$^1$H NMR of 6a,b/7a,b
\[ {\text{H}} - {\text{H}} \text{ NOESY of 6a,b/7a,b} \]

\[ {\text{H}} \text{ NMR of 8} \]
$^{13}\text{C NMR of 8}$

$^{31}\text{P(}^{1}\text{H) NMR of 8}$
$^{13}$C NMR of 11a

$^{31}$P($^1$H) NMR of 11a
$^{1}H$ NMR of 11a,b

$^{13}C$ NMR of 11a,b
$^{31}$P/$^1$H NMR of 11a,b (3.6:1, d.r.)

$^1$H NMR of 12a
$^{13}$C NMR of 12a

$^{31}$P$(^1$H$)$ NMR of 12a
$^1$H NMR of 13a

$^{13}$C NMR of 13a
**NMR** of 13a:13b (1:2.08 d.r.)

**NOESY** of 13a:13b (1:2.08 d.r.)
\[ \text{Bn} \underset{\text{(EtO)}_2(\text{O})P}{\text{N}} \text{F} \]

\[ \begin{align*}
13C \text{ NMR of 13a:13b (1:2.8 d.r.)} \\
\end{align*} \]

\[ \begin{align*}
19F \text{ NMR of 13a:13b (1:2.8 d.r.)} \\
\end{align*} \]
$^{19}$F-$^1$H HOESY of 13a:13b (1:2.8 d.r.)

$^1$P/$^1$H NMR of 13a,b (1:2.8 d.r.)
$^1$H NMR of 17

$^{13}$C NMR of 17
$^1$H-$^1$H NOESY of 17

$^{31}$P/$^1$H NMR of 17
$^1$H NMR of 18

$^{13}$C NMR of 18
$^{31}\text{P}(/^1\text{H})\text{ NMR of 18}$

$^1\text{H}\text{ NMR of 19 (major rotamer)}$
$^{13}$C NMR of 19 (major rotamer)

$^{31}$P/$^1$H NMR of 19 (major rotamer)
$^1$H NMR of 19 (minor rotamer)
$^{13}$C NMR of 19 (minor rotamer)

$^{31}$P(¹H) NMR of 19 (minor rotamer)
$^1$H NMR of 20 (1.1:1 rotamers ratio)

$^{13}$C NMR of 20 (1.1:1 rotamers ratio)

$^{31}$P/$^1$H NMR of 20 (1.1:1 rotamers ratio)
$^{31}$P($^1$H) NMR of 21
H NMR of 22a

\[(\text{EtO})_2\text{O}P_{\text{Me}}\text{O}\]

\[\text{FH}_2\text{C} \quad \text{NH} \quad \text{O} \quad \text{O}\]

\[\text{FH}_2\text{C} \quad \text{NH} \quad \text{O} \quad \text{O}\]

13C NMR of 22a
NOESY of 22a

$^{19}$F NMR of 22a
HOESY of 22a

$^{31}$P/$^1$H NMR of 22a
$^1$H NMR of 23

$^{13}$C NMR of 23
$^{31}$P/$^1$H NMR of 23

$^1$H NMR of 24
$^{31}$P($^1$H) NMR of 26a

$^{19}$F NMR of 26a
HOESY of 26a

NOESY of 26a
