Facile and Efficient Synthesis of [18F]Fluoromisonidazole Using Novel 2-Nitroimidazole Derivatives

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1H and 13C NMR spectra for new compounds

Figure S1. 1H NMR spectrum (600 MHz, CDCl3) of compound 2.

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**Figure S2.** $^{13}$C NMR spectrum (150 MHz, CDCl$_3$) of compound 2.

**Figure S3.** $^1$H NMR spectrum (600 MHz, CDCl$_3$) of compound 3.
Figure S4. $^{13}$C NMR spectrum (150 MHz, CDCl$_3$) of compound 3.

Figure S5. $^1$H NMR spectrum (600 MHz, CD$_3$OD) of compound 4.
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Figure S6. $^{13}$C NMR spectrum (150 MHz, CD$_3$OD) of compound 4.

Figure S7. $^1$H NMR spectrum (600 MHz, CDCl$_3$) of compound 5.
Figure S8. $^{13}$C NMR spectrum (150 MHz, CDCl$_3$) of compound 5.

Figure S9. $^1$H NMR spectrum (600 MHz, CD$_3$OD) of compound 6.
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**Figure S10.** $^{13}$C NMR spectrum (150 MHz, CD$_3$OD) of compound 6.

**Figure S11.** $^1$H NMR spectrum (600 MHz, CDCl$_3$) of compound 7.
Figure S12. $^{13}$C NMR spectrum (150 MHz, CDCl$_3$) of compound 7.

Figure S13. HPLC chromatogram of $^{[18}$F$]$FMISO.
Figure S14. HPLC chromatogram for co-injection of $[^{18}\text{F}]$FMISO with reference standard FMISO.