

# Comparisons of Interfacial Phe, Tyr and Trp Residues as Determinants of Orientation and Dynamics for GWALP Transmembrane Peptides

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Supporting Information. Supplemental Figures:

- S1. Mass spectrum of the synthesized peptide F<sup>4,5</sup>GWALP23.
- S2. <sup>31</sup>P NMR spectra of F<sup>4,5</sup>GWALP23 in DLPC.
- S3. <sup>2</sup>H NMR spectra F<sup>5</sup>GWALP23 in DLPC and DOPC.
- S4. <sup>2</sup>H NMR spectra F<sup>4,5</sup>GWALP23 in DLPC, DMPC and DOPC.
- S5. <sup>2</sup>H NMR spectra Y<sup>4</sup>GWALP23 in DLPC, DMPC and DOPC.

Figure S1. Mass spectrum of the synthesized peptide acetyl-GGAFFLALALALALALW-LAGA-ethanolamide ( $F^{4,5}$ GWALP23). The expected monoisotopic mass is 2298.3 daltons.

Adding one  $^{13}\text{C}$ , eight deuterons and  $\text{Na}^+$  gives 2330.3, compared to the observed 2330.8 daltons.

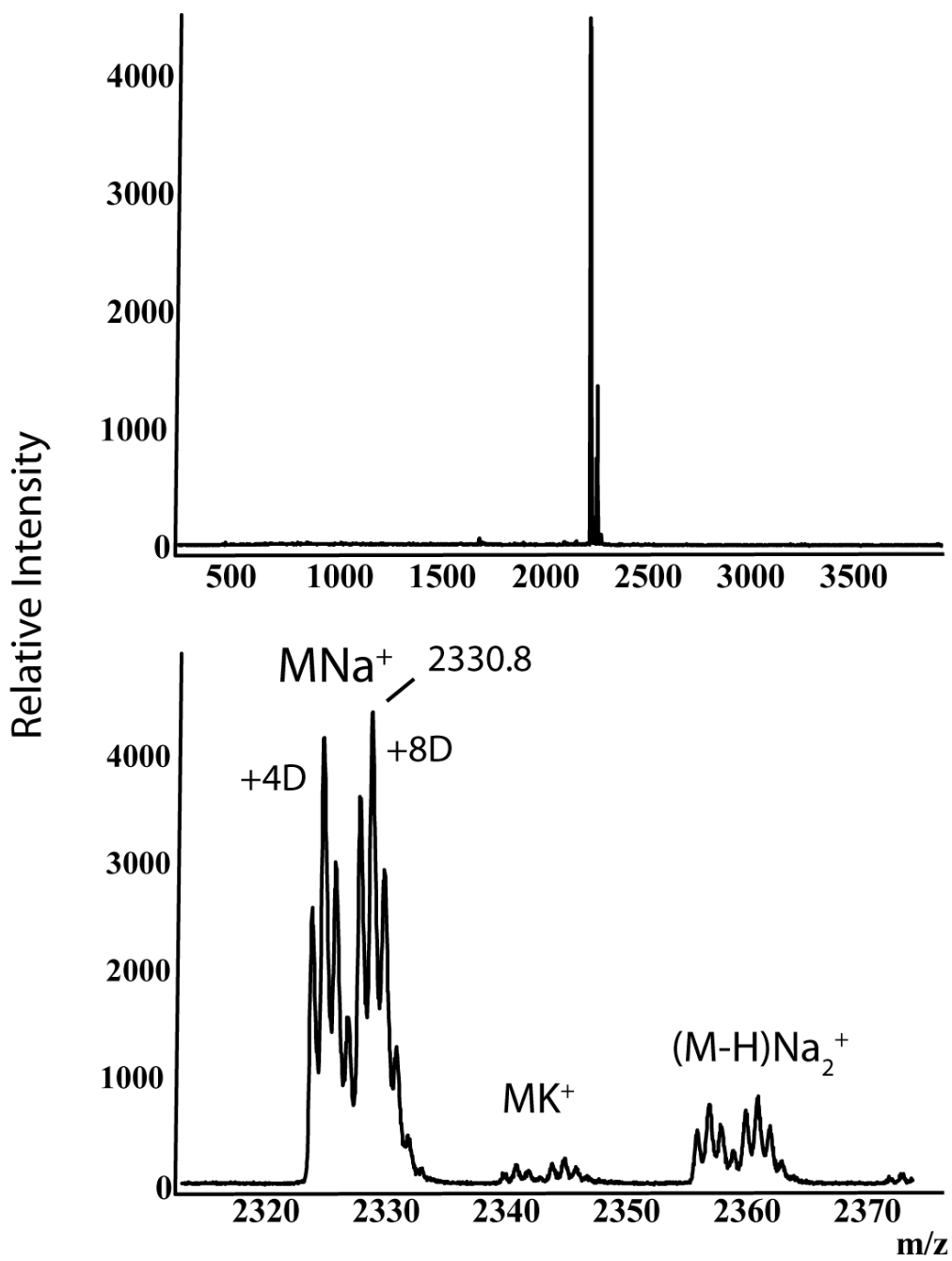


Figure S2.  $^{31}\text{P}$  NMR spectra for  $\text{F}^{4,5}\text{GWALP23}$  in oriented bilayers of DLPC at orientations of  $\beta=0^\circ$  (black) and  $\beta=90^\circ$  (red).

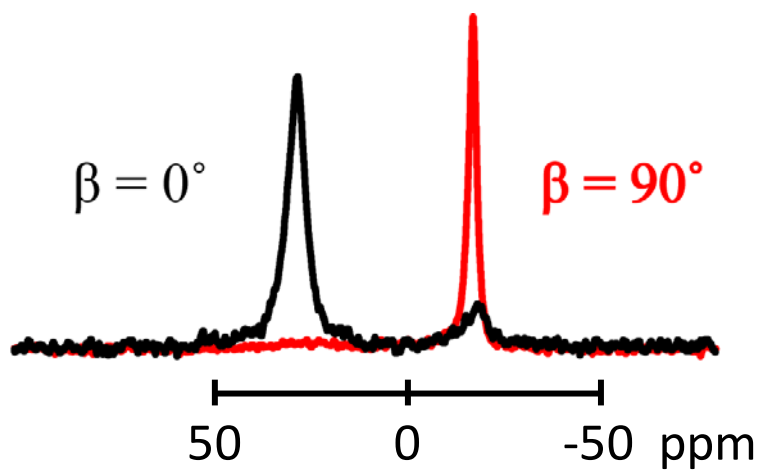
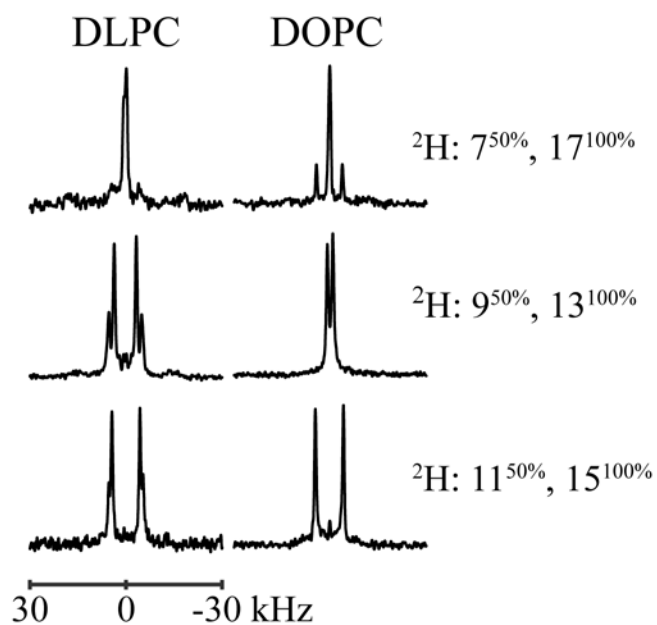


Figure S3.  $^2\text{H}$  NMR spectra  $\text{F}^5\text{GWALP23}$  in DLPC and DOPC.

$\text{F}^5\text{GWALP23}$ ,  $\beta = 90^\circ$



$\text{F}^5\text{GWALP23}$ ,  $\beta = 0^\circ$

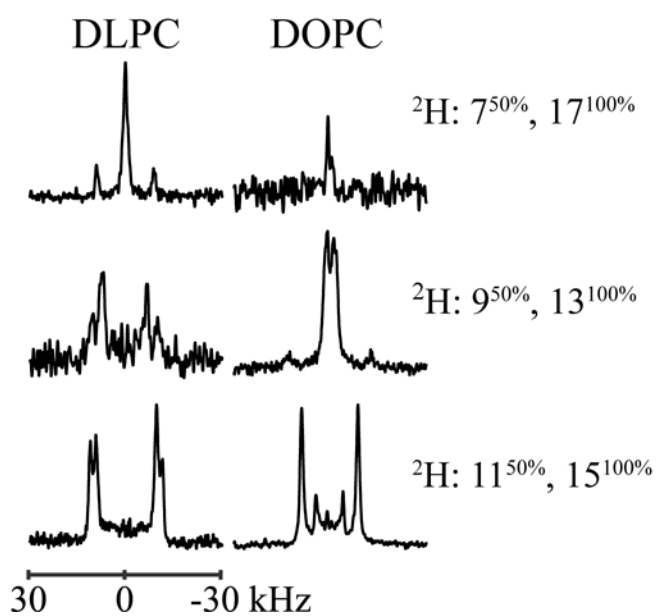
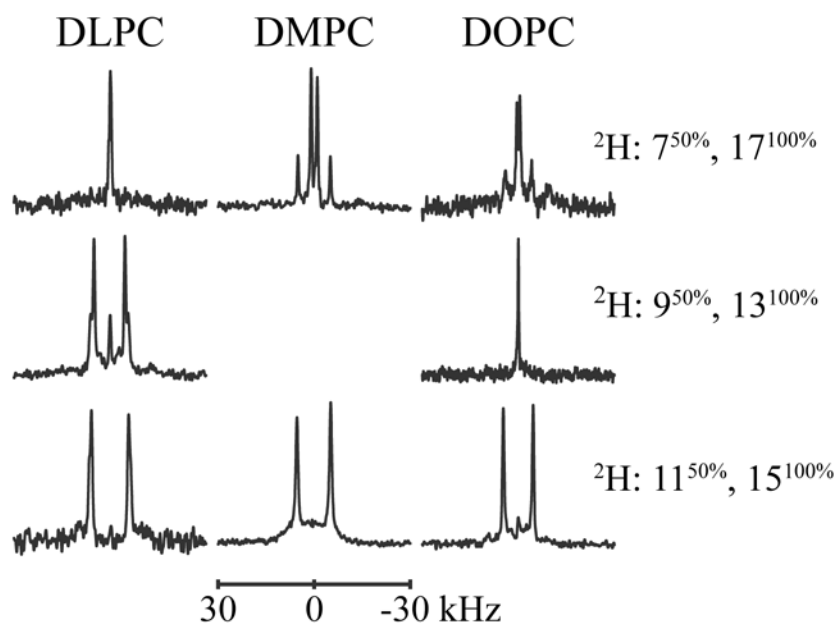


Figure S4.  $^2\text{H}$  NMR spectra  $\text{F}^{4,5}\text{GWALP23}$  in DLPC and DOPC.

$\text{F}^{4,5}\text{GWALP23}$ ,  $\beta = 90^\circ$



$\text{F}^{4,5}\text{GWALP23}$ ,  $\beta = 0^\circ$

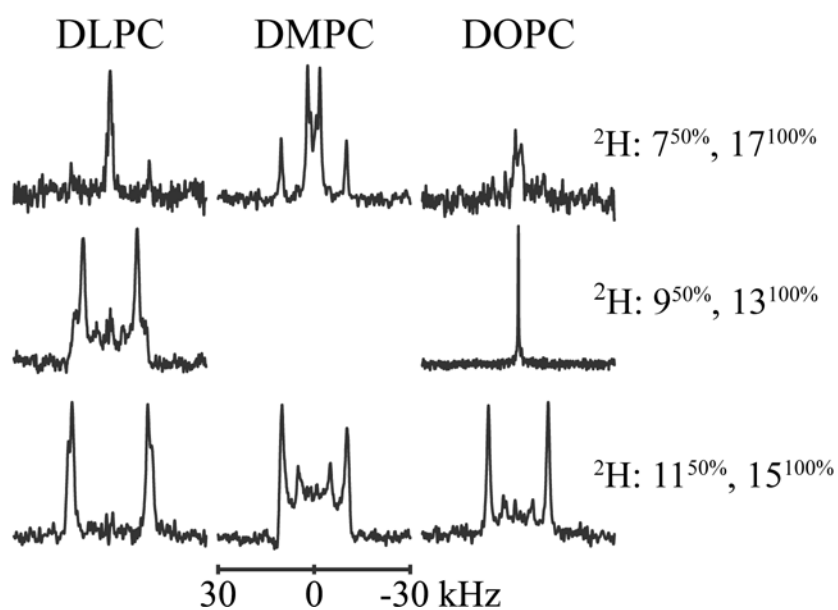
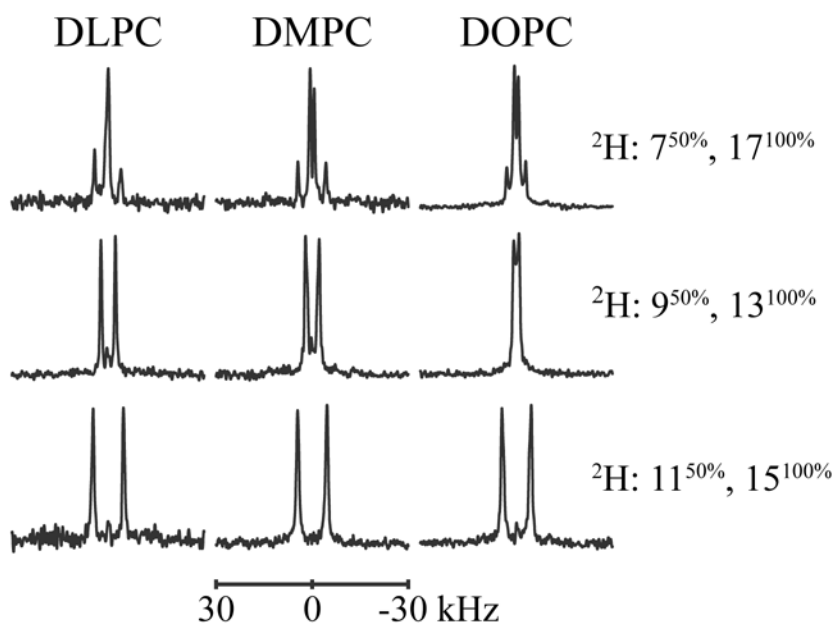


Figure S5.  $^2\text{H}$  NMR spectra  $\text{Y}^4\text{GWALP23}$  in DLPC, DMPC and DOPC.

$\text{Y}^4\text{GWALP23}$ ,  $\beta = 90^\circ$



$\text{Y}^4\text{GWALP23}$ ,  $\beta = 0^\circ$

