# Supporting information

# for

## Identifying selective inhibitors against the human cytosolic sialidase NEU2 by substrate specificity studies

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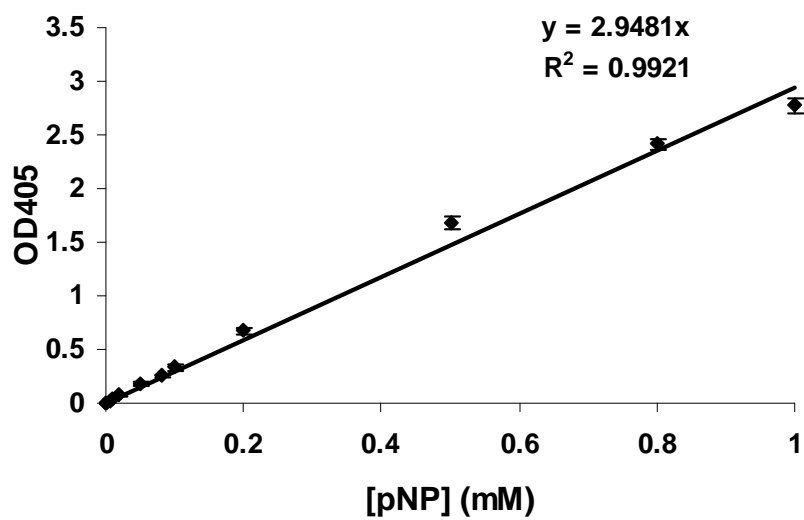*E-mail: chen@chem.ucdavis.edu; Fax: +1 530-752-8995; Tel: +1 530-754-6037*

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**Fig. S1** Standard curve of *para*-nitrophenol (*p*NP).

**Fig. S2** Graphs for determining $IC_{50}$ values for human sialidase NEU2. Concentrations of Zanamivir (**A**), Neu5Ac2en **11** (**B**), Neu5Gc2en **12** (**C**), Neu5AcN$_3$2en **13** (**D**), or KDN2en **14** (**E**) were varied from 0–100 mM in the presence of a fixed concentration (1 mM) of substrate Neu5Acα2–3Galβ$p$NP (open circle) or Neu5Acα2–6Galβ$p$NP (closed triangle).
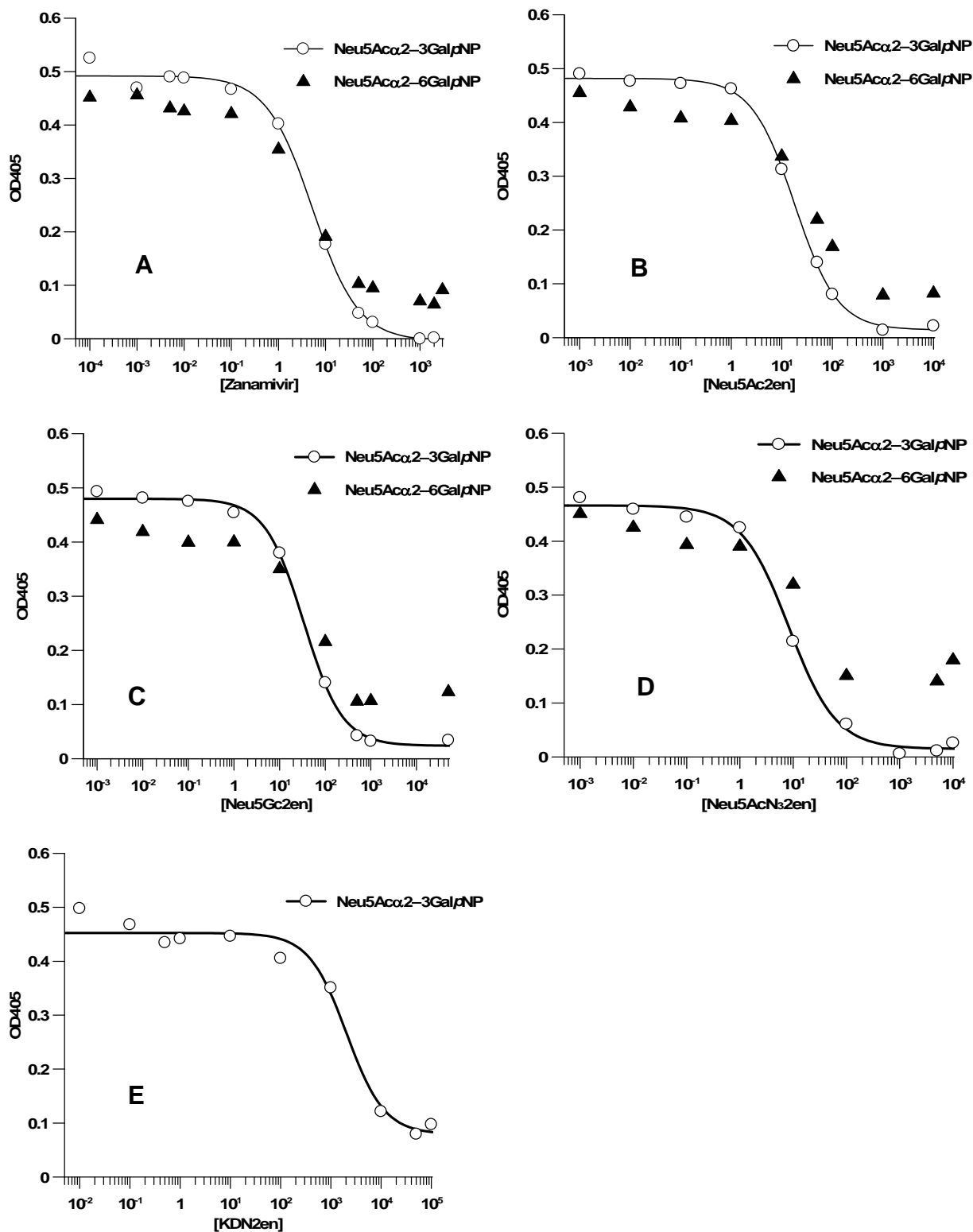
**Fig. S3** Graphs for determining $IC_{50}$ values for *Vibrio cholera* sialidase (V.C.) (**A, B,** and **C**) and *Salmonella typhimurium* sialidase (S.T.) (**D**). Concentrations of Neu5Ac2en **11**, Neu5Gc2en **12**, Neu5AcN$_3$2en **13**, or KDN2en **14** were varied from 0 to 500 mM in the presence of a fixed concentration (1 mM) of substrate Neu5Acα2–3Galβ*p*NP (open circle) or Neu5Acα2–6Galβ*p*NP (closed triangle).
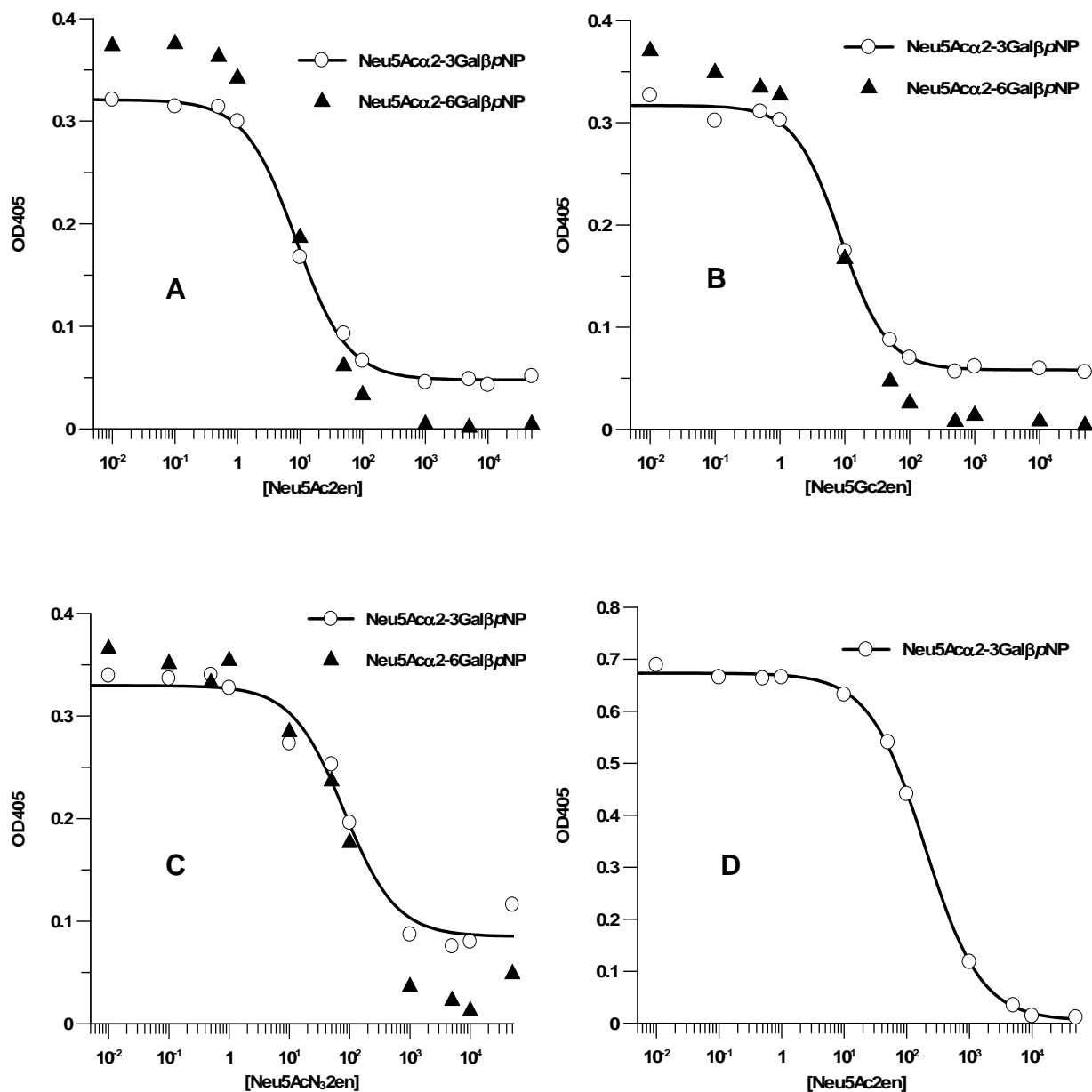
## $^{1}$H and $^{13}$C NMR spectra of Neu5Ac2en **11**
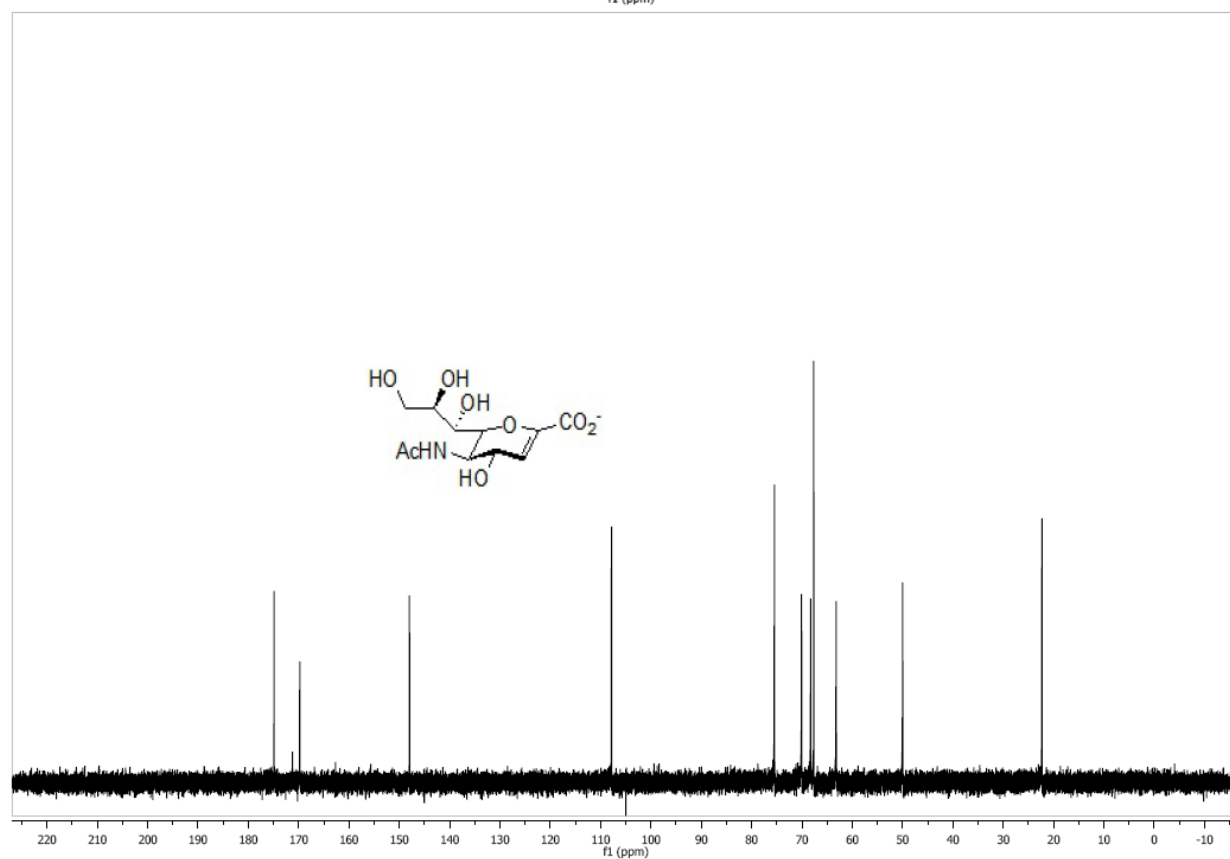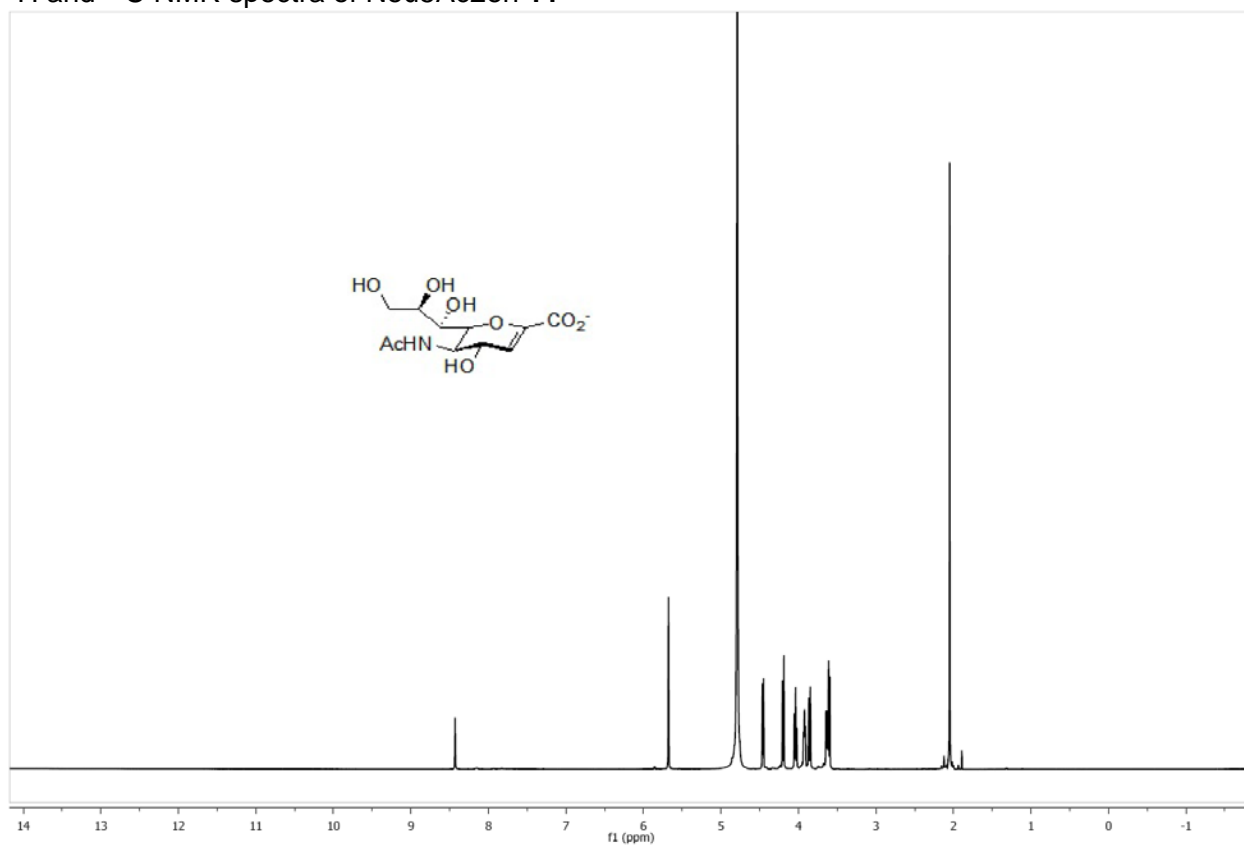
# $^1$H and $^{13}$C NMR spectra of Neu5Gc2en **12**
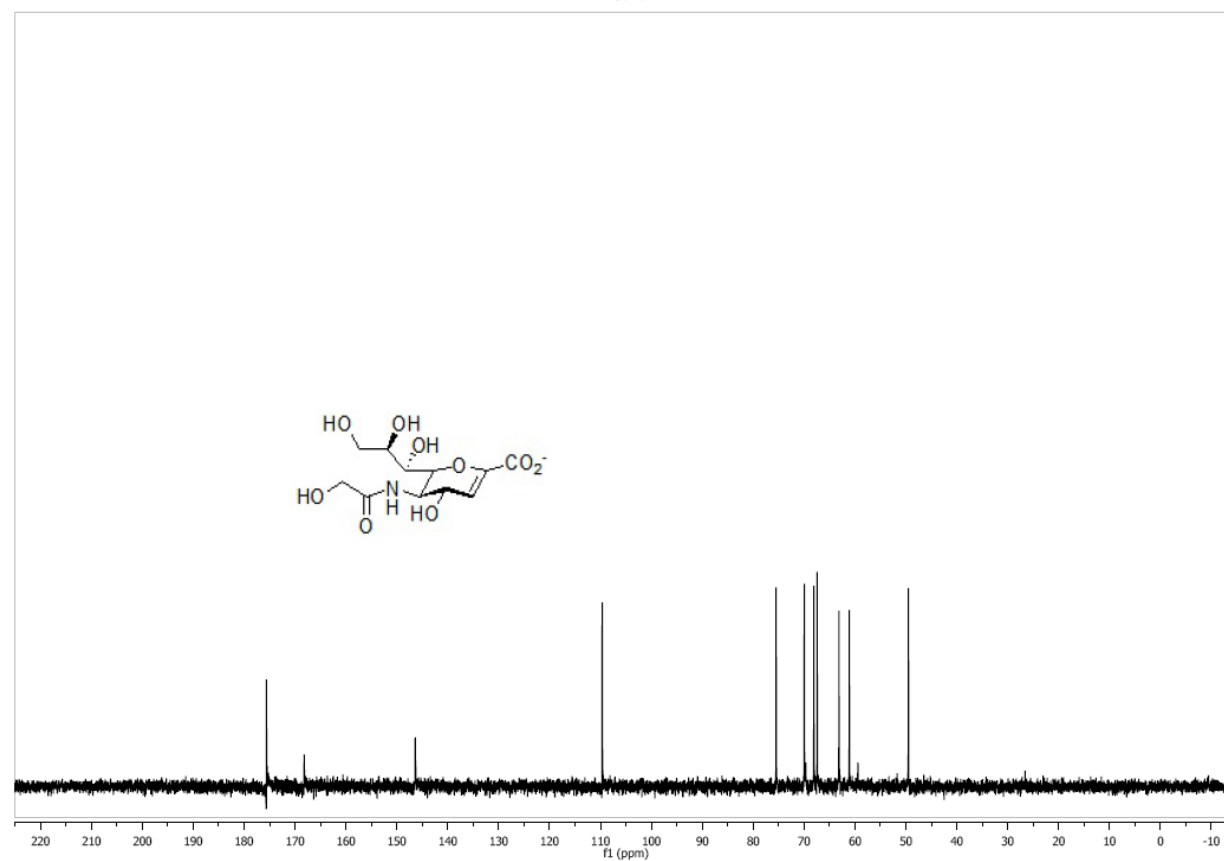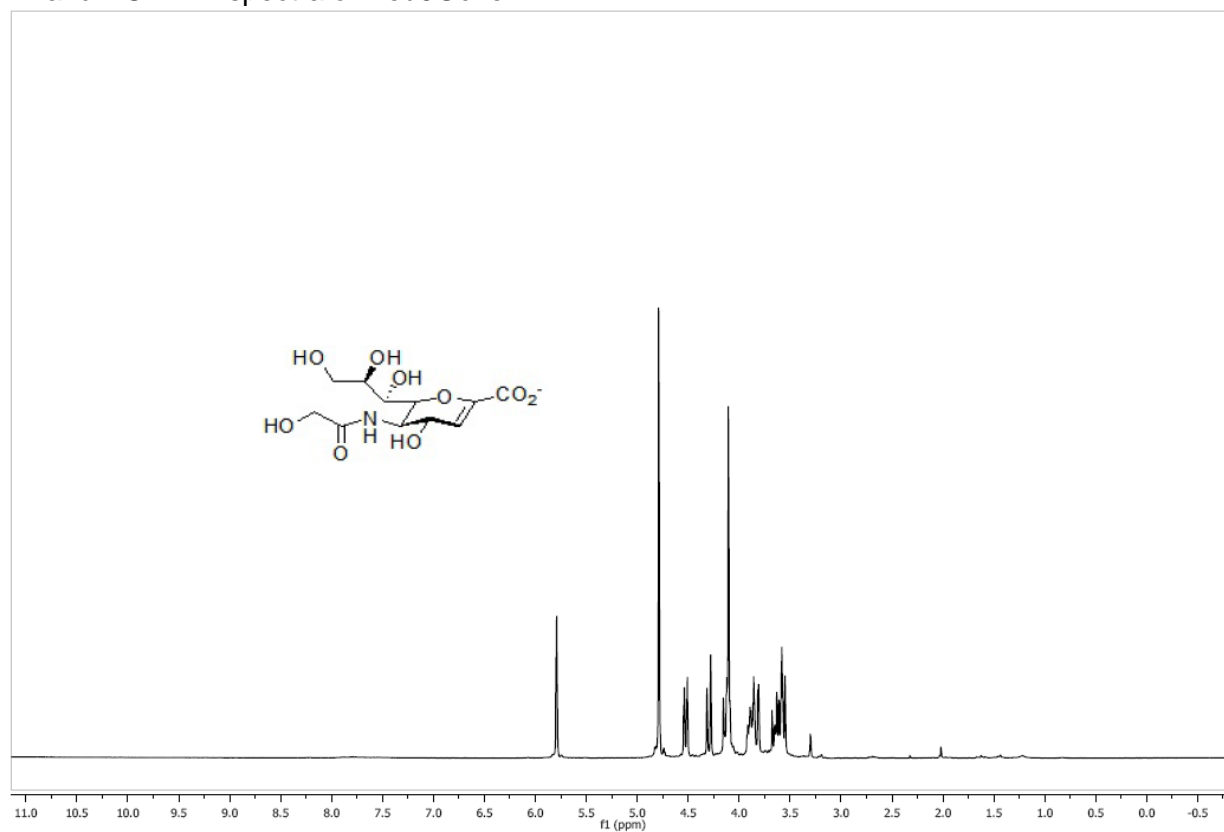
# $^1$H and $^{13}$C NMR spectra of Neu5AcN$_3$2en **13**
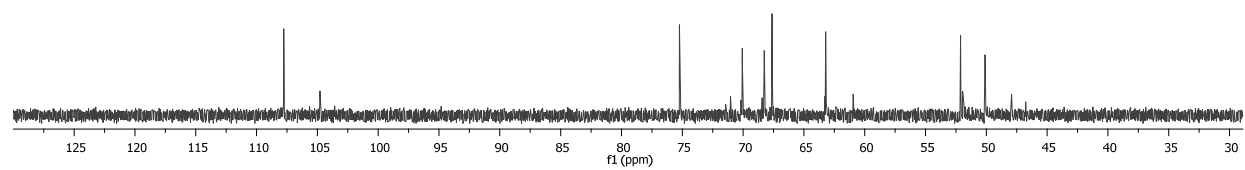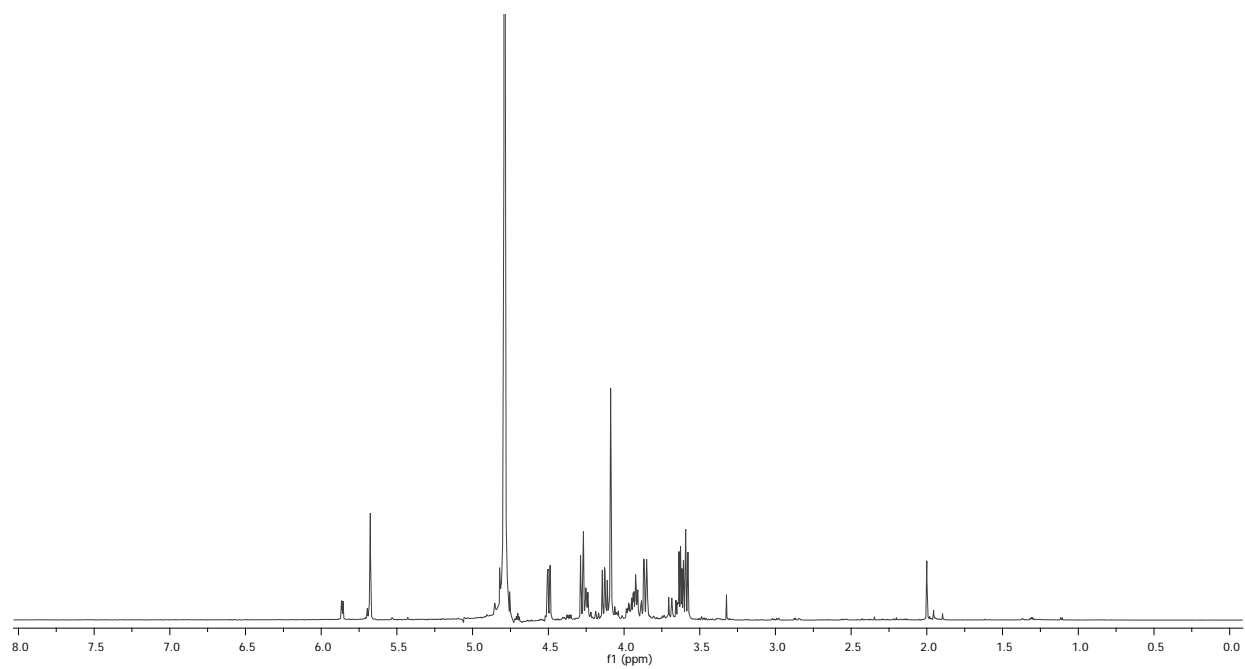
# $^1$H and $^{13}$C NMR spectra of KDN2en **14**