

# Supporting Information

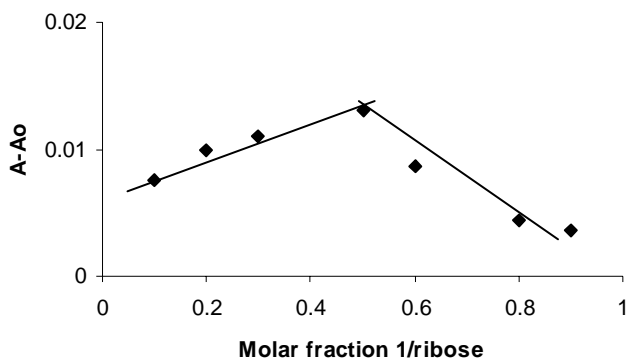
## Stereochemical and Regiochemical Trends in the Selective Spectrophotometric Detection of Saccharides

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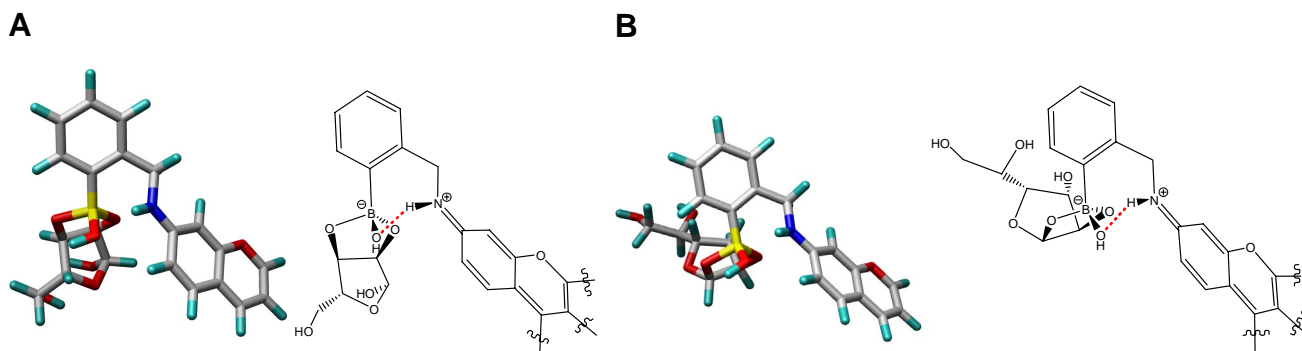
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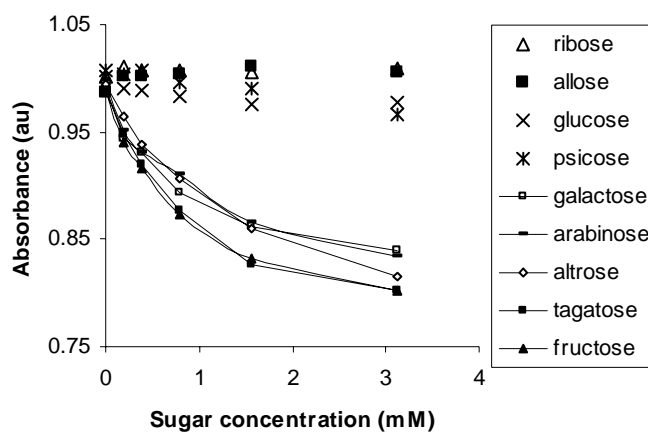
Email: rstrong@lsu.edu



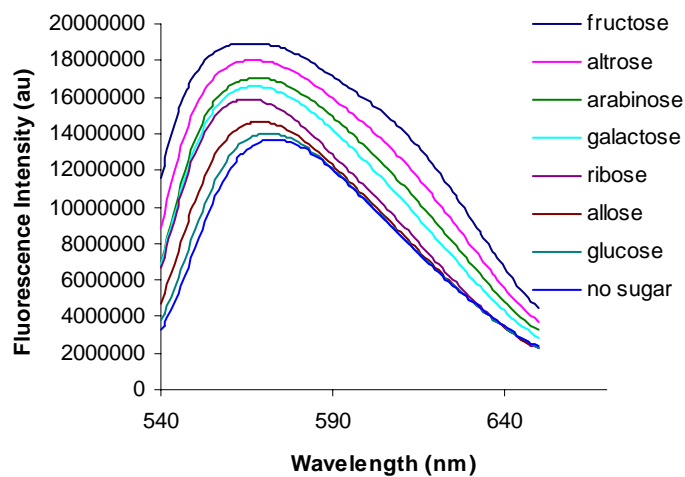
**Figure S1.** Job's plot of compound **1** and D-ribose in 9:1 DMSO:phosphate buffer (60 mM pH 7.4) showing a 1:1 stoichiometry. A-Ao is the difference in absorbance intensity of the solution in the presence of D-ribose and the blank (solution containing only **1**) at 510 nm.



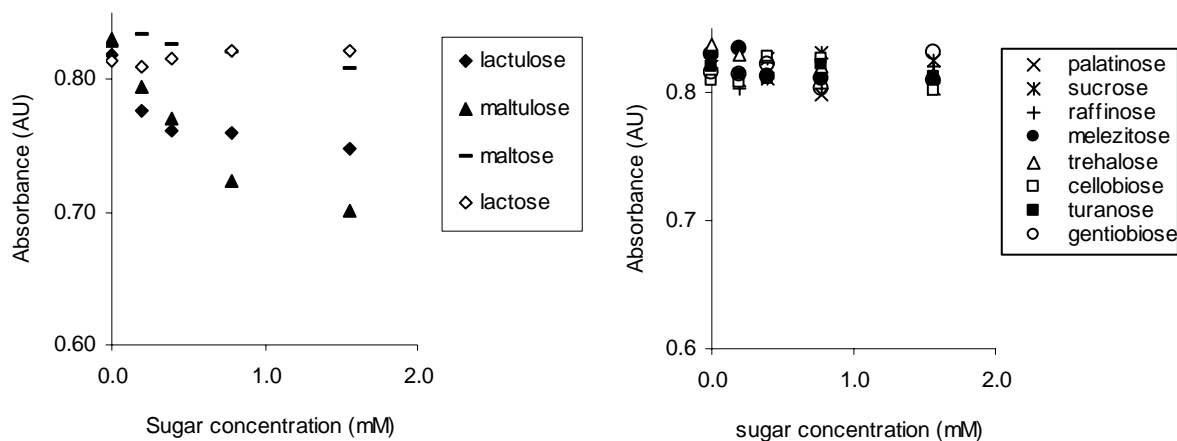
**Figure S2.** Energy-minimized structures of the complementary conformers derived from **1** and ribofuranose (“exo” isomer, structure A), and glucofuranose (“endo” isomer, structure B). A subunit of the the rhodamine chromophore moiety is shown for clarity and used in the simulations in order to simplify the calculations.



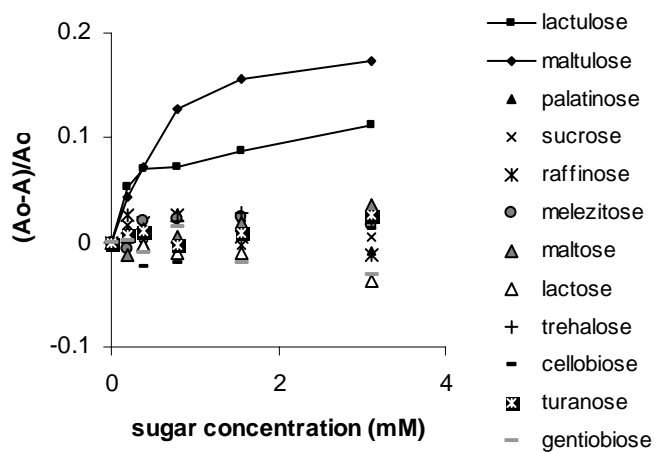
**Figure S3.** Plots of absorbance vs. the concentration of various monosaccharides in solutions comprised of phosphate buffer, 0.1 ml, 60 mM, pH = 7.4 added to **1** (3.4 mM) in DMSO (0.9 ml) at 355 nm. The selectivity is the same as shown in Figure 11 of text.



**Figure S4.** Fluorescence emission spectra of **2** ( $5.75 \times 10^{-5} M$ ) and saccharides ( $1.85 \times 10^{-3} M$ ) in 9:1 DMSO:phosphate buffer (0.05 M, pH 7.0) excited at 550 nm.



**Figure S5.** Left: absorbance spectral responses at 355 nm vs concentration of lactulose, maltulose, lactulose and maltulose confirming the fluorescence result shown in Figure 14 of the text. Right: absorbance spectral responses at 355 nm vs concentration of other di- and trisaccharides. No significant correlation is observed (the data points are scattered).



**Figure S6.** Relative absorbance spectral responses at 535 nm vs concentration of di- and trisaccharides. Selectivity for lactulose and maltulose is exhibited at this wavelength, to a lesser extent than at 355 nm (see Figure S5).