Supporting Information

Towards the non-invasive continuous monitoring of physiological glucose using a novel monosaccharide-sensing contact lens

Ramachandram Badugu[1], Joseph R. Lakowicz*[1] and Chris D. Geddes[1,2]*

[1]Center for Fluorescence Spectroscopy, Department of Biochemistry and Molecular Biology, Medical Biotechnology Center, University of Maryland School of Medicine, 725 West Lombard St, Baltimore, MD, 21201, USA.

[2]Institute of Fluorescence and Center for Fluorescence Spectroscopy, Medical Biotechnology Center, University of Maryland Biotechnology Institute, 725 West Lombard St, Baltimore, MD, 21201, USA.

*All correspondence to: Cfs@cfs.umbi.umd.edu

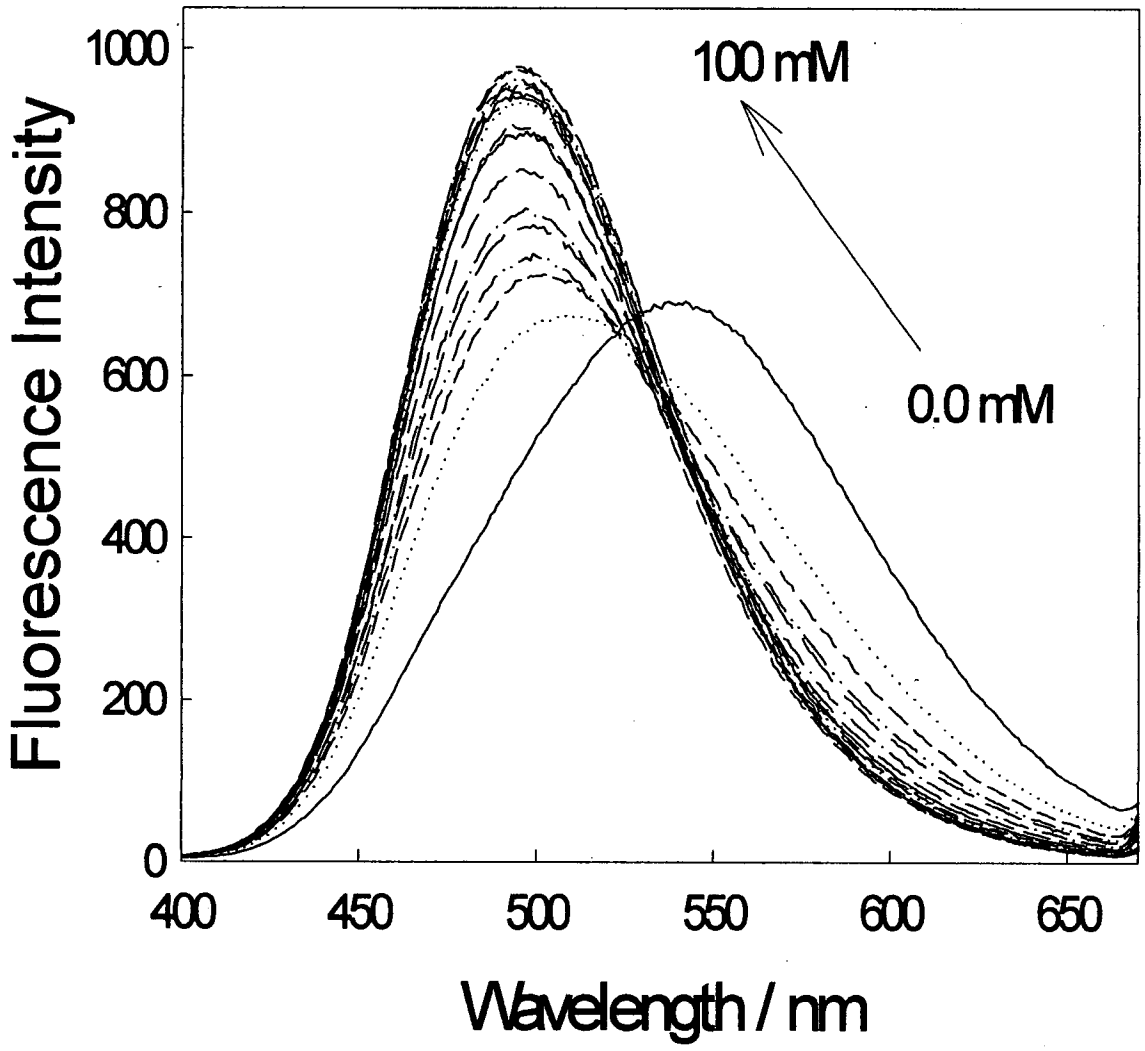


Figure S1 - Emission spectra of DDPBBA in pH 8.0 buffer / methanol (2:1) with increasing concentrations of fructose, λ_{ex} = 340 nm.

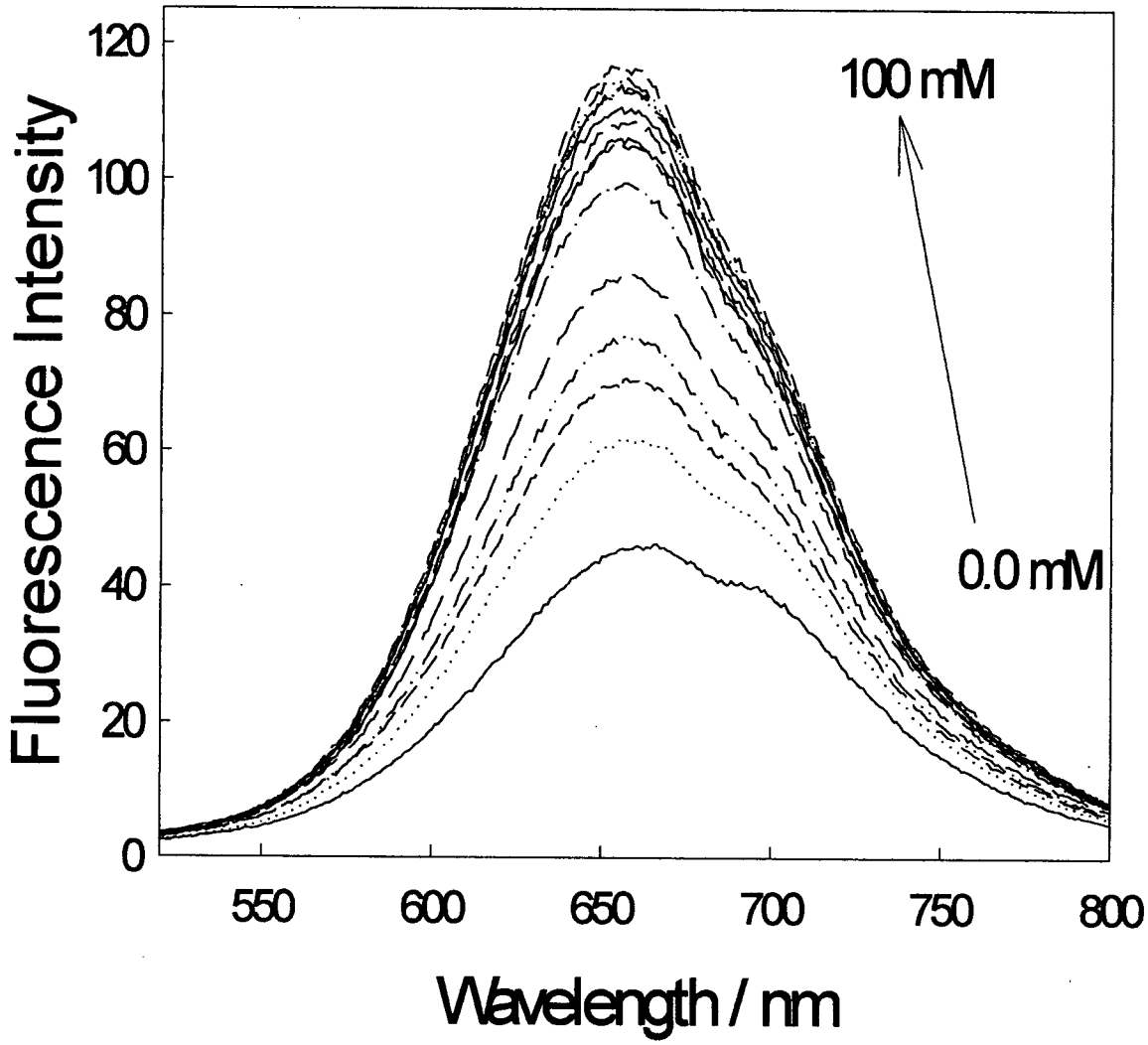


Figure S2 – Emission spectra of Chalc 2 in pH 8.0 / methanol (2:1) with increasing concentrations of fructose, λ_{ex} = 430 nm.

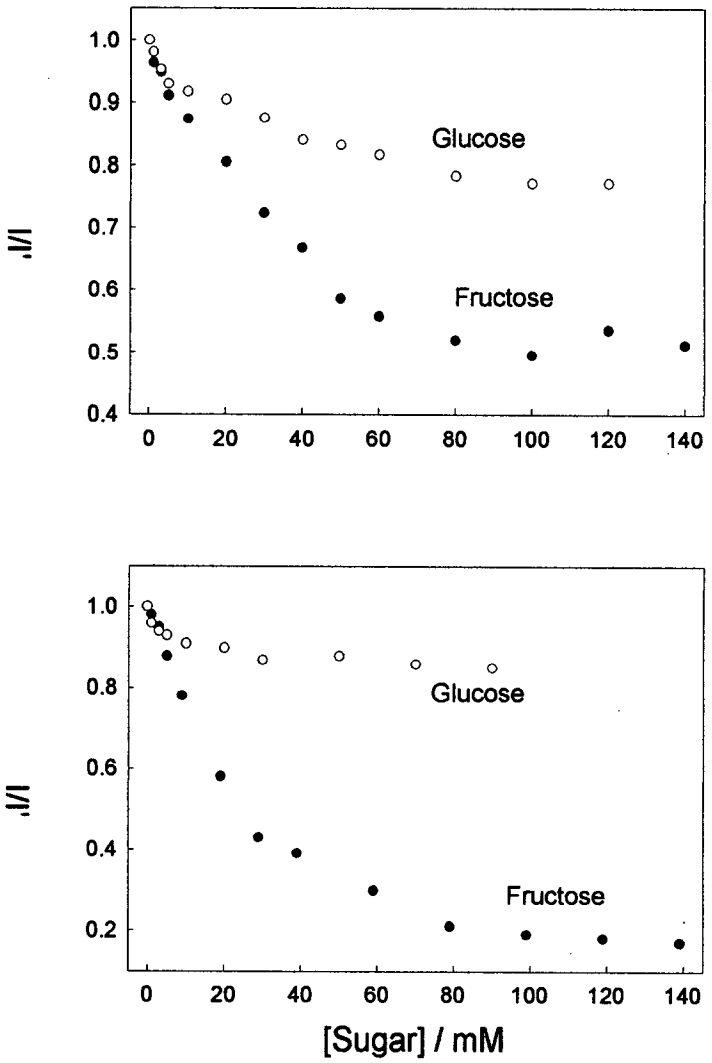
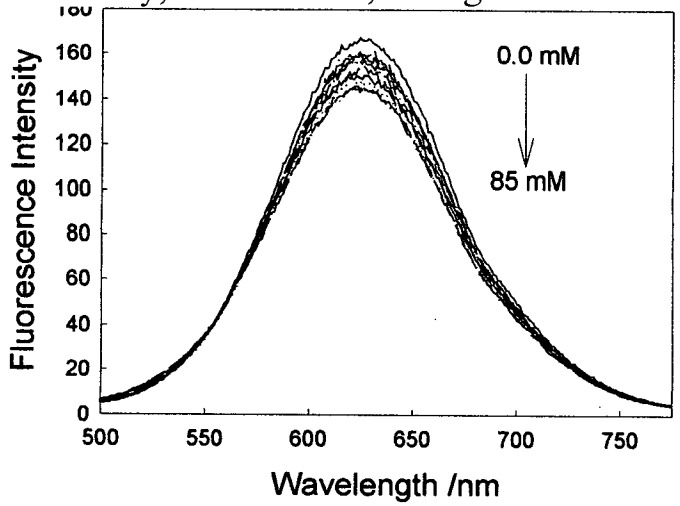
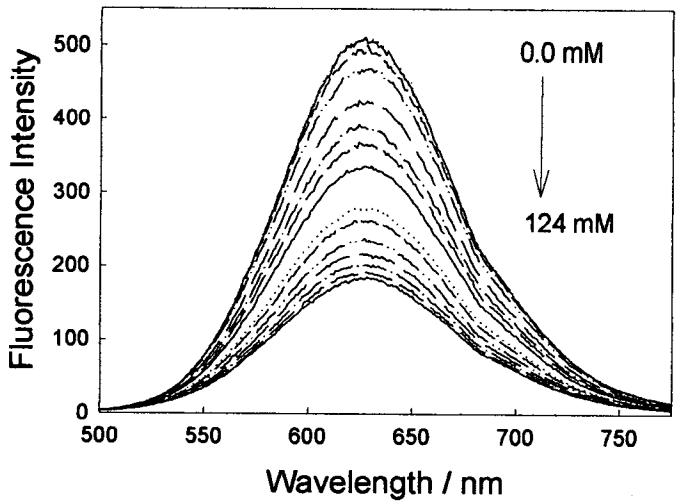


Figure S3 – Intensity ratio plot for the DSTBA doped contact lens towards both glucose and fructose, where I and I_0 are the intensities in the presence and absence of sugar respectively, λ_{em} max, (**Top**), and the intensity ratio plot for the CSTBA doped contact lens towards both glucose and fructose (**Bottom**).





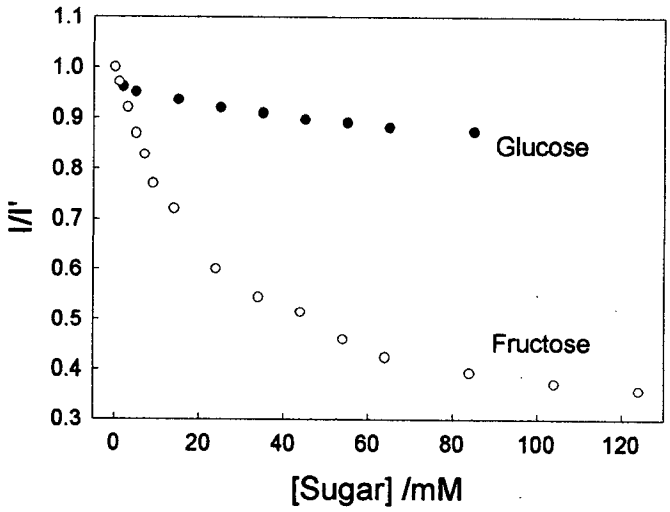


Figure S4. - Emission spectra of the Chalc 2 doped contact lens, pH 8.0 buffer / methanol (2:1), with increasing concentrations of glucose, λ_{ex} = 460 nm (**Top**), the emission spectra of the Chalc 2 doped contact lens, pH 8.0 buffer / methanol (2:1), with increasing concentrations of fructose, λ_{ex} = 460 nm (**Middle**) and the intensity ratio plot for the Chalc 2 doped lens towards both glucose and fructose, where I and I_0 are the intensities in the presence and absence of sugar respectively at λ_{em} max (**Bottom**).