An expeditious Click Approach towards the Synthesis of Galactose coated Novel glyco-dendrimers and dentromers utilizing double stage convergent method

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*This manuscript is dedicated to Prof. Shiv P Singh, emeritus Professor at Kurukshetra University, Kurukshetra, India.

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5. UV-Vis Absorption and Emission spectra of compounds 20-25
1. $^1$H and $^{13}$C NMR Spectrum of compounds (1 - 25)

**Figure S1.** $^1$H NMR (500 MHz, DMSO-d$_6$) of compound 3
Figure S2. $^{13}$C NMR (125 MHz, DMSO-$d_6$) of compound 3
Figure S3. $^1$H NMR (500 MHz, DMSO-$d_6$) of compound 4
Figure S4. $^{13}$C NMR (125 MHz, DMSO-$d_6$) of compound 4
Figure S5. $^1$H NMR (500 MHz, CDCl$_3$) of compound 5
Figure S6. $^{13}$C NMR (125 MHz, CDCl$_3$) of compound 5
Figure S7. $^1$H NMR (500 MHz, CDCl$_3$) of compound 6
Figure S8. $^{13}$C NMR (125 MHz, CDCl$_3$) of compound 6
Figure S9. $^1$H NMR (500 MHz, CDCl₃) of compound 8
Figure S10. $^{13}$C NMR (125 MHz, CDCl$_3$) of compound 8
Figure S11. $^1$H NMR (500 MHz, CDCl$_3$) of compound 9
Figure S12. $^{13}$C NMR (125 MHz, CDCl$_3$) of compound 9
Figure S13. $^1$H NMR (500 MHz, CDCl$_3$) of compound 10
Figure S14. $^{13}$C NMR (125 MHz, CDCl$_3$) of compound 10
Figure S15. $^1$H NMR (500 MHz, CDCl$_3$) of compound 12
Figure S16. $^{13}$C NMR (125 MHz, CDCl$_3$) of compound 12
Figure S17. $^1$H NMR (500 MHz, CDCl$_3$) of compound 13
Figure S18. $^{13}$C NMR (125 MHz, CDCl$_3$) of compound 13
Figure S19. $^1$H NMR (500 MHz, CDCl$_3$) of compound 14
Figure S20. $^{13}$C NMR (125 MHz, CDCl$_3$) of compound 14
Figure S21. $^1$H NMR (500 MHz, CDCl$_3$) of compound 15
Figure S22. $^{13}$C NMR (125 MHz, CDCl$_3$) of compound 15
Figure S23. $^1$H NMR (500 MHz, DMSO-$d_6$) of compound 16
Figure S24. $^{13}$C NMR (125 MHz, DMSO-D$_6$) of compound 16
Figure S25. $^1$H NMR (500 MHz, CDCl$_3$) of compound 17
Figure S26. $^{13}$C NMR (125 MHz, CDCl$_3$) of compound 17
Figure S27. $^1$H NMR (500 MHz, CDCl$_3$) of compound 18
Figure S28. $^{13}$C NMR (125 MHz, CDCl$_3$) of compound 18
Figure S29. $^1$H NMR (500 MHz, CDCl$_3$) of compound 19
Figure S30. $^{13}$C NMR (125 MHz, CDCl$_3$) of compound 19
Figure S31. $^1$H NMR (500 MHz, CDCl$_3$) of compound 20
Figure S32. $^{13}$C NMR (125 MHz, CDCl$_3$) of compound 20
Figure S33. $^1$H NMR (500 MHz, CDCl$_3$) of compound 21
Figure S34. $^{13}$C NMR (125 MHz, CDCl$_3$) of compound 21
Figure S35. $^1$H NMR (500 MHz, CDCl$_3$) of compound 22
Figure S36. $^{13}$C NMR (125 MHz, CDCl$_3$) of compound 22
Figure S37. $^1$H NMR (500 MHz, CDCl$_3$) of compound 23
Figure S38. $^1$NMR (125 MHz, CDCl$_3$) of compound 23
Figure S39. $^1$H NMR (500 MHz, CDCl$_3$) of compound 24
Figure S41. $^1$H NMR (500 MHz, CDCl$_3$) of compound 25
Figure S42. $^{13}$C NMR (125 MHz, CDCl$_3$) of compound 25
Figure S43. $^1$H NMR (500 MHz, CDCl$_3$) of compound 25
2. IR spectra of compound **14, 15 and 18-25.**

![IR spectra of compound 14](image)

**Figure S44.** IR spectra of compound 14
Figure S45. IR spectra of compound 15
Figure S46. IR spectra of compounds 18 and 19
Figure S47. IR spectra of compound 20
Figure S48. IR spectra of compound 21
Figure S49. IR spectra of compound 22
Figure S50. IR spectra of compound 23
**Figure S51.** IR spectra of compound 24
Figure S52. IR spectra of compound 25
3. HRMS and MALDI-TOF MS spectra of compound 13, 14, 15, and 18-25.

Figure S53. HRMS spectra of compound 13
Figure S54. HRMS spectra of compound 14
Compound 15

Figure S55. HRMS spectra of compound 15
Figure S56. HRMS spectra of compounds 18 and 19
Figure S57. HRMS spectra of compound 20
Figure S58. MALDI-TOF MS of compound 21
Figure S59. MALDI-TOF MS of compound 22
Figure S60. MALDI-TOF MS of compound 23
Figure S61. MALDI-TOF MS of compound 24
Figure S62. MALDI-TOF MS of compound 25
4. Gel Permeation Chromatography of compound 20-25

Figure S63: SEC Chromatogram of glycodendrimer 20-25 using DMF as eluent.

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<th>Compound</th>
<th>Mn</th>
<th>Mw</th>
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<td>13,367</td>
<td>1.01</td>
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<tr>
<td>24</td>
<td>21,747</td>
<td>22,047</td>
<td>1.01</td>
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<tr>
<td>25</td>
<td>25,374</td>
<td>26,175</td>
<td>1.03</td>
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Note: CALIBRATED AGAINST POLYSTYRENE STANDARDS.
5. **Uv-Vis spectroscopy:**

**Figure S64:** Electronic Uv-Visible Absorption spectra of the developed glycodendrimers and glycodentromers 20-25:

![Uv-Vis Absorption Spectra](image1)

**Figure S65:** Electronic Uv-Visible Emission spectra of the glycodendrimers and glycodentromers 20-25:

![Uv-Vis Emission Spectra](image2)
<table>
<thead>
<tr>
<th>S.N.</th>
<th>Compound no.</th>
<th>Absorbance ($\lambda_{\text{max}}$ in nm)</th>
<th>Emission (nm)</th>
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<tbody>
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<td>1.</td>
<td>Compound 20</td>
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<td>Compound 21</td>
<td>310.80</td>
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<td>3.</td>
<td>Compound 22</td>
<td>310.84</td>
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<td>4.</td>
<td>Compound 23</td>
<td>274.16</td>
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<td>5.</td>
<td>Compound 24</td>
<td>275.97</td>
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<td>6.</td>
<td>Compound 25</td>
<td>274.61</td>
<td>351.31</td>
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