**Supplementary material**

to

**New Terbium Complex for Detection of Gemifloxacin Mesylate in Tablets and Spiked Plasma Samples Using Luminescence** **and Time Resolved Method**

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| Gemifloxacin mesylate (GMF) |  |
| **Scheme S1.** Chemical structures of ligand and antibiotic studied. |

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| **Figure S1: (a)**Job plot of Tb(III)-(AZ)2 complex at λexc/em = 307/545 nm, the concentration range is (1 x 10-5 – 1 x 10-4 mol/L) in methanol at room temperature. **(b)** The proposed chemical structure of the Tb(III) complex in methanol. |

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| **Figure S2.** Luminescence spectra of 1x10-5M Tb(III)-(AZ)2 with different concentrations of GMF (0, 0.01, 0.05, 0.1, 0.5, 1, 5, 10, 20, 30, 40, 50, 100 µg/mL) at λexc/em = 307/545 nm and in different solvents at room temperature. |

**Table S1**: Concentrations of interferences tolerated in the presence of 5 μg /mlGMF.

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| Interferent | Concentration(μg /ml) |
| Lactose anhydrous  | 9500 |
| Avicel PH101  | 2900 |
| Talc  | 49000 |
| Titanium dioxide  | 800 |
| Magnesium stearate  | 11200 |
| Croscarmellose sodium  | 5200 |
| PVP K30  | 29500 |
| starch | 11200 |