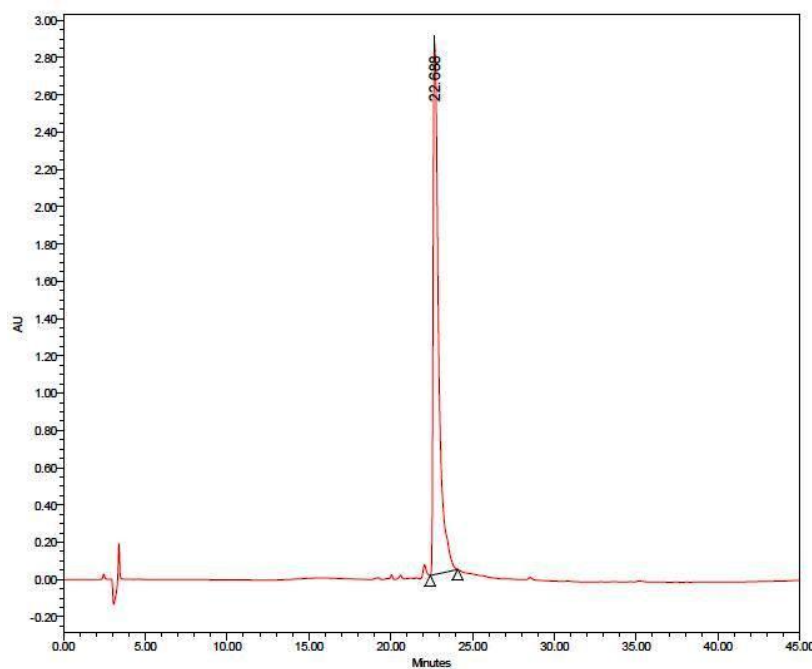


## Supporting information

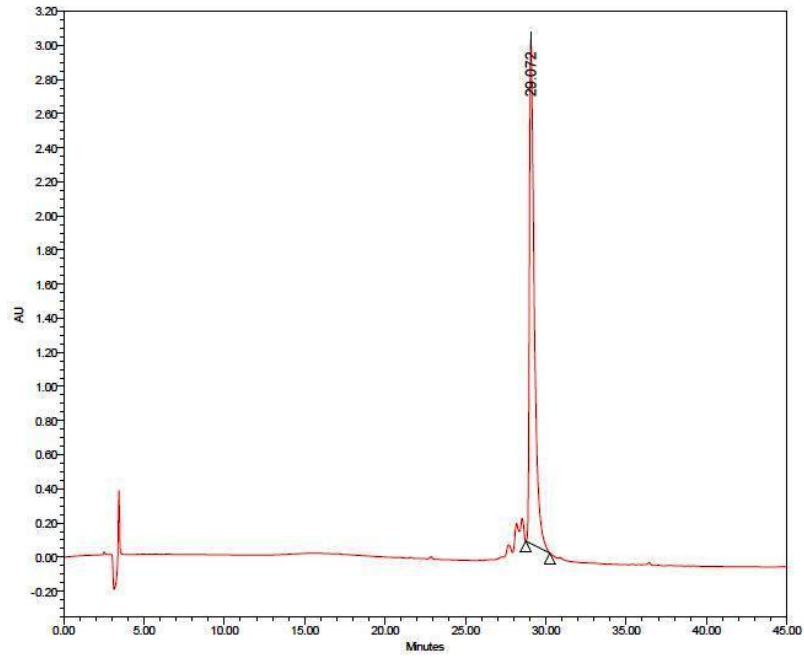
### **N-Terminal Aromatic Tag Induced Self Assembly of Tryptophan-Arginine Rich Ultra Short Sequences and Their Potent Antibacterial Activity**

#### **HPLC chromatograms of selected sequences**

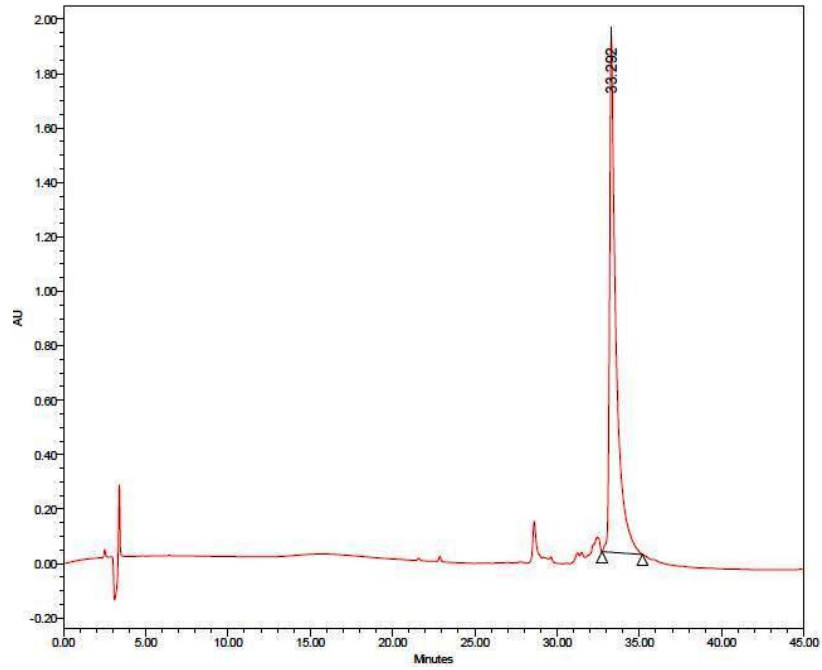
For sequences **4**, **5**, **6** and **7** RP-HPLC chromatograms (absorbance at 220 nm) are reported. A linear gradient of 10 to 90% buffer 2 was run where, buffer 1 was water (0.1 % TFA) and buffer 2 was acetonitrile (0.1% TFA) over 45 minutes.



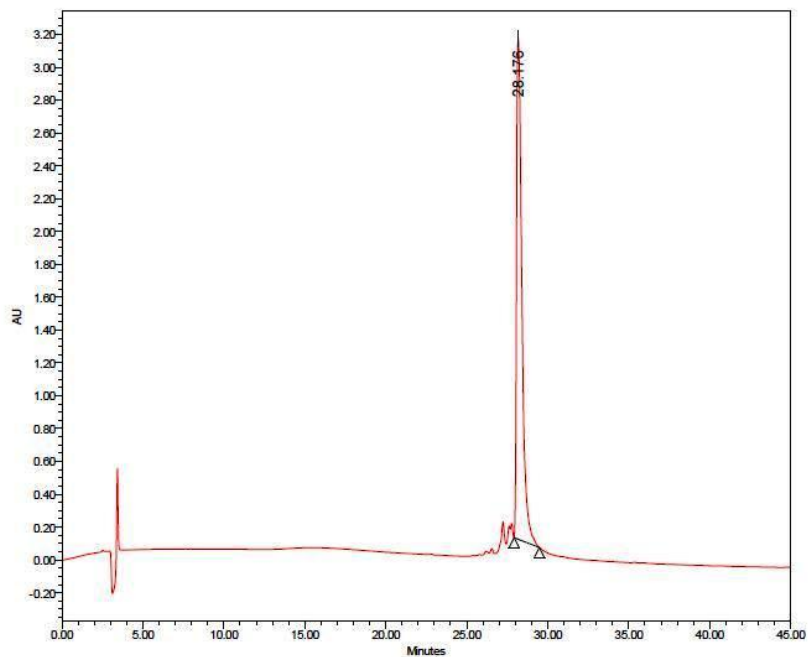
**Sequence 4**



Sequence 5



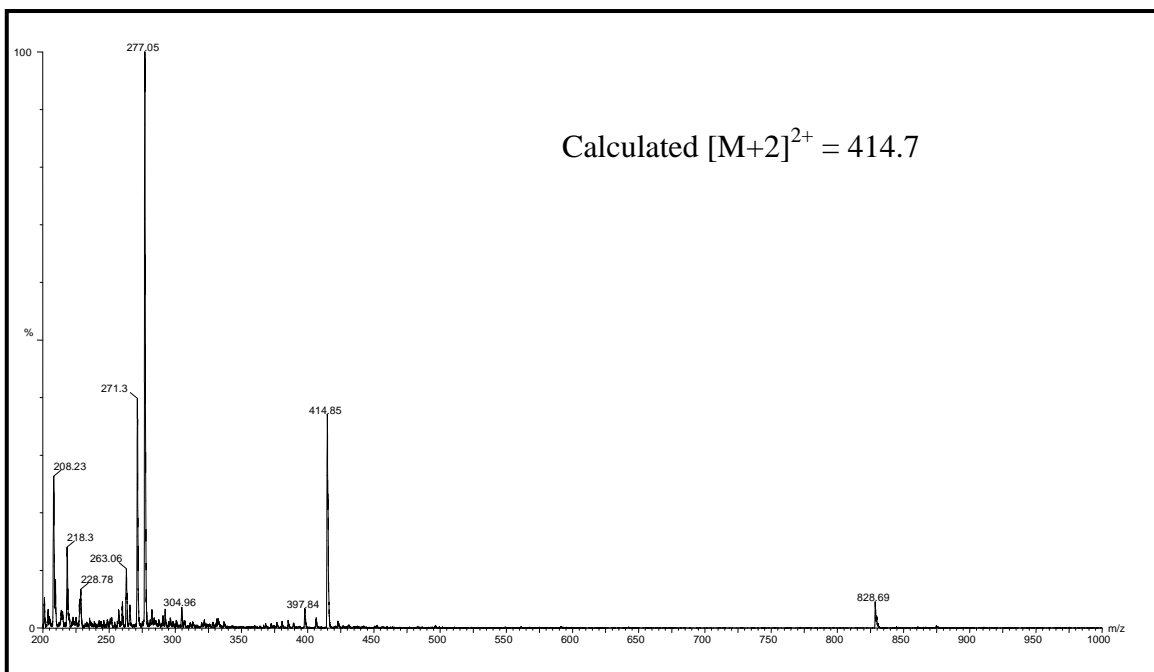
Sequence 6



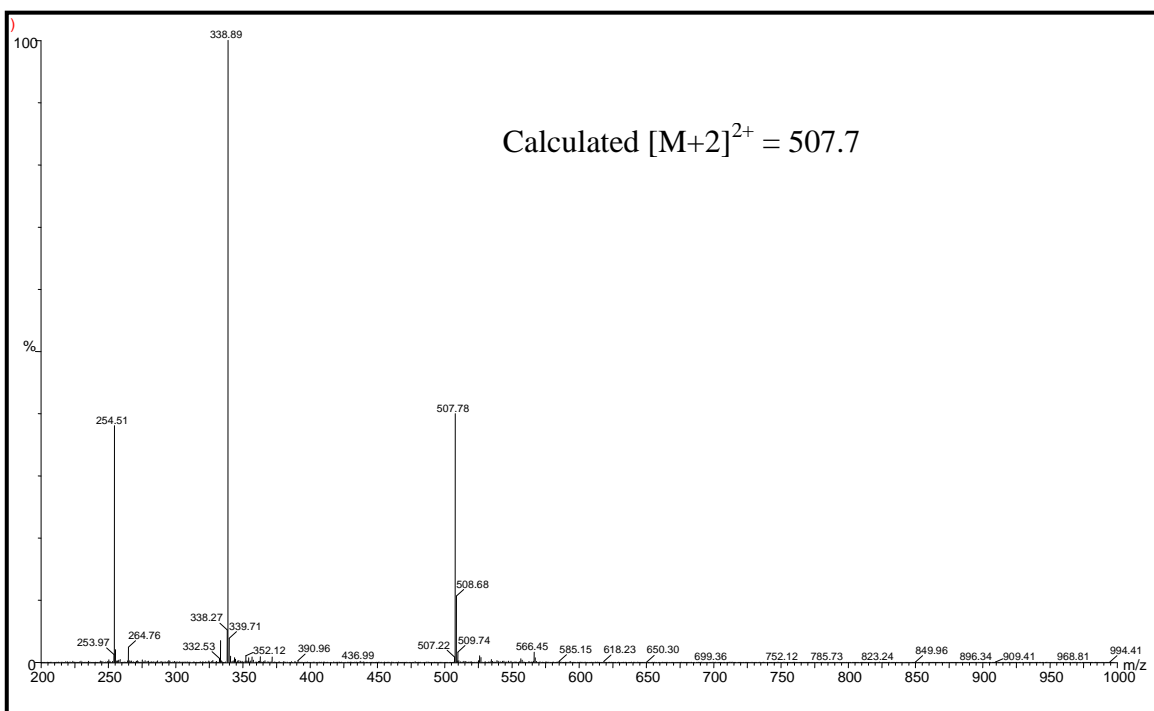
**Sequence 7**

### **ESI-MS data of sequences**

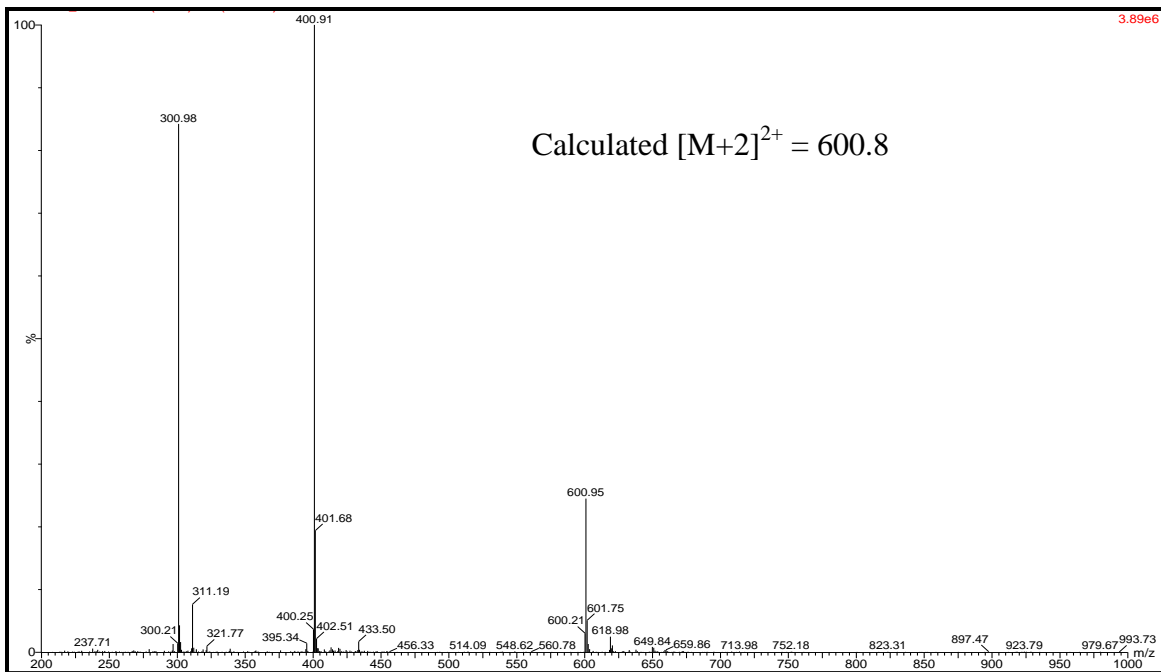
The data was acquired on Triple Quadrupole (LC-ESI-MS, Quattro Micro API Waters) using LC-MS method where LC conditions were: column BEH shields RP C<sub>18</sub> (2.1 X 100mm X 1.7 μM), flow rate: 0.3 mL/min, Gradient: 10 to 90 buffer 2 (where, buffer 1: MQ (0.1% FA) and buffer 2: acetonitrile (0.1% FA)), run time: 6 min. The MS was run in positive ion mode with capillary voltage: 3.5 kV, cone voltage: 25 V, de-solvation gas: 650 L/h, source temperature: 100 °C and cone gas: 50 L/h.



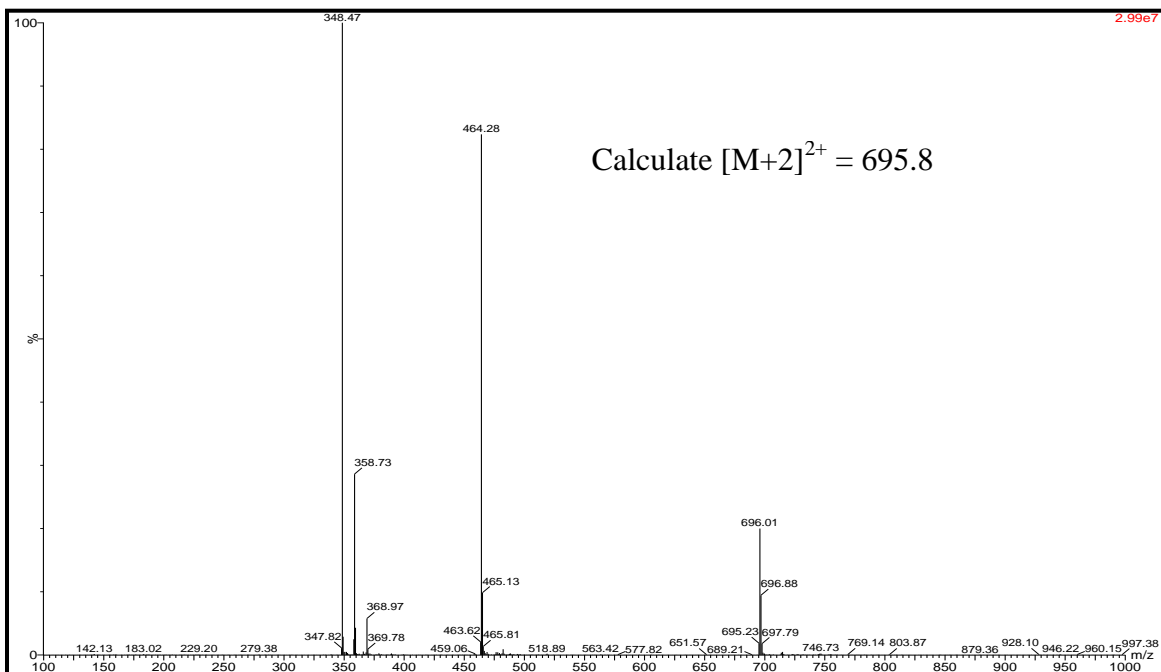
Sequence 2



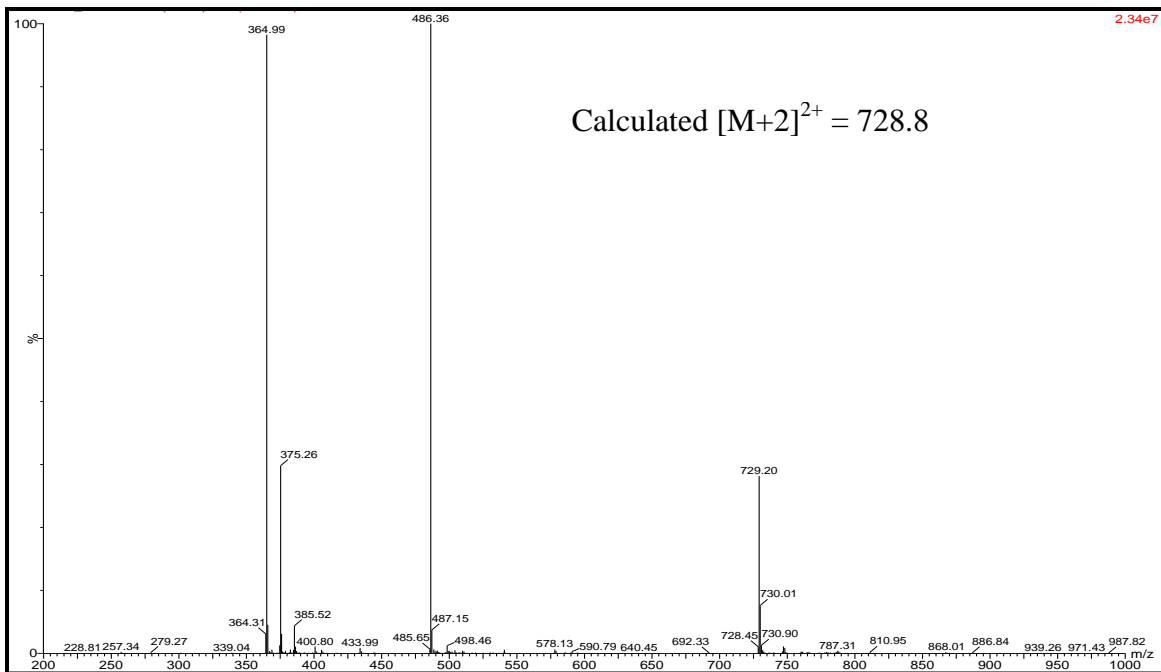
Sequence 3



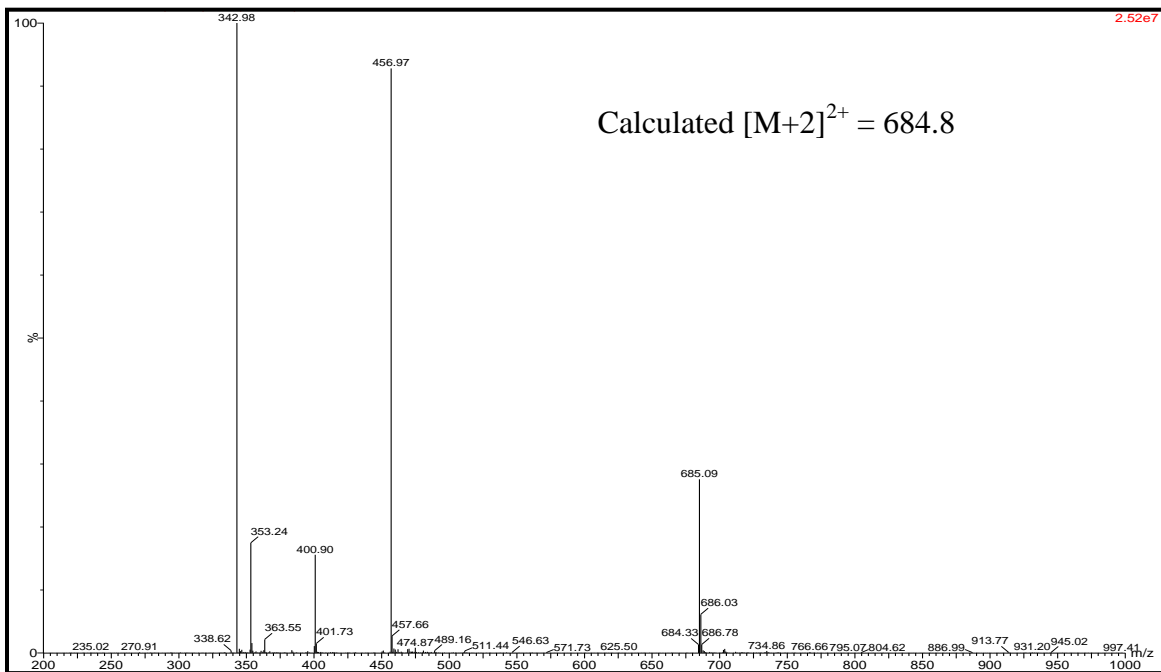
Sequence 4



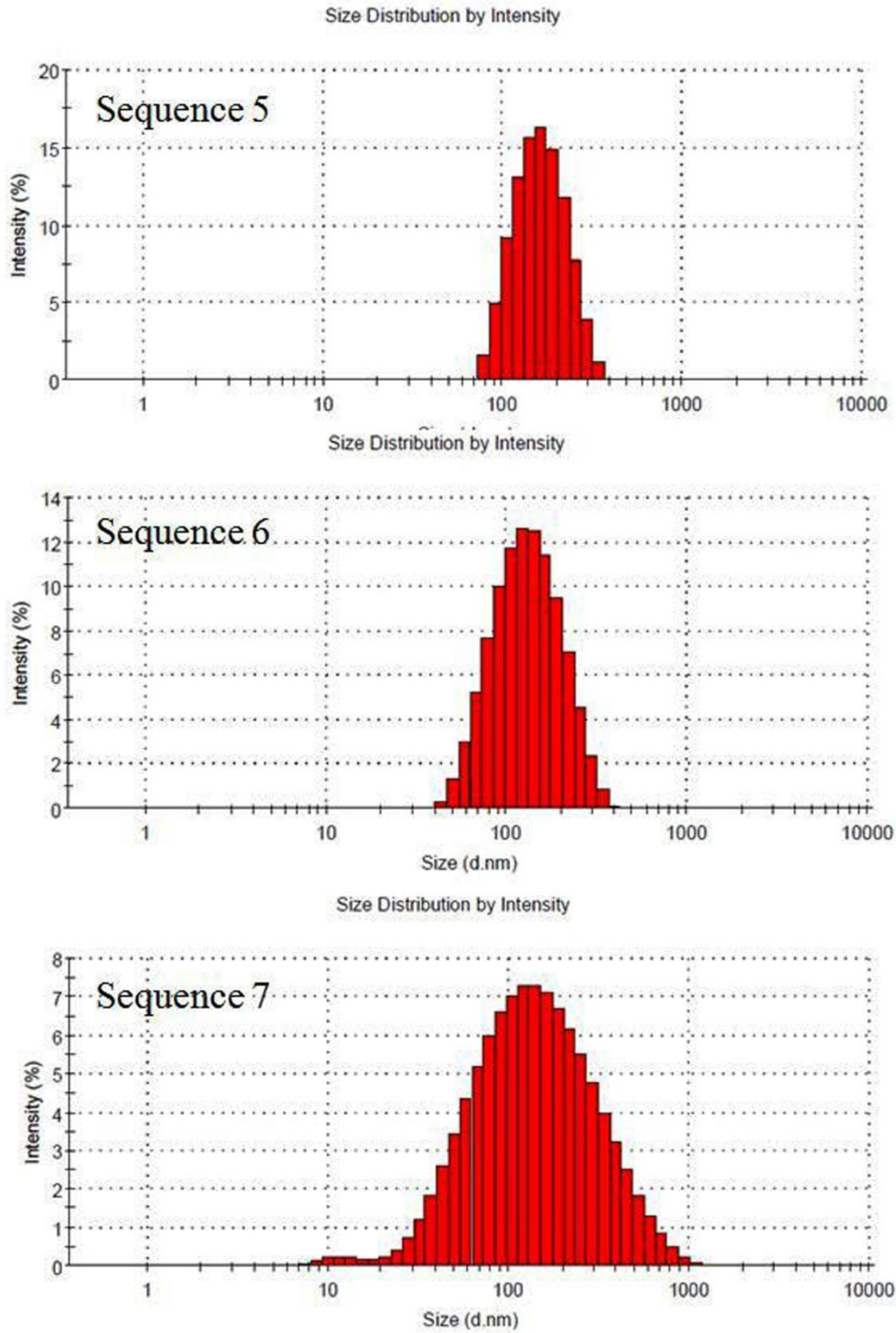
Sequence 5



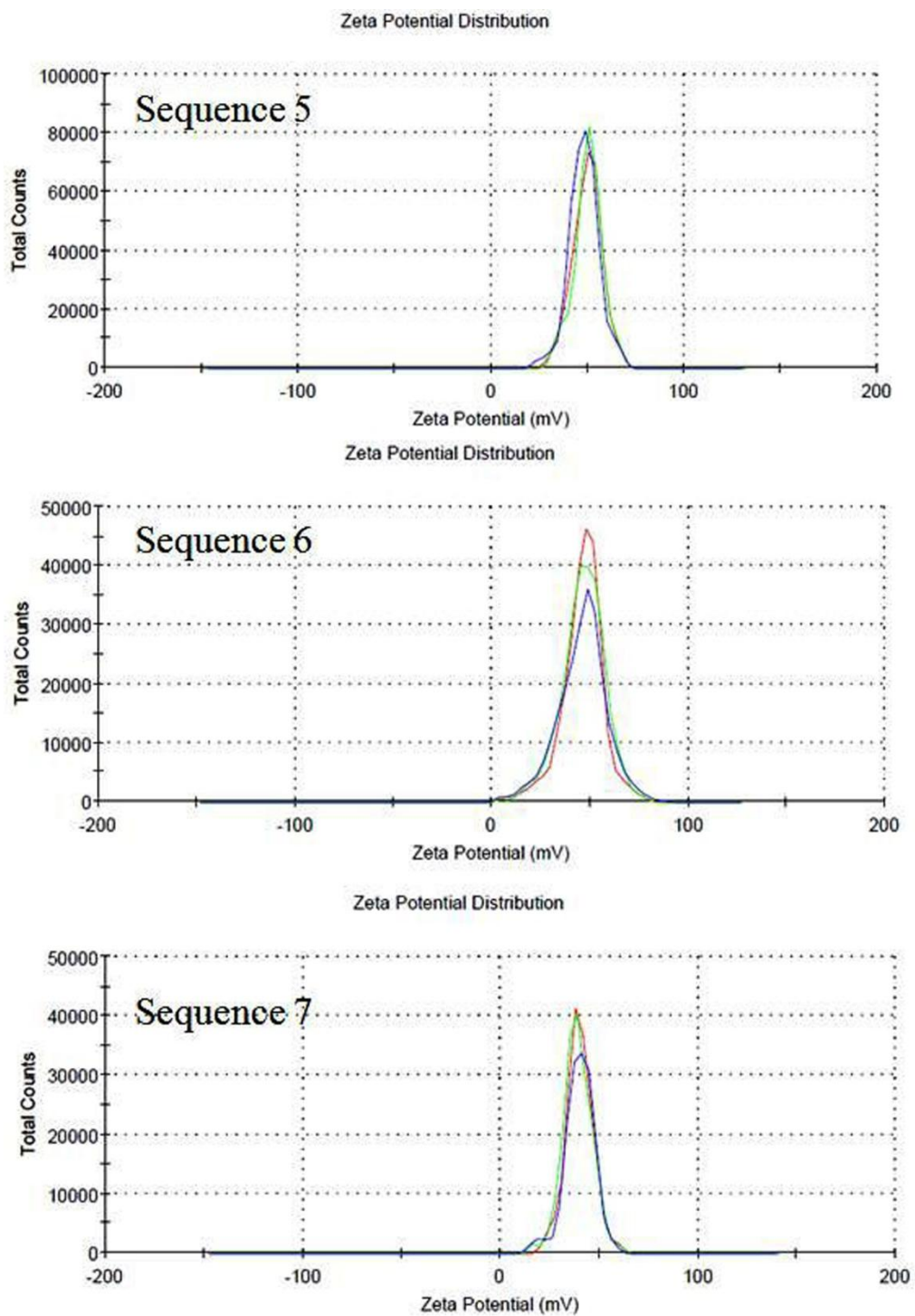
Sequence 6



Sequence 7

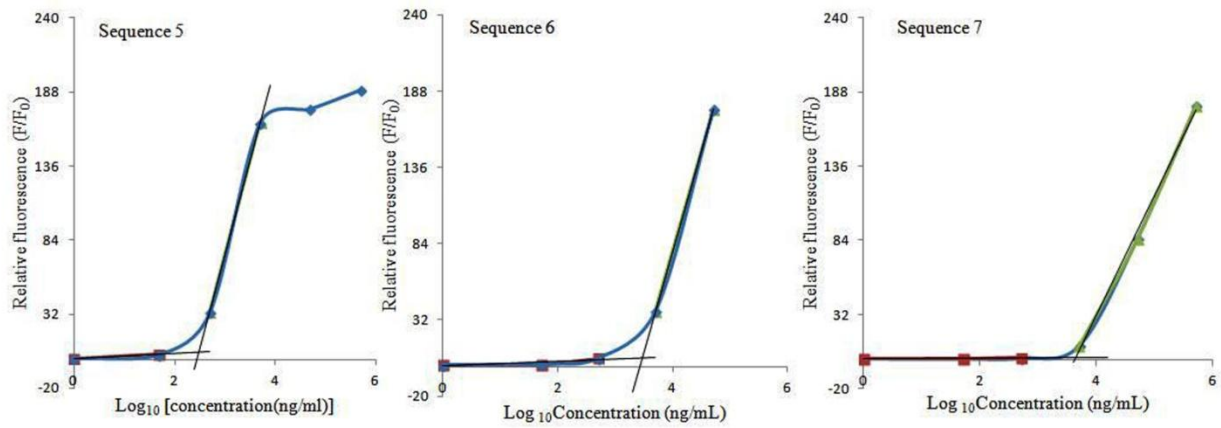


**Fig. S1:** Histograms for size distribution of sequences 5-7 using dynamic light scattering



**Fig. S2:** Histograms for zeta potential distribution of sequences 5-7.





**Fig. S3:** Critical aggregation concentration determination of sequences 5-7 using light scattering intensity. Normalized fluorescence is plotted against log concentration of sequences. Here,  $F$  represents fluorescence intensity at a fixed peptidomimetic concentration and  $F_0$  is fluorescence intensity in buffer.