

Fig. 1. Edman traces of 10 random beads picked from the 78,125 compound library.

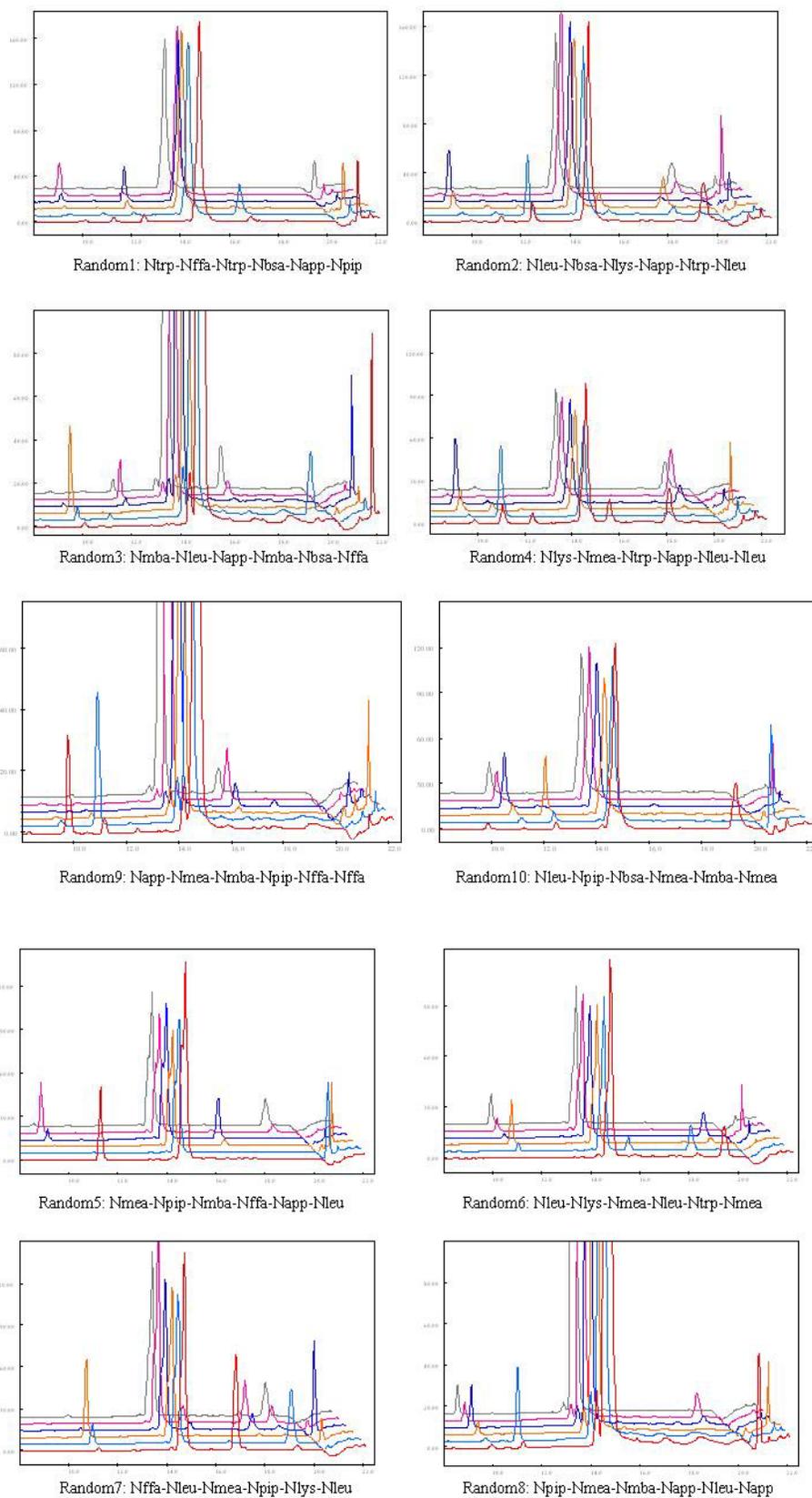


Fig. 2. Edman traces of 10 random beads picked from the 531,441 compound library.

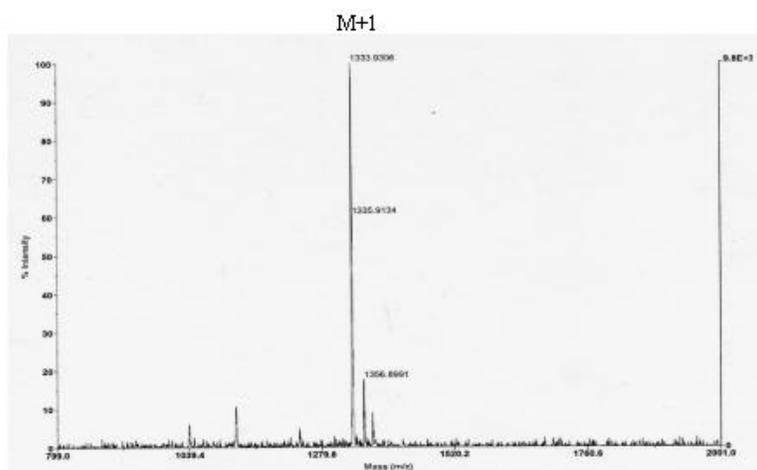
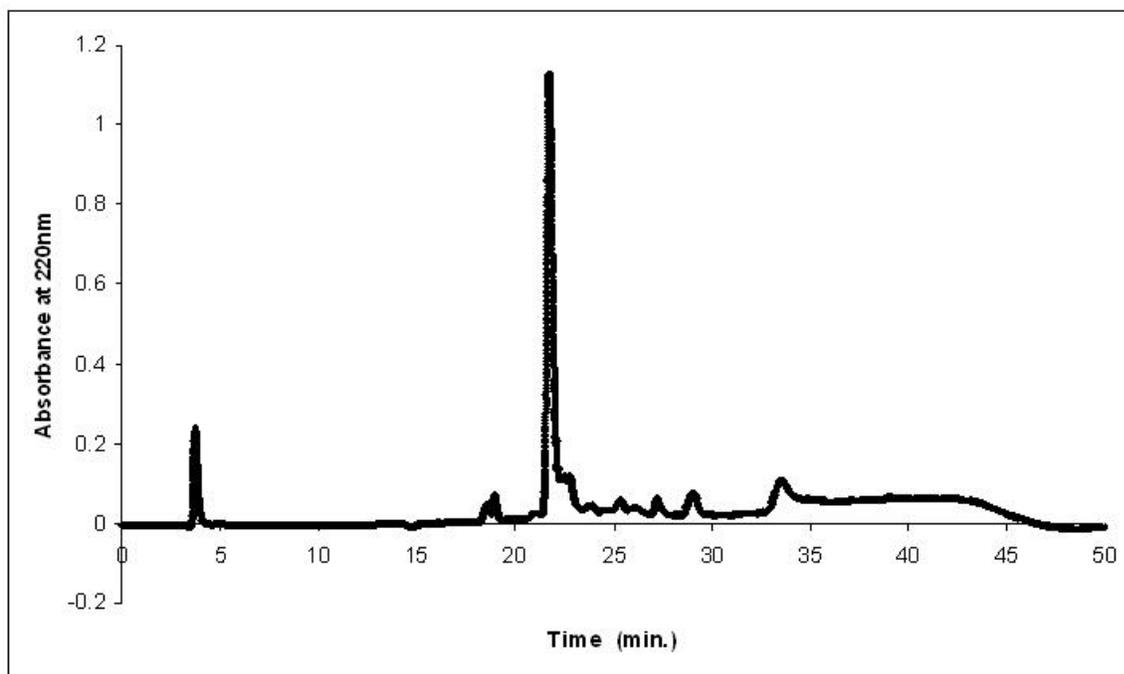


Fig. 3. HPLC and MALDI-TOF of a representative mixed sequence 8mer, NSer-Nlys-Nall-Nlys-Nbsa-Npip-Nbsa-Npip-CONH₂, employing all the monomers used in the 78,125 compound library.

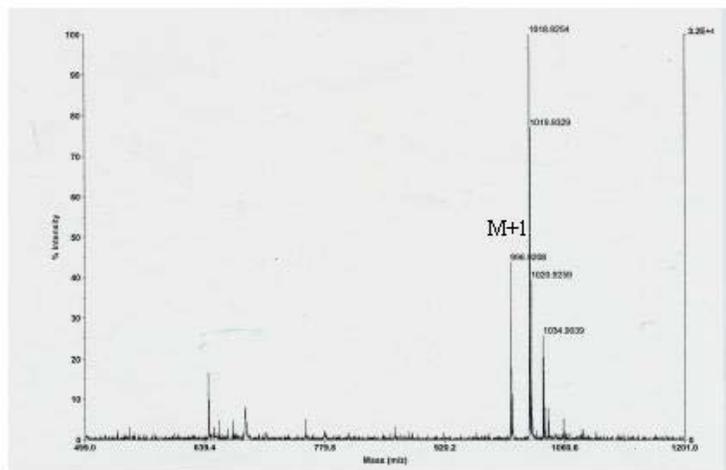
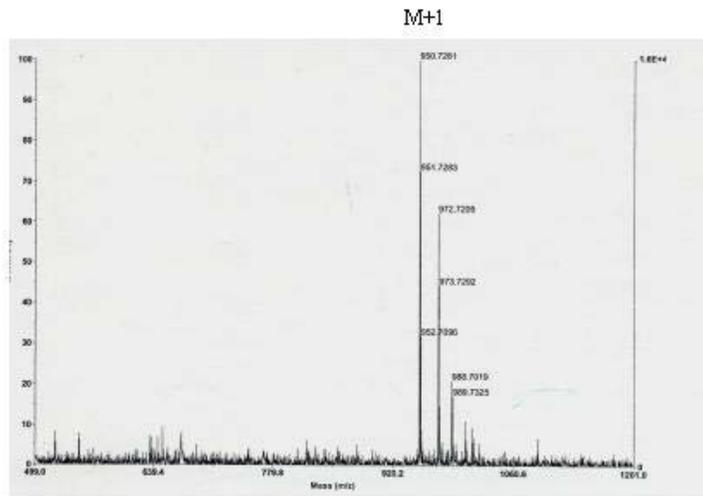
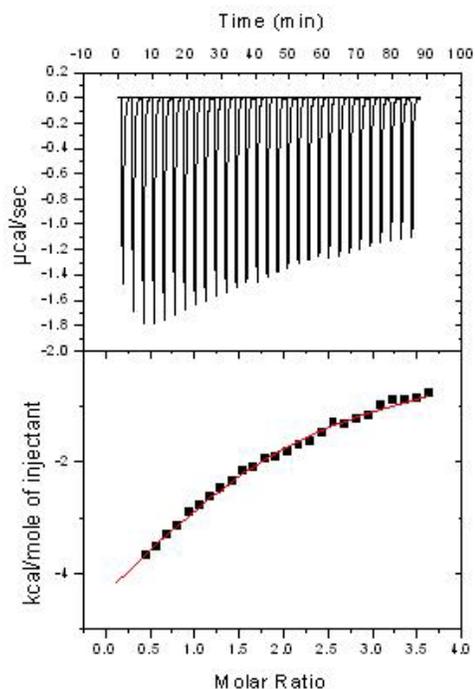


Fig. 4. MALDI-TOF spectra of mixed sequence 6mers, Ntrp-Nmea-Npip-Nlys-Nffa-Nmba-CONH₂ and NH-Nbsa-Niba-Napp-Nffa-Nmea-Npip-CONH₂, from Fig. 7 in the main text.



$K_d = 62\mu\text{M}$
 $[\text{GST}] = 30\mu\text{M}$
 $[\text{Peptoid}] = 800\mu\text{M}$

Fig.5. Solution binding studies of peptoid•GST complex by Isothermal Titration Calorimetry (ITC).

Amine	Retention time (min.)
Nser	6.4
Nall	13.9
Nlys	18.4
Npip	20.9
Nbsa	12.5
Nleu	19.5
Ntrp	21.3
Nman	16.1
Namp	15.1
Nmba	21.8
Napp	10.0
Nffa	17.0
Nmea	11.3

Table 1. Retention times of hydantoin derivatives derived from Edman sequencing.