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Source: *Bioorganic & Medicinal Chemistry*, 16, 7410-7414(2008), Y Takakusagi
Bioorganic & Medicinal Chemistry Letters, 15, 4850-4853(2005), Y Takakusagi
 Binding of Pharmaceutical Small Molecules and T7 Phage

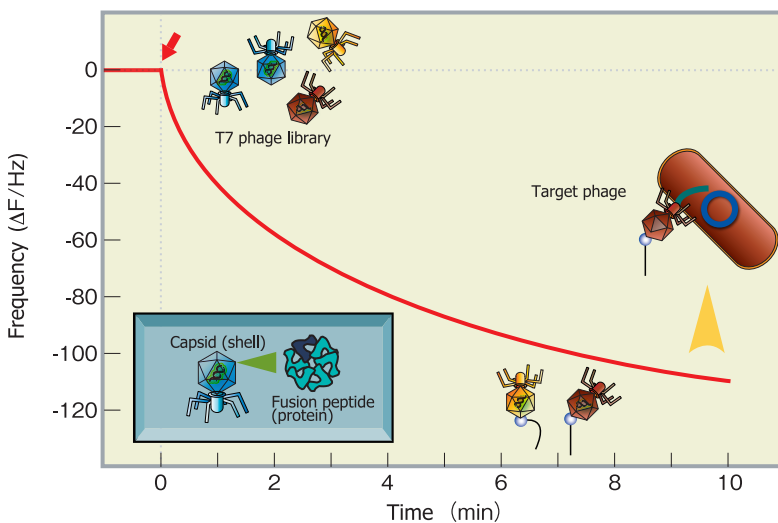
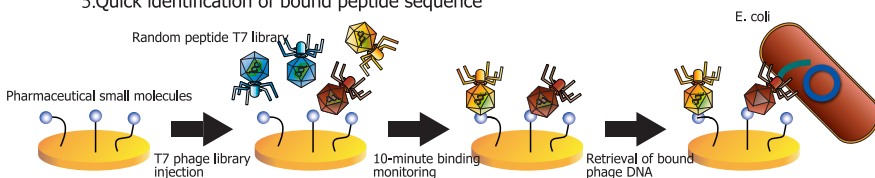
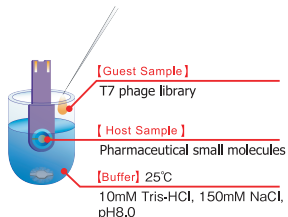
Binding of Pharmaceutical Small Molecules and T7 Phage

Materials

1. T7 phage-displayed random peptide library
(By Novagen, T7Select System)
2. *E. coli* culture
3. Pharmaceutical small molecules or derivatives
* Self-assembled monolayers, biotinylated derivatives
4. NeutrAvidin (By PIERCE, No.31000)

Results

1. Binding of phage group displaying peptide sequence that can identify pharmaceutical small molecules
2. Deciphering of bound peptide sequence by infecting phage DNA bound to gold electrode with *E. coli*
3. Identification of sequences exhibiting weak binding
4. Repeated rounds and condition selections in phage display technique omitted
5. Quick identification of bound peptide sequence



Application

1. Identification of various peptide and proteins bound to pharmaceutical small molecules
2. High throughput screening of protein bound to pharmaceutical small molecules
3. Other researches utilizing phage display technique