Fragment Screening for Drug Discovery

Diane Joseph-McCarthy

AstraZeneca R&D Boston, Waltham, MA 02451

It is increasingly common for lead generation and optimization to involve fragment screening, where fragments are defined as small molecules typically with molecular weight less than 300 Da. Since the size of chemical space is proportional to the size limit of the molecules considered, covering chemical space is more manageable with fragments than with drug-sized molecules. Various approaches for docking "fragment" vs. "lead-like" molecules will be discussed. Also, a comparison of docking results and biophysical-based fragment screening data will be presented.