**High Throughput Drug Screening Technology**

Tae-gyu Nam, Ph. D.

Department of Pharmacy, Hanyang University

tnam@hanyang.ac.kr

In drug discovery program, High Throughput Screening (HTS) of small molecule libraries has been one of the most powerful tools to discover novel hit compounds. Since technologies required for the hit-to-lead optimization are quite available, discovery of novel hit compounds is becoming a more important starting point for a successful drug discovery project than ever. In chemical biology approach, novel hit compounds also can lead to the identification of target protein or pathway responsible for the pathology or disease condition of interest especially when strong and specific binding affinity between small molecule and the target protein is obtained. HTS and related technologies can be applied to a variety of fields. For example, HTS campaigns in neglected diseases and stem cell research have made a tremendous amount of contribution to the fields. On the other hands, Tox21 toxicology program has actively applied HTS technology to change the toxicology paradigm.

In this presentation, a brief history and the state of the art of HTS system, a couple of technical issues that can be encountered during the HTS campaign, and a few examples of HTS in various drug discovery programs will be discussed.