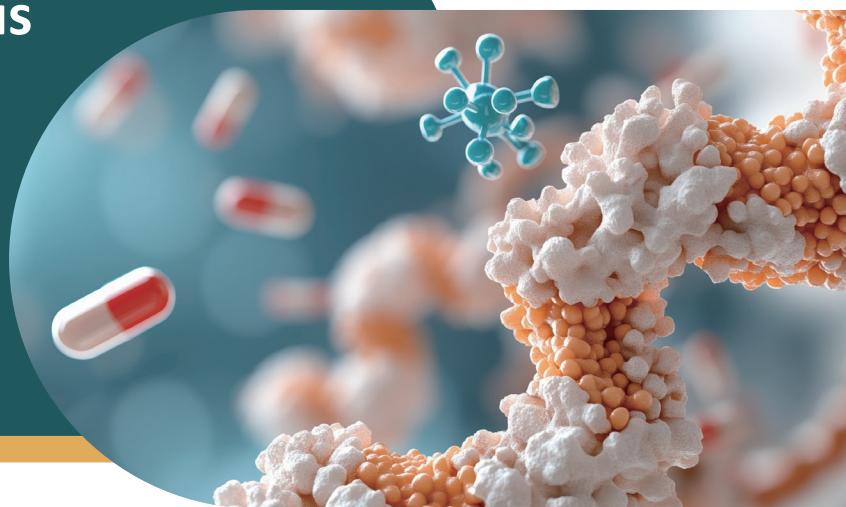
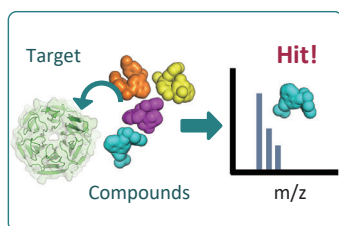


High Throughput Affinity Selection Mass Spectrometry (HT-ASMS)

HT-ASMS is a powerful technology to identify binders for various targets. Axcelead offers a high-throughput and highly flexible binder finding service.

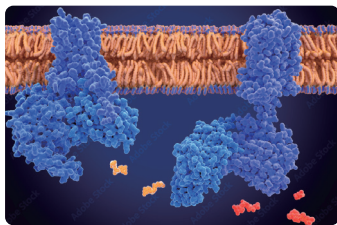


Maximizing screening outcome by flexible workflow and utilizing high-quality compound libraries



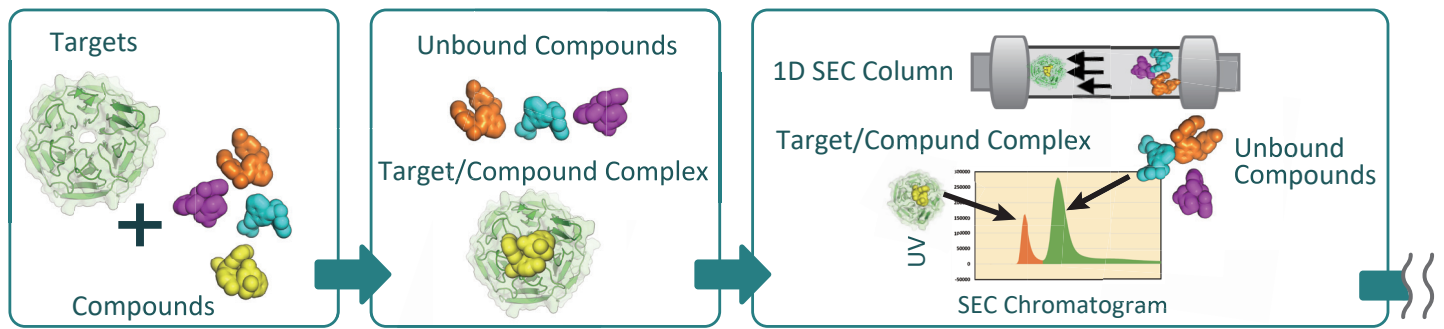
- Large scale screening in short turn around time
- Cost-effective parallel screening

Extensive track records in membrane protein binder screening



- Virus-like particles (VLPs) and other material preparation capabilities

HT-ASMS Technology and Axcelead's Track Records

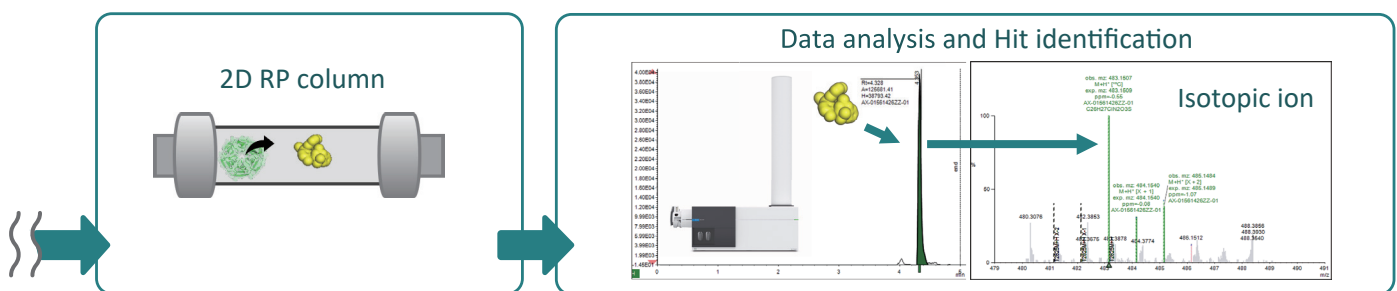


Incubation

Incubate compounds (400 cpds/well) with target

B/F separation

Remove unbound compound by size exclusion chromatography (SEC)



Dissociation

Separate bound compound from target by denaturation of complexes

Detection

Compound identification by TOF-MS

>1.2M

Compound library

>60

ASMS projects

>15

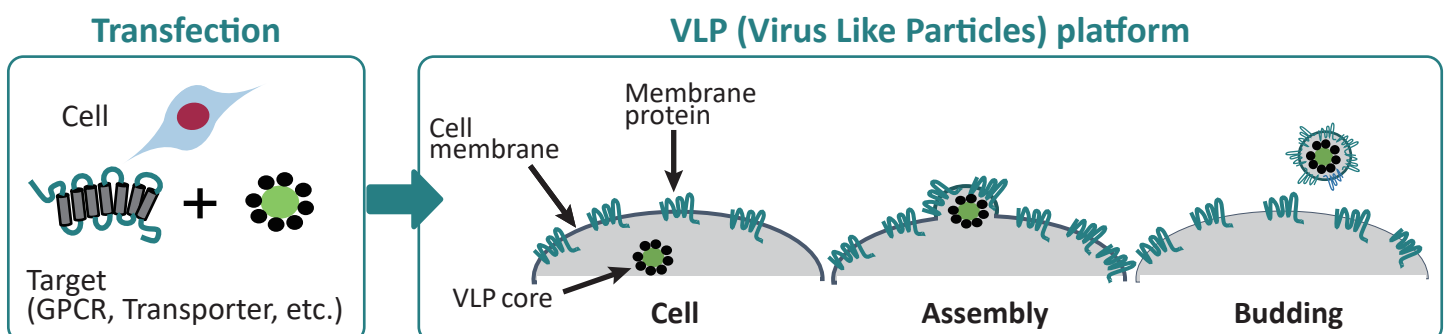
Clients

4 months

Hit identification

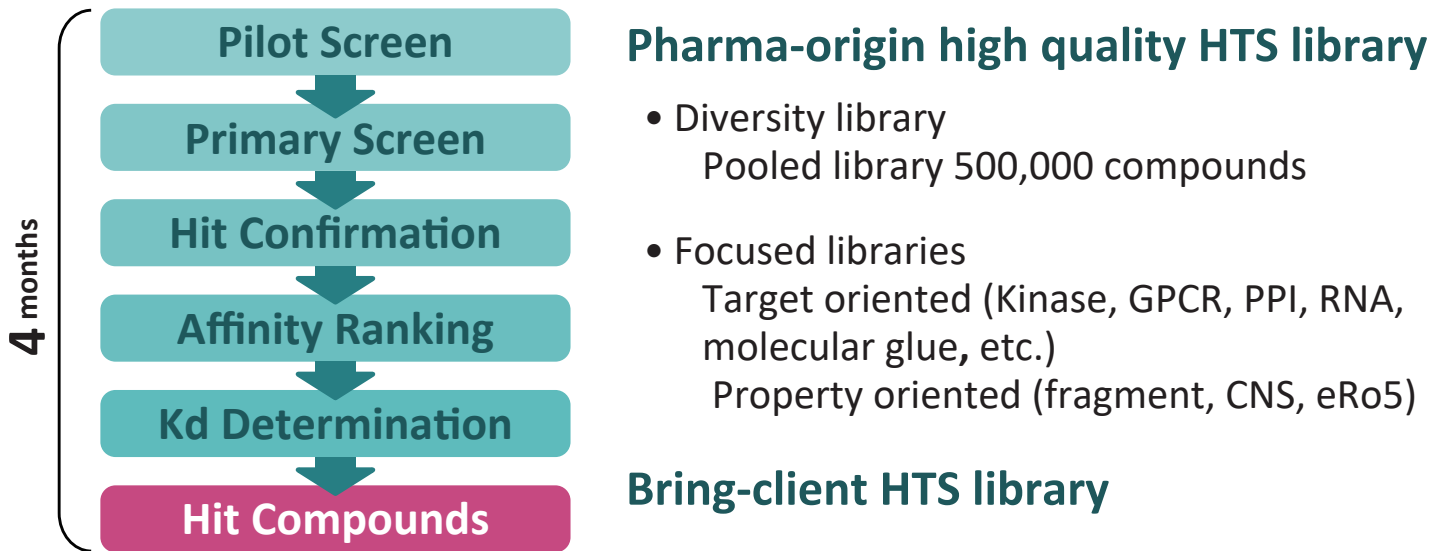
ASMS Track Records for Membrane Proteins

Axcelead has successful track records in ASMS screening for membrane proteins utilizing VLP, membrane fraction, etc.



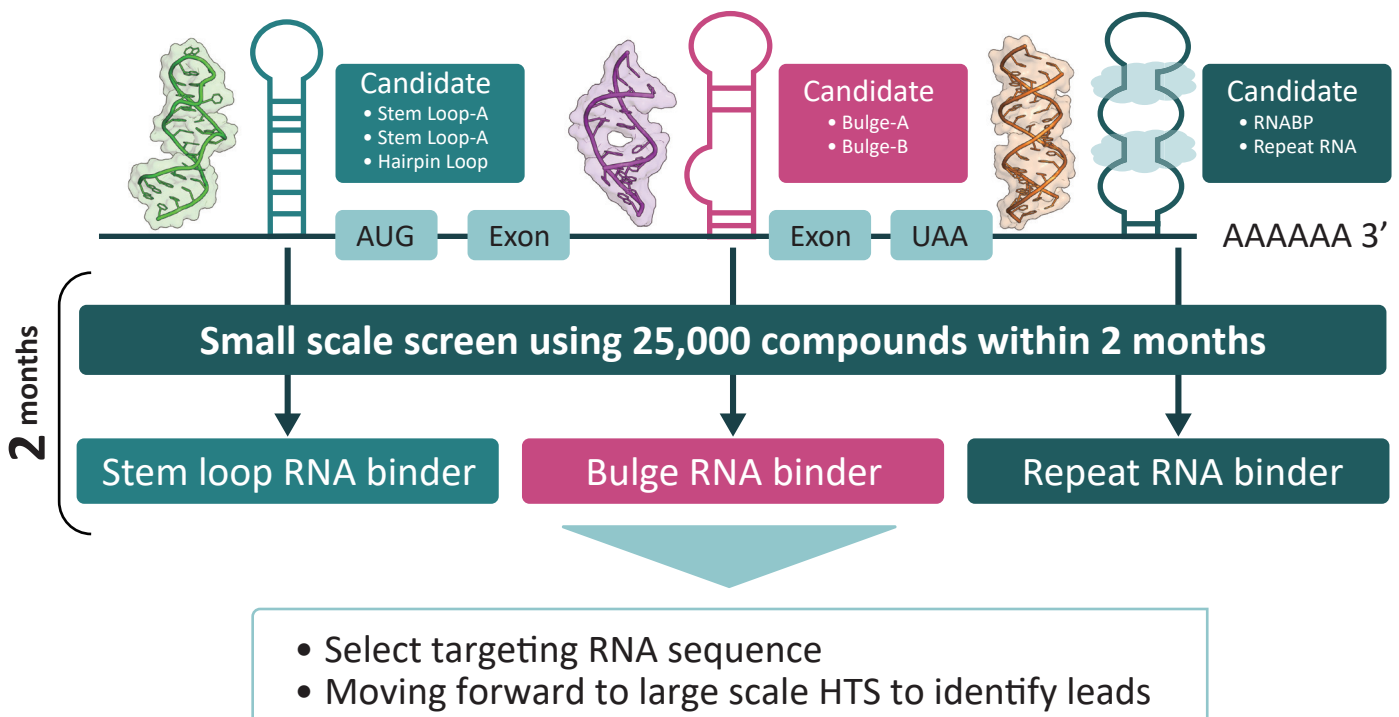
Highly Flexible ASMS Screening Platform

Large scale HTS in short turn around time using Axcelead's HTS library and/or client's library



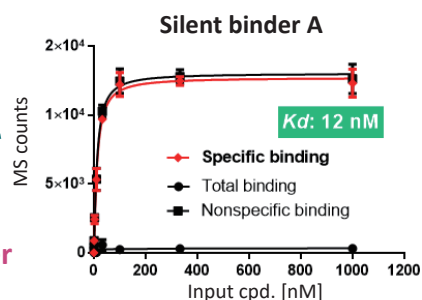
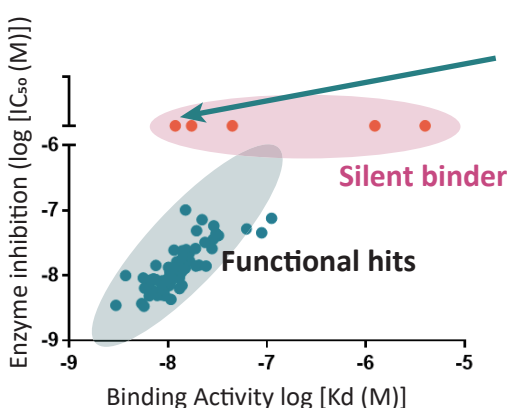
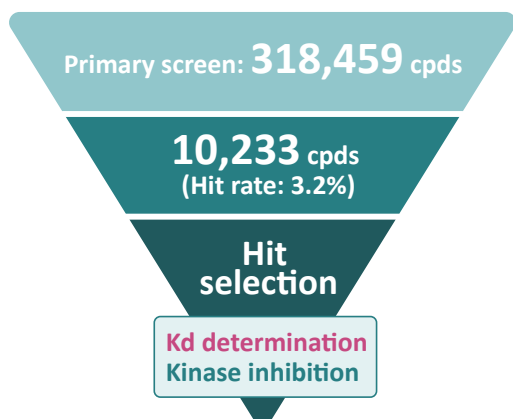
Cost-effective parallel screening using small scale library; TMQ (Target Molecular Quest) service

Use case in RNA-targeted drug discovery

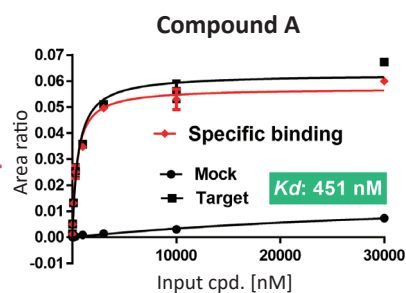
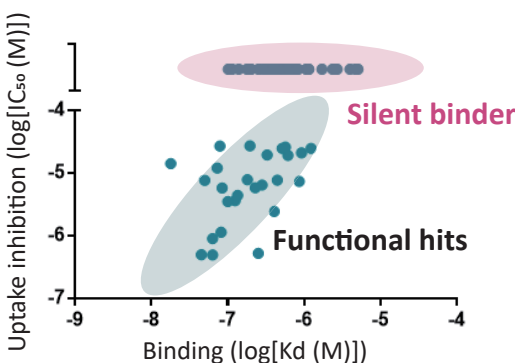
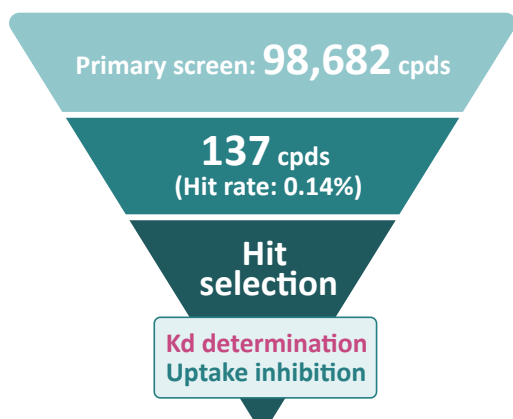


HT-ASMS Case Studies

Soluble protein (Kinase)



Membrane protein (Transporter)



Summary

Axcelead is a leading drug discovery CRO, established in 2017 as a spin-off from Takeda Pharmaceutical Company, inheriting the research functions, data, and experienced scientists related to preclinical drug discovery capabilities including HTS.

HT-ASMS is one of the most effective technologies to identify binders against wide variety of drug discovery targets such as proteins and nucleotides. Axcelead provides HT-ASMS platform to identify quality hit compounds fully utilizing comprehensive hit finding capabilities including pharma-origin proprietary small molecule HTS libraries, of which more than 60% of compounds are internally synthesized original ones.

Axcelead has experienced >60 of ASMS projects for 15 clients and they are continuously growing. Notably, Axcelead has plenty of successful ASMS assay development experiences against membrane proteins utilizing membrane fraction of over-expression cell lines, solubilized proteins, or VLP.

The strategy for screening is to be customized flexibly and our experienced HTS project leaders work together with clients to achieve project goals in short timeline. For example, Axcelead offers cost-efficient parallel HT-ASMS screening utilizing small scale library, which enables customers to prioritize protein constructs, RNA sequences, assay conditions, or target to be screened, before moving forward to full scale HTS.

Here we introduced our HT-ASMS platform and case studies. Reach out to us to accelerate drug discovery by utilizing Axcelead's quality binder identification platform.

