

# Axcelead Kinase Inhibitor Discovery Platform: Identification of Selective Inhibitors for 123 Kinases

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Discovery on Target 2023 Sponsored Presentation

**Akito Hata**

Director | Protein Science, Discovery Biology

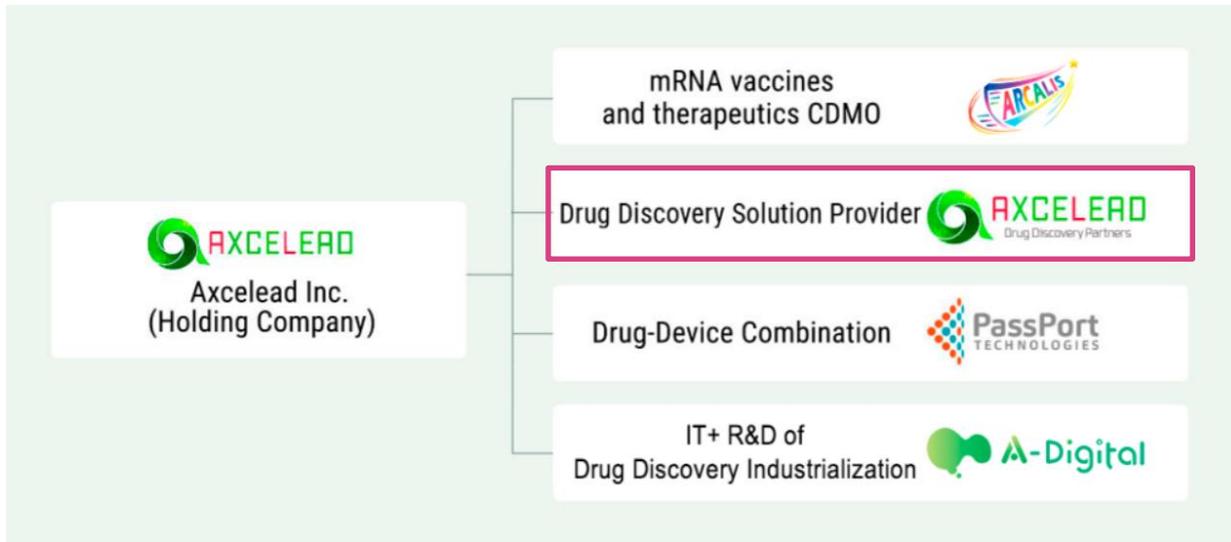
25/09/2023

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# Discovery on Target 2023 Sponsored Presentation

- **Axcelead Drug Discovery Partners Inc.**
- **Kinase platform overview**
- **Selective kinase inhibitor assets for 123 kinases**

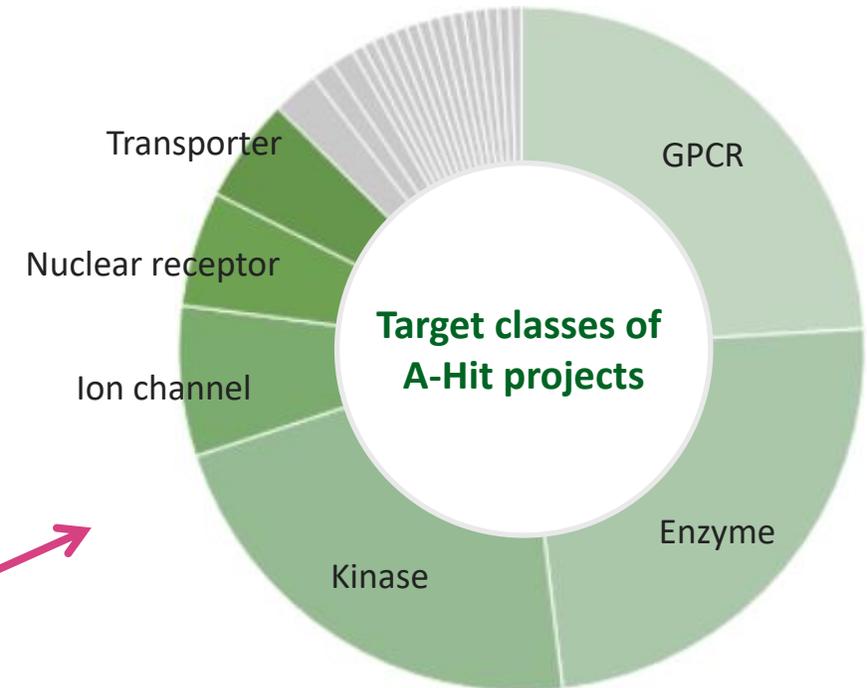
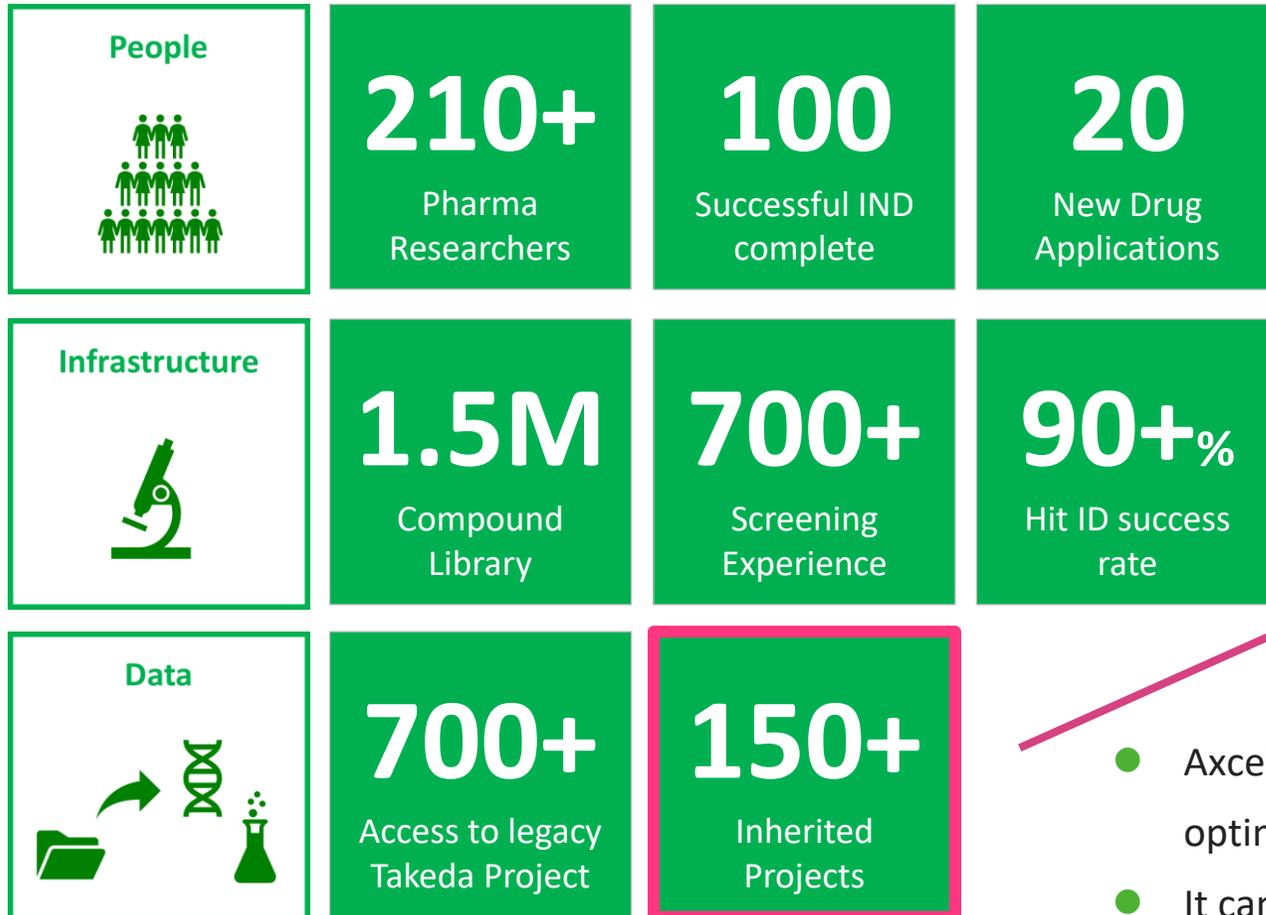
## We are a drug discovery solution provider with comprehensive preclinical capabilities



- Established in 2017 as a Takeda spin-out company which became fully independent on April 1, 2019
- Located in Shonan Health Innovation Park
- 280+ employees
- 210+ clients in 6 years

	Lead generation	Lead optimization	Candidate Selection
Screening	In vitro evaluation	In vitro evaluation	
Chemistry	Design and Synthesis	Design and Synthesis	non-GxP bulk. (API synthetic route)
Biology	In vitro Pharmacology	In vivo PD	Efficacy in disease model
DMPK	HT-ADME	HT-ADME PK/PD	Human PK. PK/PD
Safety	In vitro toxicology	In vitro toxicology. In vivo toxicodynamics.	In vivo toxicology

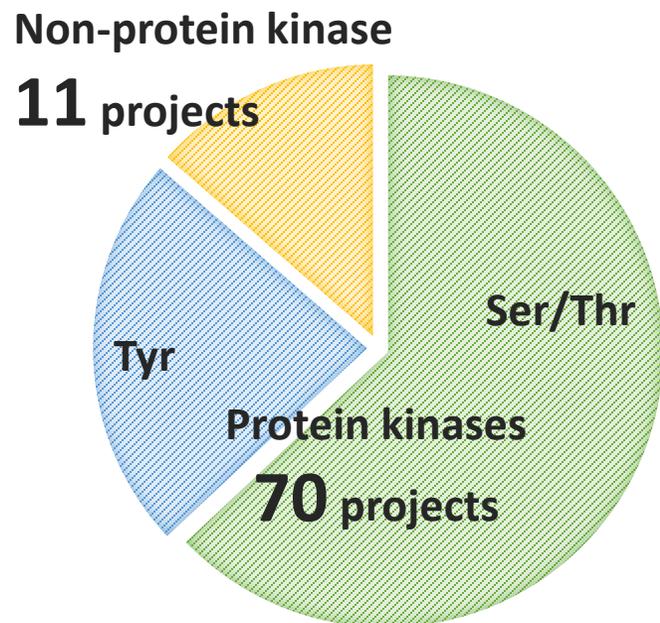
## *Inherited assets from Takeda Pharmaceuticals make us unique as a drug discovery CRO*



- Axcelead has full access to the 150+ inherited project information and optimized compounds that can be used for client's drug discovery project
- It can shorten the timeline of integrated drug discovery service

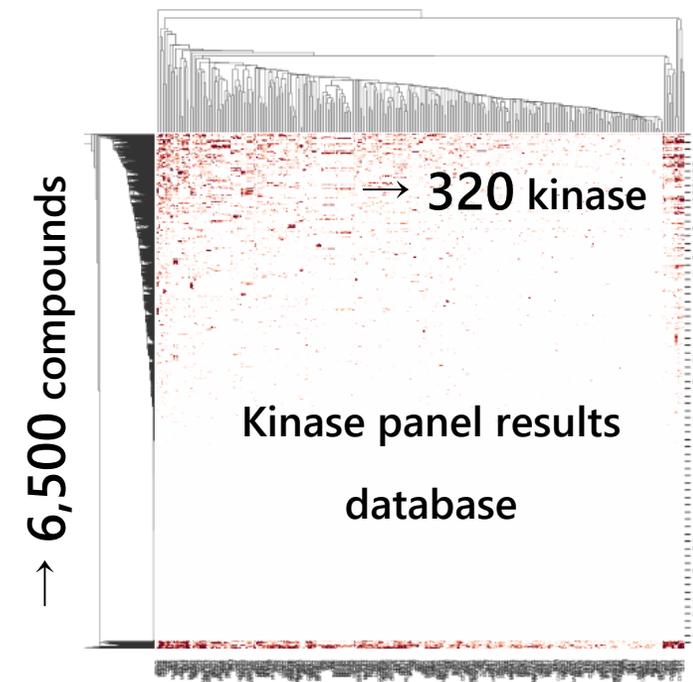
# Kinase Platform to Develop Selective Kinase Inhibitors

## Kinase project experience



- Axcelead's compound library includes original kinase inhibitors synthesized in the legacy Takeda projects
- We have full access to legacy data of inherited compounds including internal kinase panel results

## Internal kinase panel data



*How can we utilize inherited data to develop a platform to identify selective kinase inhibitors efficiently?*

Kinase focused library

Mini Kinase Panel 46

Selective inhibitor assets

# Selective Hit ID tool #1 | Kinase Focused Library

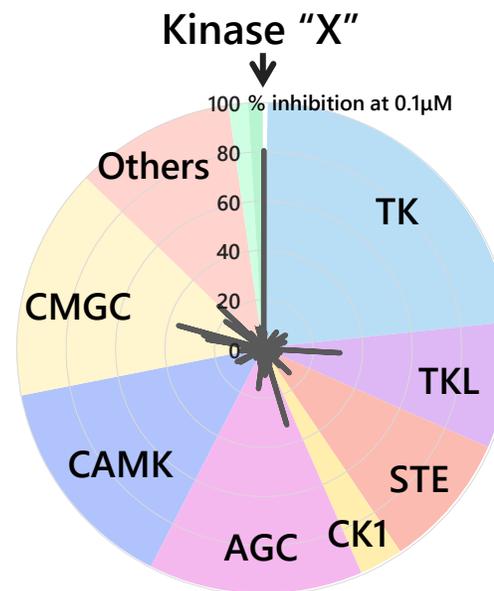
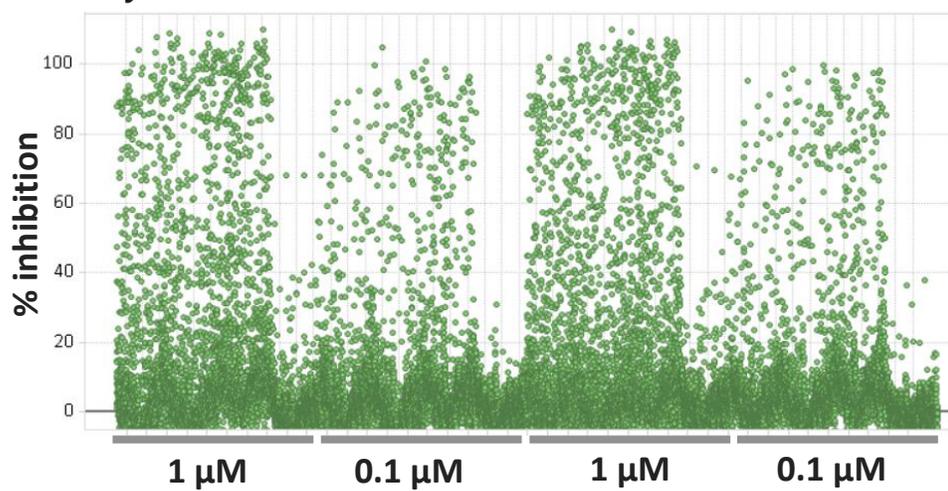
## Kinase focus library

- Approximately 5,000 compounds
- Almost all compounds have full kinase panel data (320+ kinases)

## Protein kinase "X" HTS



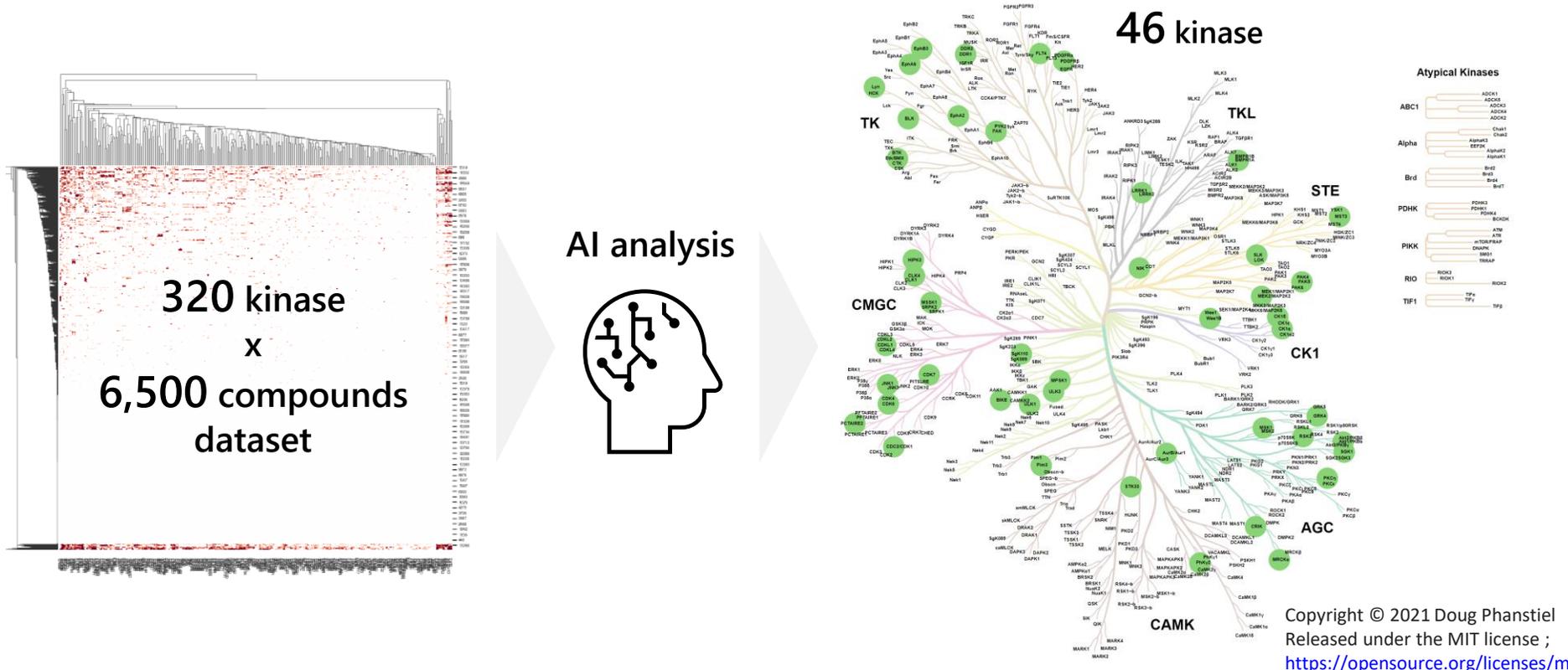
## Primary HTS



Compound A  
Kinase "X"  $IC_{50}$  18 nM  
Selectivity score = 3.0%

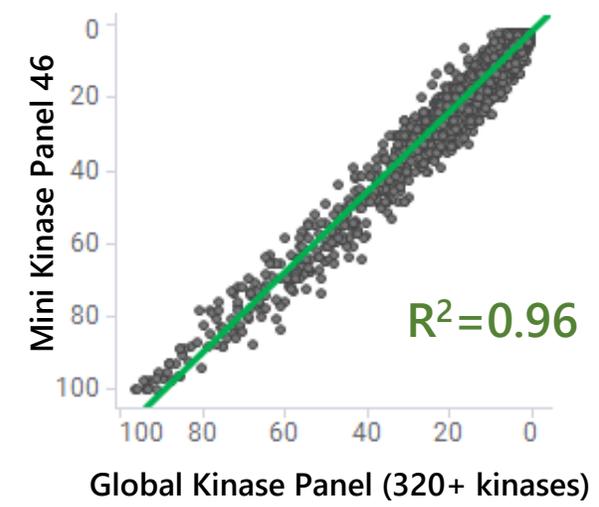
- Comprehensive selectivity profile can be obtained by only single assay with the kinase of interest
- Five selective and potent hits were identified by single experiment

# Selective Hit ID tool #2 | Mini Kinase Panel 46



## Selectivity score\*

\*Selectivity score = % of kinases IC50 < 1µM



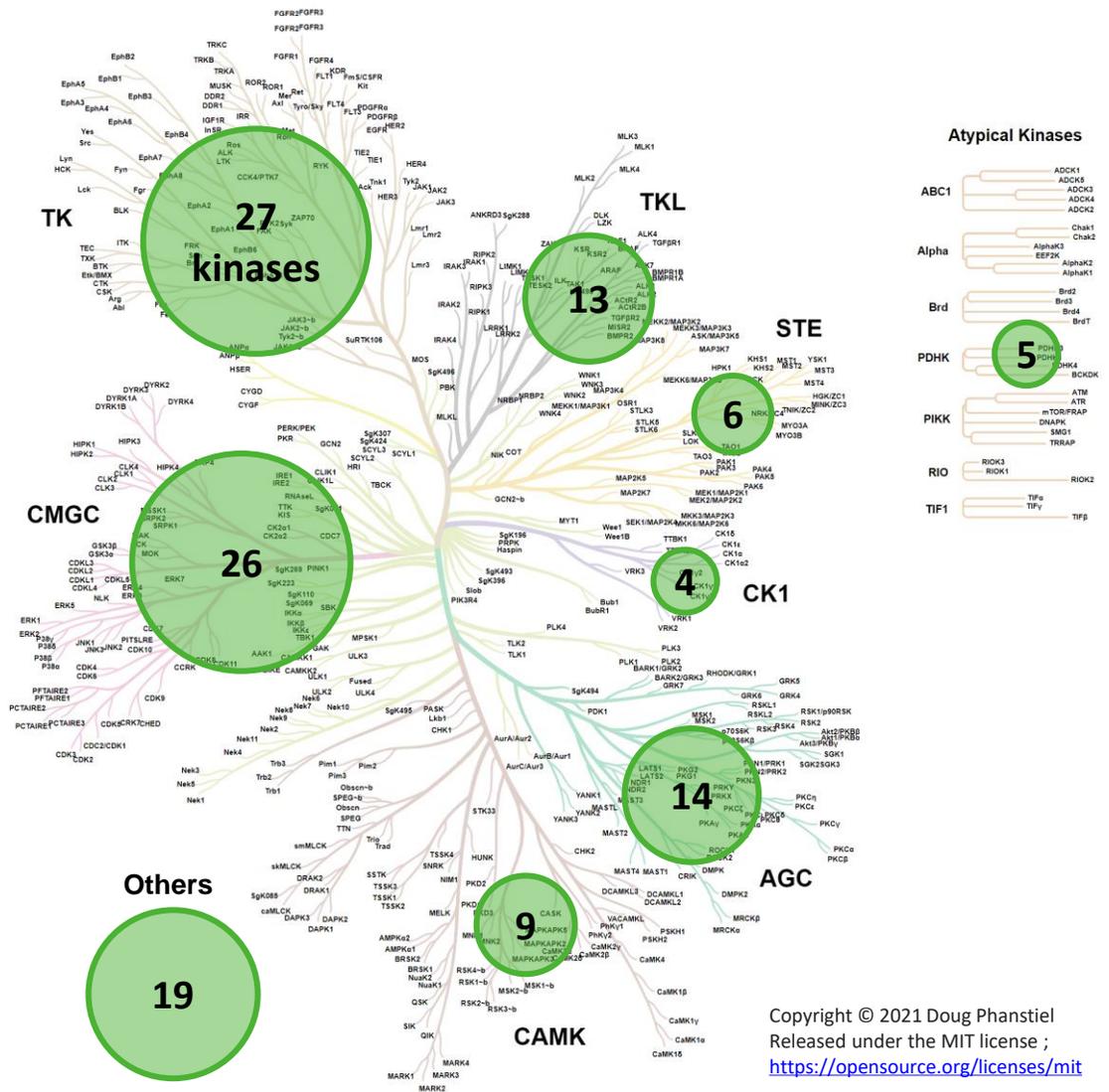
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- 46 kinase menu selected by analyzing internal kinase panel database by AI
- Mini Kinase Panel 46 results represents selectivity score obtained by 320+ kinases test
- Cost-effective assay for early stage of hit discovery stage

# Selective Kinase Inhibitor Assets, A-SKIP

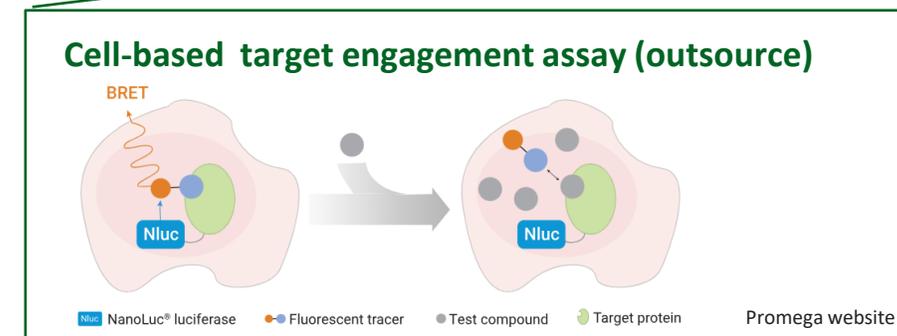
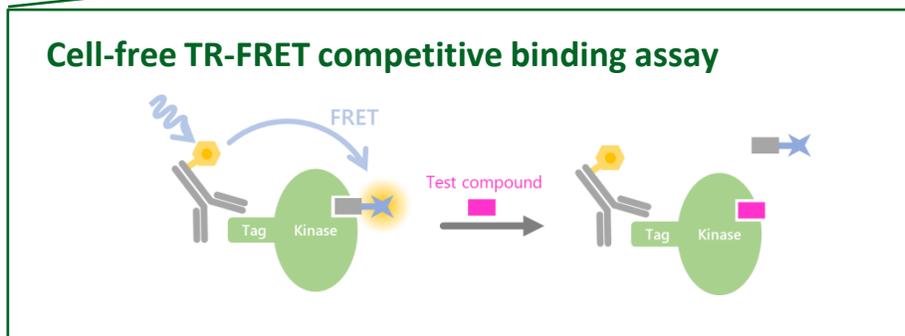
## A-SKIP; Axcelead Selective Kinase Inhibitor Profiler

- Potent ( $IC_{50} < 30nM$ )
- Highly selective  
 $IC_{50} < 1\mu M$  ; < 5% of test kinases  
 Number of  $IC_{50} < 30nM$ ; < 5 kinases
- Coverage; **123** kinases
- 94% of A-SKIP compounds didn't have records on ChEBML database



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# Axcelead Kinase Inhibitor Pipeline Development



## In-progress for selected kinases

- Cell-based PD study
- SAR study using library compounds and compound optimization strategy development
- Compound profiling; ADME profiling, cassette dosing PK study

*Clients can utilize these asset information in our Integrated Drug Discovery service.  
Reach out to us to jump start kinase program!*

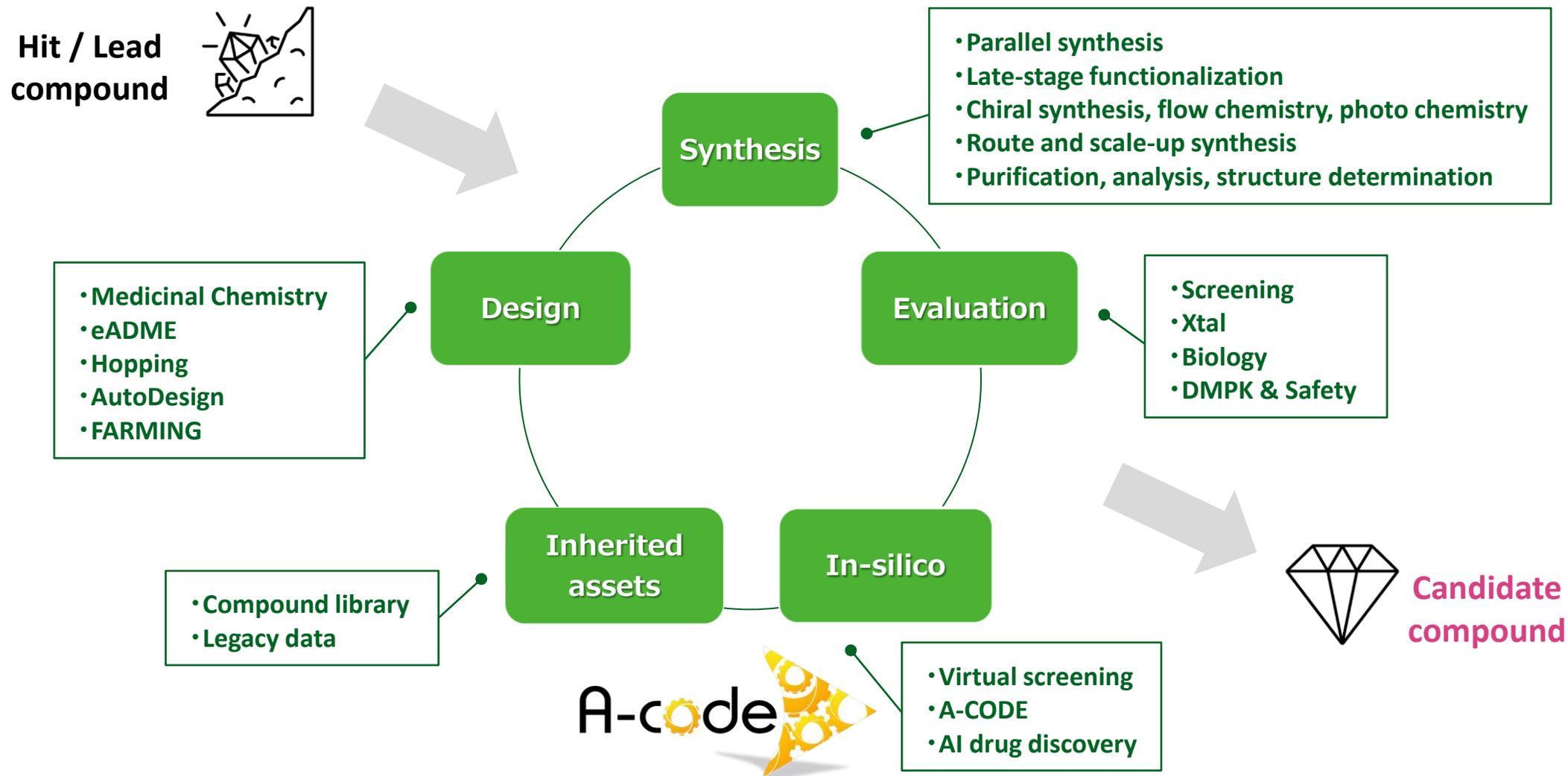
# Comprehensive Capabilities to Accelerate Lead Generation

People

**210+**  
Pharma  
Researchers

**100**  
Successful IND  
complete

**20**  
New Drug  
Applications



# Summary

- **Axcelead is a unique drug discovery CRO with inherited assets from Takeda pharmaceuticals**
- **Our kinase platform will provide efficient tools to discover selective kinase inhibitors**
- **Selective tool inhibitors, A-SKIP, have been identified against 123 kinases and cell-based assessment is in-progress**
- **We can utilize our asset information and accelerate your kinase program through our integrated drug discovery service**