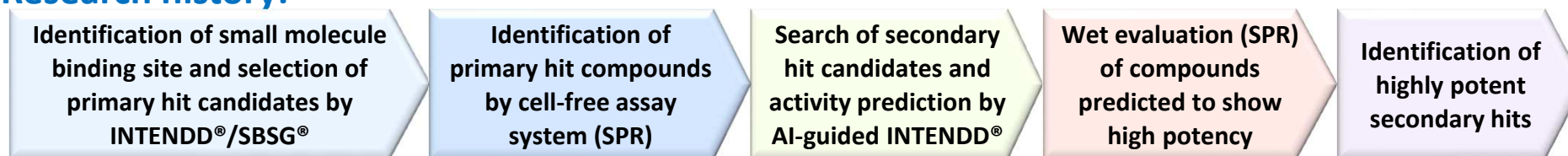


Small molecule IL-6 inhibitor

Concept:

- ◆ We identify orally active compounds that bind to IL-6 and inhibit interaction between IL-6 and IL-6R.
- ◆ Such compounds can be alternatives to anti-IL-6 and IL-6R antibodies, and anti-IL-6 therapy can be extended beyond current segments treated with antibodies.

Research history:



Present status and future scope:

- ◆ Interprotein identified the following 2 primary hit compounds by INTENDD®: A196 ($K_D = 35 \mu\text{mol/L}$) and C021 ($K_D = 18 \mu\text{mol/L}$), whose ranking was clearly higher than that of docking study (Fig. 1).
- ◆ AI-guided INTENDD® proposed 6 secondary hit candidates based on the scaffold of A196 and 4 compounds of the candidates showed more potent affinity including 2 sub-micromolar compounds as indicated in Table 1.
- ◆ We are seeking for a collaborative research partner (pharma or biotech but NOT CRO/SERVICE PROVIDER) that conducts synthetic evolution for lead generation/optimization.

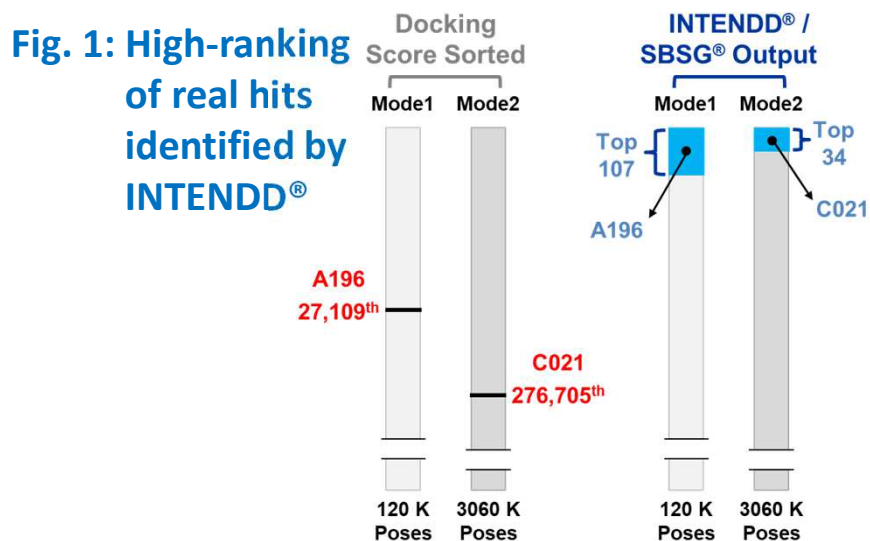


Table 1: *In vitro* activities of representative compounds

	Primary hits		Secondary hits			
Compound ID	A196	C021	D002	D003	D005	D006
Affinity to IL-6 (KD, $\mu\text{mol/L}$)	35	18	0.32	0.28	9.5	1.5