

# IChem: a toolkit for rational drug design



- Accelerating and rationalizing hit to lead
- Enables in silico target fishing and early safety profiles
- Fast and cost-efficient

#### **6** KEYWORDS

In silico screening
Drug discovery
Target identification

#### **6** REFERENCES

- **J. Chem. Inf. Model.** 47, 195-207, 2007
- **J. Chem. Inf. Model.** 52, 2287-2299. 2011
- **J. Chem. Inf. Model.** 53, 623-637, 2013
- **J. Chem. Inf. Model.** 53, 2322-2333, 2013

#### **6** LABORATORY

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### **TECHNOLOGY**

1D fingerprinting of protein-ligand 3D structures

- Binding mode fingerprints
- Cavity fingerprints
- Cavity detection and druggability estimates
- In silico target screening
- Target family-based compound screening

## **APPLICATION**

- Hit identification by virtual screening
- In silico target prioritization (Phenotypic screen follow-up)
- Early preclinical safety profile (most likely targets)
- Detection and screening of protein-protein interfaces

#### **INNOVATION ADVANTAGES**

- ultrafast
- relies on experimental data to post-process complex virtual screening matrices
- enables both compound and/or target libraries in silico screening

#### **DEVELOPMENT STATUS**

- Validated on difficult targets (e.g. GPCRs, RTKs; PPIs) either in-house or in collaboration with biotech/pharma partners
- Tool for automated identification of protein-protein interaction modulators under development

Partnership: licensing-out, fee for services, collaboration