



AURIGENE

Accelerating Discovery

TruFrag™ platform for Fragment Based Drug Discovery



TruFrag™ platform– Introduction and offering



- Aurigene's TruFrag™ platform is an integration of biophysical and computational methodologies into a differentiated approach for fragment based drug discovery
- The TruFrag™ platform offers:
 - Access to a high quality fragment library providing strong starting points for optimization
 - Validated approach integrating protein production, NMR based screening, X-ray crystallography and computational chemistry for fragment based hit generation
 - Lead generation package using the established capabilities of medicinal chemistry, biochemistry and cell biology



TruFrag™: Process



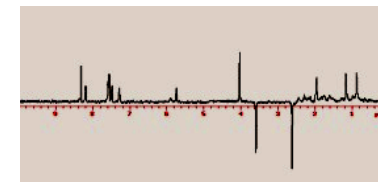
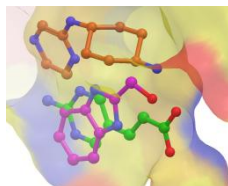
Structural knowledge of target class and
TruFrag™ fragment library

Fragment prioritization

Protein expression
and purification

FRAGMENT SCREENING

(NMR, HCS, Competitive binding)



KD/IC50 < 500uM

SAR around fragments

FRAGMENT HITS

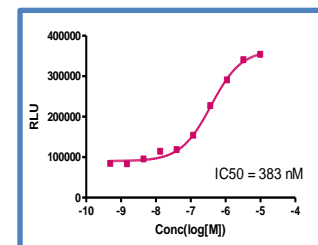
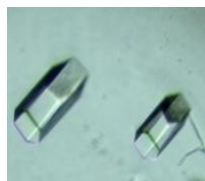
Biochemical/NMR assay

Mode of binding

Compound design & synthesis

HIT

(Potency < 10µm)



Crystal Structure

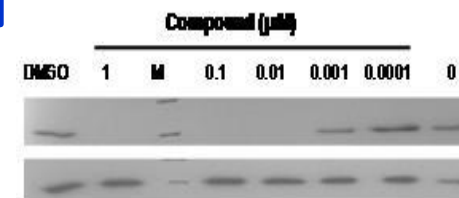
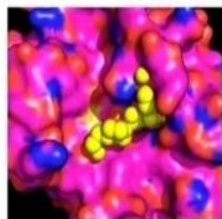
Med. chem. optimization

Biochemical assay

Cellular assays and ADME profiling

LEAD

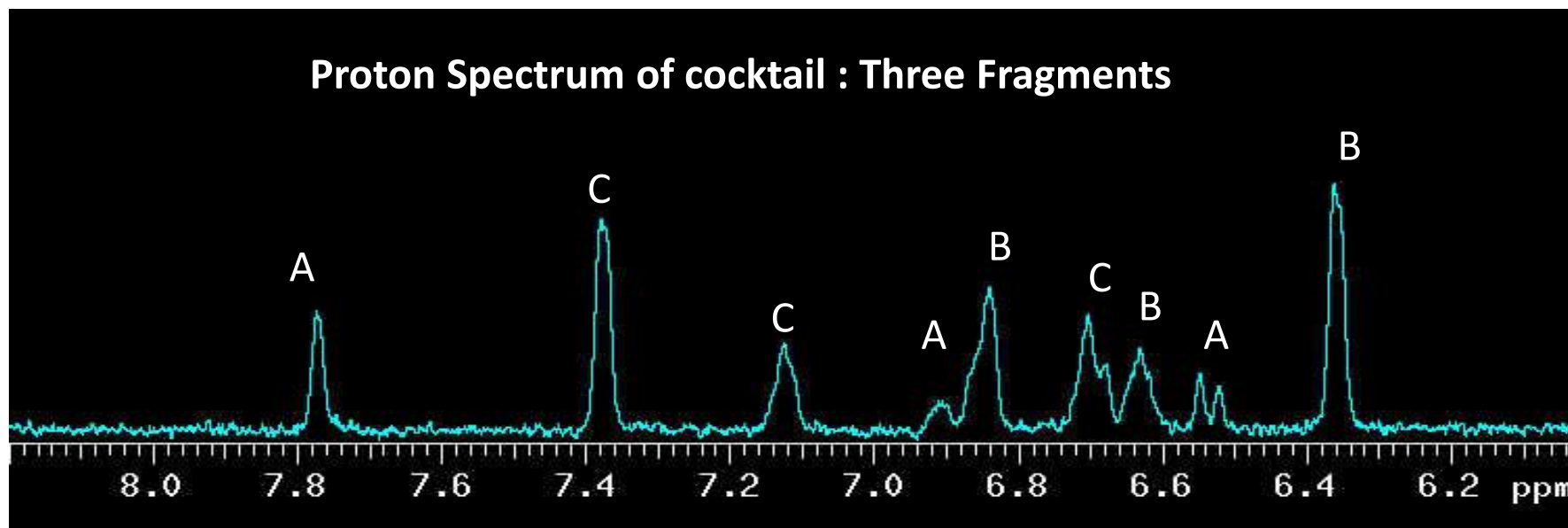
$K_i < 0.1\mu\text{M}$, MLM > 50%
Solubility > 25µM
Patentable



Aurigene Fragment Library



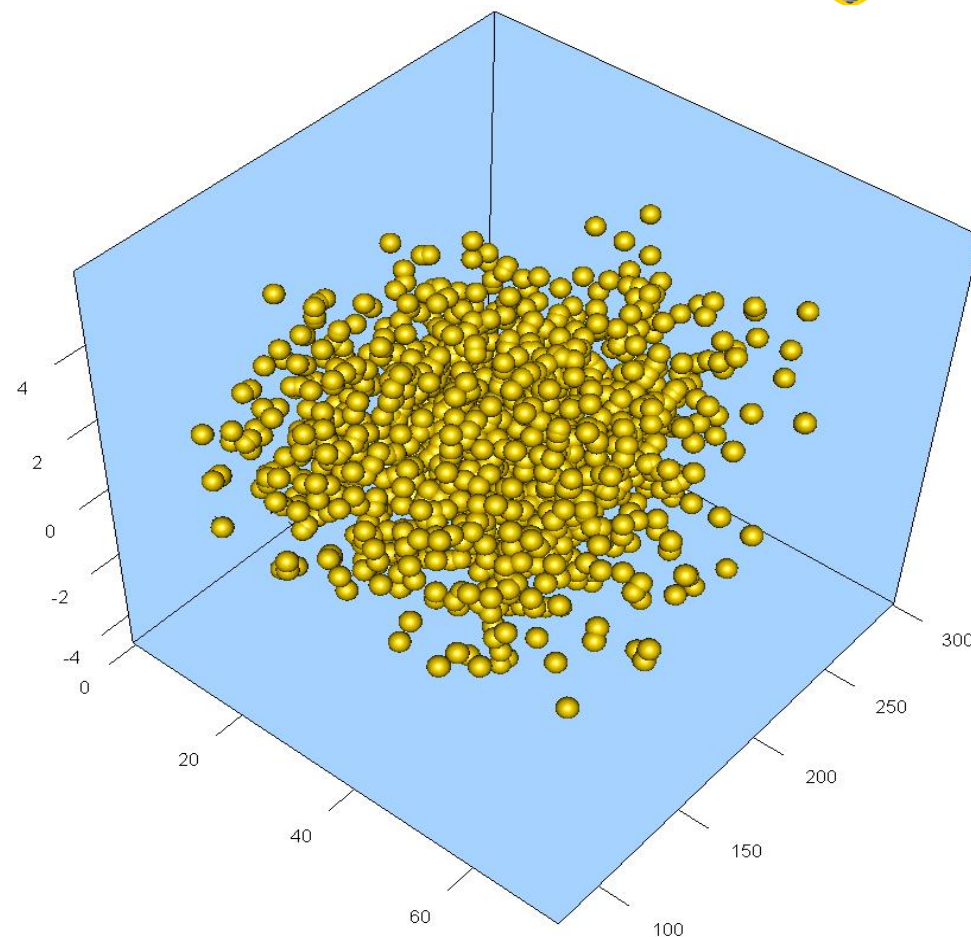
- Fragment Library : Diverse fragment library (5,000+ fragments)
- Follows Rule of 3:
 - Molecular weight (150 to 250)
 - $\text{clogP} \leq 3$
 - The number of hydrogen bond donors and acceptors (≤ 3)
- Solubility $> 500\mu\text{M}$



Quality of Fragment Library



- Fragments pass through stringent funnel of descriptors:
 - Ligand Efficiency (0.38)
 - CLogP (≤ 3)
 - Flexibility Index (≤ 3)
 - Molecular Weight (≤ 300)
 - PSA ($\leq 60 \text{ \AA}^2$)
 - HB-Donor/ HB-Acceptor (≤ 3)
- Cluster analysis is performed routinely to ensure the diversity of our fragments

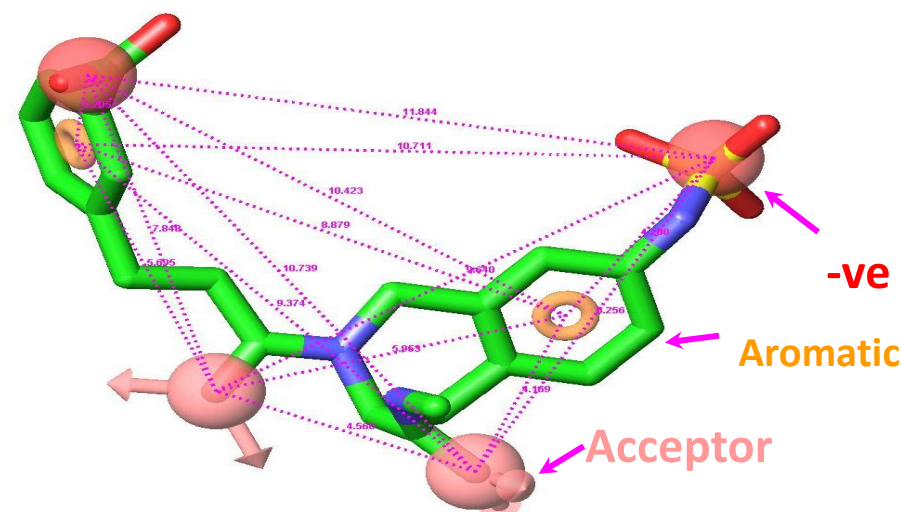
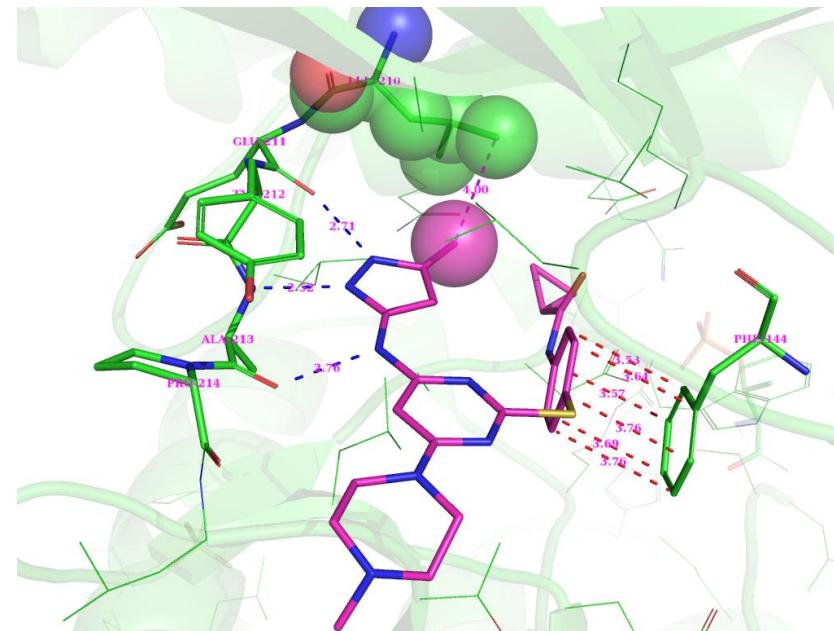


**Increasing collection of over 5,000
Fragments (proprietary as well as
commercial)**





- **Fragment library**
 - Diversity analysis , In-silico ADME properties, Ligand Efficiency
- **Fragment Prioritization**
 - Docking, Pharmacophore model
- **Binding mode and linking**
 - Docking, Homology model, Molecular Dynamic Simulation
- **Fragment Swapping**
 - Docking, Pharmacophore, Homology model, core-hopping



TruFrag™ Differentiation



- Established capabilities including integrated approach using high quality fragment library, structural biology and computational technologies to progress hits through lead generation and LO
- Faster lead generation through the TruFrag™ platform
- Identification of novel chemical IP for the client





- **TruFrag™ Lead Generation Package:**
 - Aurigene will deliver Lead/ Lead like compounds for partners under a Upfront + Milestone based arrangement

- **TruFrag™ Screening Services:**
 - Aurigene will run FBDD screening for targets of interest to the partner and most selective 5 or 10 Fragment Hits will be provided to the partner on a fixed fee model





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Thank you!

