

An abstract background graphic consisting of a dense field of small purple dots that form a series of overlapping, wavy, concentric patterns, resembling a topographical map or a signal waveform.

Ion Channel High Throughput Screening

Metrion Biosciences and Assay.Works have formed a partnership to provide high-throughput screening capabilities for ion channel drug discovery.

Metrion Biosciences

Metrion has extensive experience of providing high quality biology services for ion channel targets. Our team offers:

- Exceptional ion channel electrophysiology and drug discovery expertise
- A team of experienced cell biologists to create novel cell lines
- High quality, cost-effective compound screening
- Detailed characterisation of lead compounds in a range of high quality assays
- Translational services including confirmation of efficacy in stem cell and other phenotypic models
- Rapid reporting and data interpretation by experienced ion channel experts

Assay.Works

Assay.Works offers unique and non-redundant small molecule sets which can be combined as modular high-throughput screening decks:

- 150,000 commercially available compounds with freedom to operate
- Carefully selected by experienced chemists lead-likeness and chemotype filtered
- Molecular mass and purity verified

Assay.Works Small Molecule Library

Figure 1: Physico-chemical property profile according to Lipinski's Rule of 5 (left); Prediction of compound properties and drug-like features: Colloidal Aggregation, Permeability, Bioavailability, Solubility, PAINS.

Lipinski Rule-of-5

HBD ≤ 5	99.98%
HBA ≤ 10	99.90%
SlogP ≤ 5	97.10%
AWM ≤ 500	99.57%

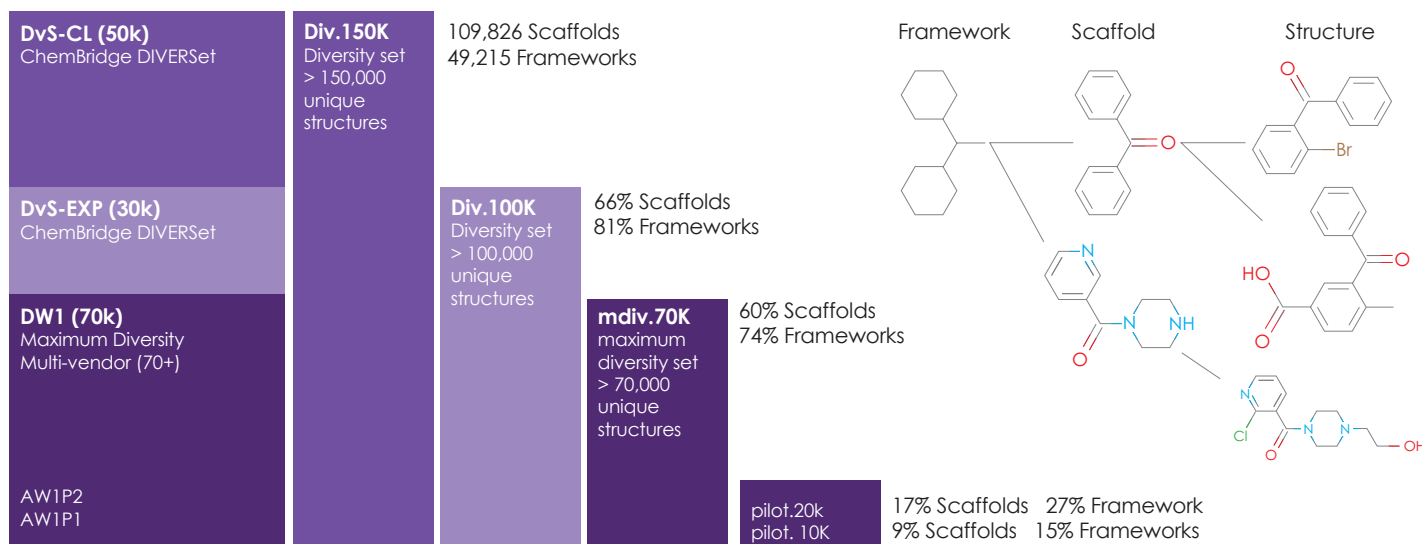
Pass Fail Unreliable

Property Prediction

Colloidal Aggregation	90.8%
Permeability $\geq 2 \times 10^{-6}$ cm/s	96.0%
Bioavailability F > 50%	79.3%
Solubility (H_2O) $\geq 10 \mu M$	81.1%
PAINS-Free	99.57%

Modular Screening Decks for Various Applications and Budgets

Figure 2: Compound sets and diversity metrics based on Bemis-Murcko clusters.



Ion Channel HTS: Metrion's High Quality Platforms

Ion channel drug discovery is reliant on sophisticated screening platforms. Metrion employs electrophysiology platforms to deliver high quality recordings and data alongside the latest liquid handling capabilities. We also offer fluorescence-based screening capabilities suitable for HTS campaigns and follow-up profiling.

Fluorescence and luminescence

- FLIPR Penta

Automated electrophysiology

- Qube 384
- QPatch-48 (x2) and QPatch-II

Characterisation of compound activity

- Manual Patch Clamp (x8)
- Multi-Electrode Array and Impedance Recording

Liquid Handling

- Agilent Bravo
- Tecan D300e



Contact us:

To learn more about our combined capabilities, contact us at:

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