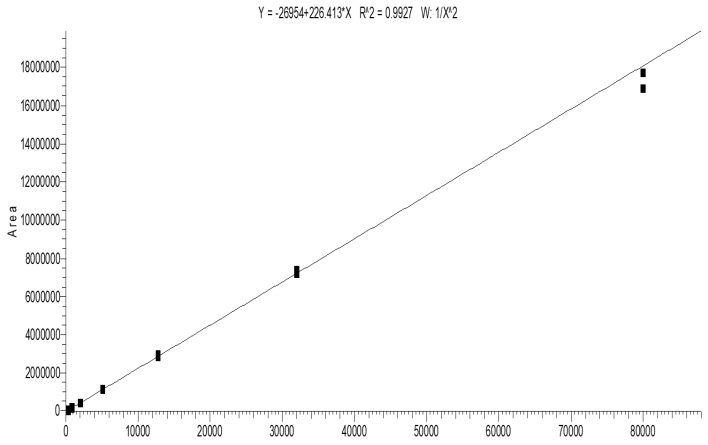
PAMPA

PAMPA (parallel artificial membrane permeability assay) is an *in vitro* assay used to evaluate passive diffusion. Pion's PAMPA kit technology uses a membrane coated with lipid to mimic gastrointestinal conditions and allows the evaluation of the passive permeability of a compound at a range of pH values.

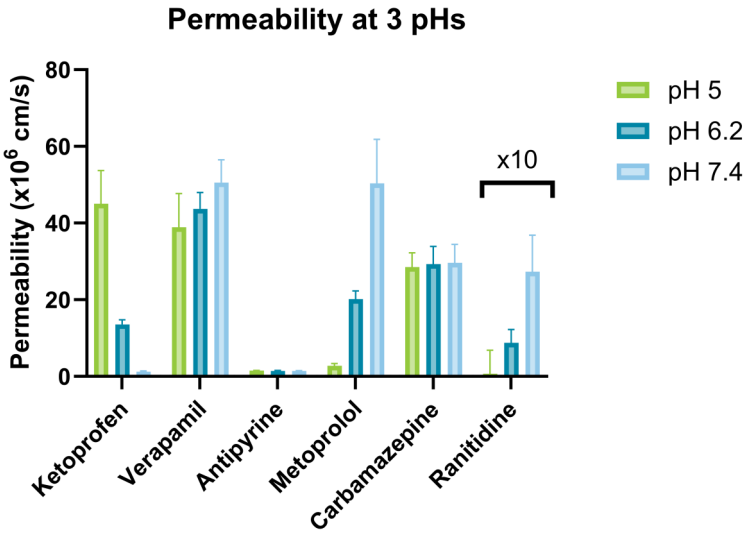
Test compound in buffer is filtered prior to adding into the donor plate of a PAMPA sandwich. The membrane of an acceptor plate is painted with lipid and acceptor sink buffer added to the wells. The assembled sandwich is left for 16 h at room temperature in a humidified vessel. Sampled buffers (T=0, T=16 h) are analysed against a matrix-matched calibration curve by LC-MS and permeability calculated using Pion's PAMPA Explorer software.

Standard Assay Conditions

- 50 µM/10 µM incubation, 0.5% DMSO
- Up to 3 buffer pHs (5.0, 6.2 and 7.4)
- Up to N=3 replicates
- Permeability controls included
- 16 hour incubation
- Analysis by LC-MS



Example calibration curve.



Compounds of varying permeability (3 pHs). N=3 experiments each with 3 replicates. Error bars denote standard deviation.

Compound Requirements

20 µL of a 10 mM stock per pH or 1 mg of solid (accurately weighed to 2 decimal places)

Deliverables

Permeability in cm/s and assay recovery.

All our assays can be customised to answer specific project questions

Contact us for more information on standard or customised assay formats

charnwooddiscovery.com

info@charnwooddiscovery.com