In Vitro: Skin Absorption Studies (OECD TG: 428)

GVK BIO
Accelerating Research

Test System: Porcine skin/Buccal Membrane

Assay Description: Tissue is exposed to test substance through donor compartment. At pre-determined time points, samples from receptor compartment are collected and analyzed for test substance concentration . Apparent permeability can be calculated based on the concentration of drug transported. The rate of skin permeation by the drug will be measured as the flux, which will be calculated from the slope of the linear part of each permeation profile

Positive and Negative Controls: Concurrent positive and negative controls (hydrophilic and lipophilic compounds) will be run in duplicate

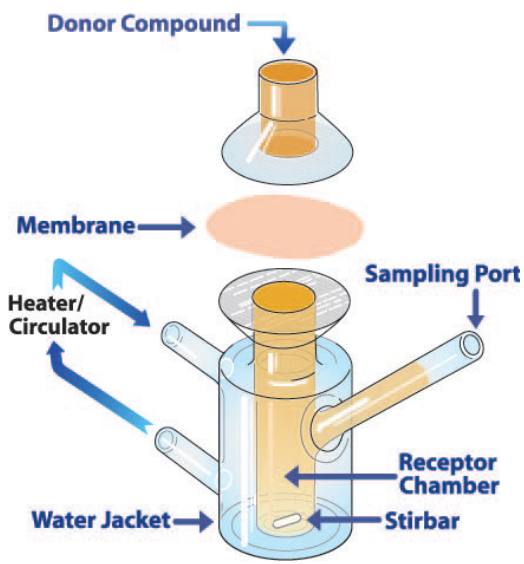
Tissue Integrity/tissue viability- optional (Histopathology/FITC-FD20/MTT assay)

End Points: Apparent permeability (Papp), diffusion rate

Analysis: HPLC/LC-MS/MS

Generation of In-house Data: In progress

Replicates		Caffeine Solution (Hydrophilic Marker)	Bupiavacine (Lipophilic Marker)
Concentration		20mg/ml	1mg/ml
Time points		0-240min	0-240min
I	Papp	5.90x10-6cm/sec	1.35x10-5cm/sec
II	Papp	5.63x10-6cm/sec	1.25x10-5cm/sec
Avg Papp		5.76x10-6cm/sec	1.30x10-5cm/sec
Literature Papp		6.03x10-6cm/sec	1.68x10-5cm/sec



Reference: Kulkarni et. al.,(2009) J Pharm Sci; 98(2): 471-83