Institute for Drug Delivery and Biomedical Research
(Services Offered by IDBR at nominal fee)

	Gas liquid chromatography with ECD	
1.	Development of analytical method for a new chemical entity	Need to provide Safety data
2.	Development of assay method for FDA approved drugs	Provide with solid drug. Solutions will be prepared at IDBR.
3.	Development of bioanalytical method for tissue distribution and pharmacokinetic studies	Rodent and human tissues.
4.	Impurity profiling of drugs as per Compendial methods	Please provide method details
5.	Quantification of aromatic component in cosmetics and perfumes	Ingredient specific. Provide standard as well
6.	Determination of residual solvent content in the excipients, chemicals, and dosage forms	Please provide the protocol
7.	Solvent permeation across the biological membranes	Please provide analytical protocol
	Physicochemical Studies	
8.	Determination of pH of solutions	pH meter
9.	Determination of pH of Ointments, Creams, and Lotions	pH meter
10.	pH of herbal extracts and AYUSH formulations	pH meter
11.	Dissociation constant of materials (pKa)	Potentiometric titrations
12.	Solubility of compounds	Provide sufficient sample
13.	Improving the solubility of compounds using physicochemical approaches	
14.	Determination of optimal pH of solubility of compounds	
15.	Determination of optimal stability pH for compounds	
16.	Water activity of materials	
17.	Thermal stability of compounds	
18.	FTIR analysis of compounds	
19.	Partition coefficient measurement	
	***In vitro/Ex vivo* permeation testing**	
20.	Drug permeation studies across porcine skin model	Franz Cells
21.	Drug permeation studies across human skin model	
22.	Drug permeation studies across porcine sublingual mucosa	
23.	Drug permeation studies across porcine buccal mucosa	
24.	Drug permeation studies across porcine vaginal mucosa	
25.	Drug permeation studies across porcine rectal mucosa	
26.	Drug permeation studies across porcine cornea	
27.	Screening permeation enhancers	

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	In vitro Release testing	
1.	*IVRT of* semisolids	Non-biological membrane
2.	*Dissolution* of immediate or modified release dosage forms	
3.	*In vitro* release testing of transdermal patches	
4.		

	Microscopy	
5.	Particle size measurement	d10, d50 and d90 will be presorted
6.	Measurement of morphometrics of botanical samples	A 20 mega pixel camera attached to the camera, provides high resolution images
7.	Bright field microscopy of permanent slides (Botanical and zoological)	
8.	Bright field microscopy of tissue and blood specimens	
9.	Globule size measurement in Emulsions, lotions and creams	
10.	Real time metamorphosis studies	
11.	Microscopic video capturing of dynamic substrates (changing globule size, movement of microorganisms, kinesis of particles)	

	Formulation Development	
12.	Development of Topical Creams, Lotions, and Gels	Expert team will review the API characteristics and provide input regarding the type of the product.
13.	Development of Prototype Products	
14.	Development of Liposomal Formulations	
15.	Formulation of Oral Films	

	Microbiological studies	
16.	Sterility testing	
17.	Antimicrobial activity studies	
18.	Staining and identification of Organisms	
19.	Testing of preservatives	
20.	Partitioning of preservatives	
21.	Disinfectant Efficacy test (to compare antimicrobial activity of product against other products)	
22.	Antimicrobial susceptibility test/Agar susceptibility test	
23.	Isolation of Pure cultures	
24.	Endotoxin test – Pyrogen test	
25.	Hydroxyproline Assay	Need fresh tissue samples in suitable preservative medium
26.	Collagen Test	

	Pharmacokinetic studies	
27.	Pharmacokinetics of drugs new chemical entities in rodent model	
28.	Tissue distribution of drugs	
29.	Study plans for animal studies	

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		UV Spectroscopy	
1.		Scanning of compounds across a wide spectrum of wavelength	Routine scanning
2.		Calibration curve development	6 concentrations
3.		Colorimetric measurement of contents	For quantification
4.		Collagen content in tissues	Proline assay
5.		Measurement of iron content in samples	Colorimetric
6.		Measurement of water content in soluble samples	Colorimetric
7.		Measurement of water content in semisolids and oral dosage forms	Colorimetry
		Hemocytometer	
8.		Measures 20 in whole blood mode and pre-diluted mode WBC, RBC, HGB, HCT, MCV, MCH, MCHC, PLT, LYM% (W-SCR), MXD% (W-MCR), NEUT% (W-LCR), LYM# (W-SCC), MXD# (W-MCC), NEUT# (W-LCC), RDW-SD, RDW-CV, PDW, MPV, P-LCR, PCT. DC detection method (WBC, RBC/PLT) non-cyanide haemoglobin detection method (HGB)	**Rodent model** approx. 50µL (whole blood mode) approx. 20µL (pre-diluted mode) (Including histograms)
9.		Measurement of RBC morphometrics and count-Rodent model	
10.		Total cell count -Rodent model	
		Atomic Absorption Spectroscopy	
11.		Iron content in solution specimens	Provide filtered solution
		Fluorescence Spectroscopy	
12.		Scanning of excitation and emission and spectra of compounds	Minimum sample volume 1 ml
13.		Colorimetric measurement	Minimum sample volume 1 ml
14.		Kinetic studies (Time lapse measurements)	Minimum sample volume 1 ml
15.		Fluorescence resonance energy transfer studies	Minimum sample volume 1 ml
		High Pressure Liquid Chromatography (HPLC)	
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