

Primate services

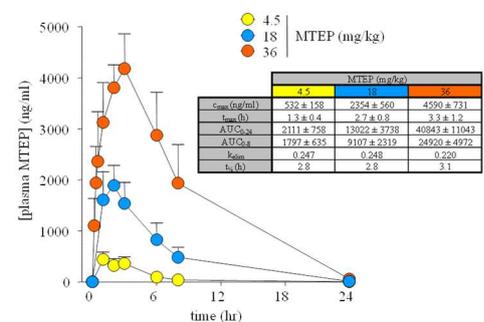
Atuka Inc. is a world expert in primate research and has the capacity to conduct both small and large studies that use up to 150 macaques. In addition to classical efficacy studies Atuka offers several primate services that can be used as stand alone experiments or as additions to planned studies.

Primate services overview

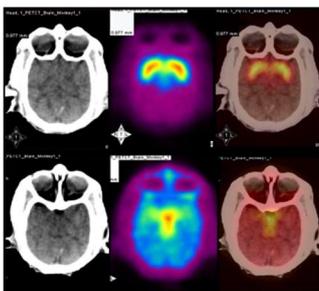
The primate services, in addition to efficacy experiments, that Atuka offers include, pharmacokinetic studies and bioanalysis, imaging, functional observation battery, telemetry, tissue collections, sleep studies and gastric emptying. Additional services can be provided on a case-by-case basis depending upon the clients needs.

Pharmacokinetics and bioanalysis

Pharmacokinetics and bioanalysis is performed in a variety of tissues including primate and rodent plasma, CSF and brain. Plasma and CSF sampling can be performed throughout an experiment. Bioanalysis is via validated LC-MS/MS using a Shimadzu LC-10AD and MDS Sciex API-4000 mass spectrometer.



Imaging

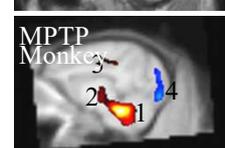
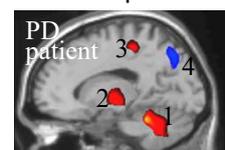


In vivo imaging is performed by PET/CT. PET ligands include ^{18}F -AV-133 (VMAT), ^{18}F -FDG (glucose uptake), ^{18}F -DOPA (neuroendocrine imaging), ^{11}C -CFT (DAT), ^{11}C -PIB (β -amyloid) and ^{13}N - $\text{NH}_3 \cdot \text{H}_2\text{O}$ (blood flow). Additional PET ligands are available.

Onsite radiochemistry using cyclotrons to produce ^{18}F and ^{11}C -labelled ligands.

3T-MRI allows for rapid (12 min per animal), high resolution scanning appropriate for surgical planning

1. Cerebellum/Dentate
2. Thalamus
3. Sensorimotor/SMA
4. Posterior parietal regions



Surgery

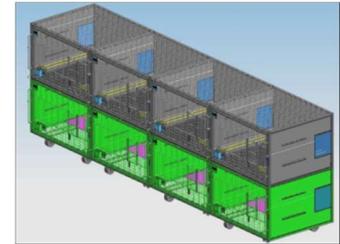


Precision surgical delivery of viral vectors, proteins or chemicals to the brain or ventricles is possible via stereotactic techniques based upon high resolution MRI scans.



Functional observational battery

Use of the functional observational battery to evaluate the neurotoxic potential of a test compound is a regulatory requirement. Incorporation of a functional observational battery component into a study allows the neurotoxicity of a test compound to be evaluated providing supporting evidence to formal GLP Safety Pharmacology studies.



Tissue collection and blood chemistry



SODIUM	21
POTASSIUM	16
CHLORIDE	1.04
CARBON DIOXIDE	15
UREA NITROGEN	6.1
CREATININE	3.0
BUN/CREATININE RATIO	9.7
URIC ACID	
PHOSPHORUS	64
CALCIUM	3.7
CHOLESTEROL, TOTAL	
HDL CHOLESTEROL	
CHOLESTEROL/HDL RATIO	112
LDL CHOL. CALCULATED	7.6
See footnote 1	
TRIGLYCERIDES	
PROTEIN, TOTAL	

Tissue collection can be performed as part of an ongoing study or as a stand alone service to provide tissues such as plasma or CSF for bioanalytical method development.

Blood chemistry can be monitored longitudinally throughout a study to monitor key early indicators of toxicity such as liver enzyme activity.

Telemetry



Telemetry allows remote monitoring of key physiological parameters including activity, body temperature and heart rate.



Other services

Additional primate services, such as sleep monitoring, gastric emptying and urine analysis are available upon request. We are able to accommodate client's requests on a case-by-case basis.