

SingHealth Advanced Bioimaging Core						
Equipment	Brand / Model	Capabilities	Nature of utilization of equipment	Location	Contact details	Website
Zeiss Elyra super resolution microscope	Zeiss ELYRA PS.1	SIM (Structured illumination microscopy) and PALM (photo-activation localisation microscopy) configurable for d-STORM, TIRF, widefield Software: Zen 2012 Laser lines: 405nm, 488nm, 561nm, 642nm Objectives: 63x oil, 100x oil Definite focus system to keep sample in focus Resolution: SIM xy: ~120nm, z: ~250nm PALM xy: 10-30nm, z: ~50nm	Self Service / Service Provision	20 College Road, The Academia, Discovery Tower, Level 10, Advanced Bioimaging Core	Enquiry Email: bioimaging@singhealth.com.sg	<a href="http://research.singhealth.com.sg/Pages/advanced-bioimaging.aspx">http://research.singhealth.com.sg/Pages/advanced-bioimaging.aspx</a>
Nikon STORM super resolution microscope	Nikon N-STORM with Andor CSU-W1 spinning disk	STORM (stochastic optical reconstruction microscopy) and spinning disk confocal configurable for d-STORM, TIRF, widefield, brightfield Software: NIS Elements Laser lines: 405/445nm, 488/515nm, 561nm, 640nm Objectives: 10x, 20x, 40x oil, 60x oil, 100x oil Perfect focus system (PFS) Stage top incubator, temperature and humidity controlled Resolution: STORM xy: 10-30nm, z: 50-70nm				
Leica STED super resolution microscope	Leica TCS SP8 STED 3X	STED (stimulated emission depletion) and scanning confocal Software: LAS X Laser lines: 405nm, 470-670nm (tunable up to 8 colors) Objectives: 20x, 40x oil, 100x oil Resolution: STED xy: 50-70nm, z: 70-130nm				
Laser capture microdissection microscope	Leica LMD 7	UV laser cutting/isolation of cells or tissues for further downstream analysis of DNA, RNA etc Software: Laser micro-dissection V8.0 Light source: LED and mercury lamp Objectives: 6.3x, 10x, 20x, 40x, 63x, 150x				
Ultra microtome	Leica ULTRACUT EM UC7	Sectioning machine for preparing EM semi- and ultrathin sections				
Transmission Electron Microscope	Jeol JEM 2100 (shared with SGH Pathology)	Software: Gatan Digital Micrograph Voltage: 80-200 keV Single and quartet sample holder Piezo goniometer stage Point resolution: 0.23nm	20 College Road, The Academia, Level 1, TEM Room			

SingHealth Clinical Pharmacology Core						
Equipment	Brand / Model	Capabilities	Nature of utilization of equipment	Location	Contact details	Website
LC-MS/MS	Agilent LC with ABSCIEX 5500 QTRAP system	Separation, identification and quantification of drug compounds and metabolites	Service Provision	20 College Road, The Academia, Discovery Tower, Level 8, SingHealth Clinical Pharmacology Core	Dr Leong Wai Fook Phone: 65767096 Enquiry email: clin.pharm@singhealth.com.sg	<a href="http://research.singhealth.com.sg/Pages/clinical-pharmacology.aspx">http://research.singhealth.com.sg/Pages/clinical-pharmacology.aspx</a>
HPLC	Shimadzu/ Prominence LC					
Pyrosequencer	Qiagen/PyroMark Q24					

SingHealth Flow Cytometry Core						
Equipment	Brand / Model	Capabilities	Nature of utilization of equipment	Location	Contact details	Website
LSRFortessa SORP	BD / 647800L6	5-laser flow cytometer, detects up to 18 colors. For cell analysis only	Self Service	20 College Road, The Academia, Discovery Tower, Level 10, Flow Cytometry Core	Charlene Foong Phone: 6576 7178 Enquiry Email: flow@singhealth.com.sg	<a href="http://research.singhealth.com.sg/Pages/flow-cytometry.aspx">http://research.singhealth.com.sg/Pages/flow-cytometry.aspx</a>
FACSAria III	BD / 648282-23-010100-X-X-Z	5-laser flow cytometer with cell sorting ability. Detects up to 18 colors.	Service provision			
BD Canto II	BD/ 338960	2-laser cytometer, for cell analysis only. Detects up to 6 colors.	Self Service			
BD LSR II	BD / 33300476	4-laser flow cytometer. For cell analysis only. Detects up to 12 colors.	Self Service / Service Provision			

POLARIS@SingHealth						
Equipment	Brand / Model	Capabilities	Nature of utilization of equipment	Location	Contact details	Website
Ion Torrent PGM	Life Technologies	Next-generation sequencing	Service Provision	20 College Road, The Academia, Discovery Tower, Level 10, POLARIS@SingHealth	Ms Tan Gek San / A/Prof Lim Kiat Hon, Tony Enquiry Email: polaris@singhealth.com.sg	<a href="http://research.singhealth.com.sg/Pages/polaris.aspx">http://research.singhealth.com.sg/Pages/polaris.aspx</a>
Miseq Next-generation Sequencer	Illumina					
Nextseq Next-generation Sequencer	Illumina					

SingHealth Experimental Medicine Centre						
Equipment	Brand / Model	Capabilities	Nature of utilization of equipment	Location	Contact details	Website

SingHealth Core Platforms Equipment (Updated: 20 October 2017)

NanoPET/MRI	Mediso / NanoScan	PET subsystem - High resolution imaging of functional processes in small animals (mice and rats) with the use of radiotracers. MRI subsystem - Imaging of soft tissue morphology.	Service Provision	SEMC Academia Basement 1, Rodent Bioimaging	Dr. Bryan Ogden email: bryan.ogden@singhealth.com.sg Enquiry email: shs.semc@singhealth.com.sg	<a href="http://research.singhealth.com.sg/Pages/SingHealthExperimentalMedicineCentre.aspx">http://research.singhealth.com.sg/Pages/SingHealthExperimentalMedicineCentre.aspx</a>
NanoCT/SPECT	Mediso / NanoScan	CT subsystem - High resolution imaging of anatomical structures in small animals (mice and rats) using X-Ray SPECT subsystem - High resolution spatial imaging of anatomical structures in small animals (mice and rats) using gamma rays.				
C-Arm Fluoroscope	Siemens / Avantis	Real time x-ray imaging of large animals.	SEMC Academia Basement 1, Main OT			
IVIS Spectrum	Caliper Lifesciences	In-vivo optical imaging for small animals.	Self Service			
OptoAcoustic scanner	iTheraMedical View / MSOT	Optical imaging using photoacoustic effect to obtain images of structures in turbid environments.	Service Provision	SEMC Academia Basement 1, Optical Imaging		
Rodent Ultrasound Machine	S-Sharp Prospect	Real time and non-invasive image acquisition capabilities for in-vivo small animal studies. For visualisation of molecular events or quantification of tumour size.	Service Provision	SEMC Academia Basement 1, Microsurgery Room		
Laparoscopic System	Karl Storz	For performing minimally invasive surgery (MIS) through small incisions on large animals.	Self Service	SEMC Academia Basement 1, Large Animal Procedure 1		
Large Animal Ultrasound Machine	GE Logiq S7	For non-invasive image acquisition of large animals like pigs.	Service Provision	SEMC Academia Basement 1, Main OT		
NHP PET-CT	Mediso MultiScan LFER PET-CT	For high resolution of imaging of lying and awake macaques.		SEMC Academia Basement 1, Fluoroscopy Lab		

**SingHealth Translational Immunology and Inflammation Centre (STIIC)**

Equipment	Brand / Model	Capabilities	Nature of utilization of equipment	Location	Contact details	Website
CyTOF 2	DVS	Mass Cytometry	Self Service (collaboration)	20 College Road, The Academia, Discovery Tower, Level 8, STIIC	Lakshmi Ramakrishna. Phone: 65767154	<a href="http://research.singhealth.com.sg/pages/stiic.aspx">http://research.singhealth.com.sg/pages/stiic.aspx</a>
FACS ARIA III SORP (4 laser)	BD	Flow Cytometry and Cell sorting				
Nanostring	Nanostring	Pathway analysis, Copy Number Variation, gene expression analysis				
QX100	Biorad	Digital droplet PCR				
LC480	Roche	Real Time PCR analysis				
Enspire Multimode plate reader	Perkin Elmer	ELISA reader				
Vectra	Perkin Elmer	Multiplex IHC				
Luminex	Millipore	Multiplex ELISA				

**SingHealth Tissue Repository / Advanced Molecular Pathology Lab**

Equipment	Brand / Model	Capabilities	Nature of utilization of equipment	Location	Contact details	Website
Leica Bond III	Leica	Immunohistochemistry and in-situ hybridization	Service Provision	20 College Road, The Academia, Discovery Tower, Level 10, Tissue Repository	Magdalene Koh Phone:65767116	<a href="http://research.singhealth.com.sg/pages/singhealthtissuerepository.aspx">http://research.singhealth.com.sg/pages/singhealthtissuerepository.aspx</a>
Zeiss Microscope with Imaging System	Zeiss	Fluorescence Imaging				