THE UNIVERSITY OF HONG KONG CENTRE FOR COMPARATIVE MEDICINE RESEARCH (CCMR) DISEASE SURVEILLANCE AND DIAGNOSTIC LABORATORY

				ening and Er		/ Equipm	ent / Gen										
Species/Strain	Species/Strain Room Animal Health Screening Genetic & IgG level Monitoring Frequency for BP / PBMPS / Interceptor / SS / PCR / Genetic / IgG level Monitoring Total No. of Lung samples Total No. of Total No. of (i) BP: Quarterly or biannual for rabbits, (ii) PBMPS: Biannual for all species (except rabbits) (Note 3(i)),								ıg								
		sentinels for PBMPS,	for Pneumocystis	animals for	animals for												
		PBMPS, SS & PCR /	spp.	Genetic / Year [Note 4]	IgG / Year [Note 5]	(vi	ii) Genetic: Y	early for inb		ote 4], (viii)	IgG : Yearl	or all species (ex for SCID mice		[Note 4(11)],			
		Year [Note 3]		Inbred strain	Immuno- deficient strain	Jan	Feb	Mar SS / PCR	Apr	May	June SS/PCR	July Genetic+IgG	Aug	Sept SS/PCR	Oct	Nov	Dec SS / PCI
1. Animal Health Screening and Genetic / IgG Monito	ring	[noie 5]						borren			borren.	otheringo		borren.			007101
1.1 Specific Pathogen Free Breeding Area							r		r.					r			Т
Hamster/AURA (Syrian) Rat /CD(SD)IGS (Sprague Dawley)	201 220	36 36	0	0	0					PBMPS				Inteceptor		PBMPS	Intercepto
Rat/CD(SD)IGS (Sprague Dawley)	222	36	0	0	0	PBMPS						PBMPS					
Rat/CD(SD)IGS (Sprague Dawley) Mouse/IVC SCID (Genetic monitoring yearly)	232 204	36 6	0	0 10	0 30			PBMPS	PBMPS		(Interceptor)	Genetic+IgG		(Interceptor)	PBMPS		(Intercepto
Mar, Jun, Sep, Dec for Interceptor screening	204	0	U	10	50			(Interceptor)			(interceptor)	Geneuc+igG		(interceptor)			(intercepto
Mouse/IVC Nude (Genetic monitoring yearly) Mar, Jun, Sep, Dec for Interceptor screening	+			15	30												
(Genetic monitoring in 2024) Mouse/IVC ICR	205	6	0	0	0			(Interceptor)			(Interceptor)			PBMPS			(Intercepto
(i). Mar, Jun, Sep, Dec for Interceptor screening														(Interceptor)			
Mouse/IVC Nude (Genetic monitoring in 2024) open on 8 Feb 2022	206	6	0	10	30			(Interceptor)			(Interceptor)	Genetic		(Interceptor)			PBMPS (Intercepto
Mouse/C57BL/6N (Stock) (No need for genetic test, because use Rm.209 6N stock)			2	0	0							PBMPS +					
Mouse/CBA/Ca (Genetic monitoring in 2024)	207	36	2	10	0	PBMPS						Genetic					
Mouse/C57BL/6J (Genetic monitoring in 2024)	***											PBMPS +					
Mouse/C57BL/6N (Genetic monitoring in 2023)	208	36 36	4	15 0	0	PBMPS			PBMPS			Genetic Genetic			PBMPS		
									PBMPS			Genetic			PBMPS		
Mouse/BALB/c (Genetic monitoring in 2023)	214	36	4	0	0		PBMPS					Genetic	PBMPS				
Mouse/ICR (CD-1)	215	36	4	0	0	PBMPS						PBMPS					
Rabbit/NZW (New Zealand White)	233	Stool, Ear, Nasal	& Blood Samples	0	0			PRIA			PRIA			PRIA			PRIA
Species/Strain	Room	Animal Hea	Ith Screening	Genetic & IgG l	evel Monitoring			Frequenc	for PBMPS	5 / Intercepto	or / SS / PCB	/ MHV / Pinwor	m / Genetic	IgG level M	onitoring		
-		Total No. of	Lung samples	Total No. of	Total No. of			nnual for all	species [Note	e 3(i)], (ii) P	BMPS (Inte	rceptor): Quarte	rly for Rm.1				
		sentinels for PBMPS,	for Pneumocystis	animals for Genetic / Year	animals for IgG / Year	 (iii) SS: Triannual for all species [<i>Note</i> 3(ii)], (iv) PCR: Biennial for all species [<i>Note</i> 3(ii)], (v) MHV: Monthly for mice only [<i>Note</i> 3(ii)], (vi) Pinworm: Monthly for mice & rats [<i>Note</i> 4(iii)], (vii) Genetic: Yeary for inbered mice (<i>NOD</i> SCID) only [<i>Note</i> 4], (viii) [Ge: Yeary for NOD SCID mice only [<i>Note</i> 5] 											
		SS & PCR,	spp.	[Note 4]	[Note 5]	(vi	i) Genetic: Y	arly for inb	ed mice (NC	D SCID) on	ly [Note 4],	(viii) IgG: Yearly	for NOD SC	TD mice only		N	D
		MHV, Pinworm /		Inbred strain	Immuno-	Jan MHV /	Feb MHV /	Mar MHV /	Apr MHV/	May MHV/	June MHV/	July MHV /	Aug MHV /	Sept MHV /	Oct MHV /	Nov MHV /	Dec MHV /
		Year [Note 3]			deficient strain	Pinworm /	Pinworm /	Pinworm / SS / PCR	Pinworm /	Pinworm /	Pinworm / SS / PCR	Pinworm / Genetic+IgG	Pinworm /	Pinworm / SS / PCR	Pinworm /	Pinworm /	Pinworm SS / PCR
1.2 Minimal Disease Experimental Holding Area	1		1	0	1							1					
Rat/Sentinel [Surgery, Ophthalmology, School of Biomedical Sciences, CD(SD)IGS (Sprague Dawley)]	101	40	0	0	0			PBMPS						PBMPS			
Mouse/Sentinel (Multi-user)	102	44	4	0	0		PBMPS (Old 109)						PBMPS (Old 109)				
Mouse/Sentinel (School of Biomedical Sciences) (Prof. ZJ ZHOU)	103	44	4	0	0					PBMPS						PBMPS	
ZHOU) Mouse/Sentinel (Multi-user)	104	44	4	0	0		PBMPS			(Old 108)			PBMPS			(Old 108)	
Mouse/Sentinel (Multi-user) (Medicine and O&G)	105	44	4	0	0				PBMPS						PBMPS		
Mouse/Sentinel (School of Biomedical Sciences) Mouse/Sentinel (School of Biomedical Sciences) (Dr. Bo	106 107	44 44	4	0	0	PBMPS		PBMPS				PBMPS		PBMPS			
GAO & Dr. YQ SONG) Mouse/Sentinel [TCFs clean stud bank + Multi Users	108	44	4			PBMPS						PBMPS					
(ELG114 & 113 rederived colonies)] Mouse/Sentinel (Multi-user)	109	44	4	0	0					PBMPS						PBMPS	
										(Old 103)						(Old 103)	
Mouse/Sentinel (Multi-user) Mouse/Sentinel (School of Biomedical Sciences)	110 111	44 44	4	0	0		PBMPS		PBMPS						PBMPS PBMPS		
Mouse/Sentinel (Multi-user)	112	44	4	0	0			PBMPS						PBMPS			
Mouse/Sentinel (IVC)	118	44	4	0	0	PBMPS						PBMPS					
Mouse/Sentinel (Multi-user)	124	44	4	0	0				PBMPS						PBMPS		
Mouse/Sentinel (TCF), open on 7 Feb 2022 Mouse/Sentinel (Multi-Users & CCMR-TCF Reagent	125 127	44 44	4	0	0		PBMPS			PBMPS			PBMPS			PBMPS	
mice)										I DMI 5						1 DMI 5	
Mouse/Sentinel (IVC, Multi-Users, MNV free colonies)	G10	44	4	0	0			PBMPS						PBMPS			
Mouse/K18-hACE2 (Microbiology, SPH, SBMS - K18- hACE2 related colonies) (Multi-user),	G10	6	0	0	0			(Interceptor)			(Interceptor)			PBMPS (Interceptor)			(Interceptor
Mouse / Sentinel (IVC, NOD.Cg-Prkdc <scid> Il2rg<tm1wjl>/SzJ) [2022 NSG] imported in Sep 2022,</tm1wjl></scid>	G10	44	16	10	30					PBMPS		Genetic + IgG				PBMPS	
Central breeding colonies (Genetic monitoring yearly)				10													
Mouse/Sentinel (IVC, NOD.CB17-Prkdc ^{scid} /J) [2022 NODSCID] new colony imported in Sep 2022, Central	G10	44	16	10	30					PBMPS		Genetic + IgG				PBMPS	
breeding colonies (Genetic monitoring yearly)																	
1.3 Conventional Experimental Holding Area		Total No. of se Year //	ntinels for SS /	/	/												
Hamster/AURA (Syrian)	E316	15	0	0	0									PBMPS			PRIA
Hamster/AURA (Syrian)	E317	15	0	0	0						PRIA						PBMPS
Mouse/Sentinel (IVC) Mouse/Sentinel (IVC)	E216		5	0	0												
Mouse/Sentinel (IVC) Mouse/Sentinel (IVC)	E217 E218		5	0	0							BMPS + Serolog (3). Dec: PBMP				1	For
Mouse/Sentinel	ELG113		5	0	0	Lun.EST/ Hal		a sep i s	Longy (Iuli	provine), (2)		, op. Dec. FBMP	serology	(See Prome)			
Rat/Sentinel (Multi-user)	AR3		4	0	0	1											
Mouse/Sentinel (Multi-user)	AR5 Zone A	2	20	0	0	i) Quarterly i	in Mar. June	Sept & Dec	for Room A	R5 Zone A	B, C, D. Apr	ually for all othe	r rooms				
Mouse/Sentinel (Multi-user) Mouse/Sentinel (Multi-user)	AR5 Zone B AR5 Zone C		:0 :0	0	0	, <u>,</u>	, ounic				, . ,	,n onle					
Mouse/Sentinel (Multi-user) Mouse/Sentinel (Multi-user)	AR5 Zone C AR5 Zone D		:0 :0	0	0												
Mouse/Sentinel (Multi-user)	8S20		5	0	0												
Mouse/Sentinel (Multi-user) Mouse/Sentinel (Multi-user)	8S21 8S22		5	0	0												
	0344	Total No. of se	ntinels for SS /	0	0												
1.4 Departmental Satellite Animal Facilities	T22-004	Year /	Note 3] 3	0	0	i) No muti	PRMDC -	formed	nimale F-12 ·	n HKU Da	artmont-1 C	tellite Animal P	ciliti~				
Mouse/Sentinel (Microbiology, QMH, Block T) Mouse/Sentinel (Microbiology, QMH, Block T)	T22-004 T22-005		3 3	0	0	 No routine Annually i 				а пко Dep	ai unentai Sa	tellite Animal Fa	cautes				
Mouse/Sentinel (Microbiology, QMH, Block T)	T22-009		3	0	0												
Mouse/Sentinel (Ophthalmology, FMB) Mouse/Sentinel	606 733		3 3	0	0												
(Paediatrics & Adolescent Medicine, FMB) Mouse/Sentinel (Surgery, FMB)	L10-16		3	0	0	1											
Mouse/Sentinel (Surgery, FMB)	L10-18		3	0	0												
Mouse/Sentinel (Surgery, FMB) Mouse/Sentinel (Surgery, FMB)	L10-25 L10-26		3	0	0												
Rat/Sentinel (Surgery, FMB)	L10-20		3	0	0												
1.5 Monthly Control Sentinels																	
SPFBA Sentinel Mouse SPFBA Sentinel Rat			14 14	0	0												
Total number of Animals		#REF!	(Mice)	#REF! (Mice)	#REF! (Mice)	/	/	/	/	/	/	/	/	/	/	/	/
		#REF! 36	(Rats) (Hamsters)														
Grand Total number of Animals:		#REF!	(Mice: 163	8, Rats: 187, Ha	umsters: 36)												
2. Environmental Monitoring [Note: 1] 3. Equipment Monitoring [Note: 2]			/	/	/	/ EQ / DT	C/B/DW/V	Air	1	Twq / Twp	/	nitation / EQ / DT	C/B/DW/V	Air	/	1	/

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Symbol

CIB/DW/V = Bacterial monitoring of used Cage-tops, Drinking Bottles & Drinking Water inside bottles in SPFBA & MDA (Once Yearly / Room) by Disease Surveillance and Diagnostic Laboratory (DSD Lab), CCMR: -

a) C = Cage-tops have been used for 8 weeks & 2 weeks in SPFBA & MDA respectively

b) B = Drinking bottles have been used for 4 weeks except weekly for immuno-deficient mice

c) DW = Drinking water inside bottle has not been replaced for one week in mouse & rat colonies only

d) V = Van of CCMR disinfection monitoring, 6 Samples / Twice Yearly

Air = Bacteriological & fungal monitoring of supply air in animal rooms & corridor of 10A Building, Dexter H.C. Man Building, FMB Building & Kadoorie Building by CCMR (Twice Yearly)

Sanitation = Sanitation monitoring (Yearly / Animal Room / Location Monitoring in Animal Area by DSD Lab)

EQ / DT = Equipment & Dunk Tank Monitoring Twice Yearly by DSD Lab

(i) 6 Samples / Monitoring for Bottle Washer, Tunnel Washer & Cabinet Washer

(ii) ~14 Samples / Monitoring for Dunk Tank

Genetic = Genetic monitoring by Envigo RMS, UK / Charles River Laboratories, USA (Once Yearly)

IgG = IgG antibody level (functional test) monitoring by Envigo RMS, UK / Charles River Laboratories, USA (Once Yearly)

PRIA = Rabbit 23 Agent PRIA Screening for rabbit colonies (Quarterly / Animal Room) by Charles River Laboratories, USA 10 Fur samples, 10 Faecal samples, 10 Oral swabs

PBMPS = Postmortem, Bacteriological, Mycological & Parasitological Screening for rat, mouse & hamster colonies by DSD Lab

PBMPS = PRIA screening by Charles River Laboratories, USA (March, June, September & December)

Twq = Tap water quality monitoring (pH value, Colour, Turbidity, Conductivity, Iron, Lead, Cadmium, Chromium, Nickel, Escherichia coli, Total Coliforms & Heterotrophic plate count) in May every year by an out-sourced laboratory via the Estates Office

Twp = Tap water Parasitological Monitoring in May every year by AFCD

SS /PCR = Serological screening / Polymerase Chain Reaction test by Envigo RMS, UK / Charles River Laboratories, USA

Note : 1. Tap water:- Total 22 samples (post-UV /faucet type filter) in 10A Building, Dexter H.C. Man Building, FMB Building & Kadoorie Building [10A Bldg x 3, SPFBA x 2, MDA x 2, 1. Tap water:- Total 22 samples (post-UV /faucet type filter) in 10A Building, Dexter H.C. Man Building, FMB Building & Kadoorie Building [10A Bldg x 3, SPFBA x 2, MDA x 2, 1. Tap water:- Total 22 samples (post-UV /faucet type filter) in 10A Building, Dexter H.C. Man Building, FMB Building & Kadoorie Building [10A Bldg x 3, SPFBA x 2, MDA x 2, 1. Tap water:- Total 22 samples (post-UV /faucet type filter) in 10A Building, Dexter H.C. Man Building, FMB Building & Kadoorie Building [10A Bldg x 3, SPFBA x 2, MDA x 2, 1. Tap water:- Total 22 samples (post-UV /faucet type filter) in 10A Building, Dexter H.C. Man Building, FMB Building & Kadoorie Building [10A Bldg x 3, SPFBA x 2, MDA x 2, 1. Tap water:- Total 22 samples (post-UV /faucet type filter) in 10A Building, Dexter H.C. Man Building, FMB Building & Kadoorie Building [10A Bldg x 3, SPFBA x 2, MDA x 2, 1. Tap water:- Total 22 samples (post-UV /faucet type filter) in 10A Building, Dexter H.C. Man Building, FMB Building & Kadoorie Building [10A Bldg x 3, SPFBA x 2, MDA x 2, 1. Tap water:- Total 22 samples (post-UV /faucet type filter) in 10A Building, Dexter H.C. Man Building, FMB Building & Kadoorie Building [10A Bldg x 3, SPFBA x 2, MDA x 2, 1. Tap water:- Total 22 samples (post-UV /faucet type filter) in 10A Building [10A Bldg x 3, SPFBA x 2, MDA x 2, MD CA-DMB x 4, CA-FMB x 4 & CA-LA x 2, CA-KA x 2] & 3 control samples (untreated water) are tested every month by DSD Lab for E.coli, total coliform, heterotrophic plate count and parasites.

2. Autoclave:- 1 biological indicator (Geobacillus stearothermophilus) / autoclave / week from CA-KA, MDA & DSD Lab, processed by DSD Lab

3 biological indicators (Geobacillus stearothermophilus) / autoclave / week from Service Area, processed by SPFBA.

3. Number of Animals for

(i) Postmortem, Bacteriological, Mycological & Parasitological Screening (PBMPS) by DSD Lab, 4 Sentinel animals / animal room / twice yearly screening (Remark : To cater for unexpected mortality / morbidity, the actual quantity of sentinels animals required per animal room is as follows:

6 Sentinel animals / Screening, [i.e.12 Sentinel animals / year])

(ii-1) Routine Serological Screening (SS) / PCR by Envigo RMS, UK / Charles River Laboratories, USA, (ii-2) MHV & Pinworm Screening by DSD Lab

a) Routine Serological Screening / MHV / Pinworm Screening in Animal Areas:

Area	Animal Room	SS	MHV	Pin-	Frequency	No of Animals /	Total No of Animals Reserved			Remark
				worm		Animal Room /	/ Animal Room			
						Screening	Mouse	Rat	Hamster	
SPFBA	All Mouse Rms	\checkmark	\checkmark	/	3-Monthly	3	24	/	/	(1). To cater for unexpected mortality / morbidity in animal rooms,
SFFBA	All Rat Rms	\checkmark	/	/	3-Monthly	3	/	24	/	additional animals per room per year are required for SPFBA: 12 animals, MDA: 4 animals, CA-FMB (Rm AR5 Zone A, B, C, D): 12
		\checkmark	\checkmark	/	3-Monthly	3	16	/	/	animals, CA-DMB (Rm E317A): 12 animals
	All Mouse Rms	/	\checkmark	\checkmark	Monthly	2	16	/	/	(2). 3-monthly serological screening:-
MDA	Rat Rm. 101	1	/	/	3-Monthly	3	/	12	/	 a) Selective-profile to be performed in March, June & December in animal rooms.
	Kat Kill. 101	/	/	1	Monthly	2	/	16	/	b) Full-profile to be performed in September in animal rooms.
CA-FMB	Mouse Rms:- AR5 Zone A, B, C, D	1	~	/	3-Monthly	2	20	/	/	 To cater for unexpected mortality / morbidity / confirmatory additional rats per room per year are required for Full-profile to be performed in
	All Rat Rms	\checkmark	/	/	Yearly	2	/	4	/	animal rooms.
CA-DMB	Hamster Rm:- E316 & E317	1	/	/	3-Monthly	3	/	/	24	
CA-DMB	Mouse Rms:- E216, E217 & E218	\checkmark	\checkmark	/	Yearly	2	5	/	/	
CA-Laboratory	All Mouse Rms	\checkmark	\checkmark	/	Yearly	2	5	/	/	
CA-KA	Mouse Rms:- 8S20, 8S21 & 8S22	\checkmark	✓	/	Yearly	2	5	/	/	
	Rat Rms:- 8S18	~	/	/	Yearly	2	/	4	/	
CA - Department Satellite Animal facilities	Mouse Rms:- T22-004, T22-005, T22- 009, 606, 733, L10- 16, L10-18, L10-25, L10-26,	1	~	/	Yearly	2	3	/	/	
	Rat Rms:- L10-27	\checkmark	/	/	Yearly	2	/	3	/	

Note: 6 serum samples per 3-Monthly serological screening of rabbit colony in SPFBA.

b) Other PCR tests

- Helicobacter spp.: Biennial for mouse/rat room; one pooled caecal sample from sentinel animals in SPFBA & one pooled fecal pellets from users' animals in MDA, No PCR test for CA.

Streptobacillus moniliformis : Biennial for mouse/rat/hamster room; one pooled caecal sample from sentinel animals in SPFBA & MDA, No PCR test for CA.

- Pneumocystis spp. : Biennial for mouse room; two pooled lung samples/room from 4 mice in SPFBA and ICR, NOD SCID & NSG mice 3-monthly only in MDA. No PCR test for CA

4. Genetic Monitoring of inbred animals for genetic contamination in SPFBA & MDA (NOD SCID & NSG mice only) by Envigo RMS, UK / Charles River Laboratories, USA:-- Representative ear punch samples will be taken from the colony & pooled for 32 or 48 Single Nucleotide Polymorphism (SNP) testing.

5. Functional test (IgG level monitoring) for SCID, NODSCID and NSG mice performed by Envigo RMS, UK / Charles River Laboratories, USA

Species / Strain	Frequency
Mouse - C.B-17/Icr-scid (SCID)	Yearly
Mouse - NOD.CB17-Prkdc ^{stid} /J (NOD SCID)	Yearly
Mouse - NOD.Cg-Prkdc <scid> Il2rg<tm1wjl>/SzJ (NSG)</tm1wjl></scid>	Yearly

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