**Health Monitoring Report in Accordance with FELASA Recommendations**

Location: **Medicine TAU** Housing: **SPF unit Medicine** Samples collection: **01/05/2024, 05/05/2024**

Species: **Mouse sentinel** Strain: **ICR females** Date of report: **12/05/2024**

Health report: **25 sentinel mice – FELASA. Performed as Annual 2 A2 instead of Quarterly Q1 since we will compare with Pathogen Binder pilot Charles River results**

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|  | Test  method | |  | | Latest  results | | Historical  results | |  | |  | | |  |  |
| Viruses |  | | May  2024 | | Feb  2024 | | Dec  2023 | | Sep  2023 | | May  2023 | | | Feb  2023 | Nov  2022 |
| Mouse hepatitis virus (MHV) | IFA | | 0/25 | | 0/25 | | 0/25 | | 0/25 | | 0/25 | | | 0 /25 | 0/25 |
| Mouse rotavirus (EDIM-ROTA-A) | MFI | | 0/25 | | 0/25 | | 0/25 | | 0/25 | | 0/25 | | | 0/25 | 0/25 |
| Minute virus of mice (MVM) | MFI | | 0/25 | | 0/25 | | 0/25 | | 0/25 | | 0/25 | | | 0/25 | 0/25 |
| Mouse parvovirus (MPV-1,-2,-5) | MFI | | 0/25 | | 0/25 | | 0/25 | | 0/25 | | 0/25 | | | 0/25 | 0/25 |
| Pneumonia virus of mice (PVM) | MFI | | NT | | 0/25 | | NT | | NT | | NT | | | 0/25 | NT |
| Sendai virus (SEND) | MFI | | NT | | 0/25 | | NT | | NT | | NT | | | 0/25 | NT |
| Theiler’s murine encephalomyelitis virus (TMEV-GDVII) | MFI, IFA | | 0/25 | | 0/25 | | 0/25 | | 0/25 | | 0/25 | | | 0/25 | 0/25 |
| Ectromelia virus (ECTRO) | MFI | | NT | | 0/25 | | NT | | NT | | NT | | | 0/25 | NT |
| Lymphocytic choriomeningitis virus (LCMV) | MFI | | NT | | 0/25 | | NT | | NT | | NT | | | 0/25 | NT |
| Mouse adenovirus type 1,2 (FL-MAV-1, K87-MAV-2) | MFI | | NT | | 0/25 | | NT | | NT | | NT | | | 0/25 | NT |
| Mouse cytomegalovirus (MCMV) | MFI | | NT | | NT | | NT | | NT | | NT | | | NT | NT |
| Reovirus type 3 (REO) | MFI | | NT | | 0/25 | | NT | | NT | | NT | | | 0/25 | NT |
| Generic parvovirus (NS-1) | MFI | | 0/25 | | 0/25 | | 0/25 | | 0/25 | | 0/25 | | | 0/25 | 0/25 |
| Murine norovirus (MNV) | MFI | | NT\* | | NT\* | | NT\* | | NT\* | | NT\* | | | NT\* | NT\* |
| Bacteria, mycoplasma and fungi |  | | May  2024 | | Feb  2024 | | Dec  2023 | | Sep  2023 | | May  2023 | | | Feb  2023 | Nov  2022 |
| Mycoplasma pulmonis (MPUL)-Mouse | MFI | | NT | | 0/25 | | NT | | NT | | NT | | | 0/25 | NT |
| Bordetella bronchiseptica (Nasopharynx, lung) | CULT | | 0/25 | | 0/25 | | 0/25 | | 0/25 | | 0/25 | | | 0/25 | 0/25 |
| Citrobacter rodentium (Intestine, feces) | CULT | | 0/25 | | 0/25 | | 0/25 | | 0/25 | | 0/25 | | | 0/25 | 0/25 |
| Clostridium piliforme (CPIL, Tyzzer’s disease) | MFI | | NT | | 0/25 | | NT | | NT | | NT | | | 0/25 | NT |
| Corynebacterium kutcheri (Nasopharynx, lung, intestine) | CULT | | 0/25 | | 0/25 | | 0/25 | | 0/25 | | 0/25 | | | 0/25 | 0/25 |
| Klebsiella pneumoniae (Naso, lung) | CULT | | 0/25 | | 0/25 | | 0/25 | | 0/25 | | 0/25 | | | 0/25 | 0/25 |
| Klebsiella oxytoca (Intestine, feces) | CULT | | 0/25 | | 0/25 | | 0/25 | | 0/25 | | 1/25 | | | 0/25 | 0/25 |
| Pasteurellaceae (Naso, lung)  Pasteurella pneumotropica | CULT | | 0/25 | | 0/25 | | 0/25 | | 0/25 | | 0/25 | | | 7/25 | 0/25 |
| Pseudomonas aeruginosa (Intestine, Feces) | CULT | | 1/25 | | 0/25 | | 0/25 | | 0/25 | | 0/25 | | | 0/25 | 0/25 |
| Salmonella spp. (Intestine, feces) | CULT | | 0/25 | | 0/25 | | 0/25 | | 0/25 | | 0/25 | | | 0/25 | 0/25 |
| Staphylococcus aureus (Skin, naso, lung) | CULT | | 0/25 | | 3/25 | | 3/25 | | 3/25 | | 5/25 | | | 5/25 | 4/25 |
| Streptococci -haemolytic (not group D) | CULT | | 0/25 | | 0/25 | | 0/25 | | 0/25 | | 0/25 | | | 0/25 | 0/25 |
| Streptococcus pneumoniae (Naso, lung) | CULT | | 0/25 | | 0/25 | | 0/25 | | 0/25 | | 0/25 | | | 0/25 | 0/25 |
| Helicobacter spp. (Intestine, feces) | PCR | | NT\*\* | | NT\*\* | | NT\*\* | | NT\*\* | | NT\*\* | | | NT\*\* | NT\*\* |
| Streptobacillus moniliformis (Naso) | CULT | | 0/25 | | 0/25 | | 0/25 | | 0/25 | | 0/25 | | | 0/25 | 0/25 |
| Dermatophytes (Skin) | CULT | | 0/25 | | 0/25 | | 0/25 | | 0/25 | | 0/25 | | | 0/25 | 0/25 |
| Corynebacterium bovis (Skin) | CULT | | 0/25 | | 0/25 | | 0/25 | | 0/25 | | 0/25 | | | 0/25 | 0/25 |
| Pneumocystis carinii (Nude lung) | PCR | | NT | | NT | | NT | | NT | | NT | | | NT | NT |
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|  | | **Test**  **method** | | **Latest**  **results** | | **Historicalresults** | |  | |  | |  |  | | | |
| Parasites |  | | May  2024 | | Feb  2024 | | Dec  2023 | | Sep  2023 | | May  2023 | | | Feb  2023 | Nov  2022 |
| Ectoparasites: Fur mites | MICRO | | 0/25 | | 0/25 | | 0/25 | | 0/25 | | 0/25 | | | 0/25 | 0/25 |
| Endoparasites: Pinworms | MICRO | | 0/25 | | 0/25 | | 0/25 | | 0/25 | | 0/25 | | | 0/25 | 0/25 |
| Opportunistic protozoa | MICRO | | 0/25 | | 0/25 | | 0/25 | | 0/25 | | 0/25 | | | 0/25 | 0/25 |
| Nonpathogenic protozoa:  Chilomastix, Entamoeba, Trichomonas | MICRO | | Present | | Present | | Present | | Present | | Present | | | Present | Present |
| Pathological lesions | MACRO | | 1/25 | | 3/25 | | 0/25 | | 1/25 | | 0/25 | | | 0/25 | 0/25 |

Data are expressed as number positive/number tested

Abbreviations used in this report: ELISA=enzyme linked immunosorbent assay (CR); MICRO=microscopy (TAU); MACRO=macroscopic (TAU); IFA=immunofluorescence assay (CR); MFI=multiplex fluorescent immunoassay (TAU); CULT=culture (TAU); PATH=gross pathology (TAU); PCR=polymerase chain reaction (TAU,CR); HIST=histopathology; NT=not tested; TAU=Tel Aviv University lab; CR=Charles River lab; IN=result interpreted as non-specific because not confirmed by alternative serologic assay or diagnostic methodology for other serologic assays

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| Summary |
| Serology: sentinel mice were negative for all serology tested pathogens. Serology tests will be compare to  Pathogen Binder pilot filters.  \*We consider mice samples positive for MNV (Murine norovirus). |
| Bacteriology: One mice samples (208-2-SPF) was positive for *Pseudomonas aeruginosa.*  In addition, 15 samples were positive for *Proteus mirabilis* (405-1-SPF, 405-2-SPF, 405-3-SPF, 407-1-SPF, 407-2-SPF,  409-1-SPF, 409-2-SPF, 409-3-SPF, 409-4-SPF, 409-5-SPF; 305-1-SPF; 305-2-SPF, 307-1-SPF, 307-5-SPF,  207-1-SPF, 207-2-SPF); 2 samples were positive for *Proteus spp*. (307-4-SPF, 208-2-SPF);  7 samples were positive for *Enterobacter cloacae* (405-2-SPF, 407-2-SPF,  407-3-SPF, 409-4-SPF, 307-2-SPF, 307-3-SPF, 208-1-SPF).  The pathogens *Enterobacter* *cloacae*, *Proteus* *mirabilis* and *Proteus spp*. are not included in Felasa recommendations.  \*\*We consider mice samples positive for Helicobacter spp. |
| Parasitology: sentinel mice samples were negative for fur mites (ectoparasites) and negative for pinworms  (endoparasites) observed by microscope. |
| Pathology: One sentinel (307-3-SPF) showed hydro-ovary. |
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**Notes:** *Viridans* group *-Streptococcus*, coagulase negative *Staphylococcus sp*., *Enterococcus sp*., *Lactobacillus sp*., *Lactococcus spp*. and *Escherichia coli* are all common components of the microbiota. *Trichomonas*, *Chilomastix* and *Entamoeba* are all common intestinal protozoa.

Identification of *Pasteurellaceae*:

*Pasteurella pneumotropica* grows as gray colonies on blood agar whereas “other *Pasteurellaceae”* refers to yellow lytic colonies. Both are gram-negative and API-20NE-positive (99%). Occasional confirmation by RT-PCR for the ITS region (IDEXX BioResearch) or 16S rRNA PCR and sequencing (Hy Laboratories, IDEXX BioResearch) indicates that gray colonies are *Pasteurella pneumotropica* (99%, GeneBank accession number: M75083.1, NR\_042887.1) and yellow colonies are *Pasteurella spp* (100%, GeneBank accession number: HF912264, JQ346058). Note that the JQ346058 sequence, called *P. pneumotropica*, is poorly characterized. It shows 100% identical to a *Pasteurella spp* (HF912264) [Dafni et al., 2019, J Am Assoc Lab Anim Sci.;58(2):201-207].

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<https://med.tau.ac.il/new-veterinary-center52021> <https://med.tau.ac.il/sentinel-diagnostic-laboratory>