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

Location: **Medicine TAU** Housing: **SPF unit Medicine** Samples collection: **03/12/23, 10/12/23**

Species: **Mouse sentinel** Strain: **ICR females** Date of report: **27/12/2023** updated

Health report: **25 sentinel mice - FELASA Quarterly Q3**

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|  | Test  method | | Latest  results | | Historical  results | |  | |  | |  |  | |  |
| Viruses |  | | Dec  2023 | | Sep  2023 | | May  2023 | | Feb  2023 | | Nov  2022 | Jul  2022 | | May  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 | | NT | | NT | | 0/25 | | NT | NT | | NT |
| Sendai virus (SEND) | MFI | | NT | | NT | | NT | | 0/25 | | NT | NT | | 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 | | NT | | NT | | 0/25 | | NT | NT | | NT |
| Lymphocytic choriomeningitis virus (LCMV) | MFI | | NT | | NT | | NT | | 0/25 | | NT | NT | | NT |
| Mouse adenovirus type 1,2 (FL-MAV-1, K87-MAV-2) | MFI | | NT | | NT | | NT | | 0/25 | | NT | NT | | NT |
| Mouse cytomegalovirus (MCMV) | MFI | | NT | | NT | | NT | | NT | | NT | NT | | NT |
| Reovirus type 3 (REO) | MFI | | NT | | NT | | NT | | 0/25 | | NT | NT | | 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 |  | | Dec  2023 | | Sep  2023 | | May  2023 | | Feb  2023 | | Nov  2022 | Jul  2022 | | May  2022 |
| Mycoplasma pulmonis (MPUL)-Mouse | MFI | | NT | | NT | | NT | | 0/25 | | NT | NT | | 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 | | NT | | NT | | 0/25 | | NT | NT | | 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 | | xx/25 | | 0/25 | | 1/25 | | 0/25 | | 0/25 | 0/25 | | 0/25 |
| Pasteurellaceae (Naso, lung)  Pasteurella pneumotropica | CULT | | 0/25 | | 0/25 | | 0/25 | | 7/25 | | 0/25 | 7/25 | | 9/25 |
| Pseudomonas aeruginosa (Intestine, Feces) | CULT | | 0/25 | | 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 | | 3/25 | | 3/25 | | 5/25 | | 5/25 | | 4/25 | 1/25 | | 0/25 |
| 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** | | **Historical**  **results** | |  |  |  | | |  | | |
| Parasites |  | | Dec  2023 | | Sep  2023 | | May  2023 | | Feb  2023 | | Nov  2022 | Jul  2022 | | May  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 | | 0/25 | | 1/25 | | 0/25 | | 0/25 | | 0/25 | 3/25 | | 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.  \*We consider mice samples positive for MNV (Murine norovirus). |
| Bacteriology: 3 mice samples were positive for *Staphylococcus aureus* (3th floor: rooms 307 and 207).  In addition, other pathogens not included in Felasa recommendations were isolated:   * 6 samples were positive for *Enterobacter cloacae* (4th floor, rooms 407-3, 407-4, 409-1, 3th floor,   rooms 307-2, 307-4, 207-1)   * one sample was positive for *Proteus vulgaris* (4th floor, room 407-4) * 6 samples were positive for *Proteus mirabilis* (4th floor, room 409-3, 3th floor rooms 305-3, 307-3, 307-4,   207-1, 207-2).  \*\*We consider mice samples positive for Helicobacter spp. |
| Parasitology: sentinel mice samples were negative for pinworms (endoparasites).  #One sample 409-5-SPF was positive for ectoparasite observed by microscope.  The result was not confirmed by PCR tests performed by Charles River.  Charles River real-time PCR tests detects *Myobia musculi*, *Radfordia affinis*, *Radfordia ensifera*, *Myocoptes musulinus*.  It might be that 409-5-SPF positive control, observed by microscope, mean a different Acariformes mites spp.  In order to exclude mites in SPF unit, pool samples were re-check by two different tests as follows:   1. Pool sentinel samples re-tested: 409-S1, S2-SPF; 409-S3, S4-SPF; 409-S5-SPF; 409-5-SPF (positive control);   305-1, 2-SPF; 307-1,2-SPF; 208-1, 2-SPF; 207-1,2-SPF.   1. Fur skin hair pool samples observed by microscope: all negative 2. Swab samples mites screen PCR tests by Charles River: all SPF swab pool samples were negative for mites,   including the positive control 409-5-SPF.  We concluded that SPF mice samples were negative for mites types *Myobia musculi*, *Radfordia affinis*,  *Radfordia ensifera* and *Myocoptes musulinus*. |
| Pathology: No signs. |
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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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Dr. Mickey Harlev, Veterinarian Dr. Debora Rapaport, PhD

Israeli Board Certified Manager of Sentinel Diagnostic Laboratory

Head of the Veterinary Service Center Department of Clinical Microbiology and Immunology

Tel Aviv University, Tel Aviv, Israel Sackler Faculty of Medicine

Mobile: 972-52-5643396 Tel Aviv University, Tel Aviv, Israel

Office: 972-3-6409919; Fax: 972-6407567 Lab: 972-3-6405137; Fax: 972-3-6409160

mickey@tauex.tau.ac.il [debirapa@tauex.tau.ac.il](mailto:debirapa@tauex.tau.ac.il)

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