

# EMMA health monitoring procedures

Brief description of housing system, health monitoring programme and health status of the EMMA SPF live colonies

## Type of facility

Animals distributed by EMMA are bred in SPF (Specific Pathogen Free) barriered facilities in which all materials are sterilized before entry. Staff entering the barriered areas must shower and change into clean unit clothing. Where appropriate, staff working within the units is also required to wear, gloves, face masks, mob caps and over shoes.

## Housing system

Animals are maintained in either flexible film isolators or IVCs (Individually Ventilated Cages) or in conventional cages in barriered areas under positive pressure and are given autoclaved bedding, autoclaved or irradiated food and filtered or chlorinated water. Animals reared in IVCs are cage changed under laminar flow hoods.

## Sentinel programme

The health status of each animal room is monitored on a regular basis e.g. 4 times per year when mice are reared in IVCs or monthly when mice are bred in conventional cages in barriered areas. These screening programmes involve exposing sentinel animals to dirty bedding collected from other IVCs within the mouse room. Some colonies e.g. those reared in isolators are sampled directly.

## Health report

Before receiving any mice from EMMA you will be sent a recent (< 3 months old) health report prepared in accordance with the FELASA (Federation of European Laboratory Animal Science) recommendations. This health report will give details of the agents tested, the number of animals tested and the analytical methods used.

The following pages provide a sample health report from the EMMA node that distributes the strain you are interested in. Note that this is a **sample** health report and **not a current report**. Current reports will be provided upon request. Additional specific health checks (beyond tests recommended by FELASA) are possible if required by customers for importation but will be charged to the customer. If you require any further information please contact the archiving/distribution centre handling your request.

**Health monitoring report**  
In accordance with FELASA recommendations

|   |                                 | 30 Jun<br>2020                           | 20 Apr<br>2020 | 11 Nov<br>2019 | 3 Sept<br>2019 | 20 May<br>2019 | Dec 2014 -<br>Dec 2018 | Test<br>laboratory | Test method |
|---|---------------------------------|--|----------------|----------------|----------------|----------------|------------------------|--------------------|-------------|
| <b>Date of issue:</b> 9 <sup>th</sup> July 2020                                   |                                 | <b>Unit type:</b> Full barrier           |                |                |                |                |                        |                    |             |
| <b>Location:</b> Mouse barrier, Oulu Laboratory Animal Centre, University of Oulu |                                 | <b>Housing type:</b> IVCs and open cages |                |                |                |                |                        |                    |             |
| <b>Species sampled:</b> Mouse   |                                 | <b>Species within the unit:</b> Mouse    |                |                |                |                |                        |                    |             |
| <b>Sampling:</b> Outbred CD1 sentinel mice, one from every animal room            |                                 |  |                |                |                |                |                        |                    |             |
| <b>Viruses</b>  |                                 |  |                |                |                |                |                        |                    |             |
| Minute virus of mice (MVM)  |                                 | 0/10                                     | 0/10           | 0/10           | 0/10           | 0 / 10         | 0 / 137                | SDL                | Bead        |
| Mouse parvovirus (MPV)  |                                 | 0/10                                     | 0/10           | 0/10           | 0/10           | 0 / 10         | 0 / 137                | SDL                | Bead        |
| Mouse parvovirus (MLNs)   |                                 | NT                                       | 0/10           | NT             | NT             | 0 / 10         | 0 / 49                 | SDL                | PCR         |
| Mouse parvovirus (faeces, pooled room samples)                                    |                                 | 0/8                                      | 0/8            | 0/8            | 0/8            | 0 / 8          | 0 / 66                 | SDL                | PCR         |
| Mouse hepatitis virus (MHV)   |                                 | 0/10                                     | 0/10           | 0/10           | 0/10           | 0 / 10         | 0 / 137                | SDL                | Bead        |
| Pneumonia virus of mice (PVM)   |                                 | 0/10                                     | 0/10           | 0/10           | 0/10           | 0 / 10         | 0 / 137                | SDL                | Bead        |
| Reovirus type 3   |                                 | 0/10                                     | 0/10           | 0/10           | 0/10           | 0 / 10         | 0 / 137                | SDL                | Bead        |
| Sendai virus  |                                 | 0/10                                     | 0/10           | 0/10           | 0/10           | 0 / 10         | 0 / 137                | SDL                | Bead        |
| Mouse rotavirus (EDIM)  |                                 | 0/10                                     | 0/10           | 0/10           | 0/10           | 0 / 10         | 0 / 137                | SDL                | Bead        |
| Theiler's murine encephalomyelitis virus (TMEV)                                   |                                 | 0/10                                     | 0/10           | 0/10           | 0/10           | 0 / 10         | 0 / 137                | SDL                | Bead        |
| Mouse norovirus (MNV)   |                                 | 0/10                                     | 0/10           | 0/10           | 0/10           | 0 / 10         | 0 / 137                | SDL                | Bead        |
| Mouse norovirus (faeces, pooled room samples)                                     |                                 | 0/8                                      | 0/8            | 0/8            | 0/8            | 0 / 8          | 0 / 92                 | SDL                | RT-PCR      |
| Ectromelia virus  |                                 | NT                                       | 0/10           | NT             | NT             | 0 / 10         | 0 / 38                 | SDL                | Bead        |
| Lymphocytic choriomeningitis virus (LCMV)   |                                 | NT                                       | 0/10           | NT             | NT             | 0 / 10         | 0 / 38                 | SDL                | Bead        |
| Mouse adenovirus (Mad FL)   |                                 | NT                                       | 0/10           | NT             | NT             | 0 / 10         | 0 / 38                 | SDL                | Bead        |
| Mouse adenovirus (Mad K87)  |                                 | NT                                       | 0/10           | NT             | NT             | 0 / 10         | 0 / 38                 | SDL                | Bead        |
| Mouse cytomegalovirus (MCMV)  |                                 | NT                                       | 0/10           | NT             | NT             | 0 / 10         | 0 / 38                 | SDL                | Bead        |
| Hantaan virus   |                                 | NT                                       | 0/10           | NT             | NT             | 0 / 10         | 0 / 38                 | SDL                | Bead        |
| Polyoma virus   |                                 | NT                                       | 0/10           | NT             | NT             | 0 / 10         | 0 / 38                 | SDL                | Bead        |
| K-virus   |                                 | NT                                       | 0/10           | NT             | NT             | 0 / 10         | 0 / 38                 | SDL                | Bead        |
| Lactate dehydrogenase elevating virus (LDEV)                                      |                                 | NT                                       | 0/10           | NT             | NT             | 0 / 10         | 0 / 38                 | SDL                | Bead        |
| Mouse thymic virus (MTV)  |                                 | NT                                       | 0/10           | NT             | NT             | 0 / 10         | 0 / 38                 | SDL                | Bead        |
| <b>Bacteria, mycoplasma and fungi</b>   |                                 |  |                |                |                |                |                        |                    |             |
| <i>Citrobacter rodentium</i>  |                                 | 0/10                                     | 0/10           | 0/10           | 0/10           | 0 / 10         | 0 / 137                | SDL                | Cult        |
| <i>Clostridium piliforme</i>  |                                 | 0/10                                     | 0/10           | 0/10           | 0/10           | 0 / 10         | 0 / 137                | SDL                | Bead        |
| <i>Corynebacterium kutscheri</i>  |                                 | 0/10                                     | 0/10           | 0/10           | 0/10           | 0 / 10         | 0 / 137                | SDL                | Cult        |
| <i>Helicobacter spp.</i> (faeces, pooled room samples)                            |                                 | 0/8                                      | 0/8            | 0/8            | 0/8            | 0 / 8          | 0 / 92                 | SDL                | PCR         |
| <i>Mycoplasma pulmonis</i>  |                                 | 0/10                                     | 0/10           | 0/10           | 0/10           | 0 / 10         | 0 / 137                | SDL                | Bead        |
| Pasteurellaceae   |                                 | 0/10                                     | 0/10           | 0/10           | 0/10           | 0 / 10         | 0 / 137                | SDL                | Cult        |
| <i>Pasteurella pneumotropica</i>  |                                 | 0/10                                     | 0/10           | 0/10           | 0/10           | 0 / 10         | 0 / 137                | SDL                | PCR         |
| <i>Pseudomonas aeruginosa</i>   |                                 | 0/10                                     | 0/10           | 0/10           | 0/10           | 0 / 10         | 1 / 137 <sup>1)</sup>  | SDL                | Cult        |
| <i>Salmonella spp.</i>  |                                 | 0/10                                     | 0/10           | 0/10           | 0/10           | 0 / 10         | 0 / 137                | SDL                | Cult        |
| <i>Staphylococcus aureus</i>  |                                 | 0/10                                     | 0/10           | 0/10           | 0/10           | 0 / 10         | 6 / 137 <sup>2)</sup>  | SDL                | Cult        |
| Streptococci, β-haemolytic  |                                 | 0/10                                     | 0/10           | 0/10           | 0/10           | 0 / 10         | 0 / 137                | SDL                | Cult        |
| <i>Streptococcus pneumoniae</i>   |                                 | 0/10                                     | 0/10           | 0/10           | 0/10           | 0 / 10         | 0 / 137                | SDL                | Cult        |
| <i>Streptobacillus moniliformis</i>   |                                 | 0/10                                     | 0/10           | 0/10           | 0/10           | 0 / 10         | 0 / 137                | SDL                | Cult        |
| <b>Parasites</b>  |                                 |  |                |                |                |                |                        |                    |             |
| Ectoparasites   |                                 | 0/10                                     | 0/10           | 0 / 10         | 0 / 10         | 0 / 10         | 0 / 137                | OULAC              | Micr        |
| Endoparasites   | Duodenum                        | 0/10                                     | 0/10           | 0 / 10         | 0 / 10         | 0 / 10         | 0 / 127                | OULAC/FFA          | Micr        |
|   | Caecum                          | 0/10                                     | 0/10           | 0 / 10         | 0 / 10         | 0 / 10         | 0 / 127                | OULAC/FFA          | Micr        |
|   | Faecal helminth eggs            | 0/10                                     | 0/10           | 0 / 10         | 0 / 10         | 0 / 10         | 0 / 127                | FFA                | Flot        |
|   | <i>Encephalitozoon cuniculi</i> | 0/10                                     | 0/10           | NT             | NT             | 0 / 10         | 0 / 38                 | SDL                | Bead        |

<sup>1)</sup> Positive result 5.5.2015 from immunocompromised (nude) sentinels

<sup>2)</sup> Two positive results 5.5.2015, four positive results 13.12.2016

The barrier was emptied, disinfected and repopulated in December 2014.

**Abbreviations used in this report:**

|        |   |
|--------|---|
| Bead   | Multiplexed immunoassay                           |
| Cult   | Culture   |
| FFA    | Laboratory of the Finnish Food Authority, Oulu    |
| Flot   | Faecal flotation                                  |
| OULAC  | Oulu Laboratory Animal Centre, University of Oulu |
| Micr   | Microscopy  |
| MLN    | Mesenteric lymph node                             |
| NT     | Not tested  |
| PCR    | Polymerase chain reaction                         |
| RT-PCR | Reverse transcription polymerase chain reaction   |
| SDL    | Surrey Diagnostics Ltd, University of Surrey      |

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Place and date

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