

Example of How to Complete Surgery Section in eSIRIUS

If after reviewing example provided you have questions regarding animal surgeries or how to complete surgery section in eSIRIUS, contact any of the following veterinarians from the Institute for Animal Studies:

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Example of Surgery Described in eSIRIUS

For each group of animals undergoing MMS, identify each of the surgeries in sequence, including the time interval between each successive procedure.

All animals in this protocol undergo two surgeries:

First surgery: AAV injection surgery

Interval between surgeries: 4 - 5 weeks

Second surgery: Craniotomy and implantation of probes

For each group of animals undergoing MMS described above, you MUST provide the rationale for the series of surgeries and the interval between them.

Expression of the gene carried by the virus takes 4 to 5 weeks. However, implanted probes remain useable for limited periods of time. For instance, cannulae become clogged, gliosis reduces the quantity of light transmitted through implanted fiber optics, and also reduces the yield of neuronal signals recorded on electrodes. If we implanted the probes during the same surgery in which we inject virus, we would lose many experiments due to these problems, which typically manifest themselves beginning several weeks after surgery. Therefore, we must inject the animals with virus first and allow the gene to be expressed before implanting these probes.