

ABSTRACT	TITLE	AUTHOR(S)	INSTITUTION	
#27	Prolonged Sheep Anesthesia for Extended Neurosurgical Procedures	Justin Hartman	NAMSA	Abstract

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Prolonged Sheep Anesthesia for Extended Neurosurgical Procedures

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Prolonged Sheep Anesthesia for Extended Neurosurgical Procedures

A workflow was developed to enable 12+ hours of stable anesthesia in sheep for long-duration neurophysiology studies. A modified anesthetic protocol emphasizing hemodynamic stability, multimodal analgesia, and continuous physiologic monitoring was combined with a custom head-support system designed for comfortable, long-term cranial positioning. Animals were maintained in a padded recovery sling to preserve alignment, prevent pressure injuries, and allow safe intra-procedure adjustments. This approach supported uninterrupted neural access, consistent physiologic stability, and rapid post-procedure recovery, enabling timely assessment for neurologic issues. This integrated system establishes a feasible platform for extended large-animal neuro research.