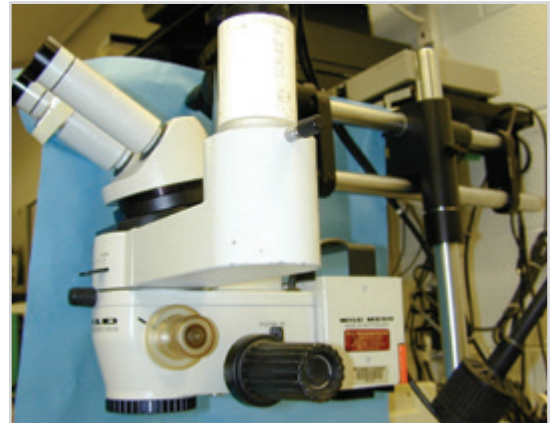


T400-Series Technical Note

Rodent Studies: Special Equipment Needs

Microscope

Equipment needs for mouse surgery vary with the procedures undertaken. Vascular catheterizations are much easier to perform using a stereo micro-scope. Try the microscope in the application you intend to use it in *before* you purchase it. Working distances and heights vary a great deal between microscopes and not all configurations are appropriate for everyone. Very good surgical loupes can be used for some procedures, but these require adaptation by the user. The focal length is fixed and images are brought into focus by moving one's head. This movement can be distracting until one gets accustomed to it.



A good stereo microscope is recommended for achieving successful measurements in small animals.

Respirator

A good rodent respirator is essential for performing mouse thoracotomies. The respirator should provide pressure limits to avoid over inflation of the lungs and should be adjustable (inflation rates, respiratory rates, PEEP).

Surgical Instruments (see next page)

Finally, surgical instruments for mice are a little smaller, a lot more expensive and very delicate. A common mistake made by investigators is to use instruments that are

too big or really cheap. Good advice is to look at a lot of instruments before buying (at scientific conventions), select instruments carefully putting need first, and take extra special care of your instruments once purchased. They should always be cleaned, dried and oiled (if they have moving parts) immediately after use. They should be stored in a safe place. They should not be loaned to others. Good instruments will last many years and are an investment. They allow you to do the work you are trying to perform and pay for themselves in time saved and years of service.

Rodent Studies: Generic Surgical Kit

	SURGICAL INSTRUMENT	FINE SURGICAL TOOLS CAT #
[1]	Vessel Cannulation Forceps- mouse catheter	FST # 00608-11
	Vessel Cannulation Forceps- for rat catheter	FST # 00574-11
[2]	#5 45° angle microblunted Dumont	FST # 11253-25
[3]	D-5aZ S&T Vessel Dilator forcep	FST # 00125-11
[4]	#5 45° angle microblunted, atraumatic Dumont altered very blunt tips	FST # 11253-25
[5]	Foerster octagonal: Curved - no teeth	FST # 11041-08
[6]	Foerster octagonal: Curved- with teeth	FST # 11043-08
[7]	Foerster octagonal Straight - no teeth	FST # 11040-08
[8]	Goldstein Micro-Dissecting Retractors 3 x 3 prong (altered to 2 x 2 prong)	FST # 17002-12
[9]	Kleinert-Kutz microclip applying forceps	Pilling Weck
	2 Kleinert-Kutz vessel clips - curved blade 1 x 6 mm (rat)	Pilling Weck
	2 Kleinert-Kutz vessel clips	Pilling Weck
[10]	Schwartz micropserrefines (straight)	FST # 18052-01
	Schwartz micropserrefines (bent)	FST # 18052-03
[11]	Chest Tube	
[12]	Fine Iris Scissors with oversize finger loops - blunt/blunt	FST # 141-08-0908
[13]	Spring Scissors with fine small blades	FST # 141-08-0908
[14]	Extra delicate mini-Vannas (curved)	FST # 15000-10
	Extra delicate mini-Vannas (streight)	FST # 15000-00
[15]	Halsey Micro Needle Holder, extra light and delicate	FST # 12500-12
[16]	Castroviejo with lock and TC jaws	FST # 12565-14
	(Not shown) Edelstein-suture removal	Storz # 5008



Instruments displayed are available from: Fine Science Tools. Courtesy of TL. Smith, Dept. of Orthopaedics, Wake Forest University, Winston-Salem, NC.



Transonic Systems Inc. is a global manufacturer of innovative biomedical measurement equipment. Founded in 1983, Transonic sells "gold standard" transit-time ultrasound flowmeters and monitors for surgical, hemodialysis, pediatric critical care, perfusion, interventional radiology and research applications. In addition, Transonic provides pressure and pressure volume systems, laser Doppler flowmeters and telemetry systems.

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