

DEPARTMENT OF VETERANS AFFAIRS

**Justification for Single Source Awards IAW FAR 13.106-1
For
Over Micro-Purchase Threshold but Not Exceeding the SAT (\$250K)**

Acquisition Plan Action ID: VA263-18-AP-6007

1. Contracting Activity: Department of Veterans Affairs, **VISN 23, 618-Minneapolis Medical Center**

2. Brief Description of Supplies/ Services required and the intended use/Estimated Amount:

Model 942 Dual Small Animal Stereotaxic Instrument with Digital Display Readout Console

This Includes:

- a. Stereotaxic "U Frame Assembly
- b. (Qty.2) Model 960 Electrode Manipulator with A.P. Slide Assembly with Model 940-B Linear Scale Assembly with Digital Display Readout Console (10-micron resolution)
- c. (Qty.2) Model 1770 Standard Electrode Holder Corner Clamp
- d. WITHOUT Model 920 Rat Adaptor Nose/Tooth Bar Assembly
- e. WITHOUT Model 957 Rat Ear Bars 18-Degree Tip
- f. Model 900C Base Plate Assembly (17" x 10")

Model 923-B Mouse Gas Anesthesia Head Holder

Model 921 Zygoma Ear Cups (includes soft and serrated cups)

Model 922 Non-Rupture 60-degree Tip Ear Bars

Model 1766-AP Cannula Holder Alzet/Plastic One

Quantity to Purchase: Three (3) each of the above five items; see quotation

This equipment will be used for the surgical preparation required for direct brain injection(s) of distinct types of compounds or, surgical placement of chronic, indwelling brain guide cannula into specific regions within the brains of mice, or other future types of rodent brain surgery that may be required, for the neuroscience-based and VA MR -funded research conducted by Dr. Catherine Kotz's VA lab staff at Minneapolis VA Health Care System, in the Bldg. 49 Veterinary Medical Unit.

3. Unique characteristics that limit availability to only one source, with the reason no other supplies or services can be used:

This stereotaxic system allows for flexibility in performing many types of brain surgery on mice as required for completing the planned research projects. These specific arms and electrode holders are also well-suited for attachment of micro-syringe pumps through which 1) virus constructs to create 'on/off' cells in specific brain regions that respond to peripheral injections may be injected; 2) tracer compounds to examine connections between brain regions; 3) acute injection of compounds; 4) implantation of indwelling (cemented) guide cannula to chronically inject compounds of interest may be

performed. Kopf instruments are well-made and highly regarded in the scientific community investigating neuroscience; most rodent brain atlases used for determining placement/target brain sites have been created by utilizing the small measurements (< 10 microns) in three planes obtained from the use of a Kopf stereotaxic. Kopf instruments are noted for versatility in surgery and available adaptive accessories to perform future studies involving different requirements as needed. The requested accessories will aid in working with small mouse brain cannulations and injections; the digital readout per arm work independently and will make it easier and more precise to determine measurements from skull landmarks to the targeted sites within a brain. Some of the brain sites targeted are quite small in diameter (<0.5mm) requiring as precise movement and measurement as possible to obtain the best accuracy in final positioning. The requested Model 922 60-degree ear bars will prevent injury to the mouse ear drums while providing a much more stable head position, which will allow for greater accuracy of targeting within a mouse and across all subjects within a group of surgeries. The mouse anesthesia head holder will provide greater stability than currently available devices used; this will hasten the setup of the mouse in the apparatus, reduce operator stress, and possibly reduce the total time required to remain under isoflurane anesthesia. The Model 1770 electrode holder requested will accommodate multiple needles, syringes etc., and the Model 1766-AP cannula holder requested will accommodate the exact guide cannula used. Kopf instruments are designed to allow for versatility in surgical manipulations.

By having available for use three of such devices setup identically, the team would be able to have more than one operator working simultaneously; one could be performing direct virus injections bilaterally into a single mouse brain, while another lab member may be implanting contralateral guide cannula into each side of the brain of two separate mice. The increased precision expected would potentially allow for fewer animals to be needed to achieve statistical significance, as fewer misplaced injections or cannulas should be possible. It would also allow for lower inter-animal variability in targeted injections/cannula placements; again, potentially reducing the number of animals needed. There are many funded projects requiring mouse brain surgeries, and several pre- and post-doctoral and lab staff that would need to use the requested equipment; having multiple but identical units available is most efficient for accomplishing the planned (and future) studies in a timely manner.

The purchase price is reasonable; similar or less than other comparable stereotaxic apparatus available from other open market sources such as Harvard Bioscience or Stoelting.

This product was used in the surgery training provided in another investigator's laboratory, and is extremely intuitive in operation of the controller and setup, making it easier to teach other current and future lab staff to reproduce the injection and/or cannulation surgeries, and would likely reduce variability of targeting placement between individual users and cohorts of animals.

4. Description of market research conducted and results or statement why it was not conducted:

The availability of this specific product was checked through GSA Advantage. This specific item was not listed nor its vendor (Kopf; David Kopf Instruments), and there were no dual arm stereotaxic instruments listed, except for a version that is used to induce brain trauma in rodents (Vendor: Leica) which is incompatible for our planned use. The price listed on the quote is comparable to other potential vendors such as Stoelting or Harvard Apparatus, but Kopf has a well-known and respected reputation for quality and good customer service, as well as availability for instrument recalibration/servicing as needed, which other vendors do not provide.

5. Contracting Officer's Certification: *Purchase is approved in accordance with FAR13.106-1(b). I certify that the foregoing justification is accurate and complete to the best of my knowledge and belief.*

Richard Leistiko
Contracting Officer

05/23/2018

Date