

# W. M. Keck Center for Collaborative Neuroscience

## THE SPINAL CORD INJURY PROJECT

# THE MASCIS IMPACTOR

### Overview

The MASCIS Impactor is a device designed to deliver graded reproducible spinal cord contusions in rats. Developed over ten years ago, the Impactor is part of a well-defined rodent spinal cord injury model that is used in over 100 laboratories around the world. Most of the recommended procedures for the Impactor are based on experience with the model and work done by the Multicenter Animal Spinal Cord Injury Study (MASCIS). The Impactor is now in its third generation with many improvements over previous models.

### Development

- The MASCIS Impactor, formerly called the NYU Impactor, was developed in 1991 by Drs. John Gruner, Carl Mason, and Wise Young. It is now used in laboratories throughout the world in their spinal cord injury studies. The device precisely measures the movement of a 10-gram rod dropped 12.5, 25.0, or 50.0 mm onto the T9-10 spinal cord exposed by laminectomy. In addition, the device measures movement of the spinal column at the impact site, displays the trajectory of the falling rod, and measures the impact velocity (ImpV), cord compression distance (Cd), cord compression time (Ct), and cord compression rate (Cr). These impact parameters correlate with each other and spinal cord lesion volumes (estimated from tissue Na and K concentrations) and locomotor recovery (BBB scores).

### Size

- The MASCIS Impactor is 17" high x 12" deep and 10" wide. It weighs approximately 11 pounds.

### Purchase

- The MASCIS Impactor is custom manufactured at the W. M. Keck Center for Collaborative Neuroscience in Piscataway, New Jersey USA. Impactors can be purchased for \$7,700 plus shipping and handling. The Impactor works with any Pentium computer with an ISA slot running MS-DOS. (Computers are available for an additional \$330 plus shipping and handling.)

### Training

- Specific protocols have been developed for the MASCIS Impactor. These are taught in the Keck Center International Spinal Cord Injury Workshop, which is offered quarterly.

### FOR ADDITIONAL INFORMATION AND/OR A QUOTE:

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City/State/Postal Code/Country \_\_\_\_\_

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

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