News from CARE Research, LLC

Combining Compassion and Quality

November 2011-January 2012

Message from the President

In this issue:

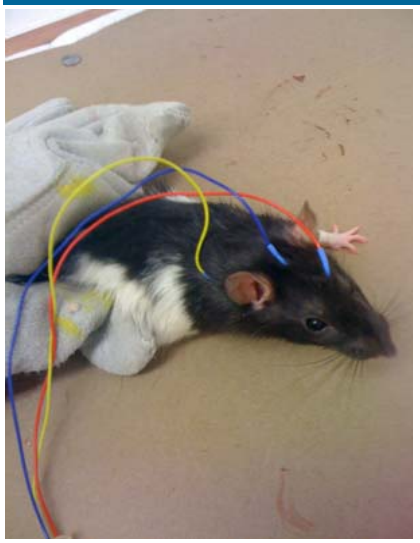
As we approach the end of the year and a nip is in the air, I would like to take this opportunity to extend our warm gratitude to all our sponsors and extend CARE's best wishes to all for a safe and happy holiday season. This year has been full of challenges and afforded us ample opportunities to rise to them. These have ranged from developing and implementing a novel model of individual rat kidney catheterization, collaboration in cutting edge research investigating spinal cord injury together with associated treatment options and developing GLP avian hematology evaluation capabilities.

We look forward with eagerness and enthusiasm to further enhance our capabilities and service offerings to our sponsors, existing and new, in the biotech; device and pharmaceutical industries during 2012 and beyond.

Sincerely,

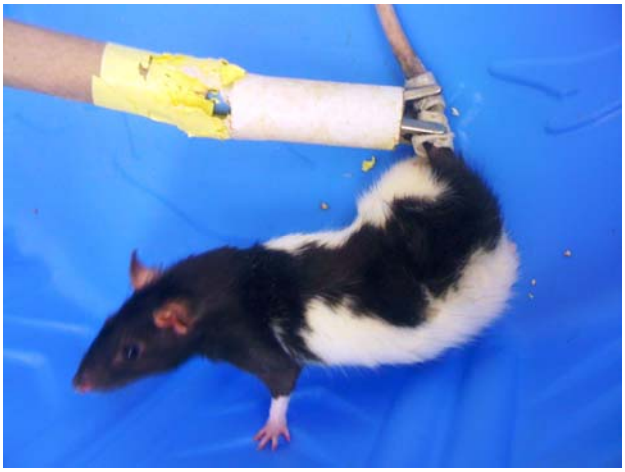
Rajan Bawa, Ph.D
Chief Technical Officer, CARE Research, LLC
President, Colorado Histo-Prep

Spinal Cord Injury Model



Rat with electrodes monitoring lower limb motor activity by measuring various electrical signals from the brain.

The Spinal Cord Injury model developed by leading collaborators at CARE, currently in the early research phase, could dramatically change the treatment of spinal cord trauma. Ultimately, the impact for human patients is the potential to regain lower limb function. Although it will be many years before the treatment will be used in humans, it gives hope to the millions of people who suffer spinal cord injuries every year in the US.



Shown at right, a rat that has recovered part of lower limb motor function by electro stimulation to the spinal cord and is shown exercising to promote recovery.

Kidney Catheterization

Why CARE?

Customer-oriented

In vivo laboratory services

Biomedical research

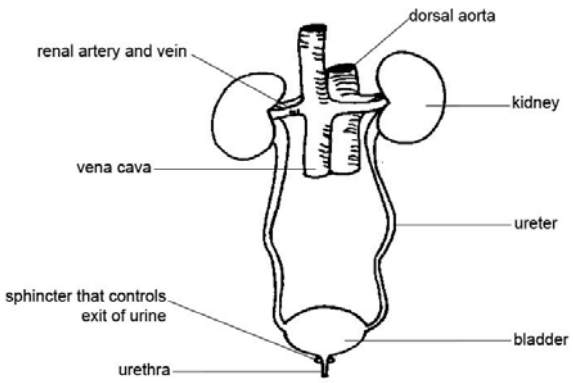
Innovative solutions

Competitive prices

Rat with individual ureters cannulated to determine individual kidney function and correlate renal drug excretion rates with blood plasma drug concentration amongst other uses of the model. Involves microsurgery

This model consists of individual ureter intubation of each kidney and quantitative collection of the urine volume and pH monitoring. The tubes are externalized through the back muscle and each individual aliquot (time series) is collected in a small vial while the animals are engaged in normal activity (including overnight and well into the next day) after recovery from surgery. Blood sampling can be accomplished either by tail vein sampling or by jugular catheter. Crystal formation in the urine is measured and digital photographs are taken to quantify these. The usual parameters of the urine can of course be tracked using urinalysis – both quantitative as well as qualitative.

The model has been used to serve clients seeking to correlate the urine excretion rates of active drug and metabolites and relate them to concomitant drug plasma levels as a time sequence of PK. The pH is measured on a 10 micro liter sample. The potential applications are several. One that comes to mind is the function of a transplanted kidney or determination of individual kidney function. Other elutants and metabolites (indicators of kidney function and pathology) can also be measured. Since the diameter of a rat kidney is less than one mm, the extension of the model to larger species such as dog, feline, etc. should be surgically easier.



CARE Services

Small Animals – Rats, mice, rabbits

Large Animals – Dog, cat, swine, sheep, horse

Specialized Models

Support Services

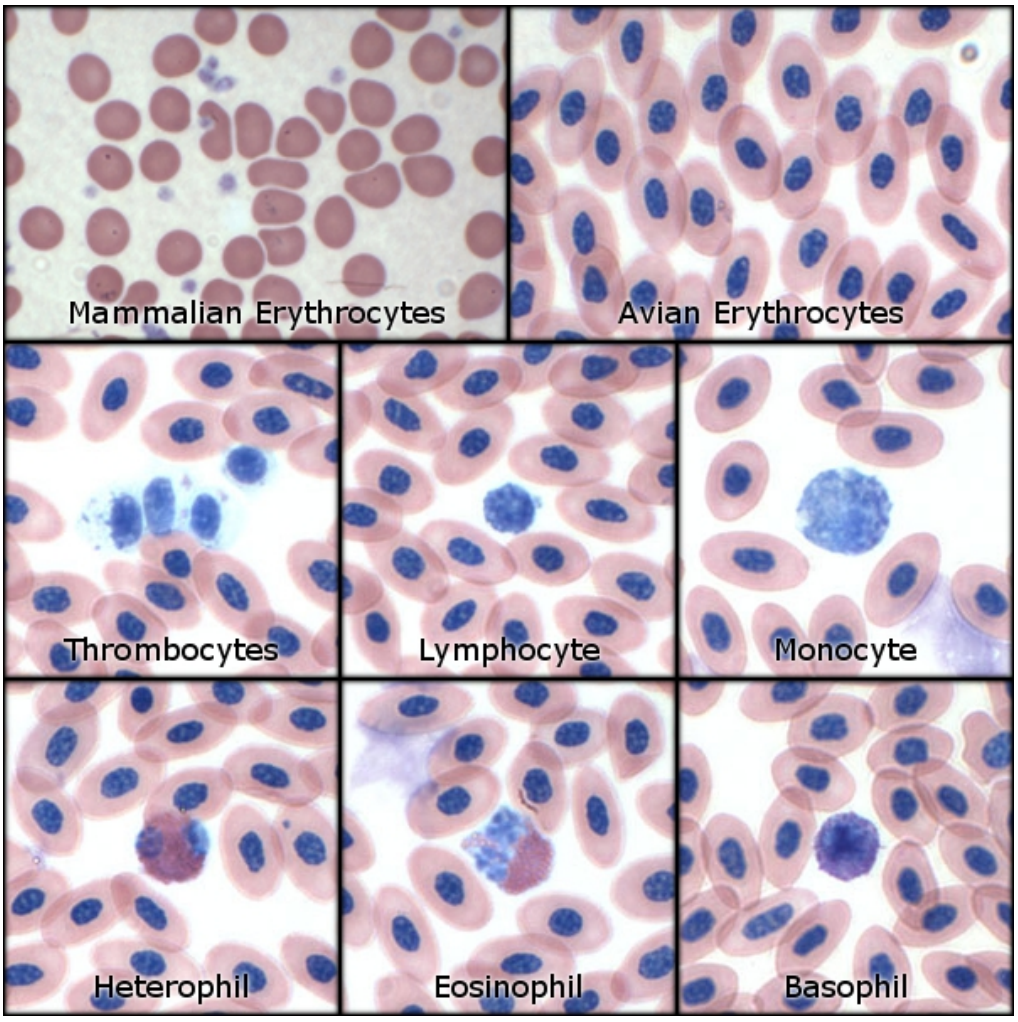
Custom built harnesses with attached cryovials that are used as receptacles for the urine from each individual rat ureter.

Avian Blood Research

Avian red blood cells are nucleated unlike mammalian red blood cells. As a consequence automated equipment cannot be used to quantify their numbers. CARE is one of the few labs in the country that is able to manually count and quantify avian red blood cells under GLP conditions.

Collage below showing differences between mammalian blood and avian blood and several elements of avian blood.

CARE's **Good Laboratory Practice** management system ensures the uniformity, consistency, reliability, reproducibility, quality, and integrity.



Link to large slide images http://www.histoprep.com/images/Chicken%20Blood.jpg

Working Together

Agricultural Species

CARE includes facilities for sheep, cattle, horses, and poultry.

Feedlot Pens

Feedlot Kalen Gates

Pasture

Isolation/Recovery Rooms

Colorado Histo-Prep welcomes unique customer requests and will work together with our client to develop the most efficient and innovative solutions to meet specific scientific, regulatory, budgetary and management objectives. CHP's seamless relationship with CARE ensures one point of contact control not only of technical details but also complete timeline control (study director at CARE) responsibility for preclinical projects with histopathology endpoints to provide quality and timeliness of project completion.

CARE

CARE Research, LLC provides excellent-quality and customer-oriented in vivo laboratory services in the biomedical research and device industry at competitive prices.

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COLORADO Histo-Prep

Integrating Histopathology and Clinical Pathology

Colorado Histo-Prep combines scientific integrity and quality with reliability, personal accountability and trustworthiness.

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