



REGENERATIVE MEDICINE ALLIANCE OF TENNESSEE



DONOR
HORSE



BONE MARROW
HARVEST



BONE MARROW
ASPIRATE



STEM CELL ISOLATION
AND PROLIFERATION



STEM CELL
TREATMENT

MISSION STATEMENT: To bring together biologists, engineers, large animal clinicians, and physicians to study stem cell biology and use stem cells in regenerative therapy.

RMAT Organization

The Regenerative Medicine Alliance of Tennessee (RMAT) based at the University of Tennessee Knoxville brings together an interdisciplinary group of faculty focused on using stem cells for the treatment of vascular, neural, and orthopedic diseases. These faculty stem from the College of Veterinary Medicine, Graduate School of Medicine, and College of Engineering. RMAT is a perfect blend of basic science and clinical medicine.

Clinic Stem Cell Source

RMAT at UTK does not use embryonic stem cells, but rather adult stem cells that have been collected from the bone marrow. Bone marrow can be harvested and adult stem cells can be isolated from the equine patient (autologous) or from a donor horse (allogeneic). Allogeneic adult stem cells isolated from a research mare at the Cherokee farm at UTK are currently being used successfully for the treatment of tendon injuries, navicular disease, and laminitis in client horses. Lab personnel in a dedicated stem cell laboratory process, culture and store bone marrow-derived adult stem cells and make them available to the clinic.

Regenerative Medicine Research

University of Tennessee stem cell initiative brings together resources from across the university to ensure that the research done in the laboratory can be translated into clinical treatments for animals and humans. Scientists at UTK are investigating stem cell therapies in the areas of musculoskeletal diseases – bone and tendon injury, corneal ulcers, wound healing, and neural differentiation.

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