

# EQUINA™: A CT SCANNER DESIGNED BY AND FOR VETERINARIANS

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Presented by: Regina Fulkerson

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[www.AstoCT.com](http://www.AstoCT.com)

# Changing the paradigm in equine imaging

## The Problem

Current imaging tools are not sufficient to optimally manage equine patients

## Asto CT Technology

Equina™ is a CT system that allows imaging of a standing sedated horse

## Our Goal

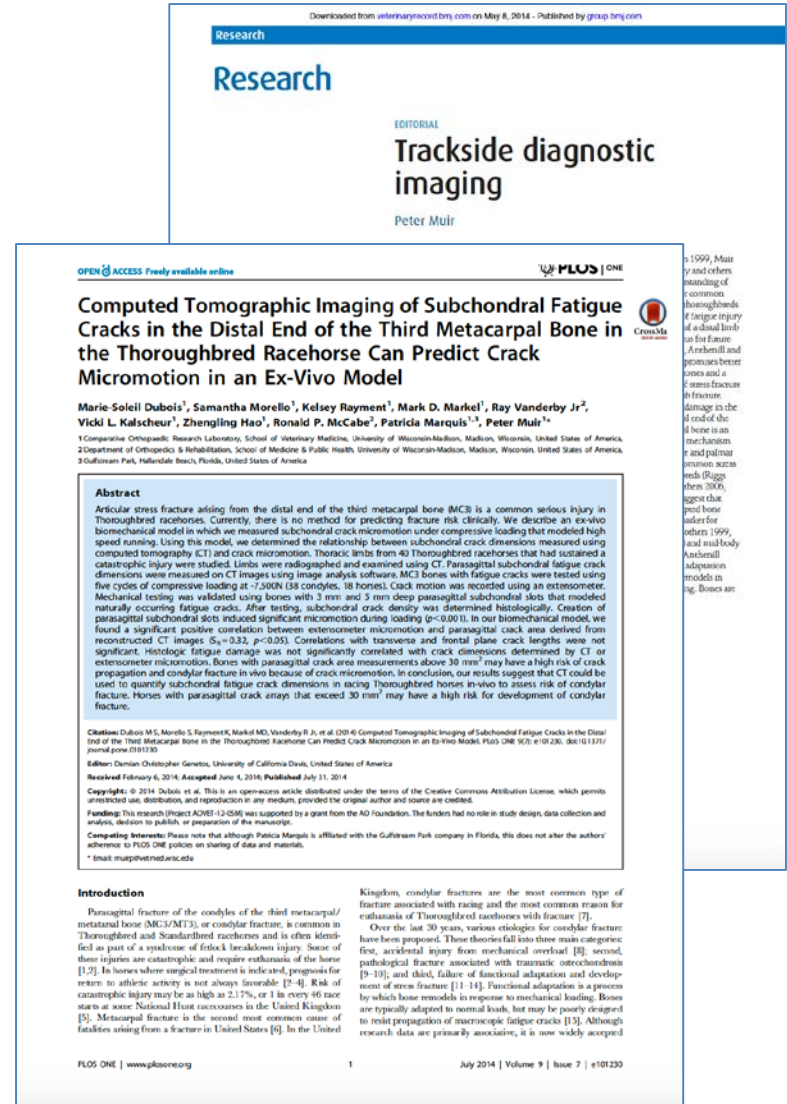
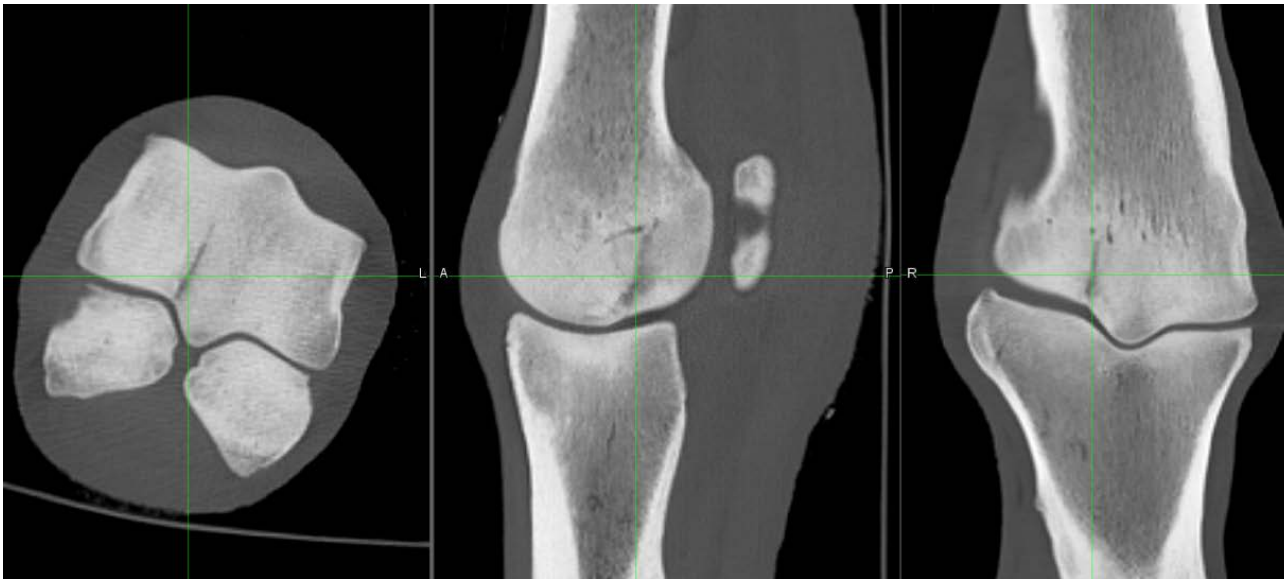
Enable veterinarians to broadly offer CT imaging to the equine community



*Asto CT is pioneering standing CT to provide state-of-the-art screening & diagnosis to equine veterinarians*

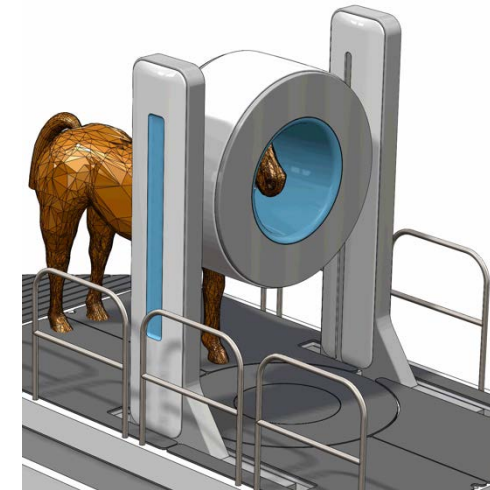
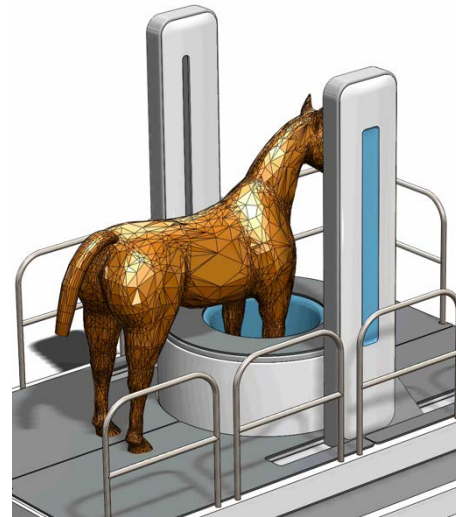
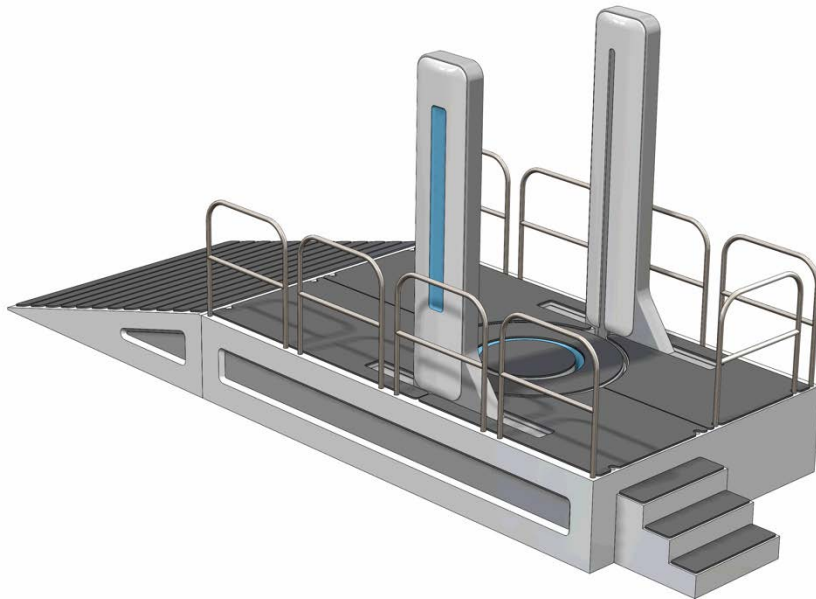
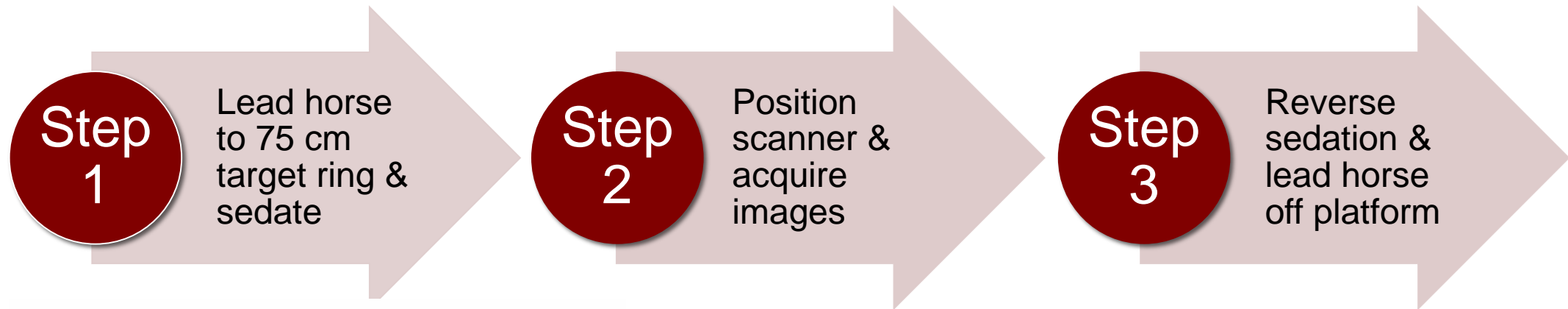
# Multi-slice CT identifies fractures

- Recent work on bone and fracture biomechanics in equine patients suggests that CT is the right technology to improve the ability to monitor and detect fracture risk over time



Dubois et al., PLoS One 2014  
Muir, Veterinary Record 2014

# Acquiring images – simple process



# Equina™ appeals to small and large veterinary centers



## Performance horses

Early detection of stress fractures  
Effectively manage training programs



## Show & Recreation

Easier identification and management of lameness & other musculoskeletal concerns



## Older horses

Best-in-class diagnosis of dental & sinus problems

Equina™ can help manage a wide range of conditions in your equine patients




# Scanner characteristics

- Modern fan-beam CT scanner
  - 75 cm opening & field of view for easy positioning
  - High-resolution mode for bone imaging
- 100 cm scan range (24 detector rows)
  - Limb imaging to carpus/tarsus
  - Neck imaging to C6/C7
- 30 sec scan times
- Very low leakage radiation – scanner is shielded
- Tube voltage 80-160 kVp, 8 mA
- Focal spot size < 1.0 mm

*Product Data*

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**Asto CT**  
*Equine Standing CT*



**Equina™**

**Description**

Equina is a robotics driven computed tomography (CT) system that can be used to scan a sedated standing horse. The system is comprised of a CT gantry, robotic motion system, and platform. An Operator Workstation and wireless controller drive the system. Equina provides CT acquisition & review tools to aid veterinarians in:

- ☐ Preventing and diagnosing conditions affecting the limbs, such as fractures
- ☐ Assessing and managing conditions of the head & neck, such as tooth and sinus problems

**Applications**

The Equina is designed to perform the following CT scans.\*

- ☐ Lower limbs, from the carpus down in the thoracic limb, and from the tarsus down in the pelvic limb
- ☐ Head & neck down to C6/C7

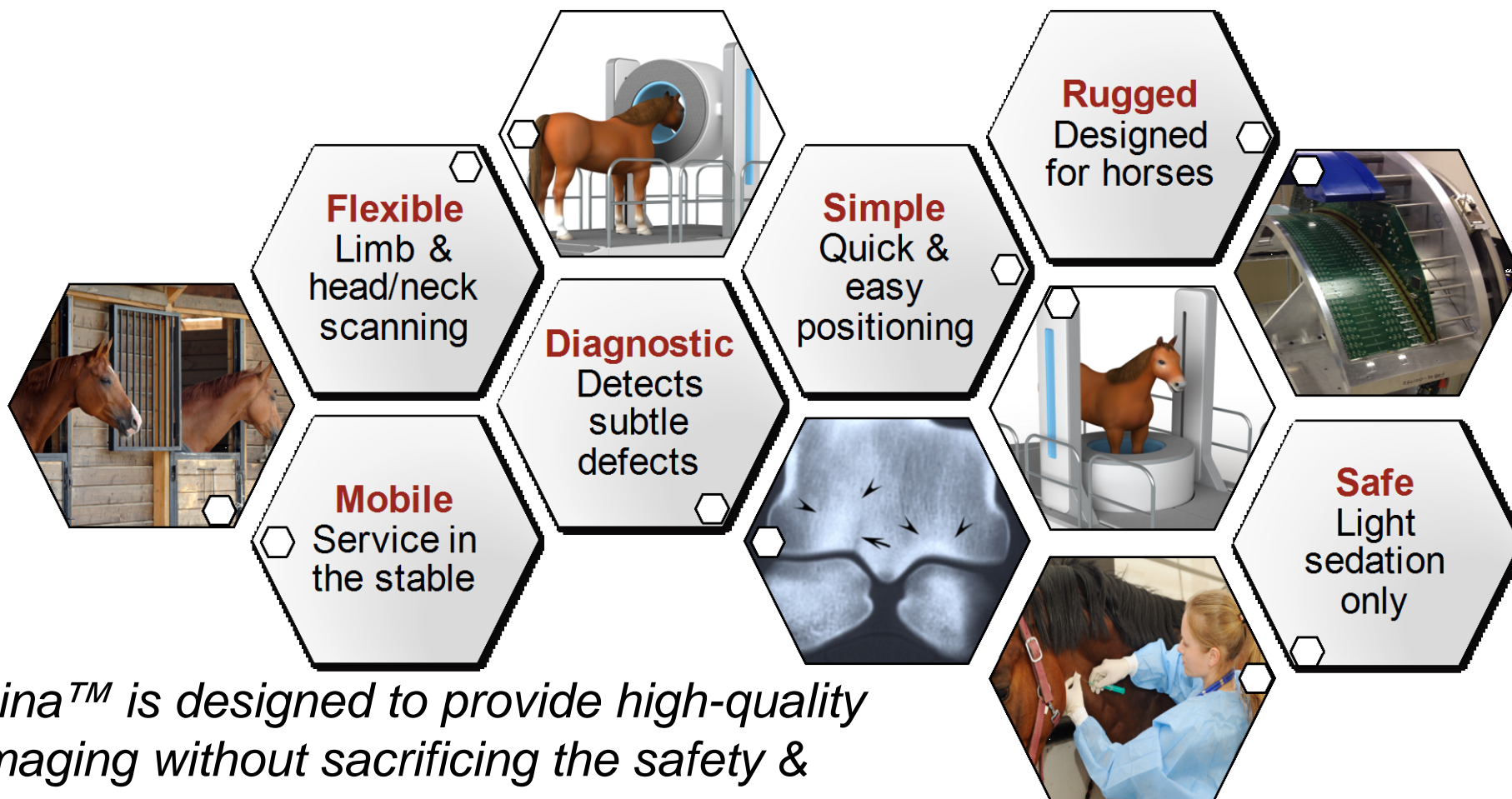
Indications for use include:

- ☐ Pre-purchase screening of horses at any age
- ☐ Routine screening of racehorses before and during racing season
- ☐ Screening of horses during other athletic events, such as jumping, and eventing
- ☐ Diagnosis of lameness problems in thoracic or pelvic limbs
- ☐ Diagnosis of equine diseases of the head, such as ethmoid hematoma, sinus and teeth problems
- ☐ Diagnosis of equine neck diseases, such as spinal disease, osteoarthritis and fractures
- ☐ Surgical planning

\*Equina should be operated by trained personnel only.

[www.astoct.com](http://www.astoct.com)

# Equina™ meets diverse needs of horses



*Equina™ is designed to provide high-quality imaging without sacrificing the safety & versatility that equine veterinarians require*

# First images demonstrate diagnostic quality





# First head & neck images



*Flexibility of Equina™ allows for diagnosis of equine diseases of the head & neck, and sinus & teeth problems*

# Equina™ can be used for small animals

- Flexibility of robotics can accommodate a gurney for small animals
- The gurney is stationary → convenient for simultaneous use of anesthesia equipment and other devices



# About Asto CT

- Asto CT was founded in 2015 as a result of a research collaboration between the UW-Madison School of Veterinary Medicine (Peter Muir) and Morgridge Institute for Research (Rock Mackie)
- The company is pioneering robotics in combination with CT scanning to provide new imaging indications
- Our patented approach allows for imaging of a standing sedated horse, or small animals on a mobile gurney
- The first mission is to improve diagnosis and treatment of conditions of the distal limb and diseases of head and neck in horses

# World-Class Team & Advisors



**Peter Muir**  
Founder  
UW Vet School



**Sabrina Brounts**  
Equine Specialist  
UW Vet School



**David Ergun**  
Founder, CEO  
*Provided slides*



**Cristina Ergun**  
Veterinarian



**Rock Mackie**  
Founder, Chair



**Olof Johnson**  
President, PDSI



**Mark Markel**  
Founder,  
UW Vet School



**Harry Freeman**  
Sales & BD



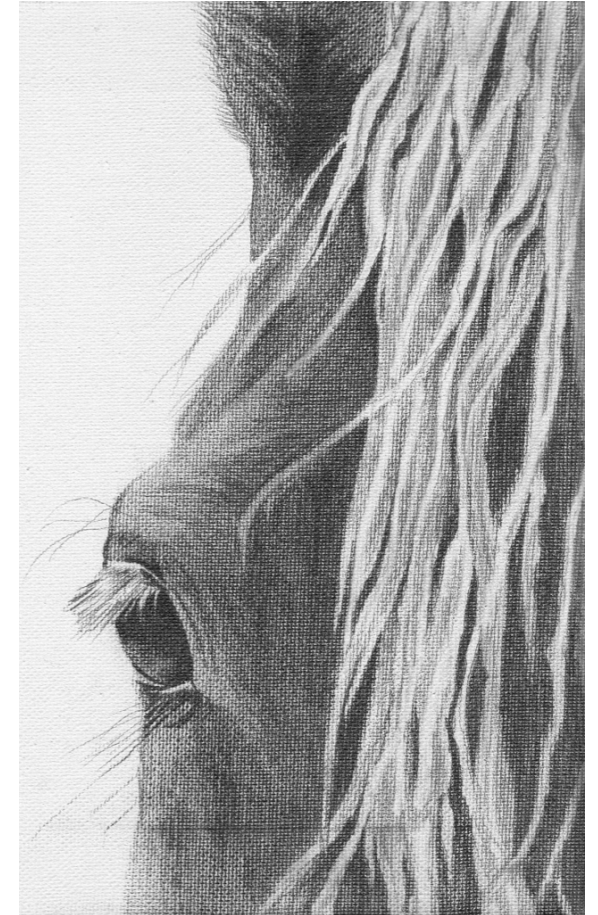
**Megan Rothney**  
Marketing





# Summary

- Asto CT technology is shifting the paradigm in equine imaging by solving long-standing diagnostic problems
- Equina™ offers safe, high-quality CT imaging to the equine community
- Equina™ is a versatile system that can be used for small animals
- Asto CT has introduced Equina™ at the AAEP in December 2016 & will begin shipping units in May 2017





# Asto CT



*Preventing equine fractures with  
safe, high-quality CT imaging*