

Symposium on Therapeutic Advances in Animal Rehabilitation

Pre-Symposium Labs April 22-23, 2015; Symposium April 24-26, 2015; Florham Park, NJ
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CANINE TRACK

Date: April 24 – April 26, 2015 (Pre-Symposium Labs, April 22 – April 23, 2015)
Location: Wyndham Hamilton Park Hotel & Conference Center, Florham Park, New Jersey
Target Audience: Veterinarians, veterinary technicians, physical therapists, occupational therapists, and other veterinary rehabilitation practitioners
Educational Credits: 4.0 total contact hours per ½-day workshop
8.0 total contact hours per pre-symposium lab day
4.0 total contact hours per AARV lecture series
Certificates of attendance will be awarded

EQUINE TRACK

Date: April 23, 2015
Location: Tranquillity Farm, Chester, New Jersey
Target Audience: Veterinarians, veterinary technicians, physical therapists, and other equine veterinary rehabilitation practitioners
Educational Credits: 4.0 contact hours per ½-day workshop (8.0 total contact hours per full day)
Certificates of attendance will be awarded

CANINE PRE-SYMPOSIUM LABS - COURSE DESCRIPTIONS

Basic Manual Therapy for the Canine Spine (2 days; 16.0 contact hours)

Instructor: Laurie Edge-Hughes, BScPT, MAnimSt (Animal Physio), CAFCI, CCRT

Prerequisites: This 2-day course, *Basic Manual Therapy for the Canine Spine*, is open to Veterinarians, Veterinary Technicians, Physical Therapists, and those who have successfully completed a canine rehabilitation certification program. Others may be admitted by special permission based on review of applicant's previous coursework and experience.

Course Description: Through lecture and lab, the instructor will lead participants through a thorough evaluation of the canine spine from a mechanical perspective. Focus will include manual therapy concepts and evidence-based rationale for treatment selection. Participants will gain a greater depth of understanding of spinal mechanics, a better appreciation for the detection of spinal dysfunctions, and the ability to manually treat (via mobilization techniques) the spinal system.

Manual Assessment, Techniques, and Treatment for the Carpus, Elbow, and Shoulder (1 day; 8.0 contact hours)

Instructor: Ria Acciani, MPT, CCRP

Course Description: This 1-day course, *Manual Assessment, Techniques, and Treatment for the Carpus, Elbow, and Shoulder*, is both lecture and lab that will focus on manual skills for evaluation and treatment of the thoracic limb. Participants will learn how to clinically assess the joints, palpate, and test all aspects of the thoracic limb. This will allow participants to confidently determine dysfunction and create a treatment and rehab plan for optimum outcomes. This course has a strong focus on manual skills, and labs will include mobility testing and mobilization techniques for the specific treatment of the carpus, elbow, and shoulder. Gait, flexibility, and ROM will be addressed for evaluation purposes and will teach participants how to incorporate these findings into the overall patient assessment.

CANINE PRE-SYMPOSIUM LABS - COURSE DESCRIPTIONS – cont'd

Manual Assessment, Techniques, and Treatment for the Tarsus, Stifle, and Hip (1 day; 8.0 contact hours)**Instructor:** Ria Acciani, MPT, CCRP

Course Description: This 1-day course, *Manual Assessment, Techniques, and Treatment for the Tarsus, Stifle, and Hip*, is both lecture and lab that focuses on the manual skills for evaluation and treatment of the pelvic limb. Participants will learn how to clinically assess the joints, palpate, and test all aspects of the pelvic limb. This will allow participants to confidently determine dysfunction and create a treatment and rehab plan for optimum outcomes. This course has a strong focus on manual skills, and labs will include mobility testing and mobilization techniques for the specific treatment of the tarsus, stifle, and hip. Gait, flexibility, and ROM will be addressed for evaluation purposes and will teach participants how to incorporate these findings into the overall patient assessment.

CANINE WORKSHOPS - - COURSE DESCRIPTIONS & OUTLINES

(4.0 contact hours per workshop)

Logical Approaches to Therapeutic Exercise for the Neurological Patient**Instructor:** Robert J. Porter III, LMT, CCRP

Course Description: This workshop, *Logical Approaches to Therapeutic Exercise for the Neurological Patient*, will focus on motivation of pet patients with the intent of using positive reinforcement-training approaches for therapeutic exercise. Exercises demonstrated in this course will be centered around transitions for the patient suffering from quad or posterior paralysis/paresis. Slow-motion video breaking down the components of these movements will be viewed in the normal dog as well as case studies of neurologic patients. A task analysis will be outlined to set patients up to succeed in functional movement and facilitate practitioners to become successful animal trainers using a food-based reward system.

Learning Objectives: Participants will gain a working knowledge of force-free motivational training techniques and (land-based) exercises geared toward functional recovery of the canine suffering from posterior paresis and quadriparesis.

Course Outline

Lecture (45-60min - A password will be given at the time of lecture for all video demonstrations for future re-viewing via www.vimeo.com/robpossible)

- Introduction to positive, force free training techniques for the neurological rehab patient
- Using logic to pick exercise
- Components of the of transition
- Creating targeted exercises and breaking up behaviors / actions for success

Lab (3 hours -1/2 hour break)

- Getting patients to eat in clinic and understanding the breakdown of behaviors
- Food values and what they mean to your patient
- Functional assessments
- Application and demonstration of exercises
- What not to do and how to make it better (fixes)

Force Free Approaches to Targeted Therapeutic Exercise

Instructor: Robert J. Porter III, LMT, CCRP

Course Description: This workshop, *Force Free Approaches to Targeted Therapeutic Exercise*, will outline 6 physical and mental basic exercises that will be demonstrated and progressed to very challenging, high-intensity actions. These exercises will be safe for post-operative patients as well as challenging for the performance canine. All exercises will use positive reinforcement training to allow the patients to truly learn the behavior and therefore increase coordination of their bodies movements. Exercises will target both front and rear limbs as well as core muscle groups, in flexion, extension, abduction, and adduction. This will target functional actions such as sitting to standing, turning, jumping, and decelerating movements seen in normal dog life as well as the performance canine. Clinic set-up, environment, and ongoing food-based motivational training techniques will also be covered.

Learning Objectives: Participants will be given a set of exercises that can be progressed or digressed to fit the needs of many pathologies and conditioning goals seen in the rehabilitation clinic. All exercise will have a force free approach using food rewards to re-enforce the patient's actions and learning environment.

Course Outline

Lecture (45-60min -A password will be given at the time of lecture for all video demonstrations for future re-viewing via www.vimeo.com/robpossible)

- Motivating rehab and conditioning patients using food rewards for fast results (lure rewarding/target training)
- Differences between shaping, targeting and luring
- Simple gestures and what they mean to the canine
- Non-rewards and ignoring unwanted behaviors
- Basic behaviors needed for advancement of a land based full body workout
- Advancing behaviors and making exercise safe and challenging for all patients

Lab (3 hours -1/2 hour break)

- Play time with patients, building motivation and getting over stressors
- Luring not teasing
- Keeping it simple, reducing behaviors/actions to the lowest common action
- Demonstration and performance of foundation behaviors / exercises
- Transitions to DogTread treadmills and challenging the canine athlete

Outcome Measures Used in Canine Rehabilitation

Instructor: Kristin Kirkby Shaw, DVM, PhD, CCRT, DACVS, DACVSMR

Course Description: This workshop, *Outcome Measures Used in Canine Rehabilitation*, is designed for DVMs, PTs, and C/LVTs with an interest in practicing evidence-based medicine and / or conducting clinical research. It will introduce / review quantitative and qualitative methods for objectively measuring outcomes in veterinary rehabilitation, with emphasis on techniques that can be easily incorporated into private practice (i.e. do not require advanced equipment). Outcome measures discussed will include lameness and pain scales, functional tests, bathroom scales, Coach's Eye™, goniometry, and limb circumference (Gulick). Participants will have the opportunity to practice various techniques with live dogs, and we will compare inter- and intra-observer variability within the class. For those interested in clinical research, understanding the selection of appropriate outcome measures is the foundation for designing a successful study.

Outcome Measures Used in Canine Rehabilitation – cont'd

Learning Objectives

- Gain confidence in performing 2-3 outcome measures that can be incorporated into your practice
- Become familiar with the different chronic pain scales and choose one that you will use in your practice to guide pain management protocols
- Understand how to choose outcome measures that will answer the question(s) of interest in a clinical trial

Course Outline

Lecture/ Discussion

- What is an outcome measure (OM)?
- Why use OM?
- What is validated?
- Overview of subjective measurements
- Pain scores—acute and chronic
- Lameness scores
- Body condition score
- Overview of objective measurements
- Goniometry
- Thigh, antebrachial circumference
- Bathroom scales (and other static weight-bearing measurement tools)
- Kinetics (force plate, pressure mat)
- Kinematics (3-D, Coach's Eye™)
- Thermography
- Functional tests
 - Finish canine stifle index
 - FinFun--neuro dysfunction
 - 6-minute walk test

Lab

- Pain scales: VAS, NRS, Glasgow, CBPI and CN Orthopedic Index—fill out for one of their own dogs—how long does it take to fill out? Discussion
- Dogs—lameness scores, BCS, goniometry, limb circumference, bathroom scales—how is our inter- and intra-observer variability?

How to Design, Conduct, and Publish Research in Veterinary Rehabilitation

Instructor: *Kristin Kirkby Shaw, DVM, PhD, CCRT DACVS, DACVSMR*

Course Description: This workshop, *How to Design, Conduct, and Publish Research in Veterinary Rehabilitation*, is designed for rehabilitation practitioners who are interested in contributing to evidence-based veterinary rehabilitation by conducting and publishing clinical research. This is an introductory level course that will familiarize participants with study design, selection of appropriate primary and secondary outcome measures, data collection, and manuscript preparation and submission. This course will not teach statistical analysis but will suggest that those wishing to perform clinical research enlist the assistance of a biostatistician. In the laboratory portion of this workshop, we will brainstorm and design several clinical studies as a group with hope that participants will be able to take these ideas back and conduct a study in their practice. Participants will be asked to fill out a short survey prior to the workshop that will guide the laboratory discussion. ***Techniques will be demonstrated via video and materials. No dogs will be utilized in this workshop.**

How to Design, Conduct, and Publish Research in Veterinary Rehabilitation – cont'd

Survey questions will include:

- What are the most common conditions treated? (# / month)
- What modalities and therapeutic tools (acupuncture, UWTM, pool, etc.) do you use in your practice?
- Do you treat certain conditions with any standard protocol?
- What outcome measures do you currently use? Have you used in the past?
- Have you conducted research and/or published before?
- What resources do you have to help—technicians, time, stats, financial support?
- What clinical observations and questions do you have?

Learning Objectives

- Participants will ideally be able to design a simple clinical trial based on a focused clinical question utilizing primary and secondary outcome measures
- Participants will become familiar with manuscript preparation and submission
- Participants will network with one another to design and conduct a multi-center clinical trial following the workshop

Course Outline

Lecture / Discussion

- Evidence-based medicine
- Why it matters
- Levels of evidence / types of study design
- Designing a research project
- Clinical observation → Hypothesis
- Narrowing down the questions--KISS
- Comparing outcomes vs. hypothesis testing
- Design approach: experimental vs. observational
- Experimental: how many groups? Methods of randomization. Blinding, controls--placebo, gold standards
- Time frame and time line: pProspective vs. retrospective; cross-sectional vs. longitudinal
- Inclusion and exclusion criteria
- Confounding factors—pain meds, modalities, concurrent medical/ortho/neuro disease, age, breed, etc.
- What type of study CAN I do in my practice: resources, funding, time, caseload
- Statistician is needed: calculating sample size, eliminating confounding factors, defining clinically relevant outcomes
- What outcome measures will be used
- Organization is key: who will be responsible for collecting data? Where will it be stored?
- Paperwork: client consent, data collection forms, client questionnaires, pain scores, etc.
- Analyzing data
- Statistician should be involved from the beginning
- Some types of studies may not need advanced stats (or any stats)
- Getting published
- Choosing a journal
- Instructions for authors
- Who are your co-authors
- Preparing the manuscript
- Acknowledging limitations of the study
- Submitting the manuscript
- What to expect from reviewers
- What to do if your paper is rejected

How to Design, Conduct, and Publish Research in Veterinary Rehabilitation – cont'd

- Presenting your data in other formats
- Abstracts at conferences
- Local VMA, share with local vet community and rehab community
- AARV newsletter
- Lets give it a try! Group brainstorming—prior to the workshop we will collect information from the attendees and ask them to start thinking about questions they would like to answer.
- Pre-workshop survey:
 - What are their most common cases? (# / month)—post surgical? How soon? Which surgeries?
 - What modalities and therapeutic tools (acupx, UWTM, pool, etc) do they use?
 - Do they treat certain conditions with any standard protocol?
 - What outcome measures do they currently use? Have they used?
 - Have they conducted research and/or published before?
 - What resources do they have to help—technicians, time, stats, financial support
 - What clinical observations and questions do they have?
- Brain storming clinical questions
- Narrowing down the question

Lab

- Designing a retrospective study—As a group we will work through defining the clinical question and hypothesis, what outcome measures will be used, how/who would collect the data, is it a case series/descriptive study or are there opportunities for statistical analysis
- Designing a quasi-experimental study
- Designing a prospective experimental study
- Next steps
- Do any of the participants want to collaborate on a multi-center study? Who will be lead author?
- Remember to start with a simple question
- Enlisting a mentor

***Techniques will be demonstrated via video and materials. No dogs will be utilized in this workshop.**

WaterWorks – A New Perspective: Using Functional and Physical Techniques to Direct Aquatic Therapies

Instructor: Tania Costa, VT, CCRP, CAAP, CMT

Course Description: This workshop, *WaterWorks-A New Perspective: Using Functional and Physical Techniques to Direct Aquatic Therapies*, will include examples of swimming and underwater treadmill session protocols. Topics of discussion will include; breed specific concerns, swimming styles in dogs, and using positive reinforcement to promote successful aquatic sessions. Ideas will be presented to maximize sessions including manual therapy techniques, external devices, and utilizing common athletic re-training principles to aid in recovery of various orthopedic and neurological conditions. Participants will learn ways to determine session protocols for a variety of different rehab cases including conditioning and weight-loss programs. The lab will consist of video presentations of case work-ups and how various known orthopedic and neurological gait-patterning issues can be addressed. Participants will work through various case presentations and discuss various physical and functional manual therapy techniques that can help maximize therapeutic plans. Audience participation through case presentations is encouraged. ***Techniques will be demonstrated via video and materials. No dogs will be utilized in this workshop.**

WaterWorks – A New Perspective: Using Functional and Physical Techniques to Direct Aquatic Therapies – cont'd

Learning Objectives

- Review of the limited research utilizing the underwater treadmill (UWTM) and swimming environments to direct therapy goals
- Participants will review various breed specific concerns, swimming styles in dogs, and ways to direct therapy goals
- Participants will learn how to identify various orthopedic and neurologic gait abnormalities in the UWTM and assign manual therapy techniques to direct therapy
- Discussion of advanced training principles in the UWTM and pool and how to apply them to rehab sessions (strength, endurance, proprioception, and speed)
- Participants will learn how to structure aquatic therapy protocols for a variety of orthopedic/neurological conditions
- Various 'gadgets' will be demonstrated to give the participant ideas on how to improve movement in the water to maximize patient outcomes
- Conditioning and weight loss program ideas will be briefly discussed
- Video analysis of orthopedic and neurologic patients in land treadmill, UWTM, and pool will be evaluated and discussed
- **Participants should email Tania@caninewellness.com with footage of interesting cases by Feb 21st 2015**

Course Outline

Lecture

- Introduction
- Brief review of the various studies done in dogs cats and rats with regards to water therapy and how it can impact therapy protocol's
 - Studies done using UWTM in dogs
 - Studies done using swimming in rats
 - Studies done using land treadmill in cats
 - How these study results can be used in therapy sessions
- Breed specific issues and swim styles, and how you can aid in improving sessions
 - Brachiocephalic, deep chested, muscular breeds, sight hounds vs. natural swim breeds
 - Guarding breeds
 - Understanding each of the swim styles and techniques to direct therapy goals
 - Precautions for swimming in dogs (e.g., wobblers syndrome, heart murmurs, seizures, aggressive dogs, the very senior dog)

Video Lab & Discussion

Lecture

- Identification of various orthopedic and neurological rehab patient gait abnormalities in the UWTM and how to improve outcomes (e.g., pivot shift, hyperextension issues of carpal and tarsal joints, crossing of front or back legs)
 - Various orthopedic movement issues will be discussed and how to use manual therapy techniques and 'gadgets' to direct therapy
 - Dealing with muscle injuries - ideas on when to use aquatic therapy
 - Neurological patients: decreasing neural pain, neural adaptations, and retraining gait mechanics
 - Neurological movement issues and techniques to direct therapy goals (e.g., ataxic dog, paralyzed dog, vestibular)

Video Lab & Discussion

WaterWorks – A New Perspective: Using Functional and Physical Techniques to Direct Aquatic Therapies – cont'd

Lecture

- Discussion of advanced principles in the pool and UWTM
 - Why we care about the proper movement of dogs in the water environment
 - Positive reinforcement to help scared dogs enjoy water sessions
 - How research can direct therapy goals in the pool and UWTM
 - Why do we want to vary sessions in the aquatic environment
 - Discussion of programmable sessions in the UWTM - how helpful are they?
 - Basic principles of the human training program: speed, endurance, proprioception, and strength training, and how these principles apply to the canine patient in the aquatic environment

Video Lab & Discussion

Lecture

- How to develop session protocols for the rehab patient to maximize client outcomes
 - Goal-setting and its importance for the patient and the client
 - Using land exercises and adapting them to the UWTM and pool
 - Adding speed, endurance, proprioception, and strength training in your therapy session
 - Determining length of time in aquatic environment (quality vs. quantity)
 - Swimming vs. UWTM
 - What happens if the dog has some setbacks - educating your client

Video Lab & Discussion

Lecture

- Developing a weight loss or conditioning program
 - Principles for developing a conditioning or weight loss program
 - Determining patient fitness levels
 - Woof-Watchers weight loss program
 - How and when to increase intensity
 - Understanding athletic re-training methods (speed, endurance, proprioception, and strength) to direct therapy
- Further discussion (time permitted)
 - A comparison of ataxic dogs utilizing land treadmill, UWTM, and swimming
- Interactive discussion of participant-submitted cases
participants should email Tania@caninewellness.com with footage of interesting cases

***Techniques will be demonstrated via video and materials. No dogs will be utilized in this workshop.**

Management of the Lifespan of Canine Hip Dysplasia

Instructor: Laurie Edge-Hughes, BScPT, MAnimSt (Animal Physio), CAFCI, CCRT

Course Description: This workshop, *Management of the Lifespan of Canine Hip Dysplasia*, is designed to provide participants with a background into the current understanding of canine hip dysplasia and will touch briefly on current veterinary surgical options for this condition. We will focus on the goal of prevention of canine hip dysplasia, management of laxity, and management of osteoarthritis and pain in the advanced (arthritic) cases as an animal with the conditions ages. Topics covered will include manual assessment of the hips and secondary regions found to concurrently exhibit pain and/or dysfunction. Targeted physical therapies such as exercise, mobilizations, massage, acupoint localization and stimulation, and myofascial trigger point identification and treatment will be practiced. The science of pain, neurophysiologic responses to manual therapy, theories and science relating to acupuncture and massage, and considerations regarding nutraceuticals and medications will be discussed.

Learning Objectives

- Participants will gain a basic understanding of the current thoughts and veterinary management of canine hip dysplasia (CHD)
- Participants will improve their assessment skills for young dogs with CHD or older dogs with hip osteoarthritis (OA)
- Participants will be instructed exercise therapies for young or old dogs with hip issues
- Participants will understand how to and where to massage and or mobilize the patient with CHD
- Participants will learn how to identify key acupuncture points to target the hips and where and how to find myofascial trigger points and address them
- Participants will gain an appreciation for the complexity of pain management
- Participants will be able to discuss nutraceutical and medicinal options as they pertain to pain management or joint health

Course Outline

Lecture (45 minutes)

- What is known about CHD and surgical options
- Prevention of CHD (theories and research)
- Management of laxity
- Management of pain

Lab (45 minutes)

- Testing and/or palpating for hip laxity, hip pain, muscle weakness
- Assessing for secondary sites of issue (MTrPs, SIJ, and spinal issues)

Lecture (1 hour)

- Management of OA (early and late stages) and what's going on in the joint
- The science of pain (in relation to peripheral and central sensitization)
- Neurophysiology of manual therapy
- Exercise for prevention, slowing, pain management, and support of an OA hip
- Acupuncture and massage - theory and science
- Nutraceutical and medical options

Lab (1.5 hour)

- Manual therapy for the hip
- Massage for the hip region
- Acupoint localization and stimulation around the hip
- Myofascial Trigger Point identification and treatment
- Exercises for strength and stretching around the hip

Introduction to Craniosacral Therapy

Instructor: Laurie Edge-Hughes, BScPT, MAnimSt (Animal Physio), CAFCI, CCRT

Course Description: This workshop, *Introduction to Craniosacral Therapy*, is designed to provide participants with a background into craniosacral therapy. A brief history of osteopathy (and specifically craniosacral therapy) concepts and theories will be explored. Participants will be challenged to explore a new paradigm of palpation, assessment, and treatment by feeling for and working with the craniosacral rhythm. A therapy protocol for a sample craniosacral session will be learned.

Learning Objectives

- Participants will be introduced to osteopathy and craniosacral therapy
- Participants will be instructed in the indications and contraindications for craniosacral therapy
- Participants will gain a basic understanding of the gentle touch and perceptions required to practice craniosacral therapy
- Participants will improve their touch skills in order to feel for craniosacral rhythm
- Participants will be instructed in concepts specific to craniosacral therapy utilization (listening, still points, release points, tissue release signs craniosacral rhythm, balancing, etc)
- Participants will learn how and where to induce a 'still point'
- Participants will learn how to address the key 'release points'
- Participants will learn a multistep protocol to use in whole or in part to input craniosacral therapy into their toolkit of therapy options

Course Outline

Lecture & Lab (1 hour)

- Introduction to craniosacral therapy & osteopathy
- Craniosacral rhythm
- Right brain / left brain
- Light forces
- Tissue release phenomenon and the therapeutic pulse
- Contraindications
- "Get over yourself & just try it!!!"

Lab (3 hours) – A Craniosacral Protocol

- Listening
- Still points
- Releases
- L7-Se decompression
- Iliac gap
- Dural tube glide
- Individual spinal bones
- Paired extremity bones
- Balancing
- TMJ
- Still point
- V-Spread

Physical Therapy Treatments for Sports-Related Injuries

Instructor: Ria Acciani, MPT, CCRP

Course Description: This workshop, *Physical Therapy Treatments for Sports-Related Injuries* provides participants with a working knowledge of the evaluation skills needed to assess sports-related injuries. The focus of this course is to give participants the ability to utilize manual skills and techniques to effectively treat clinical findings that stem from sports-related soft tissue injuries.

Learning Objectives

Participants will:

- Gain solid knowledge/understanding of the functional anatomy of the shoulder, stifle, and hip
- Be able to conduct a subjective and thorough physical exam of the shoulder, stifle and hip
- Learn the common areas of muscular restriction and joint hyper/hypomobility that can be associated with sports-related injuries
- Understand and perform advanced manual techniques to effectively treat objective findings
- Learn general time frames for progression of treatment for sports-related injuries

Course Outline

Lecture: Evaluation/Assessment for sports-related injuries of the shoulder

- Quick review of anatomy
- Review of joint mechanics and gait
- Outline pathology and mechanism of injury for specific sports-related injuries
- Discuss special tests and goniometric measurements associated with injury

Lab:

- Demo - Special tests and goniometric measurements
- Practice special tests and goniometry
- Soft tissue assessment and flexibility testing
- Mobility testing and treatment

Lecture: Evaluation/Assessment for sports-related injuries of the stifle and hip

- Quick review of anatomy
- Review of joint mechanics and gait
- Outline pathology and mechanism of injury for specific sports-related injuries
- Discuss special tests and goniometric measurements associated with injury

Lab:

- Demo - Special tests and goniometric measurements
- Practice special tests and goniometry
- Soft tissue assessment and flexibility testing
- Mobility testing and treatment
- Gait evaluation to identify location of injury
- Advanced manual techniques to address specific muscular and joint restrictions associated with specific injury

EQUINE WORKSHOPS - - COURSE DESCRIPTIONS & OUTLINES*(4.0 contact hours per 1/2-day workshop; 8.0 total contact hours)***Use of Motion Palpation Exam to Localize and Treat Sport Horse Lameness and Performance Deficit***Instructor: Sean Redman, DVM*

Course Description: Dysfunction of the axial myoskeleton is a common cause of lameness and performance deficit in the sport horse and the racehorse. Even with advanced diagnostic imaging techniques, lesions in such cases are often difficult or impossible to localize and treat effectively by traditional methods. The motion palpation examination is a vital tool for veterinarians to use on a daily basis when treating equine athletes, whether they are resting, recovering from injury, or in full training and competition mode. Examination findings can be used to develop and institute same-day treatments, which can dramatically improve performance and overall health and quality of life for the patient. Client demand is high, and these skills are accessible by all equine veterinarians. This workshop is an introduction to this system.

Learning Objectives

Participants will learn what presenting complaints should trigger the use of the motion palpation examination

Participants will learn to identify gait deficits associated with pelvis and/or spinal dysfunction, and postural abnormalities related to the same will be discussed

Participants will observe, learn, and practice the motion palpation exam under the supervision and guidance of the instructor

Participants will learn to identify patterns of dysfunction that will result in the crystallization of a treatment plan

Course Outline**Lecture**

- Chiropractic case studies

Labs

- Assessing the axial skeleton using the motion palpation exam
- Chiropractic therapy demonstration/discussion
- Saddle fit made simple – troubleshooting a hot spot in veterinary medicine
- Adjunct therapies to complement chiropractic

A Structural Review and Rehabilitation of the Equine Core*Instructor: Heather Beaudry, DC, BSc, LVT, CKTP1, CKTP2, CAC, CGT*

Course Description: The instructor will lead participants through an anatomical review of the equine “core muscles”, core function, and their significance with respect to performance, performance enhancement, injury prevention, and principles of conditioning. A review of the equine back’s response to injury and pain will be discussed. Participants will participate in a lecture along with a live demonstrations and a hands-on assessment. The workshop will provide demonstrations of advanced rehabilitation and physiotherapy techniques and give participants the opportunity to practice these techniques through hands-on applications.

A Structural Review and Rehabilitation of the Equine Core – cont'd

Learning Objectives

- Participants will apply their knowledge and understanding of the equine musculoskeletal system towards rehabilitation of “core” stability
- Participants will gain an appreciation of core rehabilitation through examination of scientific literature
- Participants will be able to evaluate the core posture and structure to determine the degree of pathophysiological core compromise contributing to overall performance and movement dysfunction and pathology
- Participants will understand the necessary steps (manual therapy, modalities, exercise techniques, exercise band application, KinesioTape® application) to progress the physiologically weak-cored equine through a functional rehabilitation program
- If time permits, discussion regarding treatment planning may be conducted

Course Outline

Lecture: A thorough review of equine musculoskeletal anatomy and physiology will be presented. A review of equine [possibly canine and human literature for supportive scientific data] scientific literature regarding core instability, spinal pathology, spinal pathophysiology, and spinal rehabilitation will be presented and reviewed.

Laboratory: Active participant assessment of the equine musculoskeletal system and core

Laboratory: Manual static and biomechanical evaluation of equine spinal and soft tissue mobility

Laboratory: Application of physiotherapeutic aids (exercise bands and equipment, KinesioTape®) and the impact on equine posture and biomechanical output

Laboratory: Practicing of physiotherapeutic aid application with concurrent devise of applicable treatment plans (including inflammatory control, static exercises, and modality application)

Equine Stifle Dysfunction and Poor Hind End Impulsion: Evaluation and Treatment

Instructor: Jennifer Brooks, PT, Med, CERP, CCRP

Course Description: Through lecture and lab, the instructor will lead participants through a thorough evaluation of the equine hind end from a biomechanical perspective, looking at the entire hind limb as a kinetic chain, with specific attention to the stifle joint. The focus will include the instructor's theories as to why many horses struggle with stifle issues, based on conformation, pathologies, and decreased neuromuscular input. Evaluation methods for identifying problematic stifle signs, along with manual therapy and therapeutic exercise approach concepts will be presented, along with evidence-based rationale for treatment selection. Participants will gain a greater understanding of stifle mechanics, pathomechanics, the underlying neuromuscular deficits surrounding intermittent and upward fixation of the patellar femoral joint, and learn methods to treat faulty stifle mechanics and weakness of the equine hind end.

Equine Stifle Dysfunction and Poor Hind End Impulsion: Evaluation and Treatment – cont'd

Learning Objectives

- Participants will be able to identify signs of faulty patellar femoral biomechanics and surrounding neuromuscular function
- Participants will gain understanding of intermittent and upward fixation of patella (IUFP) in the horse
- Participants will learn evaluation methods to identify hind end weakness and IUFP in the horse
- Participants will perform therapeutic exercise based treatment approaches for stifle dysfunction
- Participants will be able to prescribe a treatment plan to address equine hind end weakness
- Participants will understand the steps to progress the equine patient with IUFP through a rehab program (including modalities, manual therapy, and exercise techniques)
- Based on therapeutic interventions of patellar femoral dysfunction in human literature, equine applications will be discussed

Course Outline

Lecture (1hr 45 min)

- Introductions
- Equine stifle anatomy
- How the equine stifle is analogous to the human knee
- Intermittent / upward fixation of the patella in the equine vs. human patella femoral pain syndrome
- Common veterinary diagnostics and treatment interventions
- Physical therapy approach to stifle dysfunction
- Signs and symptoms and evaluation approaches
- Treatment protocol: Therapeutic stretching and ascending progressive exercise

Lab (1hr 45 min)

- History-taking and assessment
- Flexibility assessment
- Lateral tail pull (isometric) assessment
- Motor control (isotonic) assessment
- Treatment protocol progression

AARV LECTURE TRACK DESCRIPTIONS & OUTLINES*(4.0 contact hours per lecture session)***When Can Surgery Help? The Rehab Therapist and Orthoped Working as a Team****Speaker:** *Felix Duerr, DVM, DACVS, Dipl Am Coll Vet Sports Med & Rehab***Lecture**

This lecture session provides overview of treatment options for commonly encountered diseases in the small animal rehabilitation practice. The focus of the lecture is placed on non-surgical treatment and guidelines on when surgery should be pursued. Topics discussed include:

- Osteoarthritis
- Cranial cruciate ligament disease
- Patellar luxation
- Elbow dysplasia
- Hip dysplasia
- Muscle and tendon injuries
- Developmental disease
- Fracture treatment and acceleration of fracture healing

Don't Miss this Diagnosis: Tips and Tricks for Early Diagnosis of Canine Musculoskeletal Disease**Speaker:** *Felix Duerr, DVM, DACVS, Dipl Am Coll Vet Sports Med & Rehab***Lecture**

This lecture session provides an overview of the diagnosis of common small animal musculoskeletal diseases with a focus on early diagnosis. The goal of the lecture is to provide diagnostic steps that result in early recognition of disease processes allowing the veterinarian to establish a treatment protocol that aims at maximizing functional outcome. Tips and tricks for a successful physical examination will be provided. Topics discussed include:

- Stifle disease (cruciate disease, patellar luxation, and OCD)
- Elbow dysplasia (including adult-onset/jump-down syndrome)
- Hip dysplasia
- Shoulder injuries (including medial shoulder instability, OCD and supra-/infraspinatus and biceps tendinopathies)
- Osteoarthritis
- Myopathies (including gracilis, iliopsoas, flexor carpi ulnaris, and quadriceps myopathies)
- Tarsal and carpal injuries (including OCD, collateral ligament injuries and carpal hyperextension)
- Distal limb injuries (including digit injuries)

Acupuncture: Improve Pain Management in Your Rehab Patients

Speaker: Carolina Medina, DVM, CVA, Dipl Am Coll Vet Sports Med & Rehab

Lecture

This lecture will explain the mechanisms of action of acupuncture especially as they pertain to alleviating pain. Scientific studies proving the therapeutic effects of acupuncture will be discussed. Clinical applications of integrating acupuncture with rehabilitation will be described and clinical cases will be presented.

Updates on Canine CCL Research Using Computer-Based Simulation

Speaker: Gina Bertocci, PhD PE, Professor, Bioengineering, Endowed Chair, Biomechanics

Lecture

Cranial cruciate ligament (CrCL) deficiency is one of the most common canine orthopedic injuries, having an economic impact of more than \$1 billion in the United States in 2003. CrCL deficiency has a prevalence of 2.55% across all breeds and is most prevalent in Newfoundlands (8.9%), Rottweilers (8.3%), and Labrador Retrievers (5.8%). Despite such high prevalence, CrCL deficiency is still poorly understood. Surgical intervention is often employed to stabilize the CrCL-deficient stifle, but no single surgical procedure conclusively supports long-term success, osteoarthritis prevention or superiority. We developed a canine pelvic limb 3D computer simulation model of canine gait to gain an improved understanding of stifle biomechanics, as well as factors that may predispose dogs to CrCL rupture.

Our computer model was developed using general-purpose computer-aided engineering software and included canine-specific bone geometry, ligaments, muscles and ground reaction forces. Model simulation of the stance phase of walking was used to evaluate loads placed on stifle ligaments, translation and rotation of the tibia relative to the femur, and contact forces between the femur and menisci in both the intact and deficient stifle.

Commonly employed surgical procedures (tibial plateau leveling osteotomy (TPLO), tibial tuberosity advancement (TTA), lateral femoro-tibial suture stabilization (LFTS) and TightRope™ stabilization (TR)), along with a newly designed extracapsular stabilization technique, were implemented in the model through collaboration with veterinary orthopedic surgeons to evaluate the effectiveness of procedures to restore normal, CrCL-intact stifle biomechanics. Ligament loads, along with translation and rotation of the tibia relative to the femur and meniscal loads were evaluated across surgical procedures.

Finally, stifle orthoses offer an alternative to surgical intervention, especially in patients that are poor anesthesia candidates with significant co-morbidities, that are of advanced age or whose owners lack the financial means for more costly surgery. We have implemented a customized stifle orthosis in our computer model to investigate associated stifle biomechanics. Orthosis stabilized stifle biomechanics were compared to the intact stifle, CrCL-deficient stifle and surgically stabilized CrCL-deficient stifle.

Evidence-Based Medicine in Pain Management**Speaker:** *Kristin Kirkby Shaw, DVM, PhD, CCRT, DACVS, DACVSMR***Lecture**

According to the Evidence Based Veterinary Medicine Association, evidence-based medicine is “the effort to place all medical decisions on the strongest scientific proof (evidence) *available*”. The definition of veterinary rehabilitation is “the treatment of injury or illness to *decrease pain* and restore function.” As such, rehabilitation veterinarians are tasked with recognizing and managing pain in their patients and encouraged to adopt an evidence-based approach when developing analgesia protocols. While the topic of pain management is extremely broad, this 60-minute presentation will focus on osteoarthritic pain in dogs and review the available evidence for oral pharmaceuticals, nutraceuticals and nutritional supplements, and injectable agents. While topics such as the physiology of pain, pain recognition, pain scales, peri-operative pain management, and the use of acupuncture, physical rehabilitation, weight loss, regenerative medicine, and therapeutic modalities are all vitally important for a comprehensive understanding of pain management in small animals, these subjects are beyond the scope of this presentation.

★ **INSTRUCTORS & SPEAKERS BIOGRAPHIES** ★**Ria Acciani, MPT, CCRP****Advanced Canine Rehabilitation Center, Warren, NJ**

Ria and David Acciani both hold graduate degrees in Physical Therapy. They are licensed physical therapists with over 20 years experience in human therapy, and have specialized in canine rehabilitation for more than 14 years. Ria received her MPT degree from The University of St. Augustine, FL, and trained directly with Stanley V. Paris, PT, PhD, FAPTA. David and Ria received their CCRP from the University of Tennessee, and were the first PTs in the state of New Jersey to begin practicing on dogs in 2000. They own and operate *Advanced Canine Rehabilitation (ACR)*, a practice that focuses on rehabilitation of performance and sporting dogs.

Ria and David travel extensively to many regional, national, and international dog competitions, and work with top-level competitors. Ria was selected as Official Therapist for the IFCS US Agility Team, and traveled to Bristol, England with them in 2010. Both Ria and David returned to England with the Team in 2011, South Africa in 2012, Spain in 2013, and Hungary in 2014. Ria and David have also traveled with the AKC World Team to Luxembourg in 2014 and the WAO World Team in Lignano, Italy and England. They also provide instructional seminars for handlers and their dogs on a variety of topics so they can educate handlers how to prevent injury and enhance performance within their sport. Ria and David have worked closely with Dr. Sherman Canapp and the VOSM group, and have established the rehabilitation protocol for various shoulder and elbow conditions that have been successfully used at VOSM and their own practice as well. They have published several articles in *Veterinary Surgery* and *Clean Run*, and have presented at the *International Rehabilitation Symposium* in 2008 and 2010. Topics included shoulder and elbow rehabilitation, and modalities. They also instructed at the *Symposium on Therapeutic Advances in Animal Rehabilitation (STAAR)* continuing education workshops in 2010, 2011, 2012, 2013, and 2014. Just recently, Ria presented at the *Animal Rehabilitation SIG* for the APTA in Springfield, MA.

Ria and David continue to practice in Warren, NJ and plan to expand in 2015. When not working with their clients, Ria and David spend time playing with their 3 children and running them to practices and games. They also love to be active with their 2 border collies who hike, run, and swim with them.

**Heather Beaudry, DC, BSc, LVT, CCRP, CKTP1, CKTP2, CAC, CGT,
La Belle Vie Farm LLC, Rochester, NY**

Heather Beaudry earned a Doctorate of Chiropractic from the New York Chiropractic College in 2003. During her final year in clinical phase at NYCC she simultaneously completed an associate's degree in Veterinary Technology from Medaille College in Buffalo, NY. Within months of graduation, she completed additional certificate training in canine rehabilitation from the continuing education office at the University of Tennessee (CCRP), and animal chiropractic from the American Veterinary Chiropractic Association (CAC). She is a licensed chiropractor with a practice focus on treating elite equine sport horses.

Her interests in biomechanics, soft tissue and spinal injury and pathology led her to complete additional certification in kinesiotape technique and application with Kinesio Taping Association International (CKTP1, CKTP2). The presence of soft tissue dysfunction and pathology in equine athletes within their individual sports led her to complete certification in instrument assisted myofascial release through Graston. Heather travels the United States educating owners on core strengthening exercises in addition to developing individual core strengthening programs for equine athletes in their respective sports. Heather collaborates with veterinary and physiotherapy professionals in the development of such programs in addition to utilizing her skill set for individual equine musculoskeletal therapy.

**Gina Bertocci, PhD PE, Professor, Bioengineering, Endowed Chair, Biomechanics
University of Louisville, KY**

Gina earned her BS and MS degrees in Mechanical Engineering and her PhD in Bioengineering from the University of Pittsburgh. She is a Licensed Professional Engineer. Gina is a Professor in the Bioengineering Department and holds the Endowed Chair position in Biomechanics at the University of Louisville. She is a Fellow of the American Institute for Medical and Biological Engineering and the Director of the Injury Risk Assessment and Prevention Laboratory and the Canine Biomechanics and Rehabilitation Laboratory. She has published over 70 peer-reviewed journal papers and 125 conference proceedings, and has 2 issued patents. Her research interests include rehabilitation, assistive technology, and biomechanics as they apply to both humans and dogs. NIH, NIJ, NIDRR, CDC, Paralyzed Veterans of America and the AKC-Canine Health Foundation have funded her research. Funding from the AKC Canine Health Foundation has allowed Gina to combine her life-long passion for animals with her expertise in biomechanics to investigate orthopedic conditions affecting the canine stifle joint, along with surgical techniques and orthoses designed to stabilize the stifle using computer simulation modeling. The AKC Canine Health Foundation has also funded her more recent research focused on characterizing muscle activation patterns using computer simulation in dogs recovering from intervertebral disc disease following hemilaminectomy as a means to ultimately develop the most appropriate rehabilitation strategies. Gina's injury biomechanics research focuses on the application of engineering technologies in the early diagnosis and detection of physical child abuse. Her rehabilitation research has included the development of technologies to prevent secondary complications, such as pressure ulcers, associated with mobility impairments to advance the quality of life for humans and animals with disabilities.

**Jennifer Brooks, PT, Med, CERP, CCRP
Horse 'N Hound Physical Therapy, Nashua, NH**

Jennifer received her Physical Therapy (PT) degree from Russell Sage College. Her early PT career consisted of human out-patient orthopedics, sports PT, and neurology, and acute care in-patient treatment before working exclusively in animal physical therapy. In 1995, she completed her Master's in Education from Rivier College. After acquiring her teaching degree, she taught in two local Master level PT Programs prior to leaving human practice.

In 2000, Jennifer started her journey into animal PT by pursuing education in equine anatomy and rehabilitation. She attended the Animal Rehabilitation Center in Florida, studying under Narelle Stubbs PhD, PT. In 2006, she was certified as an Equine Rehabilitation Practitioner through the University of Tennessee. She then started treating equine patients throughout New England in her practice ***Equine Rehabilitation Services***.

While developing skills as an equine physical therapist, Jennifer found a niche for treating problematic equine stifle dysfunction among many struggling equine athletes. She developed a systematic method of evaluating and treating this problem with excellent success, which led her to write copyrighted booklet entitled: ***Equine Stifle Dysfunction: Evaluation and Treatment***. She presented this information at AAEP Annual Conference in 2010 and at ACVS in 2012. Her stifle approach was published in *The Horse* magazine in January, 2011 and voted one of the Top10 articles electronically searched the following year.

During this time, Jennifer was asked by the New Hampshire APTA to collaborate with the New Hampshire Veterinary Board of Medicine to help PT become an established practice for animals in the state. After several years, both disciplines' practice acts were opened to provide language that made it legal for physical therapists to practice on animals in the state of New Hampshire. New Hampshire was the 6th state to acquire access to expand the practice of animal PT with in its statutes in July, 2011.

In 2010, Jennifer was asked to join the faculty at University of Tennessee, Veterinary College, as an adjunct instructor in the Equine Rehabilitation Certification program. Jennifer also attended the University of Tennessee Canine Rehab Certification program and received her Certification as Canine Rehabilitation Practitioner in 2011. Jennifer worked with small animals at Massachusetts Veterinary Referral Hospital under the tutelage of Amie Hesbach DPT, CCRT/P, before starting her private practice, ***Horse 'N Hound Physical Therapy***, in Nashua, NH in 2012. Her practice consists of treating small animals in her clinical setting and visiting equine patients at their barn settings.

Now in its third year, ***Horse 'N Hound Physical Therapy*** is preparing its move to a 14-acre farm in rural Hollis, NH, to better serve the needs of its clientele by providing outdoor walking paths, in-ground pool accessibility on location, along with 3 rehabilitation stalls for equines. Just recently, Jennifer has completed the Equi-Core Taping Program, and is awaiting certification.

Tania Costa, VT, CCRP, CAAP, CMT
Canine Wellness Centre Inc. Toronto, Canada
Canine Rehabilitation and Hydrotherapy

Tania began her rehabilitation career training in Canine Massage Therapy. It was during this time that she began to think about combining her love for animals with the principles of physical therapy and other manual therapies. She traveled to the UK to study hydrotherapy at various different training locations, until the University of Tennessee began its rehabilitation program.

Tania holds a Bachelor's degree from Bishops University, a Veterinary Technician degree from Purdue University, and is a Certified Canine Rehabilitation Practitioner (CCRP) through the University of Tennessee's Veterinary Medicine program. She is also a Certified Animal Acupressure Practitioner (CAAP) through Tallgrass Animal Acupressure Institute. Further continued studies in the area of Osteopathy and Advanced Techniques in Physical Therapy gives Tania a well-rounded experience in understanding gait mechanics, injury prevention, and core conditioning for the growing, competitive, sport canine population.

Tania is the owner of **Canine Wellness Centre Inc.**, Ontario's first center for rehabilitation of small animals, which opened its doors in 2004. The center provides rehabilitation with the use of an underwater treadmill, swimming pool, and various modalities to support dogs recovering from injury as well as for injury prevention.

Tania has been working with small animals for over 14 years. During the past 8 years, she has become passionate about the recognition and treatment prevention of injuries in athletic dogs. As part of this understanding, she has been utilizing core-strengthening programs for many of her clients to help prevent further injury.

Tania also provides seminars to various dog sport groups on a regular basis. These seminars include core conditioning, dealing with the senior dog, understanding pain management, and keeping your pet dog free of injury. She is routinely called in to evaluate movement and conformation at sheep herding and agility trials. She has spoken several times at **Therapy Dogs of Canada** on nutrition and injury prevention of therapy dogs.

Tania holds a marketing chair office for the National Board Certification of Animal Acupressure and Massage (NBCAAM). She also maintains a charity, **Rehab for Rescues**, to ensure proper rehabilitation is given to dogs in foster care so that they can find forever homes. She is a contributor to Ontario's largest pet magazine, *Dogs Dogs Dogs*, providing information to pet owners on injury prevention. She has also been a guest writer for *Animal Wellness Magazine*. Locally, Tania has been on City TV's *Animal Housecalls*, Global Television's *Making a Difference* with Susan Hay, and *The Steven and Chris Show* on CBC. More recently, she was featured on a segment on the *Pet Network*, discussing weight loss and fitness for our canine companions.

Tania and her Border Collie, Jake, and retired Border Collie Roy, participate in Agility and sheep herding. Her love for animals has driven her to continuously strive to treat animals with rehabilitation techniques to a higher level. Her dedication has been a labor of love and will continue to be so.

**Felix Duerr, DVM, DACVS, Dipl Am Coll Vet Sports Med & Rehab
Colorado State University, Fort Collins, CO, USA**

Dr. Duerr earned his veterinary degree at the Veterinary School in Hannover, Northern Germany. After two internships in Canada at the Western College of Veterinary Medicine in Saskatoon, SK, he completed his surgical residency/master's program at Colorado State University (CSU) in Fort Collins, CO. Dr. Duerr obtained diplomate status with the American College of Veterinary Surgeons (ACVS) in 2008 and with the American College of Veterinary Sports Medicine and Rehabilitation (ACVSMR) in 2012. Dr. Duerr is also certified with the Canine Rehabilitation Institute.

Dr. Duerr worked in private practice for four years prior to joining CSU in 2011 to build up their Sports Medicine and Rehabilitation program. Dr. Duerr's research focus is clinical studies aimed at improving animal health and quality of life related to musculoskeletal problems with a particular interest in injury prevention. His clinical interests include sports medicine and rehabilitation, arthritis, cranial cruciate ligament injury, hip dysplasia, elbow dysplasia, and minimally invasive surgery (arthroscopy). Current research projects include the development and evaluation of novel gait analysis techniques, evaluation of new treatment options for arthritis (surgical and non-surgical), and investigation of techniques to enhance bone and tendon healing. Dr. Duerr's goal is to provide evidence-based guidelines for the treatment and prevention of common small animal injuries with translational application for human musculoskeletal disease.

**Laurie Edge-Hughes, BScPT, MAnimSt(Animal Physiotherapy),CAFCI, CCRT
The Canine Fitness Centre Ltd., Alberta, Canada**

Laurie Edge-Hughes obtained her Bachelor of Science in Physical Therapy from the University of Alberta in 1993 and has since focused her post-graduate training on orthopedics, osteopathy, acupuncture, and animal rehabilitation. Additionally, she completed her Master of Animal Studies in Animal Physiotherapy through the University of Queensland (Australia) in 2006.

Laurie has the honor of having taught the first canine physiotherapy/physical therapy courses in Canada (1999), the USA (1999), and Australia (2001). She has been involved in the Animal Rehab Division since its inception in 1994 and teaches canine physiotherapy and rehabilitation courses for the Animal Rehab Division of the Canadian Physiotherapy Association (CPA). Additionally, she presently holds the position of Co-Chair for the Animal Rehab Division of the CPA. She taught for ten years for the Canine Rehabilitation Institute in the USA, and lecturers internationally as often as able.

Laurie's biggest teaching venture is currently via www.FourLeg.com, an online educational platform for continuing education in canine rehabilitation / physiotherapy. Laurie co-owns and practices out of the Canine Fitness Centre Ltd (www.caninefitness.com) in Calgary, Alberta. When not entrenched in work, she enjoys spending time with her two boys, four dogs, and very patient husband!

**Kristin Kirkby Shaw, DVM, PhD, Diplomate ACVS, Diplomate ACVSMR
Aratana Therapeutics, Kansas City, KS**

Kristin Kirkby Shaw is a Medical Science Liaison with Aratana Therapeutics. Prior to joining Aratana, she practiced as a small animal surgeon and rehabilitation therapist at Seattle Veterinary Specialists for nearly 3 years and The University of Florida Veterinary Medical Center for 6 years. Kristin received her DVM from the University of Florida in 2003, completed a small animal surgery residency at the University of Florida, became a Diplomate of the American College of Veterinary Surgeons in 2008, and became a Diplomate of the American College of Veterinary Sports Medicine and Rehabilitation in 2013. Kristin is an instructor for the Canine Rehabilitation Institute, has been a regular speaker at ACVS, NAVC, and other national and international conferences, and has authored numerous journal articles and textbook chapters. She lives in Seattle with her husband, Aaron, and two dogs.

**Carolina Medina, DVM, CVA, Dipl Am Coll Vet Sports Med & Rehab
VCA Sacramento Veterinary Referral Center, Sacramento, California**

Carolina Medina received a Doctor of Veterinary Medicine degree from St. George's University in 2005. During 2005-2006, she became certified in Veterinary Acupuncture, Chinese herbal medicine, Tui-na massage and Food Therapy by the Chi Institute of Chinese Medicine and the China National Society of Traditional Chinese Veterinary Medicine. Additionally, in 2006, Dr. Medina completed an internship in Acupuncture at the University of Florida College of Veterinary Medicine. In 2010, she became certified in canine rehabilitation therapy through the Canine Rehabilitation Institute, and in 2013 she became a Diplomate of the American College of Veterinary Sports Medicine and Rehabilitation. Dr. Medina held the position of clinical assistant professor and Chief of Integrative Medicine at the University of Florida College of Veterinary Medicine from 2008-2013. In 2006, she was one of the founders of both the American Association of Traditional Chinese Veterinary Medicine as well as the American Journal of Traditional Chinese Veterinary Medicine (AJTCVM). Dr. Medina has been an Associate Editor and regular contributor to the AJTCVM since its inception. She is on the Board of Directors for the International Veterinary Academy of Pain Management and the American Association of Rehabilitation Veterinarians.

Robert J. Porter III, LMT, CCRP
MedVet Mandeville 2611 Florida Street, Mandeville, LA 70448
www.medvetforpets.com; <http://robpossible.com>

Robert (Robby) Porter is the physical rehabilitation treatment supervisor at MedVet Mandeville in Louisiana, and has been on staff since 2006. Robby has worked in canine rehabilitation since 1998 and is looked at by his peers as one of the pioneers in his field. He has a strong knowledge base in kinesiology and a great interest in positive training approaches for therapeutic exercise. Robby has studied gait analysis and therapeutic exercises using slow-motion cameras, which have helped develop many canine exercises used all over the world today. His many self-produced "How To" canine exercise videos help spread this knowledge and have helped others develop their skills as therapists.

Robby also provides practice consulting/training services for new and existing physical rehabilitation clinics, puts on training workshops for performance dogs and their handlers, and is MedVet's Media Manager, writing as well as creating visual content for social media geared at promoting veterinary medicine.

Sean Redman, DVM
Equine Integrated Veterinary Solutions, Wellington, FL

Sean Redman received his veterinary degree from Auburn University in 2000 and spent six years as an ambulatory veterinarian at Rood and Riddle Equine Hospital in Lexington, KY focused on reproduction and sport horse medicine. Having developed an interest in alternative medicine as a competitive jumper rider, he began using acupuncture in 2003 to improve pregnancy rates in Thoroughbred broodmares. In 2004, he began developing his chiropractic skills working mostly on Thoroughbred yearlings, but more and more he applied these techniques to adult sport horses and Thoroughbred racehorses in training.

In 2007, Dr. Redman moved with his family to Ocala, FL and limited his practice to equine chiropractic and acupuncture. He has subsequently developed further interest in saddle fit, lameness and performance problems originating in the back and neck. He is the author of a *Thoroughbred Times* article on the indications for chiropractic therapy in horses, and his patients include Kentucky Derby runners, Breeder's Cup Champions, Olympic jumpers, and upper level driving, dressage, eventing, and hunter competitors.

Dr. Redman lives at Heaven's Edge Farm in Ocala, FL, with his wife and three children. He is one of three founding partners of Equine Integrated Veterinary Solutions (EIVS), an exclusively alternative veterinary medicine practice providing high quality holistic care to maintain the health and soundness of equine athletes.