AO VET North America

AO VET NA Masters Course —Small Animal Minimally Invasive Osteosynthesis Traumatology

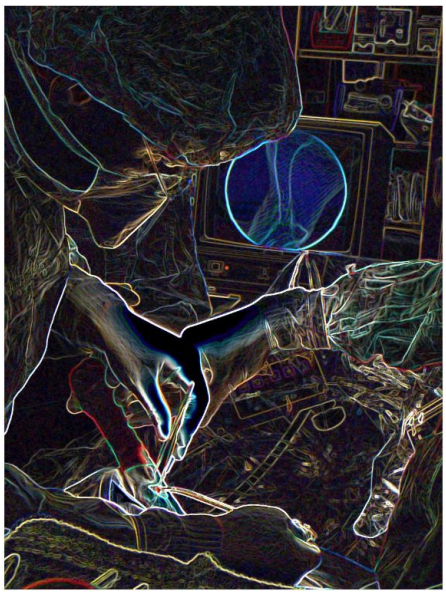
August 14, 2022 - August 16, 2022
Las Vegas, Nevada, USA

Minimally Invasive Osteosynthesis (MIO) has successfully improved human orthopedic outcomes for more than two decades. Yet, despite evidence of faster bone healing, lower morbidity, faster functional recovery, and fewer complications; MIO has not been fully embraced by the veterinary orthopedic community at large.

This 3-day AO VET NA Masters-level course is meant to help change this. It fills the current void in continuing education courses and allows veterinary orthopedic surgeons to learn the biological basis of MIO, its surgical techniques, new implants, advanced imaging and radioprotection techniques from the absolute top experts in this field today. Such exposure will undoubtedly lead to both improved management of fractures in companion animals and improved outcomes.

If you care about providing the best outcomes for your small animals, you should register for this course and begin applying MIO in your clinical practice.

In preparation for this course, it is ***strongly recommended*** you review the available pre-course material in order to help you better prepare for this educational event. You will access this material in our Learning Management System (LMS), Totara. This will only be available once you have registered for this course.



Target Audience

This course is open to surgery residents and practicing veterinarians with orthopedic experience. Familiarity with locking implant instrumentation and techniques will be assumed.

Prerequisites for Attendance:

AO VET Small Animal Principles Course (Mandatory Requirement)

AO VET Small Animal Advanced Course (Highly Recommended)

AO VET Small Animal Masters Course (Desirable)

Event Summary

Tuition:
Level Name: Participant - Veterinary
Pricing Tier: Attending
Tuition: $2,200.00

Level Name: Participant - Veterinary
Pricing Tier: Resident
Tuition: $2,200.00

Course Prerequisite(s):

- Principles of Small Animal Fracture Management

Venue:
Marriott Courtyard Henderson
2800 N Green Valley Pkwy
Henderson, Nevada, USA
Phone Number: 702-434-4700

Viticus Group Eastern Campus
5810 S. Eastern Ave.
Las Vegas, Nevada, USA
Phone Number: 702-739-6698
www.viticusgroup.org

Language(s):
English
Directly Provided by:
AO North America
Professional Level Prerequisite(s):
No Prerequisites

CME

Continuing Education Credit: 23.50

- AO North America is a Registry of Approved Continuing Education (RACE) Provider (Number 244).

Designation Statement
This program was reviewed and approved by the AAVSB RACE program for ____ hours of continuing education credit in jurisdictions which recognize AAVSB RACE approval. Please contact the AAVSB RACE program if you have any comments/concerns regarding this program's validity or relevancy to the veterinary profession.

The Continuing Medical Education (CME) mission of AO North America (AONA®) is to provide comprehensive multidisciplinary needs based education to surgeons, fellows, and residents in the specialties of orthopedic, hand, craniomaxillofacial, spine, neurosurgery, and veterinary surgery in the areas of trauma (i.e.), operative reduction and fixation), degenerative disorders, deformities, tumors, and reconstruction.

Expected results of AONA's CME activities for surgeons, fellows, and residents are to:
• Increase their knowledge base and surgical skill level
• Improve competence by applying advances of knowledge in patient care in the areas of trauma, degenerative disorders, deformities, tumors, and reconstructive surgical techniques
• Address practice performance gaps by improving management of aspects of traumatic injuries and musculoskeletal disorders (i.e., pre-operative planning to post-operative care)

Learning Objectives

Upon completion, participants should be able to:

- Define MIO principles
- Describe and integrate new reduction and fixation techniques used to reduce one's surgical footprint
- Differentiate indirect from direct fragment manipulation and assess their effect on the soft tissue envelope
- Associate the biological benefits of remote percutaneous plate osteosysthesis and the need to provide adequate mechanical stability at the fracture site
- Recognize MIO challenges and limitations and realize when a shift to open reduction internal fixation (ORIF) and open but do not touch (OBDNT) technique is required
- Assess the impact of new technologies (implants and advanced imaging) in successfully performing MIO
- Evaluate the risk / benefit of intraoperative fluoroscopy during MIO
- Implement effective protective measures to decrease radiation exposure to the surgical team (ALARA -As Low As Reasonably Achievable)
- Recognize the importance of monitoring radiation exposure

Faculty

Dejardin, Loic - Chairperson

DVM, MSc, DACVS, DECVS
Wade O. Brinker Endowed Chair of Veterinary Surgery
Professor – Small Animal Orthopaedic Surgery
ACVS Founding Fellow – MIS Orthopaedics SA
College of Veterinary Medicine
Michigan State University
East Lansing, Michigan

Dr. Déjardin is the Wade O. Brinker Endowed Chair of Veterinary Surgery. He is Professor and head of Small Animal Orthopaedic Surgery at Michigan State University and a Founding Fellow of the ACVS Minimally Invasive Small Animal Orthopaedic Surgery Fellowship. Dr. Déjardin graduated from Toulouse Veterinary School (France) and completed his Surgical Residency then MSsc with Dr. Arnoczky at MSU. Dr. Déjardin authored ~90 research proposals (~$7M), eight inventions and holds three patents on an interlocking nail and a targeting device for minimally invasive osteosynthesis. He received several prestigious awards in both veterinary and human medicine as well as in engineering, including the O'Donoghue Sports Injury Research Award (AOSSM), the Zandman Award (Soc. Exp. Mechanics), Distinguished Postdoctoral Veterinary Alumnus Award (MSU) and the Pfizer-Zoetis Award for Excellence in Research. His publications include >160 peer-reviewed scientific papers and abstracts, 20 book chapters and ~475 presentations in the US, Europe, Latin America and Asia. As an AO Foundation International Faculty and former Trustee committed to continuing education worldwide, Dr. Déjardin regularly speaks at national and international meetings and courses. He started a Minimally Invasive Osteosynthesis (MIO) program at MSU in the early 2000s' and developed a novel interlocking nail suited for MIO, well as a new technology devised for the MIO of sacroiliac luxations. Since 2009, Dr. Déjardin created and chaired the first comprehensive AOVET Master Course on MIO. His clinical interests include comparative orthopaedics, traumatology, MIO, revision surgery, as well as total joint replacement. His current research activity focuses on biomechanics, implant and instrument design, total joint replacement (elbow, hip, knee, ankle), as well as robotics and kinetics.

Perry, Karen - Co-Chairperson

BVMS, CertSAS, DECVS, MSc, FHEA, MRCVS
Pat Carrigan Professor of Feline Medicine
Professor in Small Animal Orthopedics
Veterinary Medical Center
Michigan State University
East Lansing, Michigan

Karen Perry graduated from The Royal (Dick) School of Veterinary Studies, Edinburgh in 2005. After a short period in mixed practice and an internship in small animal orthopedics Dr. Perry returned to the R(D)SVS to complete a residency in small animal surgery from 2007 to 2010. Following achievement of ECVS status in 2011, Dr. Perry joined the Royal Veterinary College (RVC), London as a lecturer in small animal orthopedics. During her tenure at the RVC, Dr. Perry completed a postgraduate certificate in veterinary education and became a Fellow of the Higher Education Academy. After four years at the RVC Dr. Perry moved to Michigan State University where she is currently a Tenured Professor in Small Animal Orthopedics. In 2022, Dr. Perry was also named the Pat Carrigan Professor of Feline Medicine. Dr. Perry's passion for veterinary education led her to pursue further qualifications in this ever-expanding field. In 2019, whilst at MSU, Dr. Perry completed her Masters of Science in Veterinary Education, the thesis of which focused on the importance of feedback during veterinary residency programs. Due to her knowledge in education, Dr. Perry was elected to serve on the AOVET NA education committee. Dr. Perry has published widely in the veterinary literature with her main research interests being feline orthopedics, traumatology and the correction of limb deformities associated with patellar luxation. Dr. Perry, an International AO Faculty, created the first AO Master Course in Feline Orthopedics and has presented her work throughout the world including in Colombia, Brazil, Mexico, Russia, Italy, Spain, Poland and the UK.

Agnello, Kimberly - Lecturer

DVM, MS, DACVS, DACVSMR
Associate Professor of Small Animal Orthopedic Surgery
ACVS Founding Fellow, Minimally Invasive Surgery (Orthopedics)
University of Pennsylvania School of Veterinary Medicine
Department of Clinical Studies - VHUP
Philadelphia, Pennsylvania

Dr. Agnello received her veterinary degree from Cornell University, School of Veterinary Medicine and completed a small animal surgery residency at the University of California. She is a Diplomate of the American College of Veterinary Surgeons and the American College of Veterinary Sports Medicine and Rehabilitation. She is currently faculty in small animal orthopedic surgery at University of Pennsylvania. Dr. Agnello's clinical and research interests include minimally invasive surgery, angular limb deformity correction, and clinical trials for the treatment of osteoarthritis.

Barnes, Katherine - Lecturer

DVM, MS, DACVS
Clinical Associate Professor
Texas A&M University
College Station, Texas

Dr. Barnes is currently a Clinical Associate Professor of Small Animal Orthopedic Surgery at Texas A&M University. She obtained her DVM from Oregon State University in 2011 followed by an internship at Cornell University, and a 3-year surgery residency at Virginia Tech. She is a diplomate of the American College of Veterinary Surgeons with research and clinical interests that include fracture repair, arthroscopy, 3D printing, and the role of rehab in the treatment and recovery of surgical patients.

Guiot, Laurent - Evaluator, Lecturer

DVM, DACVS, DECVS
Orthopedic Surgeon
ACCESS Bone & Joint Center
ACCESS Specialty Animal Hospital - Los Angeles
Los Angeles, California

Dr. Laurent Guiot is a world-class orthopedic surgeon with a passion for excellence. He obtained his degree in veterinary medicine from the University of Liege (Belgium) in 2004 and completed a general internship in small animal medicine and surgery at the same institution. Laurent then worked for one year in Paris where he was in charge of the general surgery program. He rejoined academia in 2006 as an international surgical fellow at Michigan State University where he also completed a three-year residency program with a strong emphasis in orthopedic surgery and focus in minimally invasive osteosynthesis under Dr. Loic Dejardin' s mentorship. He became boarded by the American and European Colleges of Veterinary Surgeons in 2011. Following his residency, Laurent became an assistant professor of orthopedic surgery in the Department of Small Animal Clinical Sciences and an attending orthopedic surgeon at the Veterinary Teaching Hospital at Michigan State University. He was then recruited to lead the creation of a new orthopedic surgery facility for the Ohio State University in Dublin, Ohio. In 2016, he created the Bone & Joint Center at ACCESS in Los Angeles with Dr. Reunan Guillou. This center is establishing itself as one of the prime location for advanced orthopedics and includes a comprehensive total joint replacement center, a strong minimally invasive orthopedic surgery program, and a tertiary referral service for revision cases. Dr. Guiot's major interest is orthopedic trauma and minimally invasive orthopedic surgery. He routinely presents his work internationally and is an active member of major national and international orthopedic programs including the Veterinary Orthopedic Society, the AO, and the Orthopedic Research Society. Laurent is committed to the improvement of patient care through the development of surgical techniques, instrumentation, and implants used for the treatment of orthopedic patients.

Karlin, Mike - Table Instructor

DVM, MS, DACVS
Assistant Professor
Orthopedic Surgery
Department of Clinical Sciences
Cummings School of Veterinary Medicine
Tufts University
North Grafton, Massachusetts

Dr. Karlin is currently an Assistant Professor in Small Animal Orthopedic Surgery at the Cummings School of Veterinary Medicine at Tufts University. He earned his DVM degree at Kansas State University College of Veterinary Medicine in 2006. He went on to complete a three-year residency program and Masters Degree at the University of Illinois in Equine Surgery in 2010. He then worked in private practice at two equine surgical referral centers for several years before completing the requirements for dual certification in Small Animal Surgery, at Lauderdale Veterinary Specialists. Dr. Karlin was the first surgeon to pass the requirements for dual certification through ACVS becoming a diplomate of the American College of Veterinary Surgeons (ACVS) in both small animal and large animal. His areas of clinical and research interest include arthroscopy, fracture healing, fracture repair, and orthopedic implants including minimally invasive methods, total joint replacement, osteoarthritis, and assessment and correction of limb deformity.

Agenda

Day 1

Sunday, August 14, 2022 - 07:50 - 19:15 - (includes breaks, travel-time and meals)

Schedule	Title	Moderator	Faculty	Room
07:50 - 08:00	Welcome and Organization of the Course		Dejardin, L	
08:00 - 08:45	SESSION 1: INTRODUCTION TO MIO / IMPLANTS	Agnello, K		
08:00 - 08:30	Evolution of Osteosynthesis – from ORIF to MIO		Dejardin, L	
08:30 - 08:45	General Surgical Techniques		Guiot, L	
08:45 - 09:00	Coffee Break / Discussion			
09:00 - 10:00	SESSION 1: INTRODUCTION TO MIO / IMPLANTS (continued)			
09:00 - 09:20	Principles and Indications of LCP in MIO Surgery		Barnes, K	
09:20 - 09:40	I-Loc Surgical Technique - Tricks and Tips		Perry, K	
09:40 - 10:00	Principles, Indications and Limitations of ILN in MIO Surgery		Perry, K	
10:00 - 10:10	Travel to Lab			
10:10 - 11:10	LAB A – DRY LAB / CADAVER DEMO (Tibial Fx) - APPLICATION OF ANGLE STABLE IMPLANTS IN MIO	Dejardin, L Guiot, L		
10:10 - 10:40	Part 1A - Tibial Fx – Cadaver Lab - Demo Joystick, Tunneler, LCP, Push-Pull	Dejardin, L Guiot, L Perry, K		
10:40 - 11:10	Part 1B - Dry Lab - LCP Application on a Tibial Fx using Joysticks	Agnello, K		
11:10 - 11:20	Coffee Break			
11:20 - 12:50	Lab A Continued			
11:20 - 11:30	Part 2 - Video Introduction to ILN Technique(s)	Agnello, K		
11:30 - 12:40	Part 3 - ILN Application Canine Femoral Fx	Perry, K		
12:40 - 12:50	Part 4A - Curved Tibial ILN Demo / Part 4B – ILN Application Feline Femoral Fx (Supplement only)	Dejardin, L		
12:50 - 13:45	Lunch			
13:45 - 14:30	SESSION 2 - BASIC SURGICAL TECHNIQUES	Barnes, K		
13:45 - 14:30	Specific Application of MIO - SIL-SIF / ORIF vs MIO in SIL-SIF Treatment - introduction of the SILIS-MILAD		Dejardin, L	
14:30 - 14:45	Coffee Break / Travel to / Change for Wet Lab			
14:45 - 16:35	LAB B - CADAVER LAB - SIL-F BASIC MIO APPLICATIONS	Dejardin, L		
14:45 - 16:35	Part 1A - Sacro-Iliac Luxation Repair via Lag Screw Fixation (1/2 group in lab, 1/2 in SGD)	Barnes, K Dejardin, L Tomlinson, J		
16:35 - 16:45	Coffee Break / Change into Street Clothes / Travel to Lecture			
16:45 - 17:25	Questions on Day 1 Lectures		Agnello, K Barnes, K Dejardin, L Guiot, L Karlin, M Perry, K	
17:25 - 18:00	Review of SI Post-Op Radiographs		Agnello, K Barnes, K Dejardin, L Guiot, L Karlin, M Perry, K	
18:00 - 18:15	Shuttle from Oquendo Center to Hotel			

18:15 - 19:15	Reception

Day 2

Monday, August 15, 2022 - 08:00 - 19:15 - (includes breaks, travel-time and meals)

Schedule	Title	Moderator	Faculty	Room
08:00 - 09:15	SESSION 2: BASIC SURGICAL TECHNIQUES (continued)	Barnes, K		
08:00 - 08:20	Specific Application of MIO – Distal Humeral Fractures		Guiot, L	
08:20 - 08:50	Specific Application of MIO - Tibial Fractures (2 parts LCP-ILN)		Guiot, L	
08:50 - 09:15	Specific Application of MIO - Radius/Ulna Fractures		Agnello, K	
09:15 - 09:25	Travel to / Change for Wet Lab			
09:25 - 11:10	LAB B – CADAVER LAB BASIC MIO APPLICATIONS - Part 2-Repair of a Lat Humeral Condylar Fracture (Lag Screw); Part 3-Repair of a Tibial Diaphyseal Fracture (LCP); Part 4-Repair of a Radius/Ulna Diaphyseal Fracture (LCP)			
11:10 - 11:30	Coffee Break / Change into Street Clothes / Travel to Lecture Room			
11:30 - 12:10	SESSION 2: BASIC SURGICAL TECHNIQUES (continued)	Perry, K		
11:30 - 11:50	Specific Application of MIO – Other Distal Physeal Fractures		Agnello, K	
11:50 - 12:10	Proximal Physeal Fractures without Articular Movement		Agnello, K	
12:10 - 13:05	Lunch / Change for Wet Labs			
13:05 - 14:50	LAB B – CADAVER LAB BASIC MIO APPLICATIONS (continued) - Part 3-Repair of a Tibial Diaphyseal Fracture (LCP); Part 4-Repair of a Radius/Ulna Diaphyseal Fracture (LCP); Part 2-Repair of a Lat Humeral Condylar Fracture (Lag Screw)			
14:50 - 15:05	Coffee Break / Travel to Lecture Room			
15:05 - 15:35	SESSION 3: ADVANCED SURGICAL TECHNIQUES	Agnello, K		
15:05 - 15:35	Specific Application of MIO – Femoral Head / Neck Fractures		Perry, K	
15:35 - 15:40	Travel to Wet Labs			
15:40 - 18:00	LAB C – CADAVER LAB ADVANCED MIO APPLICATIONS	Dejardin, L		
15:40 - 16:50	Part 1 - Repair of a Femoral Neck Fracture (K-wires) (Odd group lab, Even group SGD)	Dejardin, L Guiot, L Perry, K		
16:50 - 18:00	Part 1 – Repair of a Femoral Neck Fracture (K-wires) (Even group lab, Odd group SGD)	Dejardin, L Guiot, L Perry, K		
18:00 - 18:50	Questions on Lectures / Labs of the Day			
18:50 - 19:00	Change into Street Clothes			
19:00 - 19:15	Shuttle from Oquendo Center to Hotel			

Day 3

Tuesday, August 16, 2022 - 08:00 - 15:45 - (includes breaks, travel-time and meals)

Schedule	Title	Moderator	Faculty	Room
08:00 - 08:50	SESSION 3: ADVANCED MIO APPLICATIONS	Guiot, L		
08:00 - 08:25	Specific Application of MIO – Femoral Fractures		Guiot, L	
08:25 - 08:50	Specific Application of MIO – Humeral Fractures		Dejardin, L	
08:50 - 09:00	Travel to Wet Labs			

09:00 - 12:30	LAB C – CADAVER LAB ADVANCED MIO APPLICATIONS (continued)	Dejardin, L	
09:00 - 10:30	Part 2 – Repair of Femoral Diaphyseal Fracture (ILN)	Dejardin, L	
10:30 - 10:45	Coffee Break		
10:45 - 12:30	Part 3 – Repair of Humeral Diaphyseal Fracture (PRC or ILN)	Guiot, L	
12:30 - 13:30	Change to Street Clothes / Lunch / Travel to Lecture Hall		
13:30 - 15:45	SESSION 4: MIO IN JUVENILES & COMPLICATIONS	Perry, K	
13:30 - 13:55	Limits and Complications of MIO		Guiot, L
13:55 - 14:20	Minimally Invasive Elastic Plate Osteosynthesis in Juvenile Patients		Guiot, L
14:20 - 15:45	Review Femoral and Humeral Fx - Course Summary / Final Q and A / Adjourn		Agnello, K Barnes, K Dejardin, L Guiot, L Karlin, M Perry, K

AO NA Disclaimer Information

Faculty Disclosure:
It is the policy of AO North America to abide by the Accreditation Council for Continuing Medical Education Standards for Commercial Support. Standard 2: “Disclosures Relevant to Potential Commercial Bias and Relevant Financial Relationships of Those with Control over CME Content,” requires all planners, including course directors, chairs, and faculty, involved in the development of CME content to disclose their relevant financial relationships prior to participating in the activity. Relevant financial relationships will be disclosed to the activity audience. The intent of the disclosure is not to prevent a faculty with a relevant financial or other relationship from teaching, but to provide participants with information that might be of importance to their evaluation of content. All potential conflicts of interest have been resolved prior to the commencement of this activity.

Off-Label / Experimental Discussions:
Some medical devices used for teaching purposes and/or discussed in AO North America’s educational activities may have been cleared by the FDA for specific uses only or may not yet be approved for any purpose. Faculty may discuss off-label, investigational, or experimental uses of products/devices in CME certified educational activities. Faculty have been advised that all recommendations involving clinical medicine in this CME activity are based on evidence that is accepted within the profession of medicine as adequate justification for their indications and contraindications in the care of patients.

All scientific research referred to, reported or used in this CME activity in support or justification of a patient care recommendation conforms to the generally accepted standards of experimental design, data collection and analysis.

Disclaimer:
AONA does not endorse nor promote the use of any product/device of commercial entities. Equipment used in this course is for teaching purposes only with the intent to enhance the learning experience.

Conflict of Interest Resolution Statement:
When individuals in a position to control or influence the development of the content have reported financial relationships with one or more commercial interests, AO North America utilizes a process to identify and resolve potential conflicts to ensure that the content presented is free of commercial bias.

Liability Statement:
AO North America faculty and staff assume no personal liability for the techniques or the use of any equipment and accessories used for teaching purposes in the laboratory. The certificate provided pertains only to the participants’ completion of the course and does not, in any way, attest to the proficiency of the participants’ clinical experience.

Laboratory Waiver:
To participate in this surgical skills course, you will be required to sign a waiver of liability prior to the course. In order to participate, AONA’s policy mandates that every individual must wear appropriate protective garments provided by AO NA during the lab sessions. Participants who do not sign the waiver and wear protective garments will not be allowed to participate in the laboratory sessions.

Animal Anatomic Specimens:
This course will involve exposure to and contact with animal anatomic specimens. These specimens are being utilized for purposes of teaching and learning and are to be treated with the utmost respect. Participants should be familiar with and understand the potential risks involved and will be required to observe all customary safety procedures.

Acknowledgment

In-Kind Support
AO North America gratefully acknowledges in-kind support for equipment and technical staff from Biomedtrix and DePuy Synthes.

Educational Grant
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