

CURRICULUM VITAE
LAURA ZARUCCO, DMV, PhD

Personal Information

Place of birth:	Trento, Italy
Citizenship:	Italian
Marital Status:	Married
Languages:	Italian, English, French
Business Address:	Università degli Studi di Torino Dipartimento di Patologia Animale Via Leonardo da Vinci 44 Grugliasco, (TO) 10095
E-mail:	laura.zarucco@unito.it

Education:

<u>Dates</u>	<u>Degree</u>	<u>Institution</u>
1987	Dottore in Medicina Veterinaria (DMV) (grade: 110/110)	University of Milan, Italy
1996	Dottore di Ricerca (PhD)	University of Parma, Italy

Awards, Fellowships

1994 - 1995	<i>J. William Fulbright Award</i>
2007	<i>The Barbaro Memorial Health Study Award</i> by Morris Animal Foundation for the development of a new technique for pain relief in the distal equine forelimb.

Primary Areas of Research:

Surgical and minimally invasive intramuscular procedures for idiopathic flexural limb deformities in foals
Muscle architecture and functional neuromuscular partitioning in forelimb muscles of normal foals and adult horses.
Musculoskeletal computer modeling and stance simulation of the equine forelimb for teaching and research purposes
Development of new techniques for continuous perineural blockade in the equine forelimb for pain management in the horse
Equine forelimb joint kinematics, muscle architecture and force characteristics.
Pathophysiological changes in tissue oxygenation and microcirculatory blood flow during impaired organ perfusion

Postgraduate Training

1991 - 1992	Large Animal Internship - Equine Medicine and Surgery Veterinary Teaching Hospital and Clinics, Large Animal Clinic, Louisiana State University, Baton Rouge, LA 70803 ,USA
1993 - 1994	Doctorate (PhD) in Veterinary Orthopedics (1 st year)

- 1994 - 1996 Clinica Chirurgica Veterinaria, Università degli Studi di Milano, Italy
Doctorate (PhD) in Veterinary Orthopedics (2nd-3rd year)
Veterinary Orthopedic Research Laboratory, Department of Anatomy, Physiology and Cell Biology, University of California, Davis, CA 95616, USA
- 1996 - 1997 Doctorate (PhD) in Veterinary Orthopedics (3rd year)
Clinica Chirurgica Veterinaria, Università degli Studi di Milano, Italy
- 1998 - 1999 Equine Surgery Resident (1st year)
University of California, Davis, Veterinary Medical Teaching Hospital, Davis, CA 95616, USA
- 1999 - 2001 Large Animal Surgery Resident (2nd and 3rd year)
University of Pennsylvania, Department of Clinical Studies, New Bolton Center, Kennett Square, PA 19348, USA

Research/Faculty Appointments

- 1997 - 1998 Post-Graduate Researcher
University of California, Davis, School of Veterinary Medicine, JD Wheat
Orthopedic Research Laboratory, Department of Anatomy Physiology and Cell Biology, Davis, CA
- 2001-2004 Researcher
Dept. of Clinical Sciences, NBC, University of Pennsylvania, School of Veterinary Medicine, Kennett Square, PA
- 2005 Visiting Assistant Professor in Equine Surgery
Department of Clinical Sciences, Mississippi State University, School of Veterinary Medicine, Mississippi State, MS 39762
- 2005-2007 Associate Researcher
Dept. of Clinical Sciences, NBC, University of Pennsylvania, School of Veterinary Medicine, Kennett Square, PA
- 2006-present Contract Professor, Section of Surgery, Department of Animal Pathology, Università degli Studi di Torino, Italy

Other Employment

- 1987 - 1988 Associate Veterinarian: Clinica del Cavallo; Gerno di Lesmo, (MI) Italy
- 1989 - 1990 Veterinarian: Unita' Sanitaria Locale (Regional State Health Department) Bolzano, Italy
- 1988 - 1991 Veterinarian: Equine Private Practitioner
and 1992/93

Membership in Professional and Scientific Societies:

- 1987 - 1994 Italian Association of Equine Practitioners (SIDI)
- 1994-97, 2006-present Italian Association of Veterinary Surgery (SICV)
- 1997 - present Veterinary Orthopedic Society (VOS)
- 2003 - present Italian PhD Association (Associazione Dottorandi Italiani [ADI](#))
- 2007 - present Italian Association of Equine Practitioners (SIVE)

Editorial Positions:

- Ad-hoc reviewer
- 2005-present Ippologia – Official Journal of SIVE (Società Italiana Veterinari per Equini)

Bibliography

Papers published / in press

1. **Zarucco L**, Ferro E (1994) Protocollo terapeutico in un caso di mionecrosi da Clostridium Perfringens nel cavallo. (Treatment of myonecrosis caused by Clostridium perfringens in a horse) [Italian] Praxis Veterinaria (Milan). 1994. 15:3, 20-21.25 ref
2. Miller SM, Stover SM, Taylor KT, **Zarucco L** (1996) Palmaroproximal approach for arthrocentesis of the proximal interphalangeal joint in horses. Equine Vet J 28(5): 376-380
3. **Zarucco L** (1997). Modello di Simulazione Computerizzata delle Strutture Muscoloscheletriche dell'Arto Anteriore Equino (A Computer Simulation Model of the Musculoskeletal Structures of the Equine Forelimb). [Italian] [Tesi di Dottorato di Ricerca / PhD Thesis] Università degli Studi di Milano, Facoltà di Medicina Veterinaria, Milan, Italy: pp 1-103
4. Vazquez deMercado R, Stover SM, Taylor KT, **Zarucco L**, Willits NH (1998) Lateral approach for arthrocentesis of the distal interphalangeal joint in the horse. JAVMA, 212(9): 1413-1418
5. Driessen B, **Zarucco L**, Steffey EP, McCullough C, Del Piero F, Melton L, Puschner B, Stover SM (2002) Serum fluoride concentrations, biochemical and histopathological changes associated with prolonged sevoflurane anesthesia in horses. J Vet Med A: 49, 337–347 (2002)
6. **Zarucco L**, Swanstrom MD, Driessen B, Hawkins D, Hubbard M, Steffey EP, Stover SM (2003) An *in-vivo* equine forelimb model for short-term recording of peak isometric force in the superficial and deep digital flexor muscles. Vet Surg: 32 (5), 439-450.
7. Seco Diaz O, **Zarucco L**, Dolente B, Reef VB (2004) Sonographic diagnosis of a presumed ureteral tear in a horse. Veterinary Radiology & Ultrasound: 45 (1), 73-77.
8. **Zarucco L**, Taylor KT, Stover SM (2004) Determination of muscle architecture and fiber characteristics of the superficial and deep digital flexor muscles in adult Thoroughbred horses. AJVR: 65 (6), 819-828.
9. Cheung A, Driessen B, Ramanujam S, Barbosa MA, Chan DM, Asfour V, **Zarucco L**, Burns P, Chen PCY, Jahr JS, Gunther RA (2004) Vasopressin treatment in hemorrhagic shock. In: The 23rd European Conference on Microcirculation (Lisbon, Portugal, September 8-10, 2004). Eds. Martins e Silva J., Saldanha C., Oliveira V., Prie A., Shore A., Medimond Inc., Bologna, Italy, pp. 81-86 (ISBN 88-758-7078-0)
10. Swanstrom MD, **Zarucco L**, Stover SM, Hubbard M, Hawkins DA, Driessen B, Steffey EP (2005) Passive and active mechanical properties of the superficial and deep digital flexor muscles in the forelimbs of anesthetized Thoroughbred horses. J Biomech: 38 (3) pp 579-586.
11. Swanstrom, MD, **Zarucco L**, Hubbard M, Stover SM, Hawkins DA (2005) Musculoskeletal modeling and dynamic simulation of the Thoroughbred equine forelimb during stance phase of the gallop. J Biomech Engineering: 127(2):318-28.
12. Durando MM, **Zarucco L**, Schaer TP, Ross MW, Reef VB (2006) Pneumopericardium in a horse secondary to sternal bone marrow aspiration. Equine Vet Ed: 18: 2, 75-79.

13. Southwood LL, Lindermann J, **Zarucco L**, Driessen B, Olander H, Habecker P, Birks EK, Frisbie DD (2006) Growth factor and receptor mRNA expression in the intestine of horses with large colon volvulus: a pilot study. *Equine Veterinary Journal*. 38(6):532-7.
14. **Zarucco L**, Wisner E, Swanstrom MD, Stover SM (2006) Image fusion of computed tomographic and magnetic resonance images for the development of a three-dimensional musculoskeletal model of the equine forelimb. *Vet Radiology & Ultrasound*. 47(6):553-62.
15. Driessen B, **Zarucco L**, Gunther RA, M. Burns PM, Lamb SV, Vincent SE, Boston RA, Jahr JS, and Cheung ATW (2007) Effects of low volume Hemoglobin glutamer-200 (bovine) versus normal saline and arginine vasopressin resuscitation on systemic and skeletal muscle blood flow and oxygenation in a canine hemorrhagic shock model. *Crit. Care Med* 35(9):2101-9.
16. **Zarucco L**, Driessen B, Scandella M, Seco O, Cozzi F, Orsini JA (2007) Continuous perineural block of the palmar nerves: A new technique for pain relief in the distal equine forelimb. *Clin Tech Equine Pract* 6:154-164.
17. Driessen B, Scandella M, **Zarucco L** (2008) Development of a technique for continuous perineural blockade of the palmar nerves in the distal equine forelimb. *Vet Anaesth Analg*: 35 (5) 432–448.
18. **Zarucco L**, Driessen B, Scandella M, Cozzi F, Cantile C (2009) Sensory nerve conduction and nociception in the equine lower forelimb during perineural bupivacaine infusion along the palmar nerves. *Can J Vet Res*: in print.
19. Driessen B, **Zarucco L** (2009) Perianesthetic use of acepromazine in the male equine: a retrospective study and opinion poll. *Vet Anaesth Analg*: submitted

Other Publications (Review papers):

1. Driessen B, **Zarucco L** (2007) Pain – From Diagnosis to Effective Treatment. *Clin Tech Equine Pract* 6:126-134
2. **Zarucco L**, Driessen B (2007) Leading Edge: "Continuous Peripheral Nerve Block: A Novel Technique" *Comp Continuing Education- Equine Ed Nov* 310-317

Book chapters

1. Driessen B, **Zarucco L**, Nann L, Klein L (2003) Hazards associated with laser surgery in the airway of the horse: implications for the anesthetic management. In: *Recent Advances in Anesthetic Management of Large Domestic Animals*. Ed. Steffey EP, International Veterinary Information (<http://www.ivis.org>)

Proceedings

1. de Gresti A, **Zarucco L** (1987) Sindrome Interspinosa Toraco-lombare nel cavallo atleta (Kissing Spine) (The Thoraco-Lumbar Interspinous Syndrome in the Horse - Kissing Spine). *Proceedings of the 8th National Congress of the Italian Association of Equine Practitioners (Atti della Societa' Italiana di Ippologia)* [Italian] Siena, Italy, June 4-6, 1987; 8:309-313
2. **Zarucco L**, Acocella F, Perini A, Addis F, Soccini A, Luvoni GC (1994) Laparoscopia nel cavallo in stazione: tecniche di base ed applicazioni cliniche (Laparoscopy in the standing horse: basic techniques and clinical applications). *Proceedings of the 1st National Congress of the Italian Association of Veterinary Surgery* [Italian]

- (Atti del 1° Congresso Nazionale della Società Italiana di Chirurgia Veterinaria), Parma, Italy, December 1-2, 1994; 1:217-224
3. **Zarucco L**, Swanstrom MD, Stover SM, Hubbard M, Wisner E (1997) In Vitro assessment of the instant centers and angle of rotation of the equine Thoroughbred forelimb joints. Proceedings 24th Annual Conference Veterinary Orthopedic Society, Big Sky, Montana, March 1-8, 1997; p42
 4. **Zarucco L**, Swanstrom MD, Stover SM, Hubbard M, Wisner E (1997) Image Processing and 3-D Musculoskeletal Geometry Reconstruction from Co-Registered CT and MRI Images: A Computer Model Generation of the Equine Forelimb. Proceedings of the 1997 UC Davis Biomedical Engineering Symposium, Davis, California, April 25th; pp 29-30
 5. Swanstrom MD, **Zarucco L**, Hubbard M, Stover SM (1997) Dynamic Simulation of the Musculoskeletal Structures in the Thoroughbred Distal Forelimb. Proceedings of the 1997 UC Davis Biomedical Engineering Symposium. Davis, California April 25th; pp 31-32
 6. **Zarucco L**, Addis F (1997) Il Cavallo Multimediale: Didattica Avanzata o Pura Tecnologia? Proceedings of the 4th National Congress of the Italian Association of Veterinary Surgery (Atti del 4° Congresso Nazionale della Società Italiana di Chirurgia Veterinaria) [Italian] Naples, Italy
 7. Vazquez deMercado R, Stover SM, Taylor KT, **Zarucco L** (1997) Lateral Approach for Arthrocentesis of the Equine Coffin Joint. Proceedings 43rd Annual Convention AAEP, Phoenix, AZ, December 7-10, 1997; 43:372-373
 8. Swanstrom MD, Hubbard M, **Zarucco L**, Stover SM (1997) Dynamic Simulation of Musculoskeletal Structures in the Thoroughbred Distal Forelimb. Proceedings of the VIth International Symposium on Computer Simulation in Biomechanics. Tokyo, Japan, August 21-23, 1997; pp 29-31
 9. **Zarucco L**, Swanstrom MD, Stover SM., Hubbard M, Wisner E (1998) Image Processing and Co Registration of CT and MRI Images: 3-D Musculoskeletal Geometry Reconstruction for Equine Forelimb Computer Model Generation. Proceedings 25th Annual Conference Veterinary Orthopedic Society, Snowmass, Colorado, February 21-28, 1998; pp 56
 10. Driessen B, Steffey EP, **Zarucco L**, McCullough C, Del Piero F, Galey F, Melton L, Puschner B, Stover SM (2000) Biochemical and histopathological changes associated with prolonged sevoflurane anesthesia in horses. Proceedings of the 7th International Congress of Veterinary Anesthesiology, Berne, Switzerland, September 20-23, 2000
 11. **Zarucco L**, Taylor KT, Stover SM (2003) Muscle architecture and fiber characteristics of the superficial and deep digital flexor muscles in adult Thoroughbred horses. Proceedings 30th Annual Conference Veterinary Orthopedic Society, Steamboat Springs, Colorado, February 22- March 1, 2003
 12. Stover SM, Swanstrom MD, **Zarucco L**, Hubbard M, Hawkins D (2004) Effects of simulated proximal check ligament desmotomy on fetlock support structures of the equine forelimb fetlock throughout stance phase of gallop. Proceedings 31st Annual Conference Veterinary Orthopedic Society, Big Sky, Montana, February 22-27, 2004.

13. **Zarucco L.**, Driessen B, Birks EK, Southwood L (2004) Submucosal microcirculatory blood flow and oxygen tension in an equine large colon torsion model. Proceedings of the 2004 American College of Veterinary Surgeons.
14. **Zarucco L.**, Driessen B (2007) Regional Pain Management Strategies for Horses with Laminitis. Fourth International Equine Conference on Laminitis and Diseases of the Foot", Palm Beach, Florida, November 2-4, 2007
15. **Zarucco L.**, Scandella M, Seco O, Cozzi F, Driessen B (2008) Continuous peripheral nerve block in the lower forelimb of the horse Veterinary European Equine Meeting of the Year 2008 XIV Congress SIVE/FEEVA Venice, Italy January 25-27 2008 Venice, Italy: <http://www.ivos.org/proceedings/sive/2008/toc.asp>
16. Driessen B, **Zarucco L.**, ScandellaM, Seco O, Cozzi F, Boston RC (2008) Continuous perineural bupivacaine infusion along the palmar nerves for pain relief in the lower equine forelimb Proceedings of the AVA meeting, Barcelona, Spain October 14-16, 2008 <http://www.avabarcelona.org/index.htm>
17. Driessen B, **Zarucco L.**, Scandella M, Seco O, Boston RC (2008) Antinociceptive efficacy of continuous perineural blockade of median and ulnar nerves in the equine forelimb Proceedings of the AVA meeting, Barcelona, Spain October 14-16, 2008 <http://www.avabarcelona.org/index.htm>
18. **Zarucco L.**, Scandella M, Seco O, Driessen B (2008) Ultrasound-guided technique for continuous ulnar and median nerve blockade in the horse: Proceedings of the American College of Veterinary Surgeons, San Diego, CA October 23-25 2008.

Abstracts

1. **Zarucco L.**, Swanstrom MD, Stover SM, Hubbard M, Wisner E (1997) In vitro assessment of the instant centers and angle of rotation of the equine Thoroughbred forelimb joints. Abstracts of 24th Annual Conference Veterinary Orthopedic Society, Big Sky, Montana, March 1-8, 1997; Vet Comp Orthop Traumatol 10:72
2. **Zarucco L.**, Swanstrom MD, Stover SM, Hubbard M, Wisner E (1997) A computer dynamic model generation of the musculoskeletal structures of the Thoroughbred distal forelimb. Abstracts 5th World Equine Veterinary Association Congress, September 10-12, 1997 Padova, Italy, Rivista SIDI 3 (3): 49
3. **Zarucco L.**, Swanstrom MD, Stover SM., Hubbard M, Wisner E (1998) Image processing and co-registration of CT and MRI Images: 3-D musculoskeletal geometry reconstruction for equine forelimb computer model generation. Abstracts of 25th Annual Conference Veterinary Orthopedic Society, Snowmass, Colorado February 21-28, 1998; Vet Comp Orthop Traumatol 11:A66
4. **Zarucco L.**, Swanstrom MD, Hubbard M, Hawkins D, Driessen B, Steffey EP, Stover SM (2000) In-vivo study on forelimb superficial and deep digital flexor muscle isometric force characteristics in Thoroughbred horses. Abstracts of the American College of Veterinary Surgeons' Annual Symposium, Arlington, VA, September 21-24, 2000; Vet Surg 29 (5):484
5. Swanstrom M, **Zarucco L.**, Stover S, Hubbard M, Hawkins D, Driessen B, Steffey E (2001) In vivo equine flexor muscle force-length properties suggest fibers act in series. Abstracts of the International Society of Biomechanics XVIIIth Congress, Zurich, Switzerland, July 8-13, 2001; Meeting abstracts online at http://congress.akm.ch/abstract/abstract_P633

6. **Zarucco L**, Taylor KT, Stover SM (2003) Muscle architecture and fiber characteristics of the superficial and deep digital flexor muscles in adult Thoroughbred horses. Abstracts of the 30th Annual Conference Veterinary Orthopedic Society, Steamboat Springs, Colorado, February 22- March 1, 2003; Vet Comp Orthop Traumatol 16:A31
7. Cheung A, Driessen B, Ramanujam S, **Zarucco L**, Barbosa M, Chan D, Burns P, Jahr J, Chen P, Gunther R (2004) Effects of vasopressin on the microcirculation in hemorrhagic shock. Abstracts of 2004 ASIP Meeting in Experimental Biology 2004, Washington, D.C., April 17-21, 2004; FASEB Journal 18: Abstract #830.2
8. Cheung ATW, Driessen B, Ramanujam S, **Zarucco L**, Barbosa M, Chan D, Burns P, Jahr JS, Chen P, Gunther R (2004) Adverse microvascular effects induced by en route pre-hospital treatment in hemorrhagic shock: a computer-assisted intravital microscopy study. Abstracts of the XIII International Vascular Biology Meeting, Toronto, Ontario, Canada; June 1-5, 2004
9. Driessen B, **Zarucco L**, Cheung A, Burns P, Jahr J, Gunther R (2004) Effects of arginine vasopressin (AVP) on muscle blood flow and oxygenation in a canine hemorrhagic shock model. Abstracts of the 27th Annual Shock Society Meeting, Nova Scotia, Canada, June 5-8, 2004; Shock 21 (Suppl 2): 42
10. Cheung A, Driessen B, Barbosa M, Ramanujam S, Chan DM, Chen PCY, **Zarucco L**, Burns P, Jahr JS, Gunther RA (2004) Complications from vasopressin treatment in hemorrhagic shock. Abstracts of the 27th Annual Shock Society Meeting, Nova Scotia, Canada, June 5-8, 2004; Shock 21 (Suppl 2): 64
11. Gunther R, Driessen B, **Zarucco L**, Burns P, Jahr J, Cheung A (2004) Cardiovascular effects of arginine vasopressin (AVP) post hemorrhage in a canine shock model. Abstracts of the 27th Annual Shock Society Meeting, Nova Scotia, Canada, June 5-8, 2004; Shock 21 (Suppl 2): 43
12. Cheung A, Driessen B, Ramanujam S, Barbosa MA, Chan DM, Asfour V, **Zarucco L**, Burns P, Chen PCY, Jahr JS, Gunther RA (2004) Vasopressin treatment in hemorrhagic shock. Abstracts of the 23rd European Conference on Microcirculation, Lisbon, Portugal, September 8-10, 2004; J Vasc Res 41:58 (Abstract 01R7).
13. Driessen B, **Zarucco L**, Burns PM, Boston R, Gunther RA, and Cheung AT (2004) Effects of arginine vasopressin (AVP) on the cardiovascular system and muscle blood flow and oxygenation in a canine hemorrhagic shock model. Association of Veterinary Anaesthetists' Autumn 2004 Conference, Vienna, Austria, September 15-17, 2004. Vet Anaesth Analg
14. Driessen B, **Zarucco L**, Burns PM, Boston R, Gunther RA, Cheung AT (2004) Pre-hospital low volume resuscitation with hemoglobin-glutamer-200 (Hb-200) in a canine hemorrhagic shock model. American College of Veterinary Anesthesiologists' Annual Meeting, Phoenix, AZ, October 19-25, 2004; Vet Anaesth Analg
15. Southwood L, Lindermann J, Olander H, **Zarucco L**, Driessen B, Birks EK, Frisbie DD (2005) Growth factor mRNA expression in the mucosa of horses with a large colon volvulus: 8th AAEP Equine Colic Research Symposium, Quebec City, Canada, August 3-5, 2005. Eq Vet J

Presentations/ Workshops by Invitation (Scientific)

- 1996 "Large Animal Veterinary Laparoscopic Surgery". Workshop: Clinica Chirurgica Veterinaria, Università degli Studi di Milano, Milan, Italy and SMIT VIII International Meeting, Cernobbio, Italy.

- 2002 "The development of a computer model of the equine forelimb: Future research and clinical applications". Veterinary Medical University Vienna, Department of Large Animal Orthopedics, Vienna, Austria.
- 2003 "An interactive musculoskeletal model (SIMM) of the Thoroughbred forelimb to study orthopedic surgical procedures". College of Veterinary Medicine at Cornell University, Department of Clinical Sciences, Equine Hospital, Ithaca, NY.
- 2007 "Regional Pain Management Strategies for Horses with Laminitis". Fourth International Equine Conference on Laminitis and Diseases of the Foot", November 2-4, West Palm Beach, FL.
- 2008 "Continuous peripheral nerve block in the lower forelimb of the horse" Rosssdales Equine Hospital and Diagnostic Centre, Exning, Newmarket , UK.
- 2008 "Le infezioni ortopediche nel cavallo e l'uso della terapia antibiotica loco-regionale", "Emergenze ortopediche nel cavallo e metodi di stabilizzazione" Regional Veterinary Medical Association of Sardegna (Ordine dei Medici Veterinari della Provincia di Sassari),
- Workshop on: A new technique for pain relief in the distal equine forelimb: Continuous perineural block of the palmar nerves. Università degli Studi di Sassari, October 4-5, Sassari Italy

Teaching Responsibilities

Student Lectures / Laboratories:

- 1992 VMED 5458 (Louisiana State University) Equine Medicine and Surgery
- 1992 VMED 5228 (Louisiana State University) Fundamentals of Equine Surgery
- 1992 VMED 5312 (Louisiana State University) Diseases of Horses, Laboratory
- 1994 CCV94 (Universita' degli Studi di Milano) Corso di Chirurgia Veterinaria
- 1996 CCV96 (Universita' degli Studi di Milano) Corso di Patologia Chirurgica Veterinaria
- 1998 VMD407L (VMTH, University of California, Davis) Principle and techniques of operative surgery and anesthesia
- 1999 VSR 463L (VMTH, University of California, Davis) Soft tissue surgical disease
- 2000 Large Animal Surgery –Core/Elective #8096/8702 2000 (NBC, University of PA)
- 2000 Surgical Principles – Course #8001 (VSUR601) 2000 (VHUP, University of PA)
- 2001 Large Animal Surgical Exercises–Course #8502 (VCSN645) 2001 (NBC, University of PA)
- 2005 Surgical Laboratory – College of Veterinary Medicine, Mississippi State University, MS
- 2006 V5037 Veterinary Surgery Course (Corso di Clinica Chirurgica Veterinaria- Università degli Studi di Torino)
- 2007 Clinical Rounds and Surgical Laboratory – A.A.2006-2007 Elective Equine Surgery (Ospedale Didattico, Università degli Studi di Torino)
- 2007 V5037 Veterinary Surgery Course (Corso di Clinica Chirurgica - Università degli Studi di Torino)
- 2007 Surgical Laboratory – A.A.2007-2008 Basic Course (Corso di Clinica Chirurgica - Università degli Studi di Torino)
- 2008 V5037 Veterinary Surgery Course (Corso di Clinica Chirurgica - Università degli Studi di Torino)
- 2008 Surgical Laboratory – A.A.2008-2009 Large Animal Surgery (V5037 Corso di Clinica Chirurgica – Grossi Animali - Università degli Studi di Torino)
- 2009 V5037 Veterinary Surgery Course (Corso di Clinica Chirurgica - Università degli Studi di Torino)

- 2009 Surgical Laboratory – A.A.2008-2009 Large Animal Surgery (V5037 Corso di Clinica Chirurgica – Grossi Animali - Università degli Studi di Torino)
- 2009 Equine Clinical Competencies for 5th year students – (Attività pratiche nell'equino per studenti del 5[^] anno – Sezione Chirurgia Veterinaria, Università degli Studi di Torino).