

ANDREA BERTUGLIA, DVM, PhD
Assistant Professor in Large Animal Surgery
Department of Veterinary Sciences
University of Turin (Italy)

CURRICULUM VITAE

Personal Information

Place of birth: Chieri (Turin), Italy
Date of birth: December 09, 1974
Citizenship: Italian
Languages: Italian (mother tongue), English (advanced), French (advanced)
Work Address: University of Turin
Department of Veterinary Sciences
Section of Large Animal Surgery
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Education and training

Education

<u>Dates</u>	<u>Degree</u>	<u>Institution</u>
1999	Doctor in Veterinary Medicine (grade: 110/110)	University of Turin
2004	<i>Philosophiae Doctor</i> (PhD) in Veterinary Sciences	University of Turin

Awards

2000 Prize for the best thesis of the year, University of Turin

Postgraduate Training

002	Externship (12 weeks) at Newmarket Equine Hospital , Newmarket, Suffolk UK, (supervisor Dr I.M. Wright, ECVS Diplomate)
002	Externship (4 weeks) at Tierärztliche Klinik für Pferde in Aschheim , Munich, DE (supervisor Dr Uwe Heidbrink, senior partner)
003	Externship (8 weeks) at Large Animal Hospital, University of Edinburgh , UK (supervisors Dr P. Dixon, Full Professor Equine Surgery and Dr. H Tremaine, ECVS Diplomate)
003	Basic BEVA course on Equine Dentistry, Cambridge, UK
003	Externship (6 weeks) at Beaufort Cottage Equine Hospital , Newmarket, Suffolk, UK (supervisor Dr T. Greet & Dr R. Payne, ECVS Diplomated)
004	Externship (4 weeks) at Rood & Riddle Equine Hospital , Kentucky, US, (supervisor Dr L. Bramlage & Dr R. Embertson, ACVS Diplomated)

Work experiences

Academic Employment

2004- present 2004-2008 Assistant Professor (part time) in Large Animal Surgery, Department of Veterinary Sciences, University of Turin
2009-present Assistant Professor (full time) in Large Animal Surgery Department of Veterinary Sciences, University of Turin

Membership in Professional and Scientific Societies:

2003- present Italian Association of Equine Practitioners (SIVE)

2005- present Italian Association of Equine Orthopaedics and Surgery (SIOCE)

Editorial Positions:

Ad-hoc reviewer

2008-present Official Journal of SIVE (Italian Association of Equine Practitioners) – IPPOLOGIA- ISSN: 1120-5576.

2008-present International SIVE Congress (Section of Brief Communications)
2014 Journal of Zoo and Wildlife Medicine (JZWM), Case Reports in Veterinary Medicine

2015 Veterinary Radiology & Ultrasound

Research

Primary Areas of Research

Musculoskeletal injuries in Standardbred racehorses: epidemiology and preventive medicine, superficial digital flexor tendon injuries

Equine osteoarthritis: synovial fluid biomarkers, proteomics, cellular cross-talk

Ultrasound contrast medium: intrasynovial administration to detect longitudinal tear of the DDFT

Regenerative medicine: platelet concentrates

Tendon biology: rat model of tendonitis, biopsy and histopathology

Secondary areas of Research

Surgical techniques for fracture repair in large animals- internal fixation

Grants/Financial Support to Research

2007 “Investigating osteoarthritis biomarkers in Standardbred racehorses”, 8700€, funded by the University of Turin Intramural Research Fund “Ex 60%”_2007)

2009 “Proteomics of synovial fluid samples of horses with osteoarthritis treated with Interleukin-1 Receptor Antagonist Protein”, 3-year grant obtained in collaboration with the University of Perugia, 70000€, funded by Italian National Funding Program (PRIN2007_RKYAZS_001)

2009 “Surgical repair of long bone fracture in small ruminants and calves using Fixin locking plates”, funded by the University of Turin (2800€, 60% Funds, Local Research Fund “Ex 60%”_2009) and Intrauma s.r.l. (Turin, Italy), which kindly provided the surgical material

2009 “Biological effects of an amino-acidic mixture on collagen regeneration in a rat model of Achilles tendon lesion”, 10000€ (Industry contract), funded by Professional Dietetic s.p.a. (Milan, Italy)

2012 “Optimization of platelet concentrating methods for tendon repair in animals”, 5700€, funded by the University of Turin (Local Research Fund “Ex 60%”_2012)

2013 “Intrasynovial administration of ultrasound contrast medium (SONOVUE) to detect longitudinal tears of the equine deep digital flexor tendon”, supported by Bracco Diagnostics s.p.a. (Milan, Italy), which kindly provided the non-commercial contrast medium

2014 The “Foundation Giovanni Gorla” supports with 18.000 euro a grant scholarship for the researching project on biomarkers immunoassay in the equine synovial fluid-

Investigator in Research Projects

Biological effects of an amino-acidic mixture on collagen regeneration in a rat model of Achilles tendon lesion (Principal Investigator)

Epidemiology of musculoskeletal injuries in Standardbred racehorses at Turin Racetrack (Principal Investigator)

(Principal Investigator) Investigation on osteoarthritis biomarkers in Standardbred racehorses in training

Proteomics of synovial fluid samples of racehorses with osteoarthritis treated with Interleukin-1 Receptor Antagonist Protein (Collaborator)

Fracture repair of spontaneous long bone fractures in calves and ruminants using Fixin locking plates (Principal Investigator)

2012-2014 Development of an *ex-vivo* model to study performances of an US contrast medium to detect intrasynovial longitudinal tear of the equine deep digital flexor tendon (Principal Investigator)

(Collaborator) Role of the osteoclasts in the subchondral bone during equine osteoarthritis

Teaching

Teaching Responsibilities

- 2005-2013 V5037 - Anaesthesiology and veterinary surgery, Module of equine orthopaedics (Veterinary Medicine Degree, University of Turin) - 10 frontal hours
- 2007-2013 V5034 - Pathology, semeiotic and veterinary radiology, Module of equine diagnostic techniques (Veterinary Medicine Degree, University of Turin) - 8 hours of practical laboratory
- 2005-2008 V5042 - Equine practice and breeding, Module of equine surgery, orthopaedics and rehabilitation (Veterinary Medicine Degree, University of Turin) - 18 frontal hours and 14 hours of practical activities (tot 32)
- 2009 V5042 - Equine practice and breeding, Module of equine surgery, orthopaedics and rehabilitation (Veterinary Medicine Degree, University of Turin) - 36 frontal hours and 28 hours of practical activities (tot 64)
- 2009 Basics equine musculoskeletal pathology (Master in Equine Rehabilitation for Technicians), University of Turin, SUISM (University School of Physical Education) and Centro Internazionale del Cavallo (International Horse Center "Venaria Reale")- 10 frontal hours and 10 hours of practical activities
- 2010 V5037 - Equine Clinical Competencies for 5th year students during wet laboratories and field service (Veterinary Medicine Degree, University of Turin) - 80 hours of practical activity
- 2009-2013 V5067 – Optional practical training in equine clinics for 5th year students (100 hours/student, Veterinary Medicine Degree, University of Turin) - 32 supervised students
- 2014-2015 VET0225 - Clinical rotations in equine medicine and surgery (Veterinary Medicine Degree, University of Turin) - 40 practical hours
- 2014-2015 VET0030 - Veterinary surgery 2, Module of semeiotics and veterinary surgery: equine musculoskeletal system and equine upper respiratory tract (Veterinary Medicine Degree, University of Turin) – 17 frontal hours and 31 hours of practical activities (see **ANNEX I**)

Continuing education

- 2015 "Basic SIVE equine musculoskeletal ultrasonographic course". Nov 13-14, 2015. Faculty of Veterinary Medicine of Perugia, Italy. Clinical Instructor (*only equine practitioner audience*)
- 2015 Workshop on "How to learn from mistakes in equine emergencies". 6th International Congress "Veterinary Science and Profession", Oct 1-2, 2015, Faculty of Veterinary Medicine, University of Zagreb. Invited speaker (*only equine practitioner audience*).
- 2014 Academy of non-transfusional hemo components (Anthec). Anthec International Congress: state of the art and multidisciplinary medical application, Nov 21-22, 2014, Palazzo

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Veterinary field service: CDI*** International Dressage competition (March 5-7, 2010); CSI 5* Global Champions Tour Italia (May 20-23, 2010)

Publications

Recent published articles in the field of equine sports medicine

1. **A. Bertuglia**, C. Girard, M. Lacourt, H. Richard, G. Beauchamp, S. Laverty. Osteoclasts are recruited to the subchondral bone in naturally occurring post-traumatic equine carpal osteoarthritis and may contribute to cartilage degradation. *Osteoarthritis and Cartilage* 2015, 1-12. In press. doi:10.1016/j.joca.2015.10.008
2. **A. Bertuglia**, G. Mollo, M. Bullone and B. Riccio. Identification of surgically-induced longitudinal lesions of the equine deep digital flexor tendon in the digital flexor tendon sheath using contrast-enhanced ultrasonography: an ex-vivo pilot study. *Acta Veterinaria Scandinavica* 2014, 56:78; doi:10.1186/s13028-014-0078-7
3. **A. Bertuglia**, M. Bullone, F. Rossotto and M. Gasparini. Epidemiology of musculoskeletal injuries in a population of harness Standardbred racehorses in training. *BMC Veterinary Research* 2014, 10:11; doi:10.1186/1746-6148-10-11
4. E. Chiaradia, M. Pepe, M. Tartaglia, F. Scoppetta, C. D'Ambrosio, G. Renzone, L. Avellini, F. Moriconi, A. Gaiti, **A. Bertuglia**, F. Beccati, A. Scaloni. Gambling on putative biomarkers of osteoarthritis and osteochondrosis by equine synovial fluid proteomics. *Journal of Proteomics* 2012; 75:4478–4493.

Others publications

5. G. Perona, **A. Bertuglia**, L. Fraire, D. Bergero. Using a new type of polyurethane shoe for horses at rest or working moderately. *The Farriers Journal* 2003; 101(4):58-67.
6. **A. Bertuglia**, G. Puglisi. Repair of the Achilles mechanism in a miniature horse. *Equine Veterinary Education* 2005; 17(1):3-8.
7. **A. Bertuglia**, A. Rampazzo, A. Brignolo, A. D'Angelo. Sphenopalatine sinus syndrome in a horse. *Ippologia* 2006; 17(1):1-4.
8. M. Gandini, **A. Bertuglia**. In vitro evaluation of an inverted end-to-end equine jejunojejunal anastomosis using skin staples. *Veterinary Surgery* 2006; 35:678-682.
9. M. Gandini, **A. Bertuglia**, S. Chiadò-Cutin. Description and in vitro evaluation of two new surgical techniques to perform small intestine end-to-end anastomosis in the horse. *Ippologia* 2006; 17(4): 678-682.
10. **A. Bertuglia**, M. Gandini, C. Bozzini, MG Poletto. Transoral resection of persistent epiglottis frenulum in a foal. *Ippologia* 2007; 18(2):1-4.
11. A. D'Angelo, **A. Bertuglia**, M.T. Capucchio, F. Riondato, R. Zanatta, G. Gandini. Central vestibular syndrome due to a squamous cell carcinoma in a horse. *Veterinary Record* 2007; 161:314-316.
12. **A. Bertuglia**, E. Gillono, M. Bullone, A. Rosso. Penetrating solar wound and intramedullary foreign body into the navicular bone in a horse. *Ippologia* 2009; 20(4):41-45.
13. A. Rosso, M. Bullone, E. Gillono, M.C. Greppi, **A. Bertuglia**. Splenic abscesses due to migrant metallic wires from small intestine in a horse. *Equine Veterinary Education*, 2012; 24(6):286-290.
14. P.R. Dell'Armeline Rocha, **A. Bertuglia**, E. Biasibetti, M. Bullone, A. Rosamilia, L. Masoero, M. T. Capucchio. Subependymal Reaction Secondary to Choroid Plexus Papilloma in a Horse. *Journal of Equine Veterinary Science* 2014; 34:524–527.
15. **A. Bertuglia**, S. Piga, M. Bullone, L. Piras. Minimally invasive metatarsal fracture repair with locking plates in a guanaco (lama guanicoe). *Journal of Zoo and Wildlife Medicine* 2014; 45(4):915–918.

Abstracts

1. **A. Bertuglia**, C. Girard, M. Lacourt, H. Richard, G. Beauchamp, S. Laverty. Osteoclast counts in subchondral bone correlate with overlying cartilage degradation in equine carpal joint osteoarthritis. Scientific Presentation Abstracts ECVS 2014. Veterinary Surgery 2014; 43: E138
2. E. Valle, R. Barbero, B. Cuniberti, **A. Bertuglia**, G. Re, D. Bergero. Effect of herbal extracts on blood prostaglandins, leukotrienes and thromboxanes in the horse: comparison with phenylbutazone. Journal of Veterinary Pharmacology and Therapeutics 2006; 29 (Suppl 1): 209-210.

Proceedings

1. **A. Bertuglia**, G. Puglisi, M. Martano, G. Trucchi, P. Buracco. External skeletal fixation to temporarily stabilize the tibiotarsal joint during Achilles tendon healing in a horse [Italian]. X° SICV Congress, Ozzano dell'Emilia (BO), jun 19-21, 2003:308-311.
2. **A. Bertuglia**, I.M. Wright. Distal limb arthrodesis as a salvage procedure in Thoroughbred racehorses [Italian]. V° SIDI Congress, Torino, jul 3 -4, 2003:143-150.
3. A. D'Angelo, L. Bergamasco, **A. Bertuglia**, A. Tarducci, G. Trucchi, R. Zanatta, A. Jaggy. Is this narcolepsy? 16th Annual Meeting ESVN (European Society of Veterinary Neurology) 2003, Prague, sept 26-27, 2003.
4. C.U. Busconi, S. Rabba, **A. Bertuglia**. The role of bone scintigraphy to detect deep digital flexor tendon entesopathy in the equine foot [Italian]. IX° SIVE Congress, Perugia, jan 31-feb 2, 2004:302-303.
5. **A. Bertuglia**, A. Brignolo. Retrospective analysis of stress fractures referred to equine hospitals in Thoroughbred racehorses in training during two consecutive racing seasons in Newmarket [Italian]. XI° SICV Congress, Torino, june 10-12, 2004:254-256.
6. **A. Bertuglia**. Surgical reconstruction after extended periocular tumor resection [Italian]. XI° SIVE Congress, Pisa, jan 28-30, 2005:181-182.
7. **A. Bertuglia**, T. Nervo. Surgical treatment of the reproductive tract tumors in horse. Clinical cases 2001-2004 [Italian]. 7° SIDI Congress, Lodi (MI), june 22-23, 2005.
8. M. Gandini, **A. Bertuglia**. Mesenteric flap to prevent adhesions after small intestinal end-to-end anastomosis in the horse. 8° Equine Colic Research Symposium; aug 2-5, 2005, Quebec (Canada).
9. M. Gandini, **A. Bertuglia**. In vitro evaluation of an inverted end-to-end skin stapled bowel anastomosis in the horse. 8° Equine Colic Research Symposium; aug 2-5, 2005, Quebec (Canada).
10. **A. Bertuglia**, C. Bozzini, M. Gandini. Transoral resection of epiglottis frenulum in a Standardbred foal. XII° SIVE Congress, Bologna, jan 28-29, 2006:146.
11. **A. Bertuglia**, M. Gandini, M.G. Poletto. Standing surgery for sternothyroideus muscle myotomy and caudal soft palate cauterization. XII° SIVE Congress, Bologna, jan 28-29, 2006:191.
12. C. Bozzini, **A. Bertuglia**, M. Gandini. Non-surgical treatment of inguino-scrotal hernia in three neonate foals. XII° SIVE Congress, Bologna, jan 28-29, 2006:193.
13. M. Gandini, **A. Bertuglia**. Description and in vitro evaluation of a simple technique to perform skin stapled jejuno-jejunal end-to-end inverting anastomosis. XII° SIVE Congress, Bologna, jan 28-29, 2006:199.
14. M.G. Poletto, **A. Bertuglia**, M. Gandini. Standing treatment of sino-cutaneous fistola with periosteal flaps in horses. XII° SIVE Congress, Bologna, jan 28-29, 2006:203.
15. A. D'Angelo, **A. Bertuglia**, M.T. Capucchio, F Riondato, R. Zanatta, A Cagnasso. Vestibular syndrome in a horse with squamous cell carcinoma. IX° SISVET Congress. Terrasini (PA), sept 27-30, 2006:304.

16. G. Trucchi, R. Zanatta, **A. Bertuglia**, M.G. Poletto, M. Gandini, I. Rondanina. Equine cardiac arrhythmias at anaesthesiology risk [Italian]. IX° SISVET Congress. Terrasini (PA), sept 27-30, 2006:395-396.
17. E. Valle, **A. Bertuglia**, D. Bergero. News instruments for diet and athletic management in case of equine PSSM [Italian]. XV° SIVE Congress, jan 27-28, Bologna, 2009:256.
18. **A. Bertuglia**, M. Bullone. Serum and synovial fluid cytokines profile in Standardbred racehorses with traumatic OA of the fetlock joint [Italian]. XVI° SIVE Congress, jan 30-31, Carrara, 2010:223-224.
19. **A. Bertuglia**, E. Guidi, M. Bullone, M.C. Greppi, M.G. Poletto. A conservative treatment technique for gastrocnemius muscles rupture in young calves (7 cases). 3rd World Veterinary Orthopaedic Congress- 15th European Society of Veterinary Orthopaedics and Traumatology Congress, Bologna, sept 15-18, 2010:540-541.
20. E. Pagliara, N. Brkljaca Bottegaro, R. Leone, B. Riccio, **A. Bertuglia**. Thrombolysis of the tibial cranial vein in Draft horses [Italian]. XXI° SIVE Congress, Pisa, feb 6-8, 2015:229-230.
21. V. Negri, P. Cappellin, B. Riccio, **A. Bertuglia**. The optimization of autologous platelet concentrates affects the healing process of spontaneous tendon injuries in sport-horses [Italian]. XXI° SIVE Congress, Pisa, feb 6-8, 2015:235-236.
22. N. Brkljaca Bottegaro, **A. Bertuglia**. Progressive changes in pro-inflammatory and structural biomarkers in the synovial fluid and serum in Standardbred racehorses with traumatic fetlock osteoarthritis. XXI° SIVE Congress, Pisa, feb 6-8, 2015:237-238.
23. **A. Bertuglia**, E. Pagliara, A. Ricci, N. Brkljaca Bottegaro. Post-traumatic fetlock osteoarthritis in Standardbred racehorses: is it the culprit of long-term progression to degenerative joint disease? 24th ECVS Annual Scientific Meeting, Berlin, july 2-4, 2015, accepted short communication

As invited speaker:

1. **A. Bertuglia**, P. Cappellin, M.C. Greppi, M. Bullone, M.G. Poletto. Lameness in Standardbred racehorses: a three years retrospective study on the causes of lameness occurred at the racetrack of Turin. 12th SIDI Congress (New finding in equine practice), Druento (TO), nov 11-13, 2010:99-10.
2. **A. Bertuglia**. How to manage penetrating solar injuries in sport-horses [Italian]. XIII° SIVE Congress, HOW TO DO section. Bologna, jan 26-28, 2007:118-121.
3. **A. Bertuglia**. The equine foot: disease & disorders [Italian]. XI° SICV Congress, Torino, june 10-12, 2004:13-28.

Others personal skills

Long-distance runner: FIDAL-affiliation (Italian federation of athletics) 1993-present
Personal best at the 2012 International Turin Marathon (15th with 2h 34min)
Cyclist: FIC-affiliation (Italian federation of cyclist) in 1998-1999
Winner of the 1999 Italian Mountain Championship