

Veterinary Surgery and Obstetric

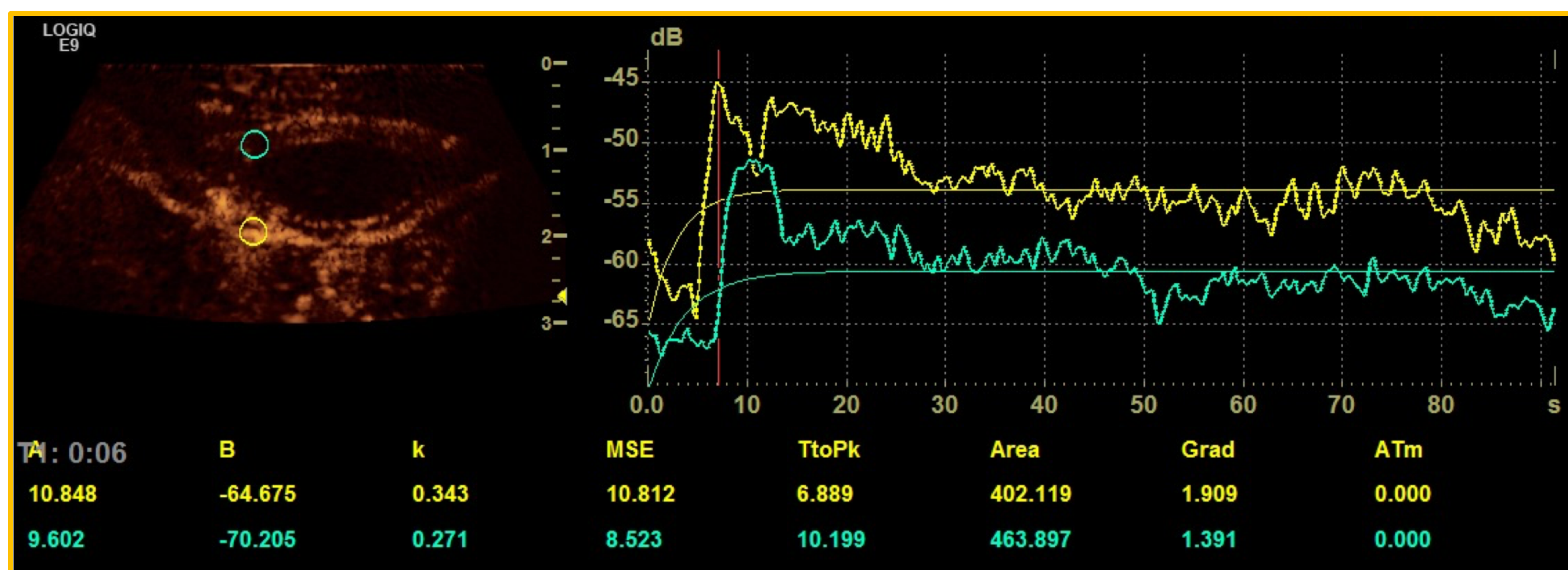
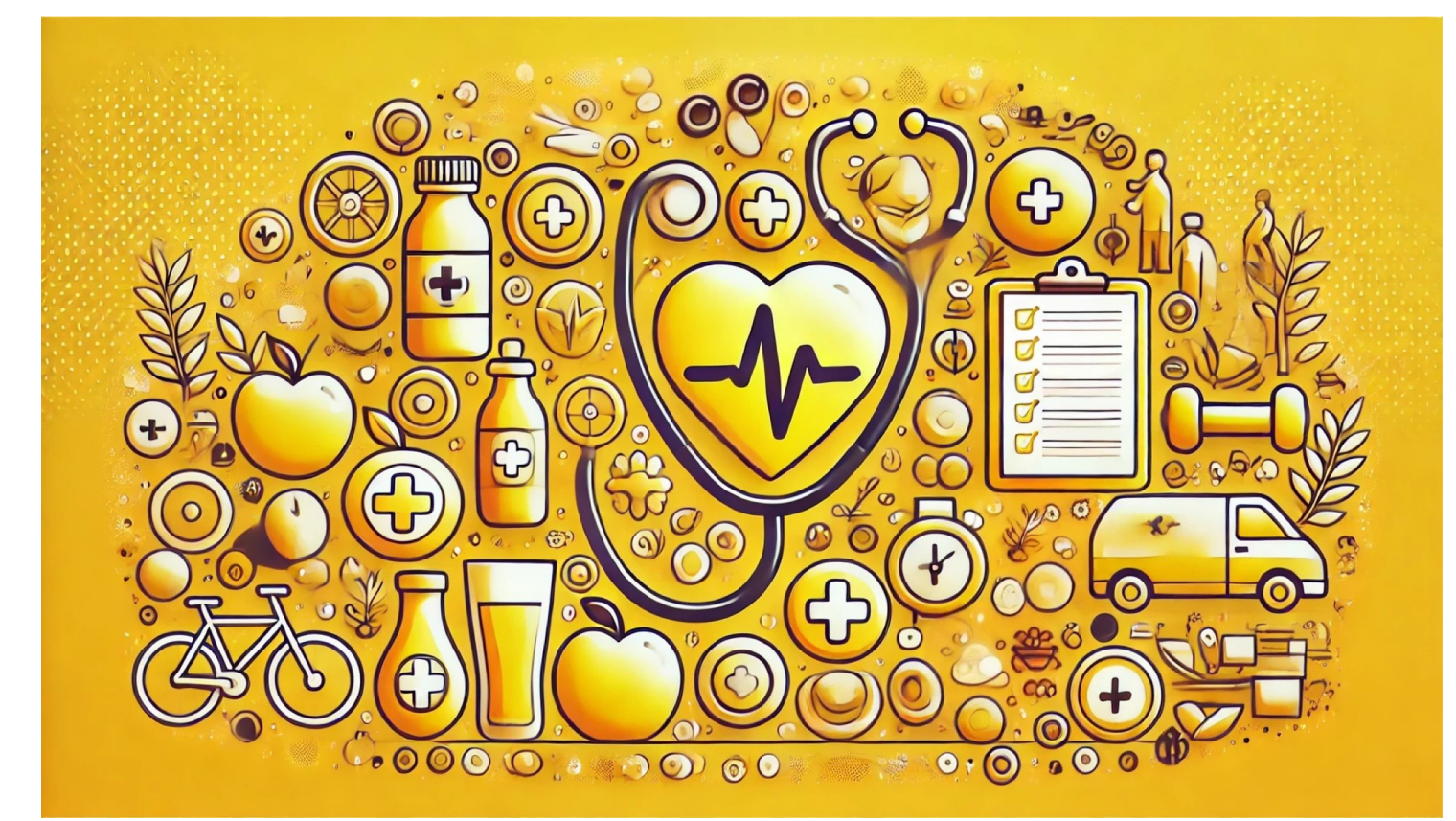
de Cosmo Massimo Attilio, Di Bella Caterina, Dini Fabrizio, Palumbo Piccionello Angela, Tambella Adolfo Maria, Troisi Alessandro

School of Biosciences and Veterinary Medicine

MVET- 05/A-B: 6 academic staff e 8 support staff



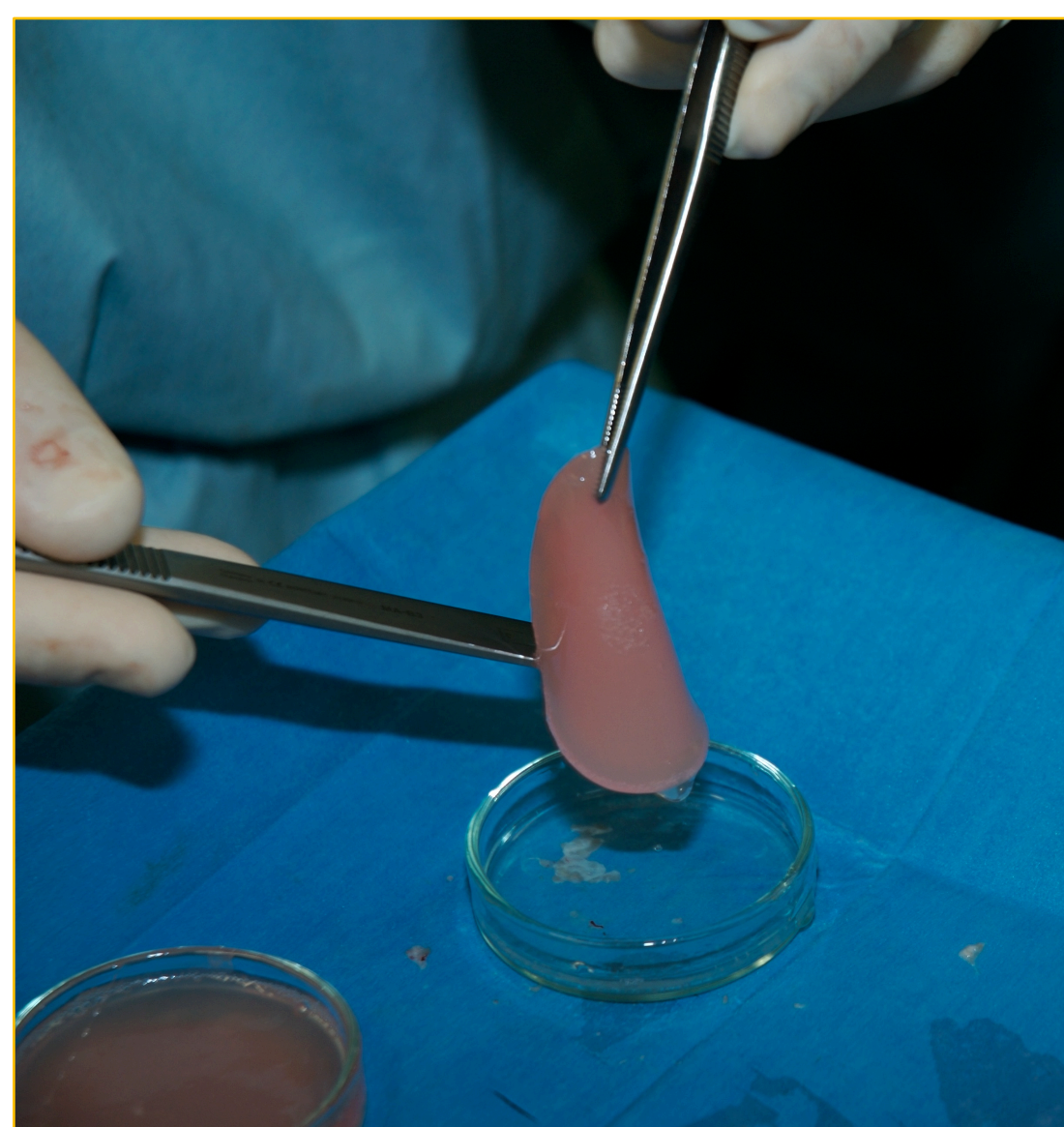
Research Day UNICAM
Camerino 12 dicembre 2024



Representative image showing quantitative CEUS examination with ROIs positioned within proximal (yellow ring) and distal (green ring) placenta

International and National impact of research

Research in this sector increased knowledge in the field of diagnosis and therapy of orthopedic, skin, respiratory and reproductive diseases, and has allowed to understand the clinical efficacy of some devices and surgical instruments for pets. This has occurred through the publication of articles in peer reviewed journals (es. Scientific reports, Stem Cells Translational Medicine, etc), participation at numerous invited national and international conferences, courses and the obtainment of 9 patents.



Platelet-rich plasma gel during surgical application

Relation with Companies

The team actively collaborate with many italian and foreign companies with the aim of developing new technologies and products, promote technology transfer, provide practical and continuous training opportunities, address specific sector issues, access resources and funding, promote animal welfare and sustainability, and create innovation networks between academia and industry. (Acme Group; Argotech srl; DePuy Synthes; Esaote spa; Foregen; Hartmann; Intrauma spa; Klox technologies inc; Medency Srl; Rigenara; Otech industry srl; Technofarma; Trebifarma; Vetoquinol; Virbac).

International Collaboration

In addition to collaborating with European and US companies (DePuy Synthes; Foregen; Hartmann, Klox Thecnology, Vetoquinol,, etc) the Team also works with with European and Extra-Europe Universities (Università di Vienna - Austria; Università di Liegi - Belgio; Università di Alfort, Parigi – Francia ; Università di Extremadura – Spagna; Università di Noroeste di Buenos Aires – Argentina; Jilin Agricultural University – Changchun – PRC) aim to foster the exchange of know-how and innovative methodologies among researchers, leverage advanced technological infrastructures, access international funding, address global challenges such as health and sustainability, develop new technologies and patents, and promote cultural and scientific diversity.

Fundings

Research funds come primarily from financing by companies, in addition the sector has received regional funding and PNRR funds for PhD programme.

Role in Scientific Societies and International networks

The researchers in this group are members of many scientific societies and international networks related to Surgery, Anesthesia ,Regenerative Medicine, and Reproduction. They actively participate in the dissemination of their research results through participation in training events (often as invited speakers) and in some specific branches they are considered opinion leaders at national level.

Characterizing studies

- Development, Application and Clinical Comparison of Surgical Techniques, Devices and Instruments in Collaboration with Italian and Foreign Private Companies;
- Development of Advanced Diagnostic Techniques in pets (Elastosonography and Contrast-Enhanced Ultrasound);
- Conception, development, characterization and clinical application of Regenerative Therapies (including non transfusional hemo-components, stromal vascular fraction, stem cells);
- Management of Pulmonary Ventilation in ARDS (Acute Respiratory Distress Syndrome);
- Biophotonic and Laser Therapies;
- Innovation in the Treatment of Canine Osteoarthritis;
- Study of extracellular vesicles as key molecular mediators in communication mechanisms in small animals reproduction: diagnostic and therapeutic potential;
- Development of More Effective Pain Assessment Scales and New Anesthetic Protocols Aimed at Reducing Peri- and Post-Operative Pain.

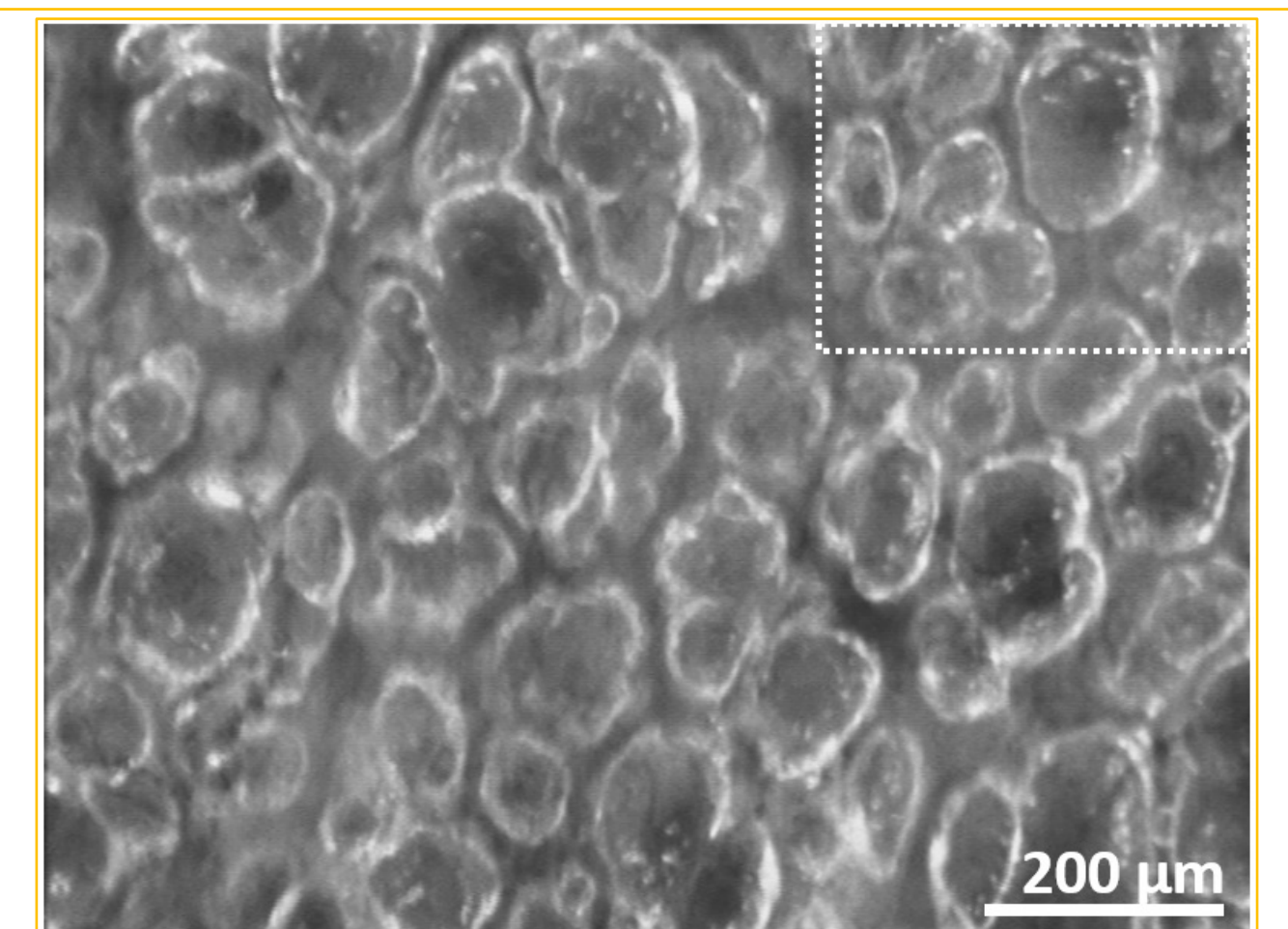


Image of pulmonary alveoli in an experimental porcine model of ARDS detected by a novel Cytocam incident dark field (IDF) vital microscopy directly affixed to the in vivo lung during mechanical ventilation



Clinical application of new devices and instruments to improve the follow up of patients affected by orthopedic diseases