

Etisense and Marshall BioResources Europe Collaborate to Develop an Innovative Telemetric Jacket for Beagle Dogs

Lyon, France – 06 May, 2025 – Etisense, a French biomedical engineering company specializing in wearable telemetry for preclinical research, is proud to announce a successful collaboration with Marshall BioResources Europe, the leading supplier of dogs used in preclinical research. Together, the two organizations have developed and validated an innovative telemetry jacket designed specifically for beagle dogs, aimed at advancing non-invasive cardiorespiratory monitoring in pharmacological safety studies, all while supporting the 3Rs principles.

This partnership was born from a shared commitment to animal welfare, scientific rigor, and technological innovation. The joint project pursued two key objectives:

1. To integrate ECG electrodes and respiratory biosensors into the jacket fabric, eliminating the need for belts, skin shaving or surgical implants;
2. To validate these jackets under real-world conditions by continuously recording high-quality ECG and respiratory signals for 24 hours, on socially housed beagle dogs, mirroring real-life safety-pharmacology studies

Thanks to the close collaboration between Etisense's design engineers and Marshall's veterinary experts, the result is an ergonomic, wrap-style jacket featuring embedded 3D-textile electrodes and respiratory biosensors, a design that is both easy to apply and well-accepted by the animals (see picture below).

The jackets were tested on beagle dogs of various ages and sizes at Marshall's facilities in Gannat, France. The results demonstrated excellent data quality, stable cardiac and respiratory signal acquisition, and material durability over extended use, confirming the jacket's suitability for routine application in preclinical or veterinary settings.



*"Marshall's team's input and feedback were instrumental in tailoring the jacket design for the specific requirements of group-housed beagle dogs" said **Timothé Flenet, Chief Executive Officer at Etisense.** "This project exemplifies how collaboration can drive scientific innovation while promoting animal welfare."*

“We were pleased to collaborate with Etisense on the development of this telemetry jacket” added **Cyril Desvignes, Vice President Europe Marshall BioResources**. *“This solution, directly supports our commitment to the 3R by refining procedures and advancing best practices in animal care”*

These new jackets, which collect high-quality cardiorespiratory endpoints in dogs, support the 3Rs guidance by refining procedures, avoiding implant surgery, and reducing the number of individual studies needed, especially in safety toxicology studies.

Both companies see this as the beginning of a broader collaboration, with potential applications in veterinary medicine and clinical telemetry for companion animals.

This collaboration illustrates what can be achieved when ethical responsibility and innovation go hand in hand.

For more information about your project or to discuss your telemetry needs for dogs in preclinical or veterinary studies, please contact:

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