## 3M Introduces New Littmann Electronic Stethoscope Model 3000 with Breakthrough Ambient Noise Reduction Technology for Veterinarians' Use; Amplifies Heart, Lung, and Other Body Sounds While Reducing Distracting Ambient Noise by an Average of 75 Percent

3M today announced the launch of the Littmann Electronic Stethoscope Model 3000 featuring amplification and proprietary Ambient Noise Reduction (ANR) technology. The breakthrough technology represents a key milestone in the area of acoustic sensitivity that can be critical to proper diagnosis and quality auscultation. Research studies in humans are showing that clinicians can hear the difference:

In recent controlled experiments, clinicians using the Littmann model 3000 have picked up difficult-to-hear heart and lung sounds, while missing or misidentifying those same sounds with an acoustic (nonelectronic) cardiology-grade stethoscope.

In a multicenter clinical study, doctors rated the Littmann model 3000 significantly better than a nonelectronic cardiology-type stethoscope when comparing the tone and clarity of heart, lung, blood vessel and bowels sounds.

The new Littmann model 3000 has been proven to reduce ambient noise by an average of 75 percent (-12dB) without filtering out critical body sounds, and offers amplification up to 18 times greater than the best acoustic stethoscope. In fact, 82 percent of cardiologists in a controlled experiment indicated it was easier to detect an aortic regurgitation (Grade 1 or 2) with the Littmann model 3000 than with an acoustic cardiology-type stethoscope of traditional design(1). In that same experiment, cardiologists missed a Grade 2 aortic regurgitation murmur five times more often with the acoustic stethoscope than they did with the Model 3000.

"For decades, Littmann has been the stethoscope veterinarians and technicians have used to learn auscultation skills," said June D'Zurilla, market development manager, 3M Animal Care Products. "3M is proud to take this trusted diagnostic tool to the next level with the Littmann model 3000, which we believe will increase veterinarians' ability to pick up sounds that are difficult to hear, even in a noisy environment."

Ambient Noise: a Hindrance to Diagnosis

Veterinary professionals have long been in need of a solution to the problem of ambient noise, as it can mask some body sounds, making diagnosis more difficult. Importantly, ambient noise is not limited to the air; it can travel through the animal's body as well. This noise can confuse and complicate the interpretation and diagnosis of body sounds.

Previous attempts to reduce ambient noise have involved amplification or filtering. Unfortunately, when important body sounds were amplified, so was ambient noise. And, efforts to filter ambient noise sometimes resulted in the filtering out of important body sounds.

Today's Technology Results in a Better Diagnostic Tool

Reducing ambient room noise requires eliminating the noise when it is in the air and when it travels through the patient's body. ANR technology successfully addresses this issue without filtering out important sounds. Noise from the room enters the stethoscope through a thin gap in the chestpiece. Once inside, this noise meets the ambient noise that has traveled through the animal's body and entered the chestpiece through the diaphragm. The ambient noise, traveling the two pathways, cancels itself out, leaving only the heart and lung sounds veterinarians need to hear.

Significantly, ANR technology does not filter out important body sounds, allowing veterinarians to gather the information they need to make the diagnosis. Presenting veterinarians with a new standard in auscultation equipped with superior ANR technology, the Littmann model 3000 builds upon the trusted, dependable Littmann name.

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(1) 100 cardiologists listened to prerecorded heart sounds with and without Grade I or Grade II aortic regurgitation murmurs, presented in random order in the presence of 70-75 dB ambient noise, using a Littmann electronic stethoscope model 3000 and an acoustic (nonelectronic) high-end cardiology-type stethoscope.

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