Purina Institute Drives the Conversation on Microbiome Innovation in Veterinary Medicine

Emerging science highlights the essential role of gut-brain axis and antimicrobial stewardship in microbiome health.

ST. LOUIS, May 19, 2026 /PRNewswire/ -- The Purina Institute is leading the conversation on microbiome science in veterinary medicine by helping to translate cutting-edge research into evidence-based understanding. Through leading scientific dialogue on the microbiome and its real-world implications in practice, the Purina Institute is reinforcing the essential role the microbiome plays in keeping pets healthy through two key areas: the gut-brain axis and antimicrobial stewardship.

The Gut-Brain Axis: From Mechanism to Practice

Research is driving clarity on how the gut microbiome influences brain function, behavior and disease through well-defined biological pathways. The Purina Institute Microbiome Forum in November 2025, gathered leading global scientists and veterinary experts who shared emerging evidence demonstrating that the gut–brain axis operates through various mechanisms, including microbial metabolites, immune signaling, and neural pathways.

For veterinarians in clinical practice, this research underscores a clear gut–brain connection, linking gastrointestinal (GI) health to neurologic and behavioral conditions such as epilepsy, paroxysmal dyskinesia, and mood regulation in dogs. It reframes certain neurologic and behavioral disorders as systemic conditions with GI contributors, highlighting the role of diet and precision nutrition. Diet is no longer passive support but an active influencer of brain function via the microbiome.

"The latest gut–brain axis science shows that the microbiome actively communicates with the brain through metabolites, immune and neural pathways—underscoring the axis as a clinically actionable pathway rather than a theoretical concept," said Julia Albright DVM, MA, DACVB.

Antimicrobial Stewardship: Protecting Long-Term Health

At the Microbiome Forum, global veterinary experts also underscored the importance of antimicrobial stewardship, advocating for selective use, diagnostic guidance, and integration of antimicrobials within multimodal, microbiome centered strategies—including nutrition, microbiome assessment, and restorative approaches.

While antimicrobials remain essential tools in veterinary medicine, their use must be balanced against growing evidence that antimicrobials can disrupt the gut microbiome with potential long-term consequences for gastrointestinal, skin, and systemic health.

Antimicrobial exposure, particularly repeated or early life use, can alter microbial diversity, impair gut barrier function, and contribute to chronic disease risk later in life. These findings position veterinarians at the forefront of clinical decision making, shifting stewardship from more general to precision use. This science supports smarter antimicrobial use that is guided by diagnostics, disease severity, and microbiome impact allowing veterinarians to preserve efficacy while minimizing unintended microbiome disruption.

"This groundbreaking science reframes antimicrobial use through the microbiome—empowering

veterinarians to protect both immediate patient outcomes and long-term health," said Jan Suchodolski, DVM, PhD, AGAF, DACVM. "By advancing microbiome science and antimicrobial stewardship together, the Purina Institute is helping to empower veterinarians in preserving the benefits of antibiotics while reducing unintended harm – shaping a more sustainable future for pet health."

Translating Science into Practice

The Purina Institute convenes global experts together to synthesize complex microbiome science and translate it into clinically relevant insights for veterinarians. By putting the gut-brain axis and antimicrobial stewardship at the center of microbiome discussions, the Purina Institute is helping shape the future of veterinary medicine.

About Purina Institute

The Purina Institute is dedicated to transforming nutrition science into actionable information that veterinary professionals can put into practice to benefit their patients. Through the Institute's extensive online resources, publications, and scientific programs, veterinarians and team members can arm themselves with the unbiased, science-based information they need to help pets live longer, better lives.

SOURCE Purina Institute

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