Panel discussion on...

Pet Supplements

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What are the main scientific gaps that still exist in PET supplement development compared to human dietary supplements?

The primary gap in the development of pet supplements lies in the limited availability of robust, science-based evidence regarding their efficacy, safety, and appropriate dosage. In contrast, the human dietary supplement industry benefits from decades of clinical research conducted on large and diverse populations. As a result, the pet supplement sector faces an urgent need to bridge this evidence gap to strengthen its scientific credibility.
Within this context, it is essential not only to generate well designed clinical trials, but also to produce peer reviewed publications and incorporate veterinary expertise—such as expert reports derived from clinical observations—to build a solid and reliable body of knowledge.

How important is species-specific research when selecting and developing active ingredients for pets? Can human data ever be sufficient?

We believe that human data alone is not sufficient for the development of active ingredients intended for pets. While consumers may perceive an ingredient used in both human and pet applications as somehow reassuring, this assumption does not hold from a scientific standpoint.

Physiological differences across species can lead to markedly different responses to the same compound. For instance, garlic is generally considered safe for human consumption, yet excessive intake can induce hemolytic anemia in dogs, cats, and horses (1, 2).

This underscores the need to demonstrate not only the efficacy of an active ingredient, but also its safety specifically for the target species. Species specific research, including toxicological assessments and controlled studies, is therefore essential to ensure responsible and scientifically sound development of pet-oriented ingredients

From an ingredient supplier's perspective, which quality parameters (standardization, bioavailability, purity) are most critical for PET applications?

As an ingredient supplier, our mission is to provide the pet market with products that meet the highest quality standards. We consider it our responsibility to deliver active ingredients and finished formulations that are efficient, safe, and stable. This is essential to reinforcing trust not only in our products, but also across the entire pet supplement industry and pet food supply chain.

Beyond the intrinsic quality of the active ingredient, the formulation and delivery system play a crucial role in ensuring the supplement's overall performance. A clear example is the use of probiotics. Oral administration of beneficial live bacteria has long been recognized as an effective method to support and restore intestinal balance in animals and humans. However, many probiotic strains, particularly lactic acid bacteria, are characterized by limited stability in standard powder form, compromising both viability and shelf life.

To overcome this limitation in animal applications, we have developed extensive expertise in the microencapsulation of our probiotic active ingredient, Enterococcus lactis SF68®. In addition to the efficacy and safety studies conducted in many animal species, further supported by peer-reviewed scientific literature, specific microencapsulated formulations have been developed (3, 4, 5, 6, 7). These formulations are designed to ensure optimal protection, stability, and controlled release of the active ingredient under the distinct physiological conditions of each host animal.

Microencapsulation allows the probiotic, but the same approach can be applied to other active ingredients, to remain protected and stable throughout processing, storage, and incorporation into the final product. As a result, the microencapsulated form can be homogeneously blended into pet food or supplement matrices while providing a significantly extended shelf life compared with the non-encapsulated powder form.

What type of clinical evidence should realistically be expected to support PET supplement claims today?

In vivo efficacy trials, as well as tolerance studies, should form an integral part of the technical dossier of any pet supplement placed on the market. This aligns with the approach taken by EFSA in the European Union, where pet supplements are classified as feed additives and regulated under the Feed Additives Regulation (EC) No 1831/2003 (8).

Efficacy studies must demonstrate statistically significant improvements in the group receiving the supplement compared with a negative control group. In other words, every claim must be substantiated by corresponding clinical evidence.

Similarly, product safety must be supported by tolerance studies conducted at levels higher than the recommended dose. This ensures a defined safety margin for the target species, confirming that the active ingredient remains safe even under conditions of elevated exposure.

Looking ahead 5–10 years, what will be the key factors determining the credibility and long-term success of the PET supplements sector?

As highlighted above, it will be essential to build a solid and scientifically robust body of evidence on the efficacy and safety of the various pet supplement applications. Only through high quality data will the sector be able to overcome current and potentially future regulatory challenges.

At the same time, sustainability can no longer be considered a trend: it has already become an expectation. Consumers increasingly look for eco-friendly products and responsibly sourced ingredients, pushing the industry toward more transparent and sustainable practices.

Another crucial factor for future innovation will be the stabilization of active ingredients using advanced technologies such as microencapsulation. These solutions are key to ensuring stability and bioavailability across the diverse range of pet food formats now available on the market.
In other words, there is still a long journey ahead for all players in the pet food industry. But at the end of the day, we all share the same goal: giving our furry companions the very best - don't we?