Prebiotic Product Development

Aicacia Young, RDN

Director of Scientific Affairs & Head Product Developer Novozymes One Health North America | Microbiome Labs



About Our Market: Healthcare Practitioners

- Between retail and pharmaceutical drugs
- Practitioners work with highly sensitive patients with myriad of health issues
- Reputation for having greater efficacy and quality than retail
- More knowledgeable than average consumers
- Demand higher quality and efficacy standards
- Focus on evidence-based approaches
- Often experiment on themselves first
- Need to understand when and how to implement different solutions



Start with the Research

- Evidence-based approach is HIGH priority
- Looking for research conducted on YOUR particular ingredient
- 2-3 published studies on product efficacy + supporting research
- HCPs will want to see the supporting research on ingredients used AND often research on final product
- Prioritizing quality research is the fastest way to gain business in this market
- HCPs want the product to work, but they also need to know WHY

Minimum Efficacious Dose



Capsules most common for dietary supplements



Stay under 4 capsules per serving

- ~ 2000 mg total fill in size 0 caps
- ~ 2800 mg total fill in size 00 caps



Consumers prefer 2 or less capsules/serving

- ~ 1000 mg with size 0
- ~ 1400 mg with size 00



Most prebiotics have high daily doses of 3-10 grams

- Works for sachets, powders, and functional foods
- Flavoring & sweeteners can be barriers for HCPs



Prebiotics with efficacious doses \leq 600 mg = **GOLD**

Source Matters

- HCP market sees highly sensitive individuals with wide range of food sensitivities and allergies
- Wheat, corn, dairy, and other controversial sources can be a MAJOR obstacle
- Country of origin can also be an obstacle
- Perception of quality is just as important as quality
- Try not to let perfection be the enemy of progress
- Re-evaluate when new sources become available
- Private labeling is another available option



Market Positioning

- Gut health is central to overall health
- Prebiotics have reputation for bloating/exacerbating gut infections
- Consider implications for SIBO
- Primary and secondary degraders (keystone species) have different prebiotic preferences
 - Primary degraders like *Ruminococcus*, *Bifidobacterium*, and others prefer **resistant starches**, **inulin**, **and cellulose** (*Bifidobacterium* spp. also like FOS)
 - Secondary degraders like Akkermansia muciniphila, Faecalibacterium prausnitzii, etc prefer intermediate substrates like mono- and oligosaccharides like FOS, GOS, XOS, etc
 - Lactobacillus prefers inulin and GOS



Thank You!

Aicacia Young, RDN

ayoung@microbiomelabs.com