


What is a postbiotic?
The good stuff bacteria create

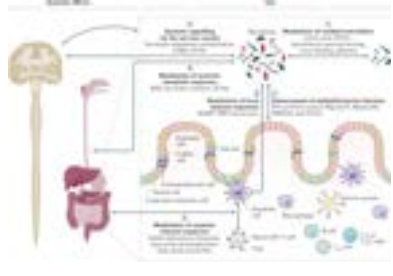
SCFAs	Quorum sensing molecules
Bioavailable vitamins and amino acids	Organic acids
Indole	Peptides
Support mood with GABA, dopamine, and other neurotransmitters	Secreted proteins
Cell wall	Enzymes
	Exopolysaccharide
	Bacteriocins



<https://www.mdpi.com/2077-051X/10/9/1717/figure>

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Five mechanisms of action of postbiotics

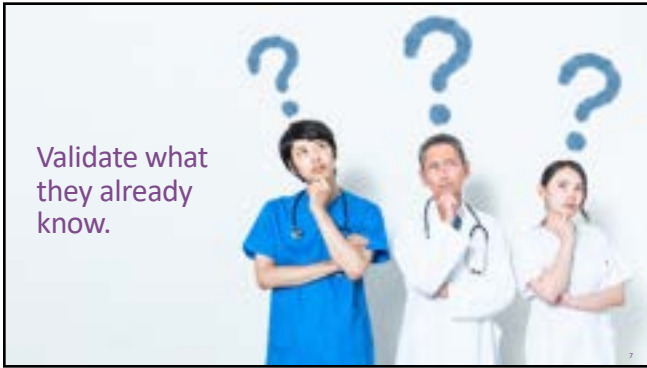


<https://www.nature.com/articles/441575-021-00440-6>

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When probiotics eat prebiotics (fiber), they create the good stuff: postbiotics.

"When you take prebiotics or probiotics, people don't realize that at the end of the day, the hope is to get some postbiotics. The entire point is about postbiotics."
Gastroenterologist Will Buhse, MD, author of the upcoming book, *Fiber Fueled*.

PROBIOTICS + PLANTS/FIBER = POSTBIOTICS

(Diversify) (Synthesize) (Innovate)

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Position in relationship to what they already know

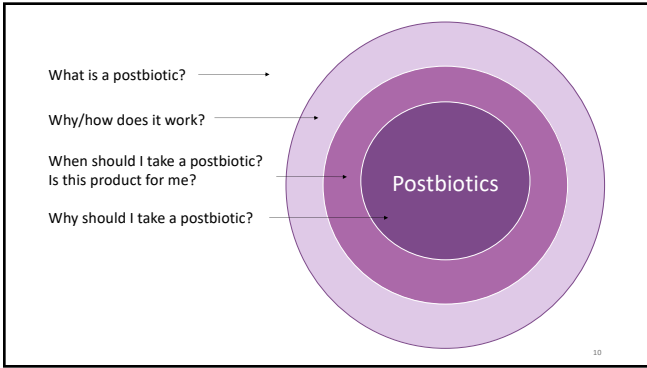
Global Fermented Foods and Beverages Market

Region	Market Size (Billion)
North America	15.2
Europe	12.8
Asia-Pacific	10.5
Latin America	8.3
Middle East & Africa	6.1

Probiotics: \$62 Billion market

Fermented foods and beverages market: \$576 Billion

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Questions

1. Will this fix "X"?
2. When should I take my postbiotics? Is this for me?
3. Should I stop taking my probiotics?
4. Should I take probiotic and a postbiotic?

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The postbiotic for weight management

Know more about Lipidex

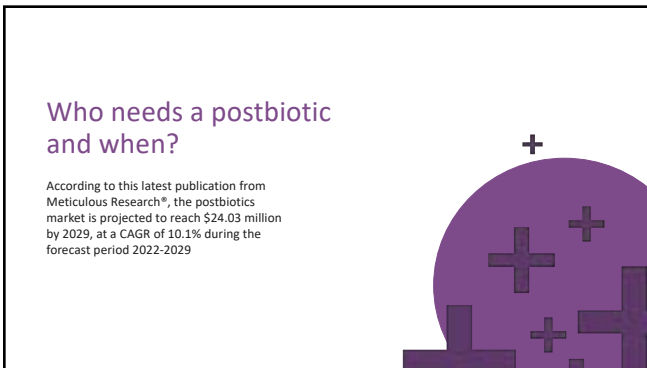
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Those when you are not getting enough fiber: limited diet

Antibiotic or medications makes it more difficult for a probiotic to thrive and germinate

Specific populations who are not great with live bacteria, immunocompromised, neonatal

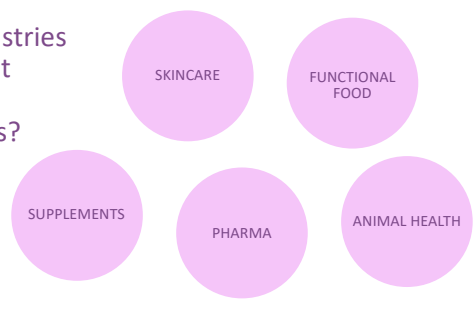
Could be the answer to worries about excessive immune stimulation, systemic infections, and horizontal gene transfer.

New targets, mechanisms that may not be addressed by prebiotic and probiotics

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What industries can benefit from postbiotics?



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- All-in-one probiotic, prebiotic, and postbiotic supplement
- Tri-biotic
- Postbiotic



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The advantages postbiotics for industry

- ✓ Shelf Stable
- ⊕ New solutions with new targets, new skus, including food and beverage
- 🏭 Easier to manufacture, package, store
- 👤 Can introduce new bacteria that may be difficult to grow or stabilize
- 🧬 Genetically modified microorganisms, for which dissemination into the environment might be hazardous

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The Challenges

- 📚 Re-education around messaging: Probiotics are live therefore effective
- 🧠 How to define something complex and define a new niche for additional biotics
- 👨‍⚕️ Keep conducting clinical research
- 🗣️ Keeping the message simple and providing context

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Postbiotics Growth

- Fastest growing area in gut health
- 1300% increase in google searches over the last 2 years
- From 520 to 7240 articles
- Basically zero articles- to 40 every month!

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Context We understood probiotics in the context of the microbiome.
Understand postbiotics in context of ecology.

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POSTBIOTICS +
Thank you

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