

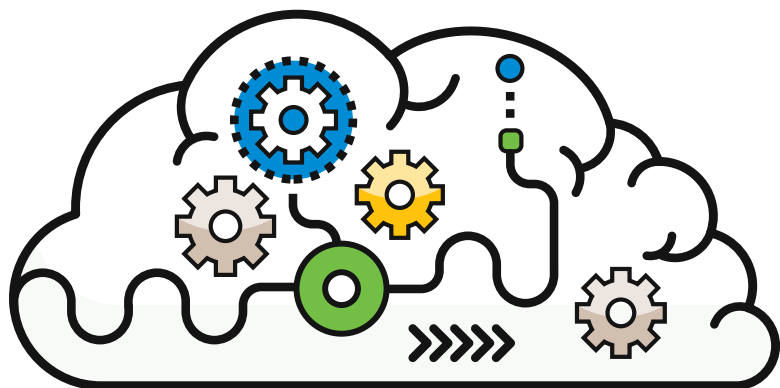


# BACK OFF BITTER

## CONSIDERATIONS FOR YOUR OTC PRODUCTS



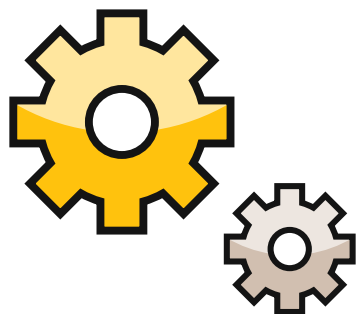
You know that active pharmaceutical ingredients (APIs) come with inherent taste challenges, like bitterness. Ingredients like ranitidine, cetirizine dihydrochloride, and dextromethorphan provide much-needed relief to consumers. The challenge can be to deliver those benefits in a way that is enjoyable for OTC consumers.



### DID YOU KNOW?

Humans evolved over time to have 25-50 bitter taste receptors to help our bodies identify dangerous substances. The human brain instinctively searches through its catalog of experiences and a signal is sent: *Avoid This!!*

Of course, **OTC products** are safe options to provide relief, ensure quality of life and support wellness goals. Improving palatability is critical to keep your consumers on their regimen. Dosage compliance and adherence keep consumers healthy. Your flavor supplier should recommend taste modification as a solution to handle bitterness commonly associated with APIs.

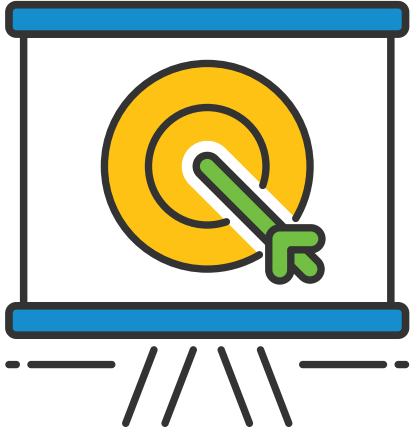


## SOME CONSIDERATIONS

### FLAVOR PROFESSIONALS TAKE INTO ACCOUNT

<b>NO. 1</b>	<b>DOSAGE FORMS.</b> There are many different bases used to create OTC products. The taste modifiers used in the product must work well within the base. Solubility is a key component your flavor supplier will examine.
<b>NO. 2</b>	<b>DOSAGE EFFICACY.</b> The right taste modifiers make bitter better while not interfering with the dosage efficacy of the product.
<b>NO. 3</b>	<b>SENSORY VALIDATION.</b> Your flavor supplier should validate the flavor solution from a sensory perspective. They should request your product base to ensure optimal flavor customization and sensory validation.

# LET'S TALK DATA-DRIVEN FLAVOR DESIGN



OK, so let's say you've identified your "**gold standard taste**," but your product just isn't hitting the mark. When dealing with APIs, live consumer tasting and validation can be complicated and time-consuming to say the least. What if you could predict and validate a solution in an easier way?

FONA's approach to challenges like yours is data-driven, combining the absolute latest in:



ELECTRONIC SENSING EXPERTISE



INGREDIENT KNOWLEDGE



CUSTOM ANALYSIS



ARTISTRY OF FLAVOR CREATION

*Let's see how this approach can work for you.*



KEEP THE

# BITTER OUT



LET'S TALK.

We understand your consumer's wellness and dosage safety are top priorities. Each and every product is unique and needs customizable taste solutions. We got you covered. Our expertise in **OTC products** extends across many different types of dosage forms. *Let us help with your next bitterness challenge.*



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SOURCES:

1. Science of Taste and Smell Perception, Robert Sobel, FONA. The Manufacturing Confectioner, 2. Growing Demand for Taste-Masking Technologies, pharmtech.com, 3. Prodrugs for Masking the Bitter Taste of Drugs, researchgate.com