CONCLUSION

For consumers, taste is king. For product developers, spices and herbs and their extracts provide the flavors and flexibility needed to develop food products with the tastes consumers want.

REFERENCES

1. International Food Information Council Foundation. 2012 Food & Health Survey. http://www.foodinsight.org/articles/2012-food-and-health-survey. Accessed July 16, 2014.

- 2. Ward EM. Spices and Herbs: Their Health Benefits. http://www .webmd.com/food-recipes/features/spices-and-herbs-healthbenefits. Accessed July 16, 2014.
- Healthy herbs: 25 of the best for your body. http://www.huffingtonpost .com/2012/11/08/healthy-herbs-spices-healthiest_n_2089007.html. Accessed July 16, 2014.
- 10 Healing herbs and spices. http://www.rd.com/slideshows/ 10-healing-herbs-and-spices/. Accessed July 16, 2014.
- 5. Pliner P, Stallberg-White C. "Pass the ketchup, please": familiar flavors increase children's willingness to taste novel foods. *Appetite*. 2000;34(1):95–103.
- DSM Global Insight Series Savory–Consumer Taste Preferences. http://www.dsm.com/markets/foodandbeverages/ en_US/informationcenter-press/campaigns/consumer-tastepreferences.html. Accessed July 16, 2014.

Transforming Trusted Brands The Art of Consumer Insights and Science to Deliver Health

Maha Tahiri, PhD

eneral Mills, Inc, started as 2 flour mills in the 1860s. Today, the company has more than 40000 employees and more than 100 brands, including Big-G cereals, Progresso soups, and Yoplait yogurts, in more than 100 countries. A decade ago, the company made a decision to focus on "better for you" foods. It believed then—and believes now—that health is a winning growth strategy.

EMBRACING CONTINUOUS PRODUCT IMPROVEMENT

General Mills' approach to product improvement is science based and requires continuous attention. Through the Bell Institute of Health and Nutrition. General Mills conducts research on dietary intake and the role of diet and individual foods in health. The company also uses "stealth health," a strategy in which small changes in a food product, such as reducing sodium, are included in the Nutrition Facts panel but not announced on the front of the package; undertaken without the consumer's knowledge; and carried out over time so consumers can adapt slowly to the altered taste. A study with consumers in the home, for example, found that exposure to a reduced-sugar yogurt for 5 weeks brought its overall liking close to the baseline rating of a well-liked higher-sugar yogurt, which scored 7 on a 9-point scale. Finally, any changes in composition and flavor must be sustainable in the market. If consumers will not buy a product or they buy it, try it once, and never consume it

again, then the product cannot stay on the grocery store shelf in today's competitive market.

USING A HEALTH METRIC TO MONITOR NUTRITIONAL IMPROVEMENTS

In 2005, a cumulative health metric was launched to follow the improvements made in food products. The main nutritional improvements in the company's US retail food products have included increasing whole grains, fiber, vitamins, and minerals and decreasing calories, sodium, sugar, *trans*-fat, total fat, and saturated fat in food products. Last year, the company offered more than 500 products such as Yoplait Light yogurt with less than 100 calories per serving and more than 800 products such as Multi Grain Cheerios that had less than 150 calories per serving.

UNDERSTANDING CONSUMER MOTIVATION

There is no typical consumer. Understanding the motivations of a diverse population requires a variety of approaches. For instance, focus groups provide direct feedback on consumer motivations for food purchases. Ethnographic research involving interviews with individual consumers and families is another strategy. Here, researchers may live with a family to gain insights about their views of healthy food products. In 1 such ethnographic research project, a mother was asked, "What is a healthy food product?" Her answer: a pot pie. Her definition of healthy was "hot and filling." Dividing consumers into segments based on their opinions and attitudes about health and nutrition also provides insight into common mind-sets. For example, according to a proprietary study, 29% of consumers are strongly motivated by health, whereas

Maha Tahiri, PhD, is vice president and chief health and wellness officer of the Bell Institute of Health and Nutrition at General Mills, Inc, Golden Valley, Minnesota.

The author has no conflicts of interest to disclose.

Correspondence: Maha Tahiri, PhD, General Mills, Bell Institute, 9000 Plymouth Ave N, Minneapolis, MN 55427 (maha.tahiri@genmills.com). DOI: 10.1097/01.NT.0000453852.67829.a7

the remainder is sometimes motivated by health or they value convenience and family functions more than health.

MEETING FUTURE CONSUMER HEALTH NEEDS

Marketing experts indicate that consumers want simplicity in food products and food labels. They want food products that are sustainable. And they are prone to ask questions: What is goodness? What is healthy? Consumers are moving to a wellness definition of health. In other words, health and wellness are becoming intertwined, and consumers are asking for both aspects in food products.

A CASE STUDY OF THE HEALTH METRIC: PROGRESSO LIGHT SOUP

General Mills sought to develop a light soup in partnership with Weight Watchers. The company first gained consumer insights about reduced-fat and reduced-calorie food products and then examined consumers' culinary mindset. It aimed to give consumers their "hero" ingredients vegetables, pasta, and cream—without sacrificing flavor and texture. A complex flavor using spices and herbs was paired with a cream-like texture to compensate for less cream in the final product. Although the continual assessment of product stability, flavor, and texture during development took several years, Progresso Light Soups, which contain at least one-third fewer calories than their regular counterparts, claimed a 90% share of the light soup market.

CONCLUSION

The experience of food product developers suggests that the art of successful health improvements in food products involves a formula that combines health as a core strategy, a consumer-centric approach, significant resources, a longterm commitment, and patience. For example, a 10% reduction in the sodium content of food products that maintain product acceptability can take as long as 3 years to develop. Good results can be achieved by focusing on taste, convenience, and affordability.

Spices and Herbs and the *Dietary Guidelines* for Americans

Barbara O. Schneeman, PhD

he *Dietary Guidelines for Americans* (DGA) provides science-based nutrition advice for individuals 2 years or older to help reduce the risk of chronic disease and promote health.¹ This federal nutrition document is prepared jointly by the US Department of Agriculture (USDA) and the Department of Health and Human Services (HHS). The DGA, which is revised every 5 years, serves as a foundation for federal nutrition feeding programs, federal nutrition education programs, and setting policy and research priorities.

DEVELOPMENT OF THE DGA

The process for developing the DGA includes appointing members to the Dietary Guidelines Advisory Committee (DGAC), obtaining comments about the DGA, holding public meetings, and reviewing scientific papers in the USDA's Nutrition Evidence Library, which provides a standardized evaluation and grading of the scientific literature. The DGAC is tasked with preparing a report for the Secretaries **Barbara O. Schneeman, PhD**, is professor emeritus at the University

of California, Davis.

Funding for this presentation was provided by the McCormick Science Institute. The author has no conflicts of interest to disclose.

Correspondence: Barbara O. Schneeman, PhD, 12618 Shoal Creek Ter, Beltsville, MD 20705 (bosprs@icloud.com).

DOI: 10.1097/01.NT.0000453853.44958.88

of USDA and HHS. Key steps are the review of documents and data, including the previous DGA, new research and systematic reviews, and reports from authoritative sources, such as the National Academy of Sciences, which may inform opinion on dietary recommendations.

Analyses on food safety, the food supply, and intakes of foods and/or nutrients in relation to nutrition-related diseases are conducted to understand dietary patterns in relation to health and disease patterns. Food and/or nutrient intakes are obtained from the "What We Eat in America-National Health and Nutrition Examination Survey" (WWEIA-NHANES), which is a national population-based food survey conducted as a partnership between HHS and USDA.² Food pattern modeling analyses are also conducted. When the Advisory Committee's report is finished, public comments are obtained, and a government agency committee is formed to review public comments and the committee's report and prepare a document that becomes the DGA. This government committee uses the scientific conclusions made by the DGAC to develop the policy document.

USES OF THE DGA

The DGA is the federal nutrition document on which national nutrition education and policy are based. A federal