

# The Nutraceuticals Industry: Harnessing Convergence to Create Competitive Advantage

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The nutraceuticals business has experienced tremendous growth over the past few years and is currently estimated to exceed \$65 billion a year in global sales. The term „nutraceutical“ is used to describe any food, or part of a food, that offers a medical or health benefit beyond simple nutrition. Such benefits may include the prevention or treatment of disease. These products range from pure compounds and herbs used in capsules (e.g., ginseng) to foods that contain added bioactive (biologically active) ingredients, such as orange juice enhanced with calcium.

Among the drivers of nutraceuticals industry growth are the health concerns of aging baby boomers in industrialized countries, a growing desire for alternatives to traditional pharmaceutical products, and increased awareness among consumers of the links between nutrition and health. Recognizing this shift in consumer preferences, companies with roots in traditional industries—especially foods, pharmaceuticals, and ingredients—are converging to create a wide range of nutraceutical products. For instance, such industry giants as American Home Products, DuPont, and Kellogg have already introduced nutraceutical products or ingredients.

In the rush to move into this rapidly growing and potentially lucrative business segment, however, companies are running into a variety of stumbling blocks. These include a complex regulatory environment, participants' limited experience with this emerging market, intellectual property gaps, difficulty in creating proprietary technologies, and a lack of uniquely differentiated and proven bioactives. In addition, many firms tend to view their prospects for competing in nutraceuticals through their own industry-specific prisms and are struggling to develop the full range of capabilities needed to compete successfully. In this article we discuss some of the recent developments propelling the industry, as well as the convergence issues companies are facing. We then outline the strategic framework we've developed in our ongoing work to help companies grapple with convergence and position themselves for success.

## A Portrait of the Nutraceuticals Market

So what exactly is the nutraceuticals industry? Products in this broad category include:

- Dietary supplements, such as food-replacement drinks, herbal extracts, vitamins, and essential oils
- Fortified foods, such as high-vitamin E eggs, high-carotenoid tomatoes, and vegetable oils modified to improve their fatty-acid profiles
- Foods and beverages with added bioactive ingredients, such as ginseng tea or cholesterol-lowering margarine with phytosterols
- Entire food regimens, such as the *IntelligentQuisine* product line recently developed (and subsequently discontinued) by Campbell's Soup

The industry also includes the hundreds of bioactive ingredients—from calcium to ginseng—that manufacturers are using to enhance food products. We do not include in our definition products that have removed negative nutritional components from their formulas (i.e., products with reduced fat, calories, sugar, salt, or cholesterol).

While it is difficult to determine which products will ultimately succeed in the marketplace, nutraceuticals that meet one or more of the following criteria have the greatest chance of success:

- Those that have been proven to be safe and effective and for which it is possible to make health claims (e.g., calcium)
- Those with highly publicized health benefits (e.g., vitamins, antioxidants, or fiber)
- Those aimed at preventing consumers' most common health concerns (e.g., obesity, high cholesterol, or stress)
- Those whose health benefits can be measured immediately (e.g., for insomnia or memory loss)
- Traditional foods with enhanced levels of or added bioactives (e.g., high-antioxidant tomatoes, or eggs with high levels of omega-3 fatty acids)

## Grappling with Industry Convergence

As noted above, three major industries (foods, ingredients, and pharmaceuticals) are currently seeking ways to leverage their expertise in the nutraceuticals market. A fourth industry, dietary supplements, has a history in this market and is currently being very successful in leveraging this area's loose regulatory environment under the US. Dietary Supplement, Health, and Education Act of 1994. For purposes of this article, we will focus our

discussion on the food, pharmaceuticals, and ingredients industries.

**Ingredient Companies.** These have traditionally focused on supplying large food manufacturers either with commodities, such as grains, or with specialty-food ingredients, such as flavors. The commodity-based ingredient companies have a strong focus on biotechnology and improving the agricultural stream. For example, companies are looking to develop pest-resistant crops, as well as altering the levels of specific nutritional components in the crops. The specialty-ingredient companies have focused more on value-added ingredients, and many have core competencies in extracting and manipulating functional or botanical ingredients.

**Scientifically Oriented Pharmaceutical Companies.** These tend to focus on breakthrough product development and proprietary products and technology. They have strong competencies in biotechnology and drug discovery and are accustomed to long development cycles, large R&D budgets, high-margin/ low-volume products, and stringent safety and efficacy requirements. They are experts in patenting and in forming partnerships and outsourcing arrangements. Marketing their products primarily to health-care professionals, most pharmaceutical companies have yet to fully master consumer branding, merchandising, and convenience issues, and have yet to establish strong relationships with supermarket distribution channels.

**Consumer-Oriented Food Companies.** These have leading-edge skills in food formulation, developing convenient consumer products, and branding. They are accustomed to relatively short product-development cycles, small R&D budgets, low-margin/high-volume products, and incremental product development. Due to the nature of their business, food companies have not needed to develop core competencies in the areas of safety and efficacy testing and proprietary patenting through R&D superiority. Food companies getting into nutraceuticals have only begun to develop relationships with pharmaceutical distribution channels and with medical opinion leaders.

### Developing an Effective Nutraceuticals Strategy

In our consulting work at Strategic Food Solutions, we serve companies from all three industries, helping them develop strategies for entering and competing in the nutraceuticals market. (Strategic Food Solutions is a joint-venture firm formed by Arthur D. Little—which has long-term expertise in corporate transformation and mobilization, market assessment, food formulation, and product development—and TNO, a Dutch-based world leader in food and nutrition research, technology and ingredient development, and safety and efficacy assessments.) In this work, we often see our clients relying too heavily on the mental models, strategic thinking, and core capabilities that have brought them success in their own markets. However, nutraceuticals—a complex and evolving industry—is developing its own rules for success and demanding that its participants enlarge their traditional ranges of skills.

Exhibit 1 illustrates a simple but powerful framework we call the „Transformation Model,“ which we use to help clients holistically analyze the nutraceuticals market, including their positioning within it and their opportunities for competing in and shaping it. Besides the nutraceuticals industry, this framework has been used successfully within the information technology and travel services industries. The model helps companies envision their businesses along four dimensions: industry scope and dynamics, new roles, existing engines, and new engines.

### Industry Scope and Dynamics

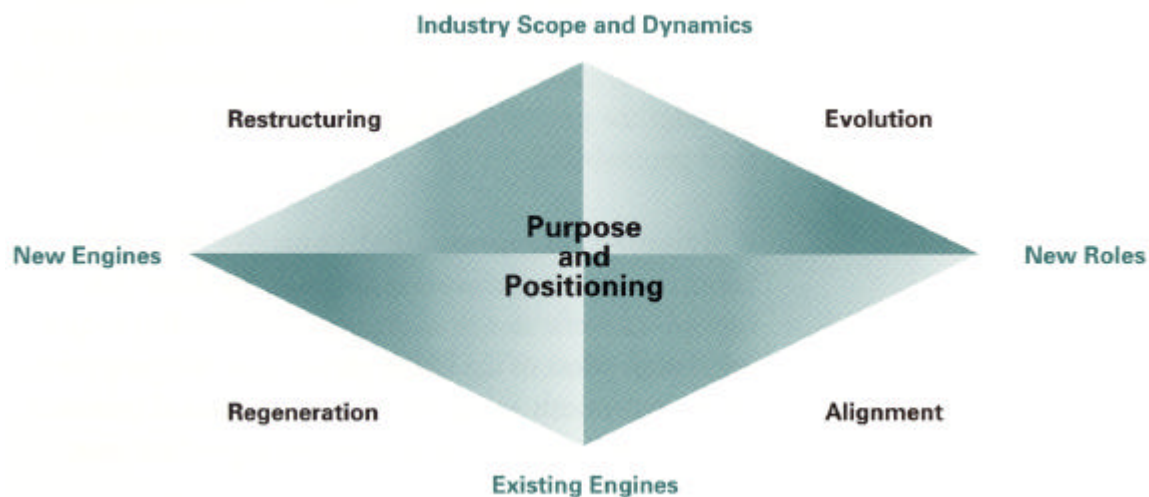
In the nutraceuticals market, it is essential for industry participants to understand how convergence of the three industries is shaping the market. A host of factors—including demographics, globalization, consolidation, economic feasibility, distribution options, consumer awareness, home shopping, and access to „any“ information (in any form, any time, at any place)—have structurally altered the scope of the traditional food, pharmaceutical, and ingredients industries by shifting the competitive dynamics of the past. Five key factors are:

- **Geographic Scope.** While nutraceuticals are available globally, regional differences in consumer preferences, knowledge, and traditions have created a fragmented market environment, forcing global companies to assess and address some processes globally and others locally.
- **Consumer Scope.** The nutraceuticals industry offers players an increasing range of consumers to target—from niche consumers (e.g., highly focused „pseudo health experts“), to consumer segments with specific interests or medical concerns (e.g., sports enthusiasts, diabetics, or heart patients), to mainstream consumers (e.g., those seeking natural cold remedies containing zinc, echinacea, etc.). It is essential that companies recognize and begin to formulate their strategies for those segments in which they are most likely to successfully compete.
- **Distribution Channels.** Formerly available only in natural food stores or nutrition centers, nutraceuticals can now be found in drugstores, grocery stores, large discount chains, and through catalogs and the Internet. However, with so many companies entering the market, and with so many products available, there are significant distribution risks. We’ve already begun to see the effects of oversupply in the herbal-products segment of the industry, as compounds such as echinacea and St. John’s wort have been commoditized by the

major players. Such products are now available in a variety of outlets and are largely undifferentiated in terms of either safety or efficacy. When developing a nutraceuticals strategy, companies must carefully weigh their distribution options and consider the potential for other channels to undermine their profitability.

## Exhibit 1

### The Transformation Model



- **Scientific Support.** Today's marketplace offers hundreds of nutraceutical compounds that have only limited scientific testing to support their health-promoting claims. Most of the larger players now stepping into the nutraceuticals arena are insisting on clinical evidence of safety and efficacy before developing product lines.

While these tests can take years or even decades to complete, most major companies are resisting the temptation to pursue short-term opportunities that lack significant scientific support. Companies that rush products to market risk damaging the value of their brands in the event that the bioactive compounds and products they promote are eventually found to be ineffective or even dangerous.

- **Proprietary Positioning.** Another factor to consider is that since natural compounds cannot be patented, companies are finding it difficult to create intellectual property from their research. The complex and uncertain regulatory environment, while too dense a subject for this article, is also creating tremendous challenges for companies trying to compete in the nutraceuticals market.

In our work with client companies, we have developed specific analytical tools for assessing and quantifying structural shifts at the overall industry, segment, and subsegment level. It is essential that companies conduct such analysis before defining the other elements of a comprehensive nutraceuticals strategy. For instance, we have assisted food, pharmaceutical, and ingredients companies with market and industry assessments relative to their traditional base of operation, as well as to new opportunities lying at the intersection of multiple traditional business segments.

### New Roles

After analyzing the scope and dynamics of an industry (or industry segment), a company can begin to envision the evolution of that industry from its current state to a new state and understand the „new roles“ it will need to adopt in order to successfully compete.

Exhibit 2 illustrates our general view of the capabilities and processes that food, pharmaceutical, and ingredients companies will need to strengthen or adopt in order to compete in the nutraceuticals market. Specific examples of developing new roles include Monsanto's and DuPont's shift to life-sciences, American Home Products' (AHP) acquisition of the herbal supplement company Solgar, and the failed merger between AHP and Monsanto— and the possible one between Monsanto and DuPont.

Individual companies will of course come to their own conclusions about the specific new roles that they will need to take on in order to compete.

## Existing Engines

Once a company has developed a thorough understanding of the nutraceuticals market and determined the new roles it will need to take on, it must then examine its „existing engines.“ In this phase of strategy development, a prospective nutraceuticals company must conduct a detailed audit of its current capabilities and economic engines to assess what can be aligned within the current base to support future roles. This alignment phase is critical since it enables a firm to fully leverage its existing asset base and also provides a foundation for making „make vs. buy“ decisions for new-product commercialization.

### Exhibit 2

#### New Roles and Conditions for Nutraceutical Industry Players

| Food Companies   | Pharmaceutical Companies   | Ingredients Companies   |
|--|--|---|
| <ul style="list-style-type: none"><li>• Safety and efficacy testing</li><li>• New distribution channels</li><li>• Higher-value-added products</li><li>• Proprietary technology</li></ul> | <ul style="list-style-type: none"><li>• Mass-market distribution</li><li>• Consumer marketing</li><li>• Shorter development cycles</li><li>• Less stringent safety and efficacy testing requirements</li><li>• Lower-margin products</li></ul> | <ul style="list-style-type: none"><li>• Greater investment in R&amp;D</li><li>• More focus on proprietary/patented nutraceutical ingredients</li><li>• Greater focus on safety/efficacy testing</li><li>• Higher-value-added products</li></ul> |

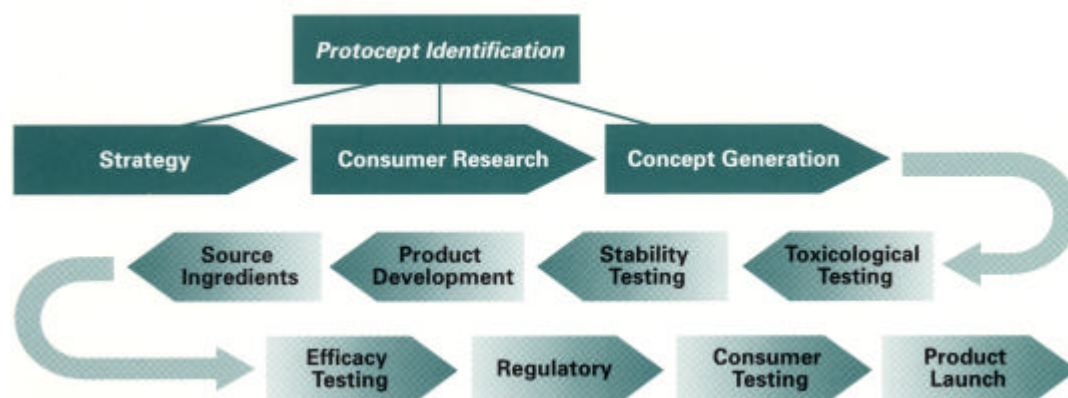
After completing this alignment exercise, a company can divest those assets that are unlikely to add value in the future and begin adding new economic engines essential for sustainable success within the nutraceuticals market. Ultimately, fused nutraceutical companies will have capabilities aligned with the needs of the market and with the new roles they will need to master. Fully formed nutraceutical firms will have access to a full spectrum of seamless competencies along the value-chains illustrated in Exhibit 3 (which have traditionally been viewed as being independent).

## New Engines

There are numerous possibilities for developing new product lines, markets, and ventures. Some companies may be able not only to reinvent their firms, but to restructure entire segments of the nutraceuticals industry. For example, we are seeing numerous opportunities for groups of companies to mutually benefit from the establishment of industry standards and the forming of coalitions of competence providers to drive down overall industry costs. After repeated requests from our clients to help them find proprietary and patented bioactives, we have developed a bioactive discovery process that companies can tailor to their own strategic ambitions and use to find new bioactives for establishing a source of competitive differentiation.

### Exhibit 3

#### The Nutraceutical Value Chain–Food and Pharmaceutical Companies



## Conclusion

We believe that the rapidly growing nutraceuticals market offers companies significant potential and that the enormous current interest and investments are justified. However, many of the rules for this highly competitive, global market have yet to be defined. The long-term nutraceutical leaders will be those with the vision to establish new industry standards while leveraging the best capabilities and processes that the food, pharmaceutical, and ingredients industries have to offer.

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