

SCIENCE

Clinical studies provide scientific proof of the health benefits of Danone products.



In 5 years Danone's clinical studies budget has risen 15-fold

DANONE TESTS CLINICALLY

For Groupe Danone, the health imperative means substantiating the claims of its products through an increasing number of clinical studies. To do so, Danone applies the same rigorous standards used in the world of scientific research.

Functional products such as Activia, Actimel, Essensis and Danacol are at the heart of Danone's mission to "bring health through food to as many people as possible." Yet even though these products promote health by acting on specific systems in the body, their credibility with consumers and health professionals requires tangible scientific

proof of their benefits. That is why Danone has launched an increasing number of clinical studies of functional products over recent years, in response to steadily rising demand. A recent study on Activia found that health benefits are the primary motivation for buying a product the first time, while taste and appeal are the primary motivations for buying it again. This makes health claims a powerful engine ■■■

Danone 672 010 971 R&S Sobigny - Photo: Getty Images / Patrick Mohr

Un petit geste pour avancer

Avec  soutenez l' INSTITUT PASTEUR



Depuis 120 ans, l'Institut Pasteur a permis de préserver des millions de vies en faisant notamment progresser la recherche sur le système immunitaire et la lutte contre les maladies infectieuses. Depuis 2005, des chercheurs Danone et des chercheurs de l'Institut Pasteur travaillent ensemble sur les ferments et les probiotiques, pour mieux comprendre leurs effets sur l'organisme.

Le financement de l'Institut Pasteur dépend de la générosité du grand public. Avec Danone, vous aussi soutenez l'Institut Pasteur.

Découpez et collectionnez les Coupons-Dons Institut Pasteur sur les lots Actimel porteurs, entre le mois d'Octobre 2007 et le mois de Mars 2008. Pour chaque Coupon-Don renvoyé, un don sera effectué par Danone à l'Institut Pasteur.

Retrouvez tous les détails de l'opération sur www.danone-pasteur.fr et sur les lots Actimel porteurs de l'offre.

■ ■ ■ for growth as consumers choose from an ever more varied array of foods. At the same time, products are becoming more focused and sophisticated, sharpening competition in the food industry and prompting Danone to make significant R&D investments and to develop highly targeted expertise. In addition, increasingly rigorous health regulations are affecting the entire food industry. In January 2007, the European Union issued new regulations to protect consumers from false statements, harmonizing and toughening rules on health and nutrition claims throughout the European Union. Under the new rules, all European food companies must substantiate health claims scientifically before they can be used to market food products.

High scientific standards

Against this backdrop, it has become more important than ever to back up health benefits with sound scientific arguments. Measuring a product's impact in laboratory test tubes is not enough: its effect on the future consumer also needs to be calculated. As a result, clinical studies have become a natural part of the innovation process—not only for fresh dairy products and baby nutrition, but also for waters. Traditionally used in medical research, these studies consist of clinical trials carried out on human subjects to provide irrefutable proof of a product's health benefits. Since multiple studies are often required to build a coherent case for a single health claim, Danone's research budget for clinical studies is constantly growing. Over the last five years, it has increased fifteen-fold, with 20 to 30 new studies launched every year. Their

number depends largely on the nature of the health claim and the complexity of the product's expected effect on the body. Essensis, which was launched in four countries in March 2007, has already been tested in two studies, while Actimel has been the subject of more than 20 clinical studies since its creation in 1994.

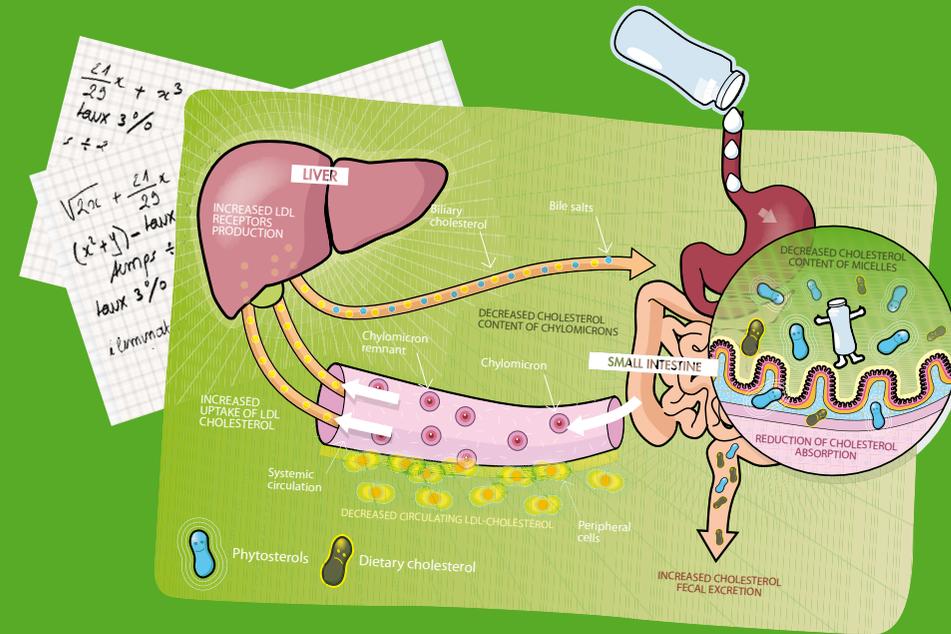
A long, demanding process

A clinical study has two goals: first, to verify that the benefit being measured is relevant to the claim being made; second, to ensure that measurements are both reliable and credible. Although it may sound simple, carrying out a clinical study is a major undertaking, one which requires months of work by teams from the Nutrition and Clinical Research Department as well as a host of other units at Danone Research. The first step is to define the ■ ■ ■



The benefits of healthy hydration |

Today's scientists are unanimous in recognizing the importance of hydration and its benefits for the body, readily pointing to the special merits of mineral water. Just over a year ago Danone responded by expanding its research program—previously limited to fresh dairy products—to include a team of nutrition and health researchers devoted exclusively to its Waters line. Clinical studies now underway are exploring the possible effects of hydration on the body, from preventing kidney stones and improving elimination of metabolic waste to preventing deterioration in physical and cognitive performance—benefits that could ultimately be claimed for specific products. And with a number of significantly overweight populations getting more than 20% of their calories from sweetened beverages, daily hydration with healthy, natural water products is clearly an idea with a future.



KEY FIGURE

3

weeks of daily consumption of bottled Danacol as part of a balanced diet led to a 12.2% reduction in LDL-C—so-called “bad” cholesterol—for adults suffering from high cholesterol levels compared to control subjects.

SCIENCE IN PICTURES

How does Danacol work?

Danacol contains plant sterols that limit intestinal absorption of cholesterol. The structure of plant sterols is very close to that of

cholesterol, enabling them to deceive the body and limit absorption of cholesterol from the intestine into the bloodstream.

SCIENCE IN NUMBERS

Clinical studies

200 Over 200 R&D partnerships worldwide, with more than 60 clinical studies underway in 18 countries.

180 In 2006, the value of the functional foods market was estimated at over \$180 billion.

15 Annual growth for Danone functional food products which make health claims exceeds 15%. And in five years, Danone's budget for clinical studies has increased fifteen-fold.

200

180

15

PASTEUR INSTITUTE
A lasting partnership

When Isaac Carasso made his first yogurts in 1919, he used cultures from the Pasteur Institute, and in recent years Danone Research and the Institute have renewed this scientific partnership. Many of the Group's researchers trained at the Institute in such fields as immunology and microbiology, and the partners have published the results of joint studies. Danone and the Pasteur Institute are currently conducting a study on probiotics, focusing specifically on how

they affect the body and health. Now Danone has gone one step further, using its high profile to benefit the Institute, which is financed primarily by private donors. In late 2007 the Group launched a fundraising campaign, encouraging consumers to clip donation coupons from packs of Actimel and send them in. For each coupon received, Danone will donate 20 eurocents directly to the Pasteur Institute in support of immunology research.



helps strengthen the body's natural defenses

A LONG TRADITION OF SCIENCE

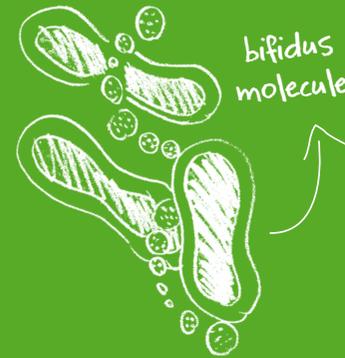
1789: Discovery of the benefits of Evian natural spring water by the Marquis de Lessert.
1919: Creation of the first Danone yogurts by Isaac Carasso in Barcelona, using cultures from the Pasteur Institute.
1964: Launch of

Taillefine's very first fat-free *fromage frais* – Taillefine 0%.
1983: Creation of the Daniel Carasso international research center for fresh dairy products.
1987: Launch of Activia, a fermented

dairy product that helps promote regularity when eaten daily.
1994: Launch of Actimel, a fermented dairy product.
1999: Founding of Evian water center in France.
2002: Opening of Danone Research, Daniel Carasso Center,

an R&D center serving all Danone business units worldwide.
2004: Launch of Danacol, a dairy product that helps reduce "bad" cholesterol.
2006: Launch of Essensis, the first yogurt to nourish skin from the inside.

ACTIVIA
Increases scientific credibility



Of the six new clinical studies on Activia launched in 2007, four contributed to the scientific and regulatory dossiers relating to the brand. The dossiers were submitted to the European Commission to demonstrate that the health claims met European standards. Based on these studies, Danone should also be able to broaden its communication for Activia.

study's purpose and develop a set of specifications that will ultimately become a call for bids from outside partners: under internationally applicable Good Clinical Practices, studies must include independent entities to ensure the reliability and integrity of their results. The proposed study is then submitted to the relevant health authorities for approval. Once authorization has been granted, the experimental phase gets underway, with Danone teams working in partnership with the world's top scientific experts and highly specialized, independent subcontractors that perform clinical investigations for third parties.

Scientifically tested methodology

In conducting clinical studies on Danone products, independent laboratories apply the same charter of good practices used for pharmaceutical trials. The active ingredient's effects are compared to those of a placebo, and healthy volunteers are selected for the study according to specific criteria.

Laboratories follow the double-blind method, which means that only the study's directors know the content of the test products: to eliminate the risk of skewed measurements, this information is not provided to the patients or medical personnel. Unlike pharmaceuticals, however, fresh dairy products can present special logistical challenges.

Complex logistics

Because the Danone products tested in clinical studies are living, perishable products with extremely short shelf lives, they have to be delivered to the study's participants every two weeks. Likewise, logistics must be perfectly calibrated to supply stable test products—sometimes to the other side of the world, sometimes to a hundred different sites—often over a period of months. Production, packaging, labeling, and refrigerated shipping must be seamlessly coordinated, and shipments are tracked in real time for optimum traceability.

Science: the key to credibility

In the final phase, the thousands of data points gathered are processed, checked, and organized for publication in the study report. Scientific methodology and transparent results are essential to credibility, making it unthinkable to take only favorable outcomes into account and disregard the rest. Because credibility is vital for Danone brands now and in the future, clinical studies will continue to expand as more and more health products are developed. Science and health are two of the Group's founding principles: when combined with taste appeal, they offer unimagined potential for growth.

KEY FIGURE

6

months on average for one Actimel study in 2007, with 4,000 subjects tested, 900,000 test bottles produced, labeled and packaged in 32,000 boxes, shipped to 150 different sites.



ACTIMEL
No. 1 in clinical studies

To date, Danone Research has conducted no fewer than 23 clinical studies on Actimel, a product first launched in 1994. These include seven recently completed studies reinforcing Actimel's claim to "help strengthen the body's natural defenses." The data showed that the probiotic strain *L. casei* DN-114 001 survives the human digestive process and examined its effects on the body's defenses, focusing particularly on three target groups—children, adults and seniors. Several recent studies have provided strong evidence that the number and duration of gastrointestinal and respiratory infections are reduced after consumption of Actimel.

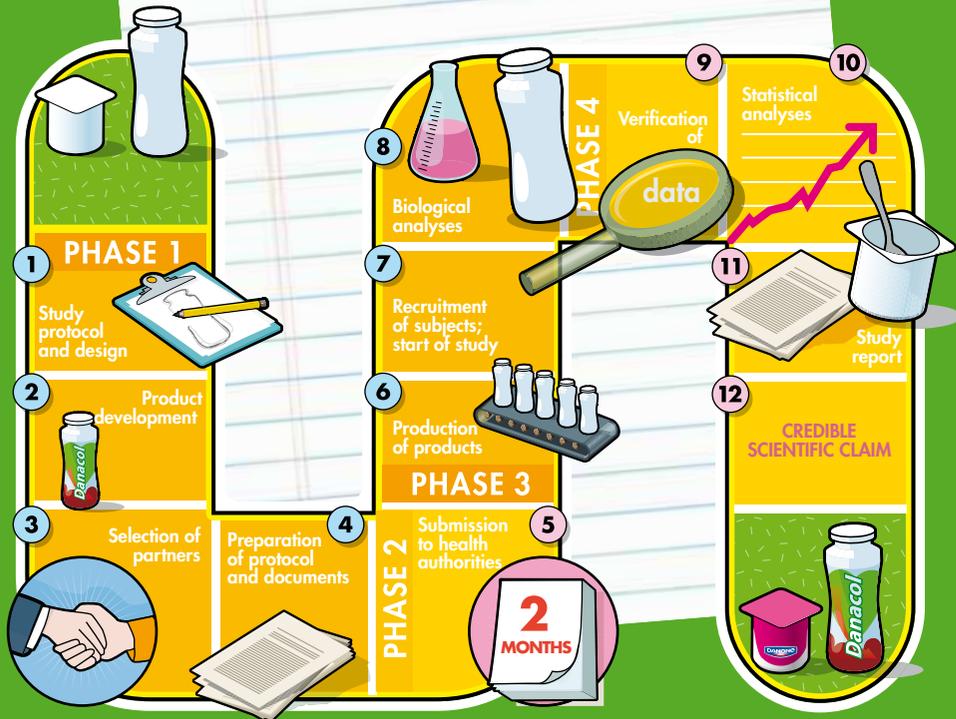


DEFINITION
Probiotics are living microorganisms that benefit health when ingested in adequate quantities.

METHODOLOGY

The 12 stages of a clinical study

A clinical study is a major undertaking that often lasts more than a year, making coordination essential. Each study consists of 12 steps divided into four phases.*



TO LEARN MORE

visit *Research and Innovation* at www.danone.com

PHASE 1
Decision on subject of consumer study/claim
about 6 months

PHASE 2
Validation
about 2 months

PHASE 3
Experimentation
length highly variable (two weeks to over a year)

PHASE 4
Data processing/report writing
about 6 months

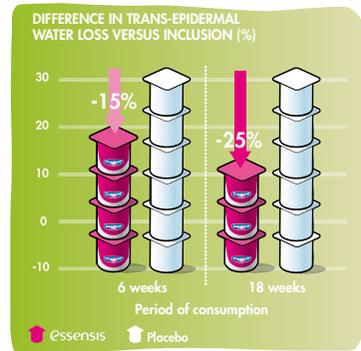
SCIENCE IN PICTURES

Essensis

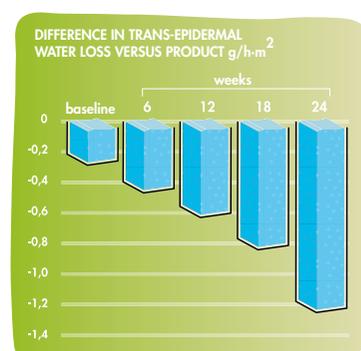
Essensis contains borage oil, green tea, vitamin E and exclusive Danone culture. A six-month clinical study involving 72 women showed that daily consumption of Essensis improves skin barrier function, helping to hydrate the skin, make it more supple, and reduce dryness.

see opposite ↗

Clinical results: water loss through the skin after consumption of Essensis 6 and 18 weeks.



Cumulative reduction in trans-epidermal water loss over time with Essensis (0-24 weeks)



* 4 phases: preparation, validation by health authorities, experimentation per se, and ultimately—statistical analysis and a write-up of the results.

EFFECTIVE HEALTH GOVERNANCE – CONCRETE PROGRAMS IN 2007

The Group's commitment to health and nutrition is now fully integrated into corporate governance, reflecting the critical importance of these values for Danone.

Governance structures in the areas of both health and nutrition are built around three fundamental principles applied by all Group companies, and are reflected in concrete initiatives.

The science behind the products

The first pillar of health governance is a rigorously scientific approach to developing products and to demonstrating their nutritional and health benefits. To that end Danone is party to more than 200 contracts with partner research organizations worldwide and has over 60 clinical studies under way in 18 countries. The principles of health and nutrition governance have, for example, led to Danone adapting the formula for Danonino in over ten countries, adding vitamins and minerals to offset specific deficiencies in children's diets.

To take another example, let us consider a survey carried out by Danone Brazil in 2007. Working in partnership with 13 Brazilian universities, the subsidiary undertook a study of the daily nutrient intake of the nation's children—information not yet available in the country. These results will help Danone's development teams to adapt Danonino more closely to local nutritional needs.

Exceeding regulatory requirements

As a supporter of voluntary standards, Danone has joined other major food companies in providing objective nutritional labeling on packaging, enabling consumers to make educated decisions about the products they buy and enjoy.

Based on recommended daily allowances, the labels show quantities of protein, carbohydrates (including sugars), fats (including saturated fats), fiber, and sodium in each serving. By late 2007, 35% of Danone products in Europe carried nutritional labels, a proportion that will rise to cover a majority of products in 2008. At the close of 2007, Danone demonstrated its commitment to responsible corporate citizenship in the European debate on advertising to children. Along with ten other companies, Danone pledged to limit advertisements targeting 3- to 12-year-olds to products appropriate for their nutritional needs, starting no later than the end of 2008. Actimel, Petit Gervais aux Fruits and Velouté are among the fresh dairy products in France to be affected by this move.

Lasting partnerships with all stakeholders

For Danone, health governance also means forging close ties to government agencies, the scientific community, business leaders, consumer groups

THE 3 PRINCIPLES OF HEALTH GOVERNANCE

A rigorous scientific approach, compliance with voluntary standards, and lasting partnerships with stakeholders.

and other stakeholders. Here, Danone Institutes dedicated to the promotion of health and nutrition education provide essential support. In mid-2007, our newest Institute opened in Jakarta, Indonesia, bringing the total number to 17 worldwide.

By fostering awareness of health and nutrition in their host countries and by financing non-profit programs to educate children, train doctors and support scientific research, these Institutes advance and disseminate knowledge concerning links between diet and health. In Indonesia, where many people live on very low incomes, the Danone Institute will be placing special emphasis on programs promoting practical solutions for malnutrition-related problems.

PUSHING BACK THE FRONTIERS OF INNOVATION

In its quest for innovation, Groupe Danone has brought a select group of suppliers into the product development process, involving them in strategic products from the start.

Increasingly sophisticated innovation, ever-tighter regulations and escalating consumer demands are the backdrop for new-product development requiring technological expertise that is not always available in-house.

That makes capturing the value in supplier innovation an imperative for both cost reduction and strategic differentiation. To meet this challenge, Danone has established preferred partnerships with a select group of suppliers. These special relationships provide access to new resources and specialized technical skills, even as they enable it to cut upstream costs and reduce time to market.

Preferred partners

Within these relationships, suppliers become partners, sharing responsibility for the development of competitive products in a structured, contract-based process that clearly defines the relationship—and speeds innovation.

To take one example, Danacol requires high-level expertise in the management of cholesterol levels, and Germany's Cognis is known worldwide for its know-how in this area. In developing a partnership with Danone, Cognis provided knowledge, a laboratory and resources, dedicating five researchers exclusively to Danone.

As a result, Cognis was able to develop the plant sterols that

go into Danacol—and after the product was launched, Cognis continued to work on taste, texture and other sensory properties, making Danacol the number one product in its market segment.

Accelerating the innovation process

Danone's internal organization has naturally evolved along with our changing supplier relationships. Our new Purchasing unit has shifted the focus from cost-cutting to the more strategic task of identifying and managing innovative suppliers. Purchasing now guides a genuine interchange between the Group's R&D needs and our suppliers' capacity for innovation, cultivating long-term relationships founded on trust and commitment. Reflecting this mutual trust, in September 2007 suppliers attended the annual meeting of Danone General Managers for the first time. At the meeting, special awards



were presented to suppliers who have contributed to innovation. Honorees included Cognis, the co-developer of Danacol; Polaris, a French nutritional lipids supplier that worked with Danone R&D for two years to perfect the recipe for Essensis; and Graham, a US packaging manufacturer that halved the weight of Actimel bottles. ■

Respect

As part of their changing role, buyers are also responsible for ensuring that suppliers comply with fundamental social principles. After a successful pilot phase, Danone extended its Respect program to buyers in the Group's business units from 2006 on. The program defines procedures and tools that buyers use to monitor their suppliers and help them improve compliance with seven principles derived from International Labour Organization conventions: freedom of association and the right to collective bargaining, workplace safety, compliance with national laws on working hours and wage conditions, non-discrimination, and abolition of child labor and forced labor. Since the start of the program, there have been 50 independent audits of Group suppliers.

NON
MI ACCONTENTO DI
UN FERMENTO
QUALUNQUE.
VOGLIO
IL MIO BIFIDO.



FERMENTI COMUNI

I fermenti contenuti nei normali yogurt riescono a superare solo in minima parte la barriera acida dello stomaco.

BIFIDUS ACTIREGULARIS

Solo Activia contiene l'esclusivo fermento Bifidus ActiRegularis che sopravvive in quantità maggiore ed aiuta la naturale regolarità.

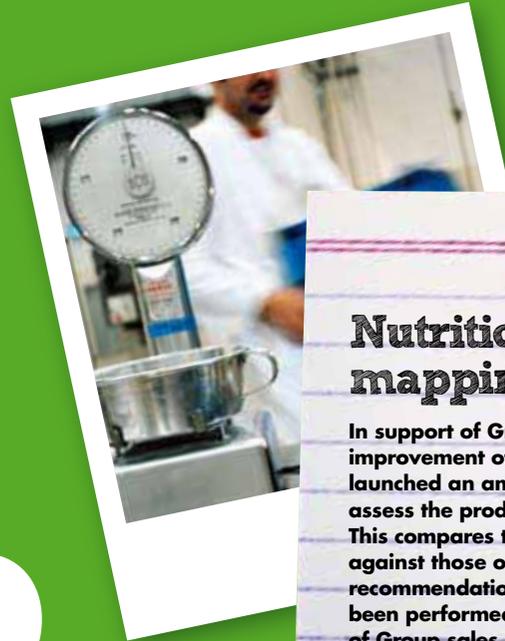
R&D IN 2007

In 2007 Danone recruited a worldwide total of 50 scientists with PhDs or engineering degrees.

KEY NUMBERS

2 million
2,067,681 statistical data points were analyzed as part of seven clinical studies on Actimel in 2007.

20 patent applications were filed by Danone Research in 2007.



Nutrition mapping

In support of Groupe Danone's commitment to continuous improvement of nutritional quality, Danone Research has launched an ambitious nutrition mapping project to assess the products of each of the Group's subsidiaries. This compares the nutritional quality of every product against those of its main competitors and WHO recommendations. By late 2007, product analysis had been performed for subsidiaries accounting for 62% of Group sales, and the project will continue in 2008.



CLINICAL STUDIES
Water and health



Danone's first two clinical studies on elimination, one of water's major health benefits, was initiated in March 2007 and rolled out at the end of the year. They focus on Bonafant water in Mexico and Font Vella in Spain, and will demonstrate that drinking two liters of either water every day improves the body's ability to eliminate waste products.

Moscow

In December 2007, Danone signed a three-year partnership agreement with Moscow's Institute of Immunology and Moscow State University's Biology Department to collect and characterize new strains of probiotic lactic bacteria, further diversifying the collection at Danone Research, which already contains some 3,500 strains. The project is part of the Group's health innovation strategy, aimed at developing exclusive probiotic products with new health benefits. Danone's goal is to isolate and characterize 250 new strains over the course of the partnership.

R&D OF THE FUTURE:
DANONE + NUMICO

218 million euros invested in research and development.

500 scientific partnerships worldwide.

1,150 individuals working in the international R&D community

Expertise in probiotics, prebiotics, bioactives and enteral medical nutrition is brought together within Danone Research.

WATERS
A scientific first

In February 2007, Danone's Waters line convened its first Scientific Committee, consisting of six international experts on hydration and kidney function. The Committee's findings will examine the health benefits of water—elimination of waste products and improved physical and cognitive performance.



Yakult

In 2007 Groupe Danone signed an agreement with Japanese partner Yakult Honsha Co. on use of YIF-Scan, a new method for analyzing intestinal flora. Highly accurate, super-fast and less cumbersome than other technologies on the market, YIF-Scan will enable researchers to learn more about intestinal flora and the health benefits of probiotics.

EU HEALTH CLAIMS REGULATIONS
Nutrition profiles

The European Union is currently rolling out regulations requiring food products to meet specific nutrition profiles before they can make health and nutrition claims. With legal definitions of the profiles slated for release in 2009, Danone Research

has brought its extensive expertise to bear, analyzing the main profiling systems currently in existence and enabling the Group to open talks with European authorities on science-based solutions for implementing the new regulations.

