

# Global reference

Innovations in women's health care products and sunscreens at Johnson & Johnson are exported to the rest of the world

**Dinorah Ereno**

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Considered one of the largest subsidiaries outside the United States in terms of production and sales, Johnson & Johnson in Brazil has also become a reference in research and development (R&D). "Today, the global research center for the women's health care line, which is mainly composed of sanitary products, is right here in Brazil, thanks to a decision made by headquarters last year," says Samuel Abel Moody Santos, 53, vice president of R&D for Latin America. The Research and Technology Center (CPT) of Johnson & Johnson do Brasil is located inside an industrial complex occupying an area that covers 910,000 square meters, 700,000 of which consist of green space, in São José dos Campos, 72 kilometers outside the city of São Paulo. The CPT is also home to the development of sunscreens for Latin America, Europe and Asia. This leading role was earned over the course of several decades.



In 1975, when Santos began work as a mechanical technician at Johnson & Johnson after graduating from high school, his job was to design machinery. "At that time, the equipment used to manufacture our products was designed and made here, because it was very expensive to import machinery." Initially, the R&D center, built in 1972 in São José dos Campos after being transferred from the Mooca district in São Paulo, was not created to develop products for the Brazilian market. It was instead used to house research on raw materials for products that were known abroad but were going to be introduced here. The company came to Brazil in 1933 to supply the Brazilian market with products for hospital and domestic use, such as cotton, gauze, surgical tape and surgical compresses.

For example, the absorbent core of Carefree sanitary pads contained a raw material that even today is not manufactured in the Brazilian market. Local researchers developed a product that offers the same level of performance and some



additional benefits using totally domestic raw materials. Today, this product is sold in North America, Europe and throughout Asia. “In a way, this development brought a global credential to the center that we did not previously have,” says Santos. At the end of his engineering course at the University of Mogi das Cruzes (UMC), he designed a machine to test samples in a pilot plant, which led to an offer to work at the R&D center in October 1980.

In 1994, when he was already a research manager at Johnson & Johnson in Brazil, he went to Shanghai, China, to head the development and product release of feminine sanitary products in the Chinese market. He spent a year and a half there, developing the products, identifying the raw materials to be used and setting up the plant. From Shanghai, he was transferred to the company’s world headquarters in New Brunswick, New Jersey, USA. After more than 15 years at company headquarters, he returned to Brazil in

May 2011 to take over the vice presidency of R&D for Latin America. “Our research is segmented into areas,” he explains. “There are more than 20 areas with different focuses, because our objective is to have experts in each area.”

To illustrate this diversity, one of the research groups, called the Consumer Science group, identifies consumer wants and needs. Heading up this group is Senior R&D Manager Rosana Rainho das Neves, 53, who holds undergraduate and graduate degrees in chemical engineering from the Polytechnical School of the University of São Paulo (USP) and has been with the company for 30 years. “I established this area in Brazil in 1992, when it was still beginning in Asia,” says Neves. Her work focuses on two separate points in the development process. The first point is when the product does not yet exist. “We work to understand consumers and to get insight from them so that together with the researchers, we can create ideas for new products.” The second point is during the

Samuel Santos  
(to the right),  
Johnson &  
Johnson vice  
president of  
R&D for Latin  
America, with a  
team of  
researchers at  
São José dos  
Campos





- 1 Mechanical mixer blades
- 2 Evaluation of dyes in the laboratory
- 3 Sections of hair used for product testing
- 4 Children's hair conditioner in the testing phase

of more than 250 businesses that operate in 60 countries and employ some 118,000 people. In Brazil, there are more than 5,000 employees, 280 of whom work in the R&D area throughout Latin America, which includes Argentina, Chile, Costa Rica, El Salvador, Guatemala, Honduras, Panama, the Dominican Republic, Paraguay, Uruguay, Colombia, Venezuela, Ecuador, Peru, Mexico and Brazil. "Of this total, 200 have university degrees and 80 are technicians; 80% of them work in Brazil," says Santos. Pharmacists and chemical engineers are the two main academic backgrounds, but there are also biologists, chemists, physicists, physicians and dentists among the researchers. Approximately 30% of the researchers hold master's degrees, and 10% have doctorates.

Neves's group has a direct channel to the product development group. This group includes Paula Scarcelli D'Oliveira Dantas, 37, senior R&D manager of the

development phase, when consumers test prototypes until the group arrives at a product that is ready to be released to the market.

After setting up the Consumer Science group, where she worked for nine years, Neves took over management of the skin care product line and, eight years ago, returned to the group she created. "Every time we have a new product, we need to know what impressions consumers have of it, so we conduct qualitative and quantitative tests," says Neves, who spent 900 hours in the classroom to earn an MBA degree from the Graduate School of Advertising and Marketing (ESPM), in partnership with the Technological Institute of Aeronautics (ITA). Internal tests are conducted using a database with 1,500 registered employee volunteer participants. When the research team arrives at a product prototype that they consider optimal, tests are conducted using a larger cohort of outside consumers who are recruited by agencies.

The consumer division of Johnson & Johnson in Brazil, which includes sunscreens, skin care, oral hygiene, baby and

children's products, feminine hygiene products and over-the-counter medications is the second largest market in the world, after only the US, where the company's headquarters are located. "Worldwide, the skin care line is the highest-selling segment," says Santos. In 2011, global sales of the Consumer Division of Johnson & Johnson were US\$ 14.9 billion. The company consists

**NAMES OF INSTITUTIONS FROM WHICH JOHNSON & JOHNSON DO BRASIL RESEARCHERS GRADUATED:**

<b>Samuel Abel Moody Santos</b> , vice president of R&D for Latin America	UMC – undergraduate
<b>Rosana Rainho das Neves</b> , senior R&D manager	USP – undergraduate and post-graduate ESPM/ITA – MBA
<b>Paula Scarcelli D'Oliveira Dantas</b> , senior R&D manager of skin care area	USP – undergraduate FGV – MBA
<b>Sérgio Luiz de Oliveira</b> , associate director of scientific affairs, analytical research and microbiological R&D	Univap and Oswaldo Cruz College – undergraduate Univap/Unicamp – master's degree FGV – MBA
<b>José Eduardo Pelino</b> , scientific and professional relationship manager in the oral care area	Unesp – undergraduate and master's USP – doctorate University of California – doctorate and post-doctorate



skin care area, who holds a degree in biochemical pharmacy from USP. “We are involved in the project from the very beginning through product development,” says Dantas, who worked at two major pharmaceutical companies and a cosmetics and medications raw materials supplier before coming to Johnson & Johnson in 2005. “Since I joined the company, I have had many opportunities for learning.” For two months, she worked on a cosmetology project at one of the company’s major research centers near Princeton, New Jersey, USA. “Afterwards, I spent another month in the same location, shadowing someone in a high-level management position to inspire me in my projects,” says Dantas. Because she wanted to learn more about the consumer area, she obtained an MBA with a focus on marketing from the Getúlio Vargas Foundation (FGV). She also took a cosmetology specialization course in hair care at the Regional Pharmacy Council and a course in cosmetic toxicology evaluation in Belgium.

#### MULTIDISCIPLINARY GROUP

The products developed by the CPT are evaluated for safety and effectiveness by the team of Sérgio Luiz de Oliveira, 45, who has been at the company for 27 years and holds the position of associate

**“Today, I use them to support the products from different lines of research I conducted at the academy,” says dentist José Eduardo Pelino**

director for scientific affairs, analytical research, and microbiological R&D. “Since the analyses involve chemical, microbiological and biophysical aspects, we have a multidisciplinary team,” says Oliveira, who began at the company as an intern in the R&D area after finishing a technical course in chemistry. The 30-member team includes biologists, chemists, pharmacists, mathematicians and biophysicists. “We have to guarantee that the formula that goes to market will be able to withstand all the climate variations it will face after it is released,” he says. Oliveira studied math at the University of Vale do Paraíba (Univap), which had a consortium with ITA, and chemistry at Oswaldo Cruz College in São Paulo. He also obtained a master’s degree from Univap, also in partnership with Unicamp, in bioengineering and an MBA from the Getúlio Vargas Foundation. In addition to the internal R&D team, Johnson & Johnson has a partnership with USP, Unicamp, ITA, Univap, the



National Institute for Space Research (Inpe) and the Federal University of Rio Grande do Sul (UFRGS).

The R&D area also has researchers with extensive academic backgrounds who serve as a bridge between professors of dentistry and professionals in the area. This is the case for dentist José Eduardo Pelino, 42, who graduated from the Universidade Estadual Paulista (Unesp) in São José dos Campos, where he also obtained a Master’s degree in microbiology using light sources, such as lasers and LEDs, for cavity prevention. He also obtained a Doctorate from University of California in San Francisco, with an emphasis on the optical properties of dental tissues, a post-doctorate from the same university in teeth whitening, and a doctorate from USP with a scholarship from FAPESP. In addition to his dental practice, Pelino taught in the Master’s program at USP on the use of lasers in odontology and at United Metropolitan College (FMU). He was also the director and coordinator of the graduate course in odontology at the Cruzeiro do Sul University (Unicsul). With Johnson & Johnson since 2009, Pelino holds the position of scientific and professional relationship manager. “All the oral care products that are distributed in Latin America must undergo scientific evaluation,” says Pelino, who notes that “there are several lines of research that I conducted over the course of my academic career that today I am able to use in industry to support products.” Studies in the area of oral care also receive support from specialists in optics from Univap and the USP Chemistry Institute at São Carlos. ■