

### Experimento a Doble ciego y con placebo 1-Resonancia Magnética Funcional cerebral.

Inhalación de cuatro aromas.

**Resultados:** Activación de áreas cerebrales diferenciadas entre los placebos y los aromas de marca comercial.

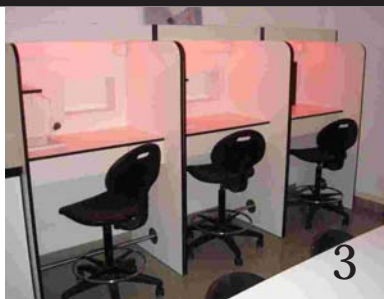
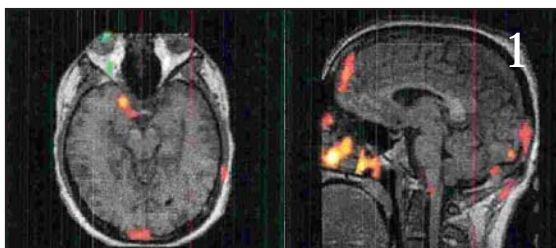
**Conclusión:** Podemos seguir avanzando con la investigación por los resultados diferenciados obtenidos.

### Experiment Double-blind, placebo. 1-Brain functional magnetic resonance image.

Inhalation of four flavors.

**Results:** Activation of brain areas differentiated between placebos and flavorings trademark.

**Conclusion:** We can move forward with the investigation of the differing results obtained.



### 3 y 4 - Olfacción directa de un panel de expertos y otro panel no expertizado.

Para conocer con qué fiabilidad se puede identificar y reconocer una marca por el aroma y comparar los resultados entre paneles.

**Resultados:** Los expertos reconocen el 48% de las muestras y los no expertos (jóvenes) el 51%.

**Conclusión:** No es necesario realizar un aprendizaje especial para identificar una marca comercial por el aroma.

### 3 and 4 - Olfaction directly from a panel of experts and other non Expertized panel.

To learn how you can reliably identify and recognize a brand by aroma and compare results between panels. **Results:** The experts recognize 48% of the samples and non-experts (young) 51%.

**Conclusion:** It is not necessary for identify a trademark, a special learning of aroma.

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## INVESTIG. EXPERIMENTAL / EXPERIMENT. RESEARCH

TEMA: EL AROMA COMO ELEMENTO DE IDENTIFICACIÓN DE MARCA.

TITULO: Si se percibe el olor de un producto de consumo, se puede identificar su marca comercial.

SUBJECT: THE AROMA IDENTIFICATION AS A BRAND ELEMENT.

TITLE: If one perceives the odor of a consumer product, you can identify the trademark.

## Conference

The theme of the conference is the aroma. A sense can produce strong emotions. The field of study of our research is communication and marketing.

A smell can remember your child memory,  
A smell highlight a product or a place  
A smell warns us of an event  
A smell identifies a product or brand.

The aroma has all these properties through the smell, the most primitive sense in the evolution of life. First one-celled animals use a chemical sense.

Smell has been used in persuasive communication because his connection with the brain regions of emotions.  
A smell evokes a memories from past. we call that olfactory flashback, Proust in the remembrance of the children through a cupcake. But no need to discuss much on this concept we all have olfactory experienced to remembers as special event.

A smell does remarks a product or a place.  
A pleasant smell makes you have a positive predisposition towards the activity.  
A place has his own smell. A school smells like school and not a hospital.  
A smell can be an alarm of an event, is the basic defense mechanism.

The smell of smoke makes our body is prepared to go. The body produce hormones that accelerated heart increased ability to concentrate and attention.

At the same time the smell may indicate a mechanical dysfunction in a car, burning tire, the smell of boiled water, etc..

A smell identifies a product or brand. That is the subject of my research in cooperation with Hospital Vall d'Hebron, the world leader in flavours Guivaudan and the company Lucta and other partners.

We have done MRI brain scans to see the behavior of brain given a placebo (orange scent) and to two commercial brands (Trinaranjus, fanta orange, and natural orange. (Spanish product on the market.)

We obtained different results in brain Brodman areas.  
For trademark aromas the brain areas of communication frontal parasagital, and memory of the hypothalamus are activated. This does not happen with two placebo aromas.

The different results are not due to the composition of the samples.

A gas chromatography was done to show that none of the components of the samples is capable of producing cerebral excitement.

Another experiment was to see that a panel of expert olfactories can identify around 50% of 20 samples of products correctly. They can recognize and identify the product and indicating the brand, for example: chocolate and Nestle. This is a high percentage considering that the identification is only by smell.

We have done the same experiment with the same samples to a group of students of the Faculty and have been able to recognize without training, 51% of products and brands.  
This result confirms that it is not necessary to be an expert to recognize a brand by smell. We all have that innate cognitive ability. Therefore, the aroma should be included under the protection elements of a corporate identifier.

These experiments will be done again with new samples and a wide probabilistic study in general population of Catalonia. I hope that in a year I can offer you new results.  
Smell is a potent aroma sense and his significance, meanings and emotions, can be used in interactivity.

## SCIENCE / AFTER TWO YEARS OF WORK

### Two Israeli researchers create odors transmitter

Capture the flavors and sent to a recipient who then decrypts them

**RAMY WURGAFT.** Correspondent

**JERUSALEM .-** Soon, all fans of TV culinary programs will be able to smell what the chef cooking in the study. Two Israeli scientists have created a system that will transmit smells through different media. Doron Lancet and David Harel, both teachers at the Weitzman Institute of Science, is convinced that his invention will be a landmark in the field of virtual reality.

"The technique we developed is not content with playing simple smells like a condiment or a flower. What interests us is to convey to the viewer or the surfer a compound of scents such as collecting to walk along a rural market in India," says Doron Lancet. The idea came at a cinema in Tel Aviv, where the businessman Eli Fish attended the premiere of the movie Memories of Africa. "I thought, how wonderful it would be if in addition to sound, this film had a band smell!" Fish account. As the idea continued to haunt him, the chairman of the company's Interactive Goldfish exposed to his brother, the aforementioned David Harel, Dean of the Faculty of Computer Science from Weitzman Institute. Harel, a world authority in the field of algorithms, joined the project with his colleague Doron Lancet, a biochemist who since 1980 investigating the sense of smell.

After two years of work, scientists have been able to create a module that consists of three phases. The first is a sniffer (sneaper) that instead of capturing the light, as does a camera, capturing aromas. The second phase involves a decoder, which interprets the information from an array of 150 odors. The same device will be able to convey the message to the recipient fragrant, this is a personal computer, a television or a film projector. "In the case of a computer, all you'll need is to incorporate a card no bigger than those used in public phones", says Harel.



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