

*The only Spanish participating in this great challenge*

## A 42km race in the North Pole to condemn pollution effects on fertility

**\* Should withstand temperatures of -30 degrees and carry a microchip to record one's body's adaptation to extreme conditions.**

**\* This feat is meant to arouse attention to the environmental toxins effects on reproduction health.**

*Barcelona, April 29, 2010*

Temperatures of -30 degrees, great difficulty to breath, risk of freezing and three-dimensional disorientation are some of the extreme and freezing conditions that Lluís Pallarés, the first Catalan and the only Spanish participating in the 8<sup>th</sup> edition of the North Pole Marathon, will endure from April, the 7<sup>th</sup>.

Lluís Pallarés participates in this important event with the support of Instituto Marqués, a clinic of global reference in assisted reproduction. The aim of this initiative is to raise awareness of the effects of industrial pollution on male fertility. According to it's director, Dr. Marisa López-Teijón, "*even in a place, seemingly untouched, as the Arctic the effects of pollution are tangible, so much that it has become the planet toxic waste dump*".

### **Dressed up as a spermatozoon to condemn the threat to fertility.**

All participants in the marathon have to be equipped with three layers of clothes on their bodies and two layers over their legs, gloves and down-filled mittens, balaclavas, antifreeze and thermal socks, membrane shoes and gaiters to keep the snow out of the shoes, snowshoes, blizzard protecting glasses whose design prevents freezing caused by the humidity of the breath and a special mask that avoids you from breathing too cold air. Moreover, it is advised to not use cotton underwear given the fact that it would become a shell of ice.

Besides these protections, Lluís Pallarés will be dressed up as a spermatozoon. The costume has been specifically created to resist freezing temperatures but is light enough to be transported and taken with him to the North Pole bearing in mind the usual luggage restrictions for these kind of events, whose last part will be accomplished on board of a Russian helicopter.

During these months, Lluís has been prepared in the High Performance Center for elite athletes in Sant Cugat del Vallés (Barcelona). According to it's Head of the Physiology Department, Franchek Drobic "This experience will give us information

about the temperature adaptation pattern when making exercise under extreme conditions.

This is the reason the night before the race, Lluís will ingest a capsule with a thermal sensor which reaches the small intestine and from there sends signals to a small receiver. This item will record every little change in his body provoked by the atmospheric conditions.

### **The Arctic: the planet toxic waste dump.**

The report "*The tip of the iceberg: Chemical contamination in the Arctic*" highlights the potentially presence of toxic chemical substances in the Arctic produced in Europe and North America. These chemical, industrial and agricultural products are carried up to the Arctic by atmospheric, river and ocean currents as well as by ice blocks adrift and animal migratory routes. The Polar ice absorbs these chemical residues which are gradually released during melting periods. This process could drag on for many years.

The Arctic animals are at particular risk of contamination since their layers of fat resist such low temperatures are like a magnet for chemical substances. Recent researches confirm chemical residues are affecting the thyroids, immune and reproductive systems of polar bears. Other scientific studies have proven the presence of toxic substances in whales, foxes, seals, walrus, fish and birds in the area. For the last two decades, the Inuit, Arctic native, have showed diseases caused by chemical pollution due to consumption of large quantities of fish, whale and seal meat whose fat contains toxic substances.

### **The effects of pollution on male fertility**

Lluís Pallarés is sponsored by Instituto Marqués, a clinic of global reference in male infertility. In the last few years, Instituto Marqués has carried out three different studies on sperm quality published in outstanding scientific journals. These researches focused efforts on raising awareness on male fertility deterioration which could be mainly due to environmental pollution and, therefore, show several geographic variabilities. According to Dr. Lopez-Teijón, "if a pregnant woman is exposed to environmental pollution, the fetus' reproductive system can be affected and cause the so-called gonadal dysgenesis syndrome, that is to say, poor semen quality, genital malformations at birth and testicle cancer.

Environmental toxins, commonly used in industry, agriculture and home, contaminate the water and the soil and, thus, pass through to the food chain. They are known as endocrine or estrogenic disruptors because they act in the woman's body as false estrogens. "*The result is that a woman might deliver, through breastfeeding, an excessive level of female hormone to her male fetus during the pregnancy and lactation period*", states Dr. Lopez-Teijón.

*"We are delighted to support this great adventure at the North Pole to highlight that male fertility deterioration may be caused by environmental pollution. We all should reconsider if the price we are paying is really worth it"*, concludes the specialist.

*For further information,*

[www.institutomarques.com](http://www.institutomarques.com)  
[www.northpolemarathon.com](http://www.northpolemarathon.com)