

New use of cabergoline in breast cancer chemoprevention

A CSIC research group have found that Cabergoline exerts an increased latency and decreased breast cancer incidence in a mouse model deficient in *Brcal/P53*. An only single dose is needed to potentiate post-lactational gland involution and a decreasing of epithelial proliferation, providing less tumor susceptibility in mice. Results suggest Cabergoline could be a strong and safe protective drug for breast cancer prevention. It could be administered after breastfeeding to enhance the protective effect of pregnancy against breast cancer or later, to reduce the risk of post-pregnancy breast cancer in women over 30-35 years old. Pharmaceutical company is sought for further licensing.

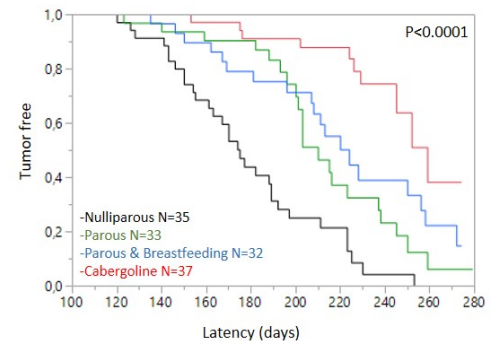
An offer for Patent Licensing

Cabergoline and breast cancer chemoprevention

Age is the epidemiological factor that most influences the incidence of breast cancer. Early first-term pregnancy decreases the risk of breast cancer, but a global increase in breast cancer incidence is expected due to the increased aging of the population, and late first pregnancies, often after 35 years, avoiding the natural protective effect of pregnancy. Currently, there are only two alternatives to prevent breast cancer: breast amputation surgery and chemoprevention based on estrogen-receptor modulators. The latter produces important side effects such as thromboembolisms or endometrial cancer. Chemoprevention strategies with fewer side effects and less aggression are then needed.

We demonstrated that treatment with a single dose of cabergoline at weaning in a mouse model deficient in *Brcal/P53* in the mammary gland increased latency and decreased breast cancer incidence, since cabergoline increased the percentage of apoptotic cells and adipose tissue in the early phase of post-lactational involution. Moreover, in the long-term follow-up, cabergoline decreased epithelial proliferation and the ductal epithelial area.

These results suggest that cabergoline could be a valuable drug for breast cancer chemoprevention after pregnancy.



Cabergoline potentiates the protective effect against breast cancer in mice

Main innovations and advantages

- Cabergoline is more comfortable to be administered (one dose after weaning) than current chemoprevention drugs (daily intake).
- Cabergoline has fewer side effects than current drugs, favoring adherence to this treatment (Another chemopreventive drugs are often abandoned in the first year due to annoying side effects).
- All these features make cabergoline a valuable drug for the growing demand for chemoprevention in our society because of (i) social changes in an increasingly aging society where the first child is often had after the age of 35, increasing breast cancer risk. (ii) New machine learning strategies for image analysis will soon allow women at risk of breast cancer to be better identified in mammograms and MRIs.

Patent Status

Priority patent application filed suitable for international extension

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