BREAK THROUGH ON FERTILITY AFTER CANCER THERAPY

TELEGRAPH no 48933

Scientists have made a breakthrough that could protect the fertility of women receiving cancer treatment and delay the menopause.

Researchers have spent five years studying why many women who undergo chemotherapy or radiation therapy become infertile.

Focussing their studies on egg cells called primordial follicle oocytes, which provide each woman's lifetime supply of eggs, they discovered that what are known as Puma and Noxa proteins trigger the death of damaged eggs, leading to infertility in many cancer patients.

When these egg producing cells were missing the puma protein, they did not die after being exposed to radiation therapy and when also missing the Noxa protein they were even better protected.

The findings published in the "Molecular Cell Journal", paves the way for medication to protect the fertility of cancer patients. Prof. Jeffrey Kerr, of Australia's Monash University said "To our great surprise we found that not only did the cells survive being irradiated, they were able to repair the DNA damage they had sustained and could be ovulated and fertilised, producing healthy offspring.

"When the cells were also missing the Noxa protein, there was even better protection against radiation". Professor Jock Findlay, head of the female Reproduction Biology Group at Prince Henry's Institute, in Melbourne, said the study could also have implications for the menopause is influenced: "We know the timing of menopause is influenced by how many eggs cells a female has.

"Intervention that slow the loss of egg cells from the ovaries could delay premature menopause.