

## Ovarian stimulation and inflammation, not always friends!

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In Human IVF the success rate remains remarkably low (<40%) for a medical procedure performed since 4 decades. This study uses the genomic analysis of follicular cells from IVF cycles that failed to generate a pregnancy to reveal the ovarian perspective or response to the stimulation treatment. Using granulosa cells obtained by aspirating all follicles from a given cycle, we generated data allowing the categorization of failures in 4 main sub- groups amenable for correctives measures. Using previous markers associated with the maturity status of the follicle we were able to assess if the ovulation induction was given at the appropriate time was but surprisingly, a number of non-successful cycles were associated with an excessive inflammatory reaction. This new evaluation procedure in response to ovarian stimulation can be used to personalise treatments according to individual responses.