



The effect of ETRF treatment on the expression of pro-inflammatory markers associated with endometriosis



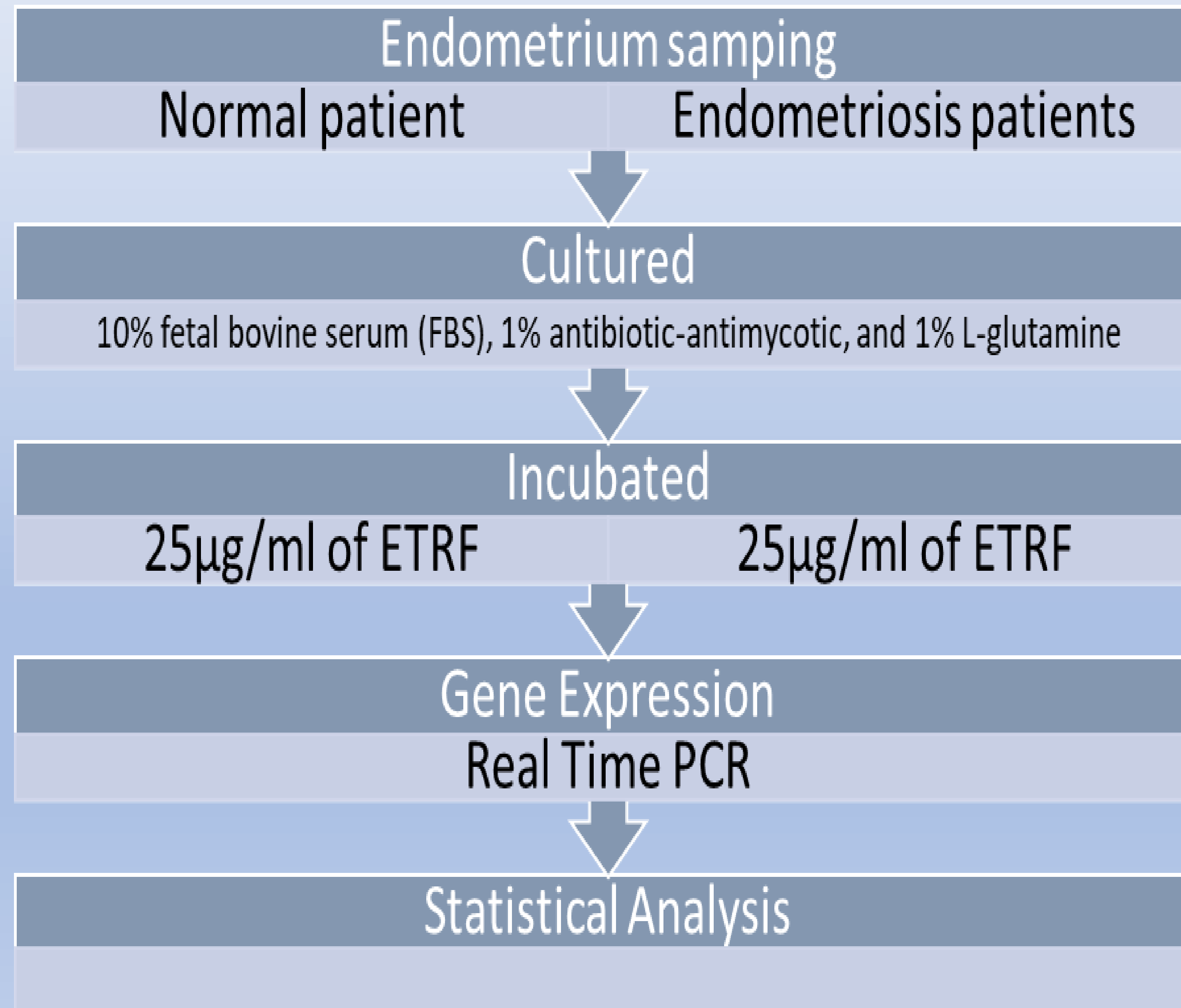
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Introduction

The pelvic inflammation in endometriosis affects the purpose of endometrial stromal fibroblast (eSF) cells to maintain the endometrium function and its cyclic changes. Tocotrienol-rich fraction (TRF), an extract from Vitamin E has been shown to exerts a potent anti-inflammatory and antioxidant. An improved substance, called an enhanced TRF (ETRF) was assumed to elicit a similar result in endometriotic tissues which may be beneficial in the treatment of endometrial disease. As the outcomes of ETRF on eSF cell is not well studied, the aim of this study was to determine the anti-inflammatory effects of newly ETRF on the eSF cells of endometriotic tissues.

Methodology



Results

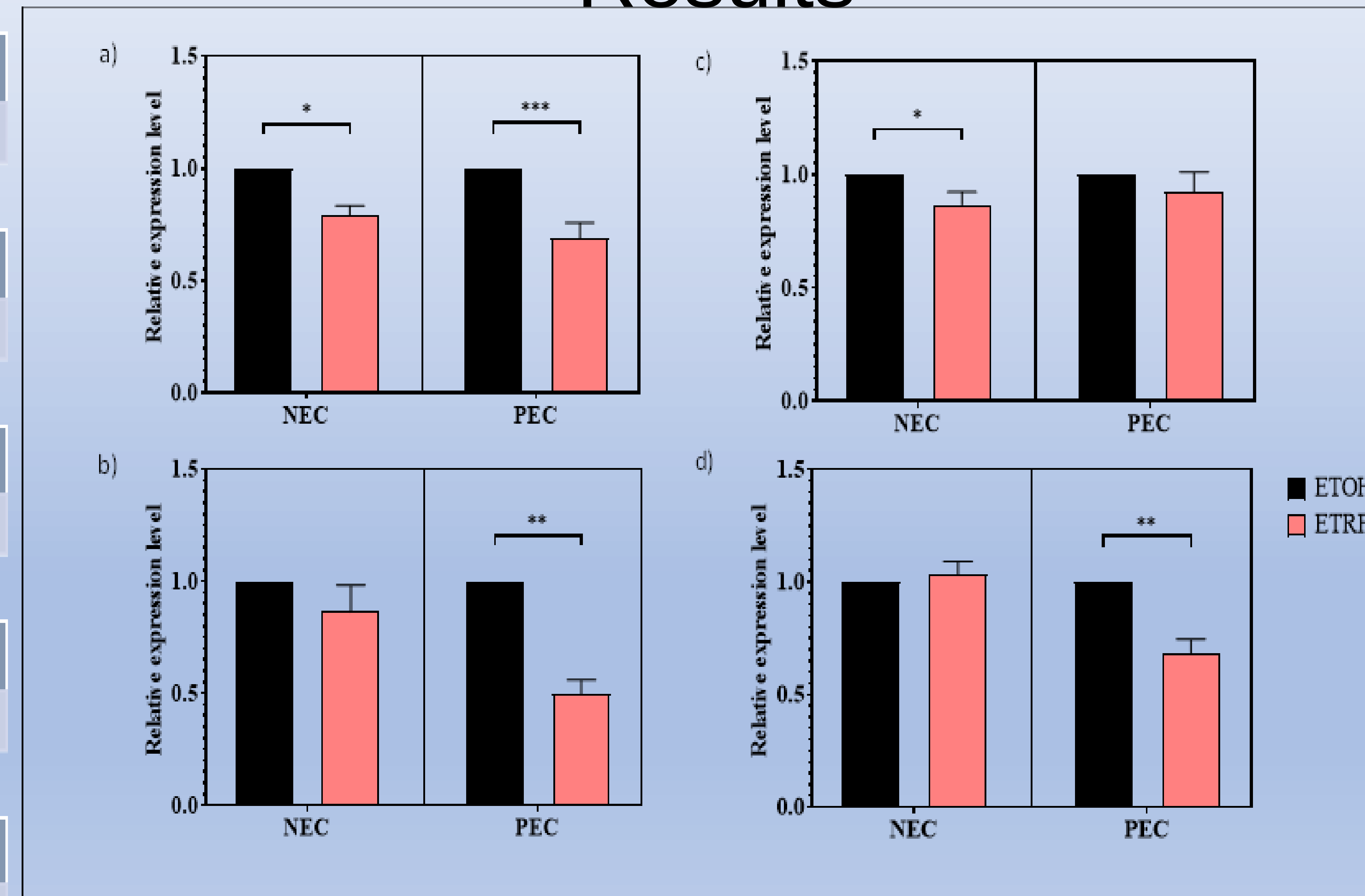


Figure 1. Effect of ETRF treatment on (a) COX-2, (b) MIF, (c) IL-6 and (d) IL-8 gene expression in NEC and PEC cells. Significant different compared to control (ETOH) (* $P \leq 0.05$, ** $P \leq 0.01$, *** $P \leq 0.001$).

Findings

COX-2 and IL-6 were significantly downregulated in ETRF-treated NECs (p-value 0.01 and 0.05)

In ETRF-treated PECs, significant downregulation observed in COX-2 (p-value 0.0006), MIF (p-value 0.002) and IL-8 (p-value 0.003) genes and no significant difference was observed for IL-6.

Conclusion

ETRF at a concentration of 25µg/ml significantly downregulate the expression of COX-2, MIF and IL-8 pro-inflammatory genes in PECs.

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