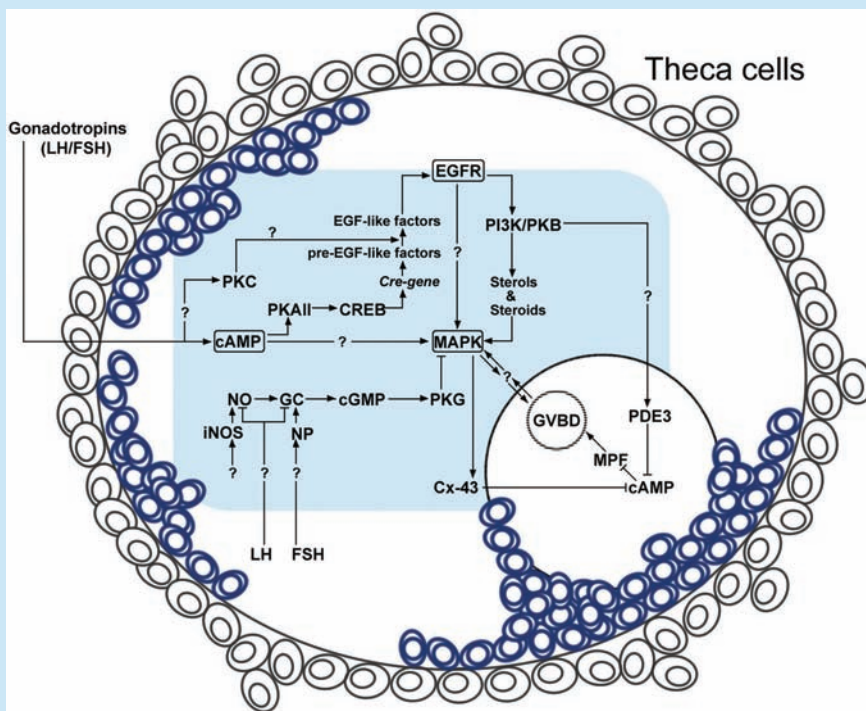


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The cover image shows a proposed model for gonadotrophins-induced mammalian oocyte meiotic resumption in pre-ovulatory follicle. Gonadotrophins bind to their receptors in cumulus granulosa cells (blue), resulting in an increased production of cAMP. PKAII activated by elevated cAMP in cumulus granulosa cells leads to CREB-regulated *Cre*-gene transcription, including the transmembrane precursors of EGF-like factors, and then these precursors become mature peptides possibly by PKC pathway. EGF-like factors binding to EGFR activate MAPK by employing PI3K/PKB and its downstream steroidogenesis. The activated MAPK and PI3K/PKB decrease cAMP level in the oocyte by phosphorylation of Cx-43 and the activation of PDE3A, respectively, and then MPF complex becomes active so that oocyte can resume meiosis. The accumulation of cGMP by NO and/or natriuretic peptides under FSH stimulation may serve to prevent untimely oocyte maturation, while the decrease of this second messenger after LH treatment participates in oocyte maturation and ovulation. (See M. Zhang *et al.*, 399–409).

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