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Biosynthesis of gonadotropins *in vivo*

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Mini-review

Abstract. GnRH is potent stimulator of gonadotropin's α and β chains synthesis *in vivo*. Stimulation of LHβ gene transcription requires pulsatile GnRH administration but the transcription of α subunit can be stimulated independently of GnRH mode of administration. Castration increases whereas *in vivo* estradiol and testosterone replacement decreases the rate of gene transcription of pituitary gonadotropin subunits. Thyroid hormones can enhance or diminish the pituitary levels of LHβ and FSHβ subunit mRNAs in female rats. Inhibin, activin and follistatin were shown to be potent regulators of FSHβ gene expression.

Key words: luteinizing hormone, follicle stimulating hormone, gene expression regulation, gonadotropins, pituitary