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(54) Title: METHODS OF DISSOCIATING NONGENOTROPIC FROM GENOTROPIC ACTIVITY OF STEROID RECEPTORS

(57) Abstract: This invention concerns the fundamental discovery of the understanding of the mechanism of action of steroidal nongenotropic effects and their relation to steroidal genotropic effects. It has been discovered that (i) steroidal nongenotropic effects and genotropic effects can be mediated by the same steroid receptor; (ii) both effects are ligand-induced; (iii) the nongenotropic effect occurs due to a ligand-induced activation of the ligand binding domain, which can be fast and loose fitting, (iv) the genotropic effect occurs due to a ligand-induced activation of the DNA-binding domain of the steroid receptor, which is typically a result of a slower, stronger interaction; and (v) the nongenotropic effect of a ligand interaction can be associated from the genotropic effect of a ligand interaction, in such a manner to effect a selective response. This invention also describes, for the first time, that certain steroids are capable of inducing a nongenotropic effect via binding to an unrelated steroid receptor.



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