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**The effects DDT on testosterone biosynthesis in immature rat  
leydig cells**

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Various pesticides known or suspected to interfere with steroid hormone function. The present study was designed to evaluate the ability of DDT to alter leydig cell steroidogenic function. Immature rat leydig cells were treated with DDT and assessed for testosterone production. DDT caused a dose-dependent inhibition of basal and LH-stimulated testosterone production. The reversibility of DDT-induced inhibition was evaluated by incubating leydig cells for 24 h and measuring testosterone production after allowing time for recovery. After treatment with DDT, testosterone production by immature leydig cells for the 24 h post-treatment period was significantly lower. DDT action and the reversibility of its effect showed that leydig cells are more sensitive to this compound during pubertal differentiation. The level of mRNA for cytochrome P450 cholesterol side-chain cleavage enzyme (P450scc) was decreased by DDT. In conclusion, this study showed that DDT causes a direct inhibition of testosterone biosynthesis by leydig cells and DDT-induced inhibition of testosterone production is related to a decrease in the activity of P450scc.

**Keyword** : DDT, testosterone, P450scc, leydig cells