

## Specificity of gossypol uncoupling: a comparative study of liver and spermatogenic cells

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A comparative study of gossypol uncoupling of rat spermatogenic and liver cells shows that spermatogenic cells metabolizing pyruvate are two to three times more sensitive to gossypol uncoupling than either spermatogenic cells metabolizing glucose or liver cells metabolizing pyruvate or glucose. Direct measurements of in situ rat liver and spermatogenic cell mitochondrial respiration indicate that the pyruvate dependence of the gossypol uncoupling appears to be located in the spermatogenic cell mitochondria. A different type of mitochondrial uncoupler carbonyl cyanide m-chlorophenylhydrazone does not present the substrate-dependent uncoupling effect. This special interaction between spermatogenic cell pyruvate metabolism and gossypol uncoupling confers specificity to a bioenergetic model of gossypol action.