

Diabetes in female rats; changes in liver microsomal aminopyrine N-demethylase and UDP-glucuronyl transferase activities

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Short or long term diabetes in female rats produced remarkable activation of aminopyrine N-demethylation, inhibition of oestrone and p-nitrophenol glucuronidation and no changes in morphine UDP-glucuronyltransferase activity in vitro. K_m and V_{max} for these reactions were determined. Insulin treatment partially antagonized diabetes activation of aminopyrine N-demethylation: it restored decreased UDPglucuronyltransferase activities for oestrone and p-nitrophenol only in long term and short term diabetes, respectively. Insulin also markedly inhibited morphine glucuronidation. Triton X-100 also displayed a differential pattern of activation for the glucuronidation reactions in liver microsomes of diabetic rats. Results suggest that diabetes in female rats may increase the actual amount of enzyme protein for aminopyrine metabolism and to decrease that for oestrone and p-nitrophenol. © 1990 Springer-Verlag.