Inhibition and activation of UDP-glucuronyltransferase in alloxanic-diabetic rats

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1. 1. Short or long term alloxan diabetes produced activation of oestrone and morphine glucuronidation and inhibition of p-nitrophenol glucuronidation in rat liver microsomes. 2. 2. Insulin treatment restored decreased glucuronyltransferase (GT) activity for p-nitrophenol and it did not abolish diabetes activation on oestrone glucuronidation. 3. 3. Triton X-100 detergent activation reduced differences between normal, diabetic and insulin treated rats in the glucuronidation rates of the substrates assayed. 4. 4. 1,4-Benzodiazepines inhibited morphine GT activity and stimulated oestrone GT activity in normal, diabetic and insulin treated diabetic rats. 5. 5. Activation and inhibition of GT activities for oestrone and xenobiotics in diabetes mellitus appears to be related with membrane perturbations of liver microsomes.