Mixed function oxidases in kidney and duodenum of camel, guinea pig and rat.

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Abstract

The activities of the drug-metabolizing enzymes, aniline 4-hydroxylase, benzphetamine N-demethylase and 7-ethoxycoumarin O-deethylase have been measured in vitro in kidneys and duodenum of camels (Camelus dromedarius), guinea pigs (Cavia porcellus) and rats (Rattus norvegicus). In these species, levels of hepatic microsomal parameters namely microsomal protein, cytochrome P(450), cytochrome b(5) and NADPH-cytochrome c reductase have also been determined. In general, camels seemed to have the lowest enzyme activity when compared to rats and guinea pigs. Rats showed the highest activity in NADPH-cytochrome c reductase, aniline 4-hydroxylase and ethoxycoumarin O-deethylase among these species. However, guinea pigs showed the highest enzyme activity in cytochrome P(450), cytochrome b(5) and benzphetamine N-demethylase