J Antimicrob Chemother. 1988 Feb;21(2):187-94.

Pharmacol Ther. 1987;33(1):145-52.

Aminoglutethimide as an inducer of oxidative drug metabolism in the rat.

Damanhouri Z, Herbert SA, Nicholls PJ

There is some evidence that when aminoglutethimide is used in the treatment of patients with advanced breast cancer a clinically-significant degree of hepatic enzyme induction may occur. This activity of the drug has been investigated in female rats. After three daily oral doses (60 mg/kg) of aminoglutethimide, the hypnotic effect of hexobarbitone was significantly shortened and plasma levels of dicoumarol were lowered. This pretreatment regimen also diminished an estradiol-induced increase in uterine weight. Electron microscopy of liver from aminoglutethimide-treated rats revealed a proliferation of smooth endoplasmic reticulum. There were significant increases in the metabolism of 4-nitroanisole, dicoumarol and [^{14}C]estradiol by the 10,000 × *g* supernatant of liver homogenates from aminoglutethimide-pretreated rats. In these animals, levels of hepatic microsomal protein, cytochrome P-450 and NADPH-cytochrome-C reductase were raised. The results are consistent with aminoglutethimide being a phenobarbitone-like inducer of the hepatic mixed-function oxidases