

In vitro metabolism of progesterone by peripheral blood of rock hyrax (*Procavia capensis*).

Abstract:

In vitro metabolism of progesterone by hyrax whole blood, erythrocytes, or plasma in the presence or absence of NADPH was investigated. In the presence of NADPH, whole blood metabolized progesterone to 5 alpha-pregnanedione and 5 beta-pregnanedione, but in the absence of NADPH, only 5 beta-pregnanedione was produced. Erythrocytes in the presence and the absence of NADPH produced only 5 beta-pregnanedione. The plasma component of blood metabolized progesterone to give 5 alpha-pregnanedione, but only in the presence of NADPH. These results suggest the presence of two types of steroid reductases found in plasma and erythrocytes. The extent of progesterone metabolism by the blood of animals in different reproductive states is in the order of pregnant females greater than nonpregnant females greater than male.