Previous work in our laboratories indicated that Pyrrole Condensate (PC), a condensation product of D-glucosamine and ethyl acetoacetate, ethyl-2-methyl-5-(D-arabinotetrahydroxybutyl)-3-pyrrole carboxylate 4 (fig. 1) acts as an alloxan-diabetes factor in rats 9 and can be isolated from human diabetic urine 7.

PC has also been found to cause significant increases in the level of insulin in male white albino rats, accompanied by a decrease in blood sugar levels, as well as a higher rate of $^4$C-glucose \textit{in vitro} incorporation in liver and muscle 8.

Present studies using diabetic mice (C57BLKsJ-db) from the Jackson Laboratory, Bar Harbor, Maine, show a significant effect of PC upon levels of serum sugar, serum insulin, liver glycogen, liver lipids and urinary sugar. The diabetic mice case is characterized by a metabolic disturbance resembling diabetes mellitus 6.

The treatment consisted of a 2\% solution of PC orally administered as sole water uptake. Each mouse drank an average of 145 ml of solution during the 28-day period. The total oral dosage over a period of 4 weeks (28 days) was 2.9 g of PC per mouse of 30-g average weight. The daily oral dosage was approximately 3.4 g/kg of body weight.

According to published work, blood sugar concentrations of normal mice range from 140-180 mg/100 ml, while those of the diabetic mice range as high as 300 mg/100 ml, as early as 4 weeks of age, and 500 mg/100 ml, by 12 weeks of age (COLEMAN and HUMMEL 1-2). Our results (tab. 1) are similar, with 23 normal mice showing an average level of 148 mg/100 ml (within the range of 112-180 mg/100 ml) and 29 8-week-old diabetic mice showing an average level of 383.4 mg/100 ml (within the range of 274-528 mg/100 ml) with 50\% showing values above 400 mg/100 ml.

\textit{Key-words: Acetoacetate; Diabetic mice; Glucosamine; Pyrrole condensate.}

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