reviewed, in which relatively uniform methods and conditions were employed. On the other hand, in the studies with rats used were various determination methods and conditions (e. g., anesthetization, feeding and sites for sample collection, etc.) and diverse combinations thereof, and the blood glucose values for normal control animals were scattered in a wide range from about 70 to 300 mg/dl.

Accordingly, we ourselves performed experiments in rats to know how individual methods or conditions affected the blood glucose level, and obtained the following results regarding the parameter: 1) Almost no difference was caused by the difference in strain, sex and age in week; 2) About 25% decrease occurred as a result of fasting; 3) A 15-20% increase was produced by anesthetization with Nembutal® or ether; 4) Approximately 20% higher levels were obtained in plasma or serum than in whole blood; 5) Higher levels tended to be observed in the arterial blood than in the venous; 6) Differences were caused by the difference in measurement method; and 7) Employment of various combinations of methods and conditions provided a wide range of values for the parameter, i. e., the highest value was almost twice the lowest one.

The above-described results of our paper reviews and experiments suggest that standardized methods and conditions need to be employed for determination of blood chemical parameters including blood glucose levels in animals in order to make it possible to compare values for the parameters obtained by different laboratories.

PROCEDURES FOR RENAL FUNCTION TEST IN RATS AND THEIR RELATED PROBLEMS ——PSP EXCRETION TEST AND CREATININE: CLEARANCE TEST——

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ラットに対する腎機能検査の実際とその問題点 ——PSP 排泄試験，クレアチニン　クリアランス試験——

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近年，毒性試験における腎機能検査は，薬物の安全性評価の面で有用かつ必須の検査項目の1つと考えられてきている。現在のところ，実験小動物において実験期間中，容易に腎障害の経過を追跡したり，また，鋭敏に障害を反映する検査法は，未だ，確立されていない。しかも，ラットのような小動物におけるクリアランス試験，色素排泄試験は大動物のような簡単な手技で試験を実施するのが困難とされていた。一般毒性試験での腎機能検査適応性については，操作の簡略性，判定の正確性，動物へのストレスの最小化，多数動物の取り扱い性等が重要な点となる。

今回，我々は，SD 系ラットに対する Kanamycin (KM)および Puromycinaminonucleoside (PA)投与による実験的腎障害モデルを用いて PSP 排泄試験および Creatinine clearance 試験の一般毒性試験での腎機能検査適応性について検索した。

〔実験方法〕　尿細管障害モデルとして KM,200 mg/kg 2 週間投与群と 500, 750, 1000 mg/kg