intramucosal reesterification of MCT to LCT. This present study was carried out on the in vitro metabolism of $^{14}$C-octanoic acid by rat intestinal everted sacs. The incubation solutions were followings; Krebs Ringer bicarbonate buffer (pH: 7.4) containing 2% bovine serum albumin 5 ml, octanoate 9 $\mu$ mole, sodium octanoate $^{1-14}$C 2 $\mu$Ci, glycerol 60 $\mu$g, ATP 10 $^{-3}$M, CoA 10 $^{-3}$M, (final conc.) Incubation was carried out under 95% O$_2$ plus 5% CO$_2$ at 60 min. The tissues were extracted according to Folch & Lees. Extracted lipids were analysed by silicic acid column chromatography.

Significantly, considerable amount of octanoic acid was esterified to triglyceride. Interestingly, the triglyceride labelled from $^{14}$C-octanoic acid was identified with long chain triglyceride by silica gel thin-layer chromatography. Further analysis of the labelled triglyceride by gas chromatography and radio-gas chromatography demonstrated that $^{14}$C-octanoic acid was incorporated in the form of octanoic acid into a part of fatty acid moiety of long chain triglyceride. Hydrolysis of labelled triglyceride by pancreatic lipase indicated that octanoic acid was esterified at 1 and/or 3 position of glycerol backbone. This suggests that possible lymphatic transport of $^{14}$C-octanoic acid which was incorporated to long chain triglyceride will occur.

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Experimental Studies of the Effect of X-Ray Irradiation to the Abdomen
(Use of $^{131}$I-PVP to Understand the State of Protein Losing)

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This is report on the evaluation of the effect of fractionate dose of X-ray irradiation to the abdomen on intestinal protein losing in rabbits with the use of $^{131}$I-PVP. This method of applying (Gordon-test), which has recently been used owing to its usefulness and accuracy in order to evaluate, to some degree, the function of the gastrointestinal organ with regards to protein losing gastroenteropathy.

Results:
The losing rate of $^{131}$I-PVP in the feces in the control group was about 1%. The rate of the group which was subject to one-time irradiation of 2,000 rad to the lower abdomen was 8.8%. The rate of the group which received 200 rad irradiation daily was 4.5% at 2,000 rad, 1.8% at 4,000 rad, and 1.3% at 6,000 rad.

The losing rate of $^{131}$I-PVP in the gastric juice in the control group was within 0.005% (percent of dose per millilitre). In the greater part of irradiation group to the upper abdomen was seen above 0.005%. Particularly, the group which was given one-time irradiation showed the increased rate by about ten times as compared with control group.

In the control group, serum total protein was 6.0 gram per decilitre; albumin was 70.0%; $\gamma$-globulin was 11.5%. All of them decreased remarkably in the group of one-time irradiation of 2,000 rad. And in the group of 200 rad irradiation daily, total protein decreased slightly; the rate of $\gamma$-globulin decreased markedly. These, however, showed a tendency to recover at 6,000 rad.

Summary:
The results were as follows, The losing rate of $^{131}$I-PVP in the feces decreased more gradually as the dose of irradiation increased in the group of irradiation daily. In addition, the difference in the change of serum protein between the group of one-time irradiation of 2,000 rad and that of 200 rad daily gave an interesting suggestion to this study.