

|                        | <i>Extract.</i> <sup>1</sup><br>% of dry organ. | <i>Phosphorus.</i><br>% of the extract. | <i>Lecithin.</i><br>% of the extract. | <i>Lecithin.</i><br>% of dry organ. | <i>Autopsy Report.</i><br>Cause of death. | Weight of kidney. Grams. |
|------------------------|---|---|---------------------------------------|-------------------------------------|---|--------------------------|
| <i>Human Kidneys.</i>  |   |   |                                       |                                     |   |                          |
| I . . . . .            | 11.42<br>12.48                                  | 2.11<br>2.00                            | 55.07<br>52.03                        | 6.29<br>6.49                        | Pneumonia and hepatic abscess.            | 200                      |
| II . . . . .           | 11.44   | 1.35                                    | 35.14                                 | 4.02                                |   |                          |
| XI . . . . .           | 15.40<br>15.51                                  | 1.18<br>1.19                            | 30.84<br>31.09                        | 4.76<br>4.80                        |   |                          |
| <i>Beef Kidneys.</i>   |   |   |                                       |                                     |   |                          |
| II . . . . .           | 15.02   | 2.10                                    | 54.64                                 | 8.21                                | —   | —                        |
| <i>Dog Kidneys.</i>    |   |   |                                       |                                     |   |                          |
| I . . . . .            | 14.93   | 2.04                                    | 53.29                                 | 7.95                                | —   | —                        |
| <i>Rabbit Kidneys.</i> |   |   |                                       |                                     |   |                          |
| I . . . . .            | 16.59   | 2.53                                    | 66.06                                 | 10.96 <sup>2</sup>                  | —   | —                        |

40. "On the phloridzin test in Bright's disease": PHŒBUS A. LEVENE and LYMAN B. STOOKEY.

Investigation of the action of phloridzin in Bright's disease has a theoretical as well as a practical interest. The mechanism of kidney diabetes is as yet imperfectly understood. The original idea that it was due to a change in the permeability of the kidney epithelium has gradually lost support, and instead there is a growing belief in the hypothesis that, in kidney diabetes, the sugar owes its origin to an exaggerated katabolic condition of the kidney. This view was first expressed by Dr. Levene in 1894. In support of this theory, evidence was brought forward to show that in animals with injured kidneys, phloridzin fails to bring about glycosuria, or causes it in less degree than in normal animals. However, it is impossible to injure, by means of drugs or by mechanical interference, only one special part of the kidney. In the course of Bright's disease there are known conditions under which the involvement of either the epithelium or of the glomeruli predominates to a very great extent, and this, of course, enables one to study the seat of the sugar formation within the kidney. The observations of most authors tend to show that when the epithelium of the kidney is injured, administration of phloridzin fails to cause glycosuria or does so in very slight degree.

The authors injected simultaneously phloridzin and methylene-blue, and compared the course of the elimination of the dye with

<sup>1</sup> The author presented a large number of data. The table here given shows only a few examples of the many results obtained.  
<sup>2</sup> 2.24% of the fresh kidney.

that of the sugar. The results of their observations in a general way corroborate the statements made by other writers. In acute parenchymatous Bright's disease, sugar fails to appear in the urine after the administration of phloridzin. In chronic forms of the disease, when only a trace of albumin can be detected in the urine, and when the permeability of the kidney for methylene-blue is normal, there is frequently a diminished sugar elimination — diminished as compared with that in health under the influence of phloridzin. In no case was there observed an impaired permeability for methylene-blue with a normal sugar elimination, but the contrary was often the case.

Levene's modification of Allihn's method was used for the sugar determinations. Further work in this direction is in progress.

41. "**Effect of blood serum in pneumonia upon the heart,**" with demonstration of tracings (preliminary report): **ISAAC ADLER** and **RICHARD WEIL**.

The object of these experiments was to determine whether blood serum in pneumonia has a specific effect upon the heart, and also, whether there is any difference in action between the serum taken *before* crisis and the serum obtained *after* it. The experiments were made upon the heart of the turtle, use of the mammalian heart being impracticable, in this connection, for many reasons. The fluids to be tested entered the heart through a glass cannula introduced through the right aorta into the corresponding ventricle, passed through the septum into the left ventricle and flowed out through a cannula in the left aorta. Care was taken to keep the temperature, concentration and hydrostatic pressure uniformly constant. The veins were all carefully ligated. The small diaphragmatic vein at the apex was tied and cut, the ligature connected with a writing lever and the contractions of the heart thus recorded upon a drum.

Normal human serum acts upon the heart of the turtle as a violent inhibitor, but it was found that in a dilution of 1 to 20, or, better still, 1 to 15, it does not differ greatly in effect from "normal saline." All sera were thereupon tested in dilution of 1 to 20 or 1 to 15, and the routine of each experiment as ultimately adopted was as follows: Infusion into the heart: (a) "normal sa-