cells prove that the pancreas has a hitherto undescribed function—that of a protective one. This might be the interpretation of some experiments by Italian biologists on the partial and total extirpation of the pancreas in pigeons, resulting in a diminished immunity from attacks of *Bacillus anthracis* or in a complete disappearance of immunity, according as a part or the whole of the pancreas was removed.

In regard to the other classes of intracellular bodies, the cells can be found and fixed in the act of swallowing the remains of their destroyed neighbours, and the bodies so swallowed derange the metabolism of the cells. Plasmosomata can also be found in the act of passing out of the nucleus, but what conditions favour this cannot be determined. The migration of plasmosomata from the nucleus has been again and again observed in cancer cells, and have in some cases therefore been mistaken apparently for parasites. The question of the function of the plasmosomata is connected with the origin of the digestive ferment of the pancreas. The studies on the plasmosomata of the pancreatic cells and on a compound diffused through the nucleus, show that the plasmosomata and the compound are both the primary stage of the zymogen which gathers in the cell in the form of granules, and which, again, gives origin to the digestive ferment (trypsin) of the pancreas. This indicates that the nucleus is of vast importance in the cell, controlling and directing its secretion and nutrition, and reinforces the view that the nucleus in red blood cells gives origin to hæmoglobin, and the observations of botanists, which show that the nucleus of vegetable cells builds up sugar out of carbon dioxide, and the only function of the vegetable cell itself is to convert the sugar into starch.

FOURTH MEETING.

Fourth Meeting, 22nd November, 1890, Mr. Harvey in the chair.

Donations and exchanges 73.

Mr. J. J. Mackenzie, B.A., read a paper on "The Typhoid Bacillus in Relation to Drinking Water," which was illustrated by a number of specimens. The characteristics of the bacillus were first described, then the contamination of sewage by the bacillus and its development therein. The conditions of its development in potable waters were then taken up, and the chances of the spread of a typhoid epidemic by such means explained. After this the methods used for the isolation of the bacillus were explained, and finally a number of samples given where