

may be observed within them, but they seldom at this stage exhibit distinct nuclei, even if we apply dilute acetic acid to them; but sometimes at this period we may observe three or four central particles which appear to be the rudiment of the future nucleus. These cells are without doubt the white corpuscles of the blood in their earlier stages of formation; they then enter the general sanguineous circulation, float in the blood of *invertebrata*, while in the higher animals they are accompanied by the red corpuscles of the blood. When arrived in the blood, they present the character of a cell perfectly round of about 1.3000th of an inch in diameter, apparently containing numerous minute molecules, which may sometimes be seen in active motion within the cell-wall. These white corpuscles of the blood, when viewed under the microscope, do not always present perfectly the same appearance, for it would seem that these differences were dependent upon the various stages of development which they gradually experience in the blood; so marked are they that this state can be readily traced from one condition to another. At an early period of their development, on the application of a little water, it will be absorbed by endosmotic action, and will swell out the cell-wall so that you may distinguish a large soft nucleus, a granular tuberculated mass within it, which seems disposed readily to break up into several parts; and if at this period the cell be treated with a weak solution of potass, the cell-wall will burst, the nucleus will be broken up, and the molecules will escape, but still the movement among the granules may be observed to continue for a considerable period. After a time the nucleus of the white corpuscles becomes smaller and more defined, and by the aid of dilute acetic acid, it may be plainly made manifest. A peculiar movement experienced by these white corpuscles has been described by Mr. Warion Jones, as happening in the blood not only of man, but also in that of vertebrated and invertebrated animals, a protrusion of the cell-wall takes place, first on one side and then on the other, and the corpuscle would seem to undergo many such changes before the process finally ceases. These changes, he says, may be observed while the cell is moving along in the column of the blood, or when it is adhering to the walls of the vessel. The refractive power of the white corpuscle is higher than that of the red; while it is distinguished by an appearance of greater firmness, and by a want of that tendency to aggregate together, so marked an attribute of the red corpuscles.

There cannot be a doubt but that the colourless corpuscle,