

Cell theory essay sample



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Without the invention of the microscope, the cell theory would not have been possible

In my opinion, the establishment of cell theory as the predominant scientific theory regarding the organization of life hinged heavily on the invention of the microscope. While it is not entirely impossible for cell theory to arise independently of the microscope, the creation of the microscope certainly sped up the advancement of cell theory as it gave direct observations of the actual cells which made up living organisms.

It is undeniable that Hooke and Leeuwenhoek's were certainly pioneering efforts in cell theory. This is because they were able to clearly show the actual cells using basic microscopy. Leeuwenhoek's lens grinding techniques allowed him to see at high magnifications - enough to see into the microscopic world of unicellular organisms. They were able to observe the behavior of cells and unicellular organisms to a general public and scientific community which have never known its existence. The correlation of microscopy to the advancement of cell theory became even more apparent with the passing of Leeuwenhoek as he took his lens grinding techniques to the afterlife. With the absence of the tools to observe cells, cell theory stagnated. It was not until the 19th century which cell theory developed again together with the development of the microscope.

That said, having the existence of cells be taken as scientific fact without actually observing them is certainly possible. The existence of Pangaea is accepted as true in geology without any person having witnessed the super continent. Modern biology is built upon evolution without having the

necessary tools to observe evolution in action. This is because it is experimentation which determines truth in science, not mere observation. The existence of cells could be theoretically proven by a well crafted experiment which has the capacity to falsify their existence. This is the reason why I say that it is not impossible for cell theory to have developed independently of the development of microscopy.

Bibliography

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