

Diapedesis

[Science](#), [Biology](#)



The article describes that diapedesis is the movement of white blood cells called leukocytes from circulating blood stream into areas of the body tissue where there is ongoing inflammatory reaction in response to cellular injury. The article evaluates the present facts on diapedesis and itemized several unresolved issues yet to be studied for perfect understanding of the biology of diapedesis. Though the author notes that compressive definition is poorly defined in scientific study, he however noted that diapedesis is technically accepted as transmigration of leukocyte between “ endothelial cell-cell junctions” (Dejana, 106).

Other upcoming research also has it that it can migrate through the endothelial cell. The articles points out literature reviews by several other authors to justify the possibility of transcellular and paracellular movements of leukocyte through the endothelial cells. The clarity from these two propositions is necessary to assist scientists in understanding the arrangement and nature of proteins found along the pathway.

This will help modulate the process and achieve desired aim(s) in clinical practice. The findings thus hold that leukocytes cross by biochemical interaction with molecular adhesive proteins at that line the endothelial junctions (Dejana 106). Some of the notable molecules are ICAM-1 and VCAM-1. Considering the intracellular movement, the article discussed that leukocyte can evade killing by the lysosome unlike some pathogen, to cross over into the tissue undergoing inflammation.

Subsequent to the attachment of leukocyte to the ICAM-1 or VCAM-1, there is reshaping of the cytoskeleton of the cell to form transmissible cup like

structure. The article raises several questions like what factors initiate the cup like formation, and which proteins play role in cytoskeletal conformational change. Answers to several questions the author raises are fundamental to scientific breakthrough in maneuvering process of inflammation to less harmful and more beneficial process in diseases e. g. cancer and organ infectious and toxic exposure.

Reference

Dejana Elisabetha. The Transcellular Railway: insights into leukocyte. *Natural Cell Biology* (2008) , Retrieved: April 24, 2009. 105 – 107. Site Available at: