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## The implication of medin in cardiovascular disease

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The research is aimed at studying medin, a protein implicated in cardiovascular disease through deposition as insoluble fibrillar aggregates in the medial layer of the aorta. Medin is a 50 amino acid protein located at the Cterminal of the C2 domain of lactadherin. The process by which medin is cleaved out of the C2 domain in cardiovascular disease is yet unknown hence the need for further studies. There are currently two pdb structures available for lactadherin C2 domains: bovine (2PQS) and mouse (2L9L). This research has identified significant variation within the medin sequence when comparing human medin to bovine and mouse medin. Results from aggregation prediction studies showed that human medin contains three regions located at positions 914, 3337 and 4450 with very high propensity to form aggregates while the bovine and mouse model contained two regions each located at positions 33-37 and 4440. This result validates the theory that sequence variations between the medin sequence in these species have a significant impact on the behaviour of the protein. Knowledge gained from studying the sequence variation and aggregation properties of medin in these species will be applied to enhance understanding of how medin may be cleaved from the C2 domain and form insoluble fibrillar aggregates in cardiovascular disease.

### Biography

Amakiri Augustine is currently a Master's student at the University of Liverpool. He completed his undergraduate studies at Federal University of Technology, Owerri where he obtained a Bachelor's degree in Microbiology.

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