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## CERTIFICATE

This is to certify that the dissertation entitled "Synthesis, characterization and antimicrobial properties of chitosan derived silver nanoparticles and its cytotoxicity studies in fish cell line" submitted to the Karpagam Academy of Higher Education in partial fulfillment of the requirements for the award of the degree of Master of Science in Microbiology is a bonafide record of original research work done by Arsha Surendran during the period 2019-2020 of their study in the Department of Microbiology at Karpagam Academy of Higher Education, Coimbatore, under my supervision and guidance and the dissertation has not formed the basis for the award of any Degree/Diploma/Associate/Fellowship or similar title to any candidate of any University.

Signature of Head of the Department

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