



**Dr Atulya M**  
**Assistant Director**

Dr Atulya Manuel is a graduate in Veterinary Science from Kerala Agricultural University and has completed her M.V.Sc. in Veterinary Microbiology in 2009 from the same University. After her masters, Dr Atulya pursued her doctoral research under the eminent INSPIRE fellowship scheme of Department of Science and Technology, Government of India from Manipal Academy of Higher Education.

Her doctoral study focused on microbial antibiotic resistance mainly due to bacterial adherence and biofilm formation. Bacteria living in a biofilm are many times more resistant to antimicrobials than their planktonic counterparts. As part of the study, she could develop a few novel nanoformulations composed of antimicrobial agents and quorum quenching molecules for targeting bacterial biofilm and its development. The formulations were optimised using the Design of experiment (DOE) approach. The synthesised nanoparticles were tested against biofilm-associated infections using in vitro and in vivo models of infection.

On completion of her PhD in 2014, she received an opportunity to serve her state as Veterinary Surgeon of Thrissur Municipal Corporation, Kerala. In 2015, she joined CCS National Institute of Animal Health, Baghatpat as Assistant Director. She is responsible for the maintenance of bacterial and fungal cultures and their seed lot system for the quality control testing of veterinary vaccines in CCSNIAH. She is also involved in quality control testing of bacterial vaccines. She has contributed to the implementation of the quality management system of ISO 9001: 2015 as Quality Manager and developed the Quality Manual for ISO/IEC 17025:2005. She completed her MBA in Human Resource Management from Pondicherry University in the year 2018. Dr Atulya has contributed several scientific articles in reputed journals, published book chapters and developed training manuals. She is a recipient of various travel awards of DST, DBT and MAHE for attending scientific conferences.

**Area of research interests:**

Development of alternative in vitro methods for quality control testing

Biofilm mediated bacterial infections

Microbial antibiotic resistance

Polymeric and liposomal nano-drug delivery