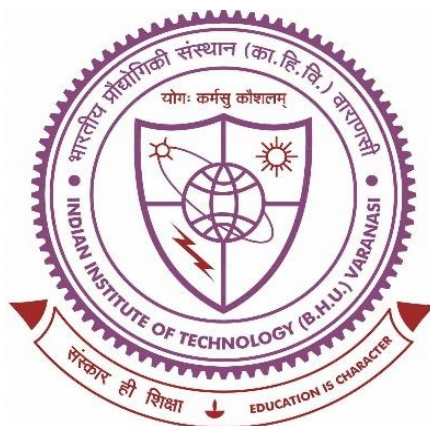


**BIMETALLIC Au-Ag NANOPARTICLES LOADED
NANOFIBERS FOR THE POTENTIAL
TREATMENT AGAINST ANTIMICROBIAL
RESISTANT WOUND INFECTIONS**



**Thesis submitted in partial fulfillment
for the Award of Degree
Doctor of Philosophy**

By

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Place

Date

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List of Abbreviations and Symbols

%	Percentage
°C	Temperature on the Celsius scale
Au	Gold
Ag	Silver
AMR	Antimicrobial resistance
AFM	Atomic force microscopy
ANOVA	Analysis of variance
BNPs	Bimetallic nanoparticles
CF	Cystic fibrosis
CLSM	Confocal laser scanning microscopy
CMC	Carboxymethyl chitosan
CS	Chitosan
Cu	Copper
DD	Degree of deacetylation
DLS	Dynamic light scattering
DMSO	Dimethyl sulfoxide
DNA	Deoxyribonucleic acid
ECM	Extracellular matrix
EMT	Epithelial-to-mesenchymal transition
EPR	Enhanced permeability and retention
EPS	Extracellular polymeric substances
Fe	Iron
FBS	Fetal bovine serum
FDA	Food and Drug Administration
FTIR	Fourier transform infrared spectroscopy
h	Hour (s)
IAEC	Institutional Animal Ethics Committee
kDa	Kilodalton
LB	Luria–Bertani medium
MAPKs	Mitogen activated protein kinases

mV	Milli volts
mAb	Monoclonal antibody
MBC	Minimum Bactericidal Concentration
MDR	Multidrug-resistant
MFC	Minimum Fungicidal Concentration
Mg	Magnesium
mg	Milligram
MHA	Muller Hinton agar
MHB	Muller Hinton broth
MIC	Minimum Inhibitory Concentration
min	Minute
mL	Milliliter
MoF	Metal-organic frameworks
MRSA	Methicillin-resistant Staphylococcus
NaOH	Sodium hydroxide
Na-TPP	Sodium tri poly phosphate
nm	Nanometer
NP/NPs	Nanoparticles
PA	Protective antigen
PBS	Phosphate buffered saline
PEG	Polyethylene glycol
PDI	Polydispersity index
Pep	Peptide
PS	Particle size
PVA	Polyvinyl alcohol
RNA	Ribonucleic Acid
ROS	Reactive oxygen species
rpm	Revolutions per minute
RTPCR	Reverse transcription polymerase chain reaction
S.D.	Standard deviation
sec	Seconds
sO ₂	Saturated oxygen
SEM	Scanning electron microscopy

TEM	Transmission electron microscopy
TGF	Transforming growth factor
TMC	N,N,N-trimethyl chitosan
μg	Microgram
μl	Microliter
μM	Micromole
USM	Ultra-small magnesium nanoclusters
WHO	World Health Organization
XRD	X-ray diffraction spectroscopy
Zn	Zinc
ZOI	Zone of inhibition