

APPENDIX A: List of Thesis related publications

In Journals

1. Chakraborty BN, **Acharya A** and Chakraborty U (2016) Biochemical changes in *Persea bombycina* following infection with *Colletotrichum gloeosporioides*. *Journal of Mycopathological Research* 54(1):127-133
2. **Acharya A**, Ghosh S and Chakraborty BN (2015) Serological detection of *Pestalotiopsis disseminata* in *Persea bombycina* causing grey blight disease. *International journal of Advanced biological Research* 5(4): 327-333
3. **Acharya A**, Chakraborty U, Ghosh S and Chakraborty BN (2015) Management of grey blight disease of Som plants using value added vermicompost with *Glomus constrictum* and *Bacillus altitudinis*. *NBU Journal of Plant Sciences* 9(1): 46-53
4. Chakraborty B.N, **Acharya A**, Chakraborty U, Jha DK, Rabha J , Sharma HK (2014) Growth Promotion and Induction of Defense Enzymes in *Persea bombycina* following application of AMF and PGPR against *Colletotrichum gloeosporioides* causing Leaf Blight Disease. *Journal of Mycology and Plant Pathology* 44(3): 249-256
5. Chakraborty BN, **Acharya A**, Chakraborty U, Rabha J, Jha D.K (2013) Screening of Arbuscular Mycorrhizal Fungi associated with *Persea bombycina* Kost and their improvement of plant health. *Journal of Plant Disease Science*. 8(2): 141-147

APPENDIX B: List of Abbreviations

APS- Ammonium per sulphate
BLAST- Basic local alignment search tool
BSA- Bovine serum albumin
BSS-2- Biclinal seed stock- 2
Ca₃(PO₄)₂ - Tri-calcium phosphate
CaHPO₄ - Calcium phosphate
CAS- Chrome azurol S
CAT- Catalase
CDA- Chitinase detection agar
cfu- Colony forming unit
CHT- Chitinase
CuSO₄- Copper sulphate
DAC-ELISA- Direct antigen coating- Enzyme linked immune-sorbent assay
DAPG- 2,4-Diacetylphloroglucinol
dATP- Deoxy adenosine tri-phosphate
dCTP- Deoxy cytosine tri-phosphate
DEAE cellulose- diethyl aminoethyl cellulose
dGTP- Deoxy guanosine tri-phosphate
DMAB- Di methyl amino benzaldehyde
DNA- Deoxyribonucleic acid
dNTPs- Deoxy nucleotide tri-phosphates
DNSA- Dinitro salicylic acid
dTTP- Deoxy thymidine tri- phosphate
EDTA- Ethylene diamine tetra acetic acid
ELISA- Enzyme linked immune- sorbent assay
ER- Root endosphere
FeCl₃- Ferric chloride
FITC- Fluorescein isothiocyanate
g- gram
Gfp- Green fluorescent protein
GlcNAc- N-acetyl glucosamine
H₂O₂ - Hydrogen peroxide
H₂SO₄- Sulphuric acid
HCl- Hydrochloric acid
HCN- Hydrocyanic acid
HDTMA- Hexa-decytrimethyl ammonium bromide
HPLC- High performance liquid chromatography
IAA- Indole acetic acid
ISR- Induced systemic resistance
KCl- Potassium chloride
KH₂PO₄ – Potassium dihydrogen phosphate

MEGA 4- Molecular Evolutionary Genetics Analysis 4
mg- Mili gram
MgCl₂- Magnesium chloride
ml- Mili litre
Na₂CO₃- Sodium carbonate
Na₂HPO₄- Di sodium hydrogen phosphate
Na₂MoO₄- Sodium molybdate
NaCl- Sodium chloride
NaN₃- Sodium azide
NaNO₂- Sodium nitrite
NaOH- Sodium Hydroxide
NB- Nutrient Broth
NBT/BCIP substrate- Nitro blue tetrazolium/ (5-bromo-4-chloro-1H-indol-3-yl)
dihydrogen phosphate substrate
NCBI- National Center for Biotechnology Information
NCM- Nitrocellulose membrane
NH₄Cl- Ammonium chloride
PAL- Phenylalanine ammonia lyase
PBS-Tween- Phosphate buffer saline- Tween
PCA- Phenazine-1-carboxylic acid
PCI- Water saturated phenol: Chloroform: Isoamyl alcohol
PCR- Polymerase chain reaction
PCR-RFLP- Polymerase chain reaction- Restriction fragment length polymorphism
PGPR- Plant Growth Promoting Rhizobacteria
PGPTs- Plant growth promoting traits
pNPP- p- nitrophenyl phosphate
POX- Peroxidase
PPO- Polyphenol oxidase
PR proteins- Pathogenesis related proteins
PRN- Pyrrolnitrin
PSB- Phosphate solubilising bacteria
PVK- Pikovskaya's agar
PVLG – Poly vinyl Lacto Glycerate
PVP- Poly vinyl- pyrrolidone
RNA- Ribonucleic acid
RP- Rock phosphate
RS- Rhizosphere soil
SA- Salicylic acid
SAR- Systemic acquired resistance
SDS- Sodium dodecyl sulphate
SDS-PAGE- Sodium dodecyl sulphate- Poly-acrylamide gel electrophoresis
SKM- Skim milk agar
TAE buffer- Tris Acetic Acid and EDTA buffer
TE buffer- Tris-EDTA buffer

TEMED- N,N,N',N'-Tetramethylethylenediamine

Tris Hcl- Tris hydrochloric acid

UPGMA- Unweighted Pair Group Method with Arithmetic Mean

yr- Year

β -1,3-GLU- β -1,3 glucanase

μ l- Micro litre

APPENDIX C: List of Chemicals

Ammonium chloride
Ammonium per sulphate
Bovine serum albumin
Calcium phosphate
Carboxy methyl cellulose
Chrome azurol S
Colloidal chitin
Copper sulphate
Deoxy nucleotide tri-phosphates
Di methyl amino benzaldehyde
Di sodium hydrogen phosphate
Diethyl aminoethyl cellulose
Dinitro salicylic acid
Ethylene diamine tetra acetic acid
Ferric chloride
Fluorescein isothiocyanate
Helicase (3%)
Hexa-decytrimethyl ammonium bromide
Hydrochloric acid
Hydrocyanic acid
Hydrogen peroxide
Indole acetic acid
LR White resin
Magnesium chloride
N,N,N',N'-Tetramethylethylenediamine
N-acetyl glucosamine
Nitro blue tetrazolium/ (5-bromo-4-chloro-1H-indol-3-yl) dihydrogen phosphate
substrate
O-dianisidine (5 mg/ml methanol)
p- nitrophenyl phosphate
Phosphate buffer saline- Tween
Poly vinyl- pyrrolidone
Potassium chloride
Potassium dihydrogen phosphate
Sodium azide
Sodium carbonate
Sodium chloride
Sodium dodecyl sulphate
Sodium Hydroxide
Sodium molybdate
Sodium nitrite
Sulphuric acid

Tri-calcium phosphate
Tris Acetic Acid and EDTA buffer
Tris hydrochloric acid
Tris-EDTA buffer
Water saturated phenol: Chloroform: Isoamyl alcohol
0.05(M) sodium phosphate buffer (pH 6.8)
0.1M sodium phosphate buffer pH (7.4)
0.1(M) sodium acetate buffer (pH 5.0)
0.2M Na-phosphate buffer (pH 5.4)
0.3mM borate buffer (pH 8.0)
1 M K-PO₄ buffer (pH 7.1)
1-amino-cyclopropane-1-carboxylic acid hydrochloride
1M Na-acetate buffer (pH 4)
Sodium borate buffer (pH 8.8)
2 mM β- mercaptoethanol
1 M Na-borate buffer (pH 9.8)
2% L-phenylalanine
2,4-Diacetylphloroglucinol
4 mM H₂O₂.
4% laminarin
2.5% Glutaraldehyde
30%-90% absolute alcohol
1% aqueous toluidine blue solution
2% uranyl acetate
0.2% lead acetate