

## **Appendix A: List of thesis related publications**

### ***In Journals***

1. **Khati S**, Bhattacharjee P, Sashankar P, Chakraborty U and Chakraborty BN. Evaluation of plant growth promoting rhizobacteria on rice cultivars for management of brown spot. *J Mycopathol Res*, **54(3)**:401-408, 2016.
2. **Khati S** and Chakraborty BN. Morphological characterization of rice cultivars their root colonization with arbuscular mycorrhizal fungi and screening for field resistance caused by brown spot disease. *NBU J. Pl. Sci.*, **9**:78-86, 2015.

## **Appendix B: List of abbreviations**

AMF – Arbuscular mycorrhizal fungi  
APS – Ammonium per sulphate  
Ar - Arbuscules  
BLAST - Basic local alignment search tool  
BR – Brown spot  
BSA – Bovine serum albumin  
 $\text{Ca}_3(\text{PO}_4)_2$  – Tri- calcium phosphate  
 $\text{CaHPO}_4$  – Calcium phosphate  
cfu – Colony forming unit  
CHT – Chitinase  
 $\text{CuSO}_4$  – Copper sulphate  
DEAE Cellulose – Di ethyl aminoethyl Cellulose  
DIBA – Dot immunobinding assay  
DMAB – Di methyl amino benzaldehyde  
DNA – Deoxyribonucleic acid  
EDTA – Ethylene diamine tetra acetic acid  
ELISA – Enzyme linked immunosorbent assay  
FAA – Formaline aceto alcohol  
 $\text{FeCl}_3$  – Ferric chloride  
FITC – Fluorescein isothiocyanate  
g – Gram  
GlcNAc – N- acetyl glucosamine  
 $\text{H}_2\text{O}_2$  – Hydrogen peroxide  
 $\text{H}_2\text{SO}_4$  – Sulphuric acid  
HCl – Hydrochloric acid  
HCN – Hydrocyanic acid  
HPLC – High performance liquid chromatography  
IgG – Immunoglobulin G  
Ih – Intracellular hyphae  
IR – Induced systemic resistance  
Irs – Intraradicle spore  
ITS-PCR – Internal transcribed sequence PCR  
KCl – Potassium chloride  
 $\text{KH}_2\text{PO}_4$  – Potassium dihydrogen phosphate  
kg – Kilo gram  
L – Litre  
mg – Mili gram  
 $\text{MgCl}_2$  – Magnesium chloride  
ml – Mili litre  
 $\text{Na}_2\text{CO}_3$  – Sodium carbonate  
 $\text{Na}_2\text{HPO}_4$  – Di sodium hydrogen phosphate  
 $\text{Na}_2\text{MoO}_4$  – Sodium molybdate  
NaCl – Sodium chloride  
 $\text{NaN}_3$  – Sodium azide  
 $\text{NaNO}_2$  – Sodium nitrite  
NaOH – Sodium hydroxide  
NB – Nutrient broth  
NCBI – National Centre for Biotechnology Information

NBT/BCIP substrate – Nitro blue tetrazolium / (5- bromo-4-chloro-1H-indol-3-yl)  
dihydrogen phosphate substance  
NH<sub>4</sub>Cl – Ammonium chloride  
OA – Oats meal agar  
PAb – Polyclonal antibody  
PAL – Phenyl alanine ammonia lyase  
PBS – Phosphate buffer saline  
PCR – Polymerase chain reaction  
PDA – Potato dextrose agar  
PDB – Potato dextrose broth  
PDI – Percentage disease index  
PGPF – Plant growth promoting fungi  
PGPR - Plant growth promoting rhizobacteria  
POX- Peroxidase  
PTA- ELISA – Plate trapped antigen ELISA  
PVPP – Polyvinyl pyrrolidone phosphate  
rpm – Round per minute  
RA – Richards agar  
SDS- PAGE – Sodium dodecyl sulphate poly acrylamide gel electrophoresis  
TEMED – N,N,N',N'-Tetramethyl ethylene diamine  
Tris HCl- Tris Hydrochloric acid  
Vs - Vesicle  
yr – Year  
β-1,3- GLU – β-1,3- Glucanase  
μl – Micro litre

## **Appendix C: List of chemicals**

Ammonium chloride  
Ammonium persulphate  
Bovine serum albumin  
Calcium phosphate  
Carboxy methyl cellulose  
Colloidal chitin  
Copper sulphate  
Di- methyl amino benzaldehyde  
Di sodium hydrogen phosphate  
Dinitro salicylic acid  
Ethylene diamine tetra acetic acid  
Ferric chloride  
Fluorescein isothiocyanate  
Helicase (3%)  
Hydrochloric acid  
Hydrocyanic acid  
Hydrogen peroxide  
Magnesium chloride  
N,N,N',N'- Tetra methyl ethylene diamine  
N- acetyl glucosamine  
Nitro blue tetrazolium/(5- bromo-4-chloro-1H-indol-3-yl) dihydrogen phosphate  
substrate  
O- dianisidine (5 mg/ml methanol)  
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  
Water saturated phenol: Chloroform:Isoamyl alcohol  
0.05(M) sodium phosphate buffer ( pH 6.8)  
0.1 (M) sodium phosphate buffer (pH 7.4)  
0.1 (M) sodium acetate buffer (pH 5.0)  
0.2 (M) sodium phosphate buffer (pH 5.4)  
0.3 mM borate buffer (pH 8.0)  
1M potassium phosphate buffer (pH 7.1)  
1-Amino-cyclopropane-1- carboxylic acid hydrochloride  
1M sodium acetate buffer (pH 4)  
Sodium borate buffer (pH 8.8)

2 mM  $\beta$ - mercaptoethanol  
1 M sodium borate buffer (pH 9.8)  
2% L- phenylalanine  
2,4- Diacetylphloroglucinol  
4 mM  $H_2O_2$   
4% laminarin  
2.5% glutaraldehyde  
30%-90% absolute alcohol