

Table No.	Title	Page No.
Table 1.1	Common cell wall constituents found in fungi	3
Table 2.1	Mammalian antifungal peptides	22
Table 2.2	Insect and amphibian antimicrobial peptides	23
Table 2.3	Bacterial and fungal antimicrobial peptides	27
Table 3.1	Selection of factors at their assigned level (Taguchi DOE L ₈ OA)	47
Table 3.2	Various mathematical models for growth kinetics and modeling used in this study	50
Table 4.1	Effect of different carbon sources on mycelial growth and afp production by <i>A. giganteus</i> MTCC 8408 in basal Olson media under submerged fermentation	58
Table 4.2	Effect of nitrogen sources on mycelial growth and afp production by <i>A. giganteus</i> MTCC 8408 in basal Olson media using soluble starch as carbon source under submerge fermentation	59
Table 4.3	Effect of slant age and inoculum level on mycelial growth and afp production by <i>A. giganteus</i> MTCC 8408 in modified Olson media under submerge fermentation	62
Table 4.4	Taguchi DOE L ₈ OA with selected factors for Y _{p/x} in submerged fermentation of <i>A. giganteus</i>	63
Table 4.5	Average effects (main effects) of selected factors on Y _{p/x}	63

Table 4.6	Influence of C/N, K ⁺ /Ca ²⁺ and ratio Mg ²⁺ /Na ⁺ on biochemical parameters of various yield in submerged fermentation of <i>Aspergillus giganteus</i> MTCC 8408 using Taguchi DOE L ₈ OA	65
Table 4.7	Analysis of variance (ANOVA) under Taguchi DOE L ₈ OA	68
Table 4.8	Taguchi DOE L ₂₇ OA projection with selected factors for afp production in submerged fermentation of <i>A. giganteus</i> MTCC 8408	70
Table 4.9	Estimated interaction of severity Index (SI) for selected factors.	73
Table 4.10	Analysis of Variance (ANOVA) under Taguchi DOE L ₂₇ OA	75
Table 4.11	Optimum culture conditions and their contribution.	77
Table 4.12	Estimated value of biokinetic parameters in statistically optimized new culture medium using Taguchi DOE L ₂₇ OA	81
Table 4.13	Estimated value of morphological parameters in statistically optimized new culture medium using Taguchi DOE L ₂₇ OA	87
Table 4.14	Statistical analysis of predicted kinetic models	88
Table 4.15	Purification profile of Acp-N84 from <i>Aspergillus giganteus</i> MTCC 8408 in submerged fermentation	93
Table 4.16	Analysis of Acp-N84 by MALDI-TOF MS (results of BLAST search)	106
Table 4.17	Sequence of peptides matched with the putative GTP-binding protein of <i>Aspergillus calidoustus</i> strain (gi 972235139) after Tryptic digestion of Acp-N84, analyzed by the Mascot algorithm.	107
Table 4.18	Amino acid composition of Acp-N84 (ExPASy ProtParam)	109
Table 5.1	In vitro MICs values of Acp-N84 and other conventional antifungal agents	126-127