

CHAPTER 16

GENETICS

Doctoral Theses

180. LOHIA (Rakhee)
Role of HDACs During Growth, Development and Differentiation of Dictyostelium Discoideum.
Supervisors : Dr. Pradeep Kumar Burma and Dr. Shweta Saran
Th 21084

Contents

1. Introduction 2. HDAC activity, expression and effects of modulators during growth and development of D. discoideum 3. Classification, spatio-temporal RNA expression and overexpression of the sirtuins from D. discoideum 4. Functional analysis of the sirtuin 2A D. discoideum 5. Functional analysis of the sirtuin 2D of D. discoideum. Summary and conclusions. Appendix.

181. MEHROTRA (Amita Kush)
Analysis of Promoters of Genes Expressed in Anthers of Cotton and Development of an Intron Containing Barnase Gene.
Supervisor : Dr. Pradeep Kumar Burma
Th 21089

Contents

1. Analysis of promoters of genes expressed in anthers of cotton
2. Development of an intron containing barnase gene. Annexure.

182. NAMRATA
Studies on Gamma-Glutamy1 Transpeptidase from Fluorescent Pseudomonas: P. Protegens Pf-5, P. Fluorescens Strains PFT-1 and Psd.
Supervisor : Prof. Sheela Srivastava
Th 21088

Contents

1. Introduction 2. Materials and methods 3. Results 4. Discussion
5. Summary and conclusions. References. Annexures.

183. PAL (Gargi)
Isolation, Heterologous Expression, Purification, and Characterization of Plantaricins Derived from Soil Metagenome.
Supervisor : Prof. Sheela Srivastava
Th 21087

Contents

1. Introduction 2. Materials and methods 3. Results 4 Discussion
5. Summary and Conclusions. References. Annexures.

184. ROUT (Kadambini)
Genetic Analysis of Oil Content and Seed Glucosinolate Trait in Brassica Juncea.
Supervisor : Prof. Akshay K. Pradhan
Th 21270

Contents

1. General introduction 2. Review of literature 3. Construction of two bi-parental linkage maps and development of an integrated map in Brassica Juncea using four bi-parental maps 4. Genetic analysis of seed oil content in Brassica Juncea 5. Genetic analysis of seed glucosinolate trait in Brassica juncea. 6. Results, discussion, summary and Conclusions 7. References and annexures.

185. SENAPATI (Sabyasachi)
Genetic Analyses of Celiac Disease and Rheumatoid Arthritis using Trans-ethnic and Imputation Approaches.
Supervisor : Prof. B.K. Thelma
Th 21090

Contents

1. Review of literature and introduction 2. Materials and methods 3. Trans-ethnic replication and independent association studies in a North Indian cohort confirm six celiac disease loci and identify additional potential risk variants 4. Paediatric and adult celiac disease: Two sides of the same coin 5. Imputation based analysis identifies three novel immune loci associated with

rheumatoid arthritis in north Indians 6. Genome-wide analysis of methotrexate pharmacogenomics in rheumatoid arthritis reveals multiple novel risk variants and leads for TYMS regulation 7. Conclusions and perspectives. Appendices.

186. SHARMA (Anuradha)
Mechanism of Action of Peptide Antibiotics, Plantaricins from Lactobacillus Plantarum Strain LR/14 Against Yeasts..
 Supervisor : Prof. Sheela Srivastava
Th 21086

Contents

1. Introduction 2. Materials and methods 3. Results 4 Discussion
 4. Summary and conclusions. References. Annexures. List of publications.

187. SINGH (M. Dhruba)
Studies on the Role of Dymc in Modulation of Human Neurodegenerative Disorders in Drosophila Poly(Q) Disease Models.
 Supervisors : Dr. Surajit Sarkar and Prof. Sheela Srivastava
Th 21085

Contents

1. Introduction 2. Materials and methods 3. Results 4. Discussion and summary 5. References. Annexure.

188. TYAGI (Gunjan)
Spectroscopic Study of Nucleic Acid Interaction of Natural Anti-Cancer Compounds and their Cytotoxic Potential on Cancer Cell Lines.
 Supervisors : Dr. Tapasya Srivastava and Dr. Ranjana Mehrotra
Th 21083

Contents

1. Introduction and review of literature 2. Instrumentation and methodology 3. Spectroscopic investigation of DNA interaction with anti-cancer alkaloids vincristine and vinblastine 4. Spectroscopic evaluation of tRNA interaction with vincristine and vinblastine 5. Cytotoxic potential of allicin on cancer cell lines 6. Analysis of nucleic acid binding properties of allicin 7. Conclusions and future perspective.