CHAPTER 39

MICROBIOLOGY

Doctoral Theses

447. BHADURI (Asani)

Molecular and Biochemical Studies on Secretory Proteins of Mycobacteria

Supervisors : Prof. J.S. Virdi and Yogendra Singh Th 21191

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448. DESWAL (Deepa)

Cellulase from Brown-Rot Fungus Fomitopsis SP. RCK 2010 and its Application in Hydrolysis of Lignocellulosic Materials for Ethanol Production.

Supervisor: Prof. R.C. Kuhad

Th 21203

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- 449. DHAR (Mahesh Shanker)

Interaction of Strains of Two Clonal Groups of Yersinia Enterocolitica with Cultured Cells in Vitro.

Supervisor : Prof. J. S. Virdi Th 21190

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450. DOGRA (GAURAV)

A Study of Polymorphism of TGF- β , IL -10, TNF- α , IL-6 and ISDR in Patients with HCV Infection and Its Correlation with Different HCV Genotypes.

Supervisors : Dr. Anita Chakravarti and Dr. Premashis Kar Th 21314

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451. FIRDAUS JAHAN

Bacterial Cellulose: Production, Properties Scale up and Industrial Applications.

Supervisor: Prof. R. K. Saxena

Th 21199

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- 452. GARIMA (Kushal)

Expression Analysis and Protein Profiling of Drug Efflux Transporters in Clinical Isolates of Mycobacterium Tuberculosis. Supervisors: Prof. Mridula Bose and Dr. Mandira Varma-Basil Th 21193

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1. Introduction 2. Review of literature 3. In Silico search for efflux pump related genes in mycobacterium tuberculosis 4. Determination of minimal inhibitory concentration (MIC) of a panel of Clinical Isolates of M.tuberculosis for a set of antituberculosis drugs 5. Differential expression of efflux pump related genes in response to varied subinhibitory concentrations of antituberculosis drugs in M. tuberculosis H37Rv 6. To study the mRNA expression profile of the efflux genes identified bioinformatically, in the panel of drug susceptible and drug resistant clinical isolates of M.tuberculosis grown under subinhibitory concentration of antituberculous drugs 7. To study the proteomics of the panel of M. tuberculosis clinical isolates cultured under different growth conditions 8. Summary and conclusions. References and Appendix.

453. MAHAJAN (RICHI V)

Production of L-asparaginase with Low-glutaminase Activity from Bacillus Licheniformis: Process Optimization, Purification, Characterization, Scale up and its Evaluation as a Potent Anti-Cancerous Molecule using Liposomal Technology.

Supervisor: Prof. R. K. Saxena

Th 21196

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- 454. MEHTA (Deepika)

Cloning, Expression, Characterization and Applications of Thermostable Amylases of Geobacillus Thermoleovorans.

Supervisor : Prof. T. Satyanarayana

Th 21194

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- 1. Introduction 2. Materials and methods 3. Results 4. Discussion
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- 455. NANDAL (Preeti)

Bioprocessing for Production of Inoculum and Laccase from Coriolopsis Caperata RCK2011 and their Application.

Supervisor: Prof. R. C. Kuhad

Th 21201

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- 456. RAJPUT (Rinky)

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Supervisor: Prof. Rani Gupta

Th 21197

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- 457. RATHOR (Nisha)

Regulation of Expression of mce4 Operon of Mycobacterium Tuberculosis: Search for Upstream Promoter Activity and Regulatory Proteins.

Supervisors : Prof. Mridula Bose and Dr. Mandira Varma-Basil Th $21192\,$

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458. RAWAT (Garima)

Production of Shikimic Acid from Citrobacter Freundii KC466031- a Base Compound to Fomulate Drug Against Swine/Avian Flu: Process Optimization, Downstream Processing, Scale up and its Industrial Applications.

Supervisor: Prof. R. K. Saxena

Th 21205

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- 1. Introduction 2. Review of literature 3. Materials and methods 4. Observations and results 5. Discussion 6. Summary and conclusions 6. Bibliography and appendices 7. Future prospects.
- 459. RONSARD (Larance)

Genetic and Functional Implications of HIV-1 Genes (Tat exon-1 and VIf) and Host Genes (SDF-1 and CCR5) from North Indian Population that Affects the Progression of HIV/Aids.

Supervisors: Prof. V.G. Ramachandran, Prof. Shukla Das and Dr. A.C. Banerjea

Th 21318

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460. SHARMA (Abha)

Enhancing Laccase Production From Ganoderma Lucidum RCK 2011 and its Applications.

Supervisor: Prof. Ramesh Chander Kuhad Th 21202

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- 1. Introduction 2. Review of literature 3. Materials and methods 4. Results and observations 5. Discussion 6. Summary and conclusion 7. Bibliography and appendices.
- 461. SHARMA (Sonia)

Unravelling Microbial Diversity and Xylanolytic Gene(s) From Soils and Compost Through Metagenomic Approach.

Supervisor: Prof. Ramesh Chander Kuhad Th 21195

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- 1. Introduction 2. Review of literature 3. Materials and method 4. Observations and results 5. Discussion 6. Summary and conclusions 7. Bibliography and appendix.
- 462. SNEH LATA

Genetic and Functional Characterization of HIV-1 Regulatory Genes.

Supervisors: Prof. V.G. Ramachandran, Prof. Shukla Das and Dr. A.C. Banerjea

Th 21315

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- 4. Genetic and functional characterization of natural variants of HIV-1 Tat exon 1 and Vpr from northern India 5. Rev-mediated downregulation of HIV-1gene expression by degradation of Tat via NQO1 modulation 6. Regulation of NF-kb signaling by SOCS3
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463. TRIPATHI (Priyanka)

Shikimic Acid- A Key Ingredient for the Formulation of the Drug Tamiflu: Process Optimization, Purification, Characterization, Scale up and its Potential Applications from Citrobacter Freundii KC879274.

Supervisor: Prof. R. K. Saxena

Th 21204

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1. Introduction and current status of research 2. Materials and methods 3. Observations and results 5. Discussion 6. Summary and conclusions 6. Future prospects 7. Bibliography and appendix.

464. V. BALAJI

Expression Patterns Induced by Stress in Mycobacterium Tuberculosis: A Genome-Wide Analysis Focusing on Toxin Antitoxin Loci.

Supervisor: Dr. Amita Gupta

Th 21200

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- 1. Introduction and review of literature 2. Optimization of method for isolation of RNA from mycobacterium tuberculosis 3. Design and characterization of a new whole-genome microarray platform for m. tuberculosis 4. Expression profiling of M.tuberculosis under different in vitro stress conditions. 5. analysis of expression profiles of toxin antitoxin loci of m.tuberculosis in response to different stress conditions 6. summary and conclusions. Appendix.
- 465. YADAV (Sweta)

Biobutanol: A Second Generation Biofuel from Clostridium Acetobutylicum KF158795, its Process Optimization, Purification and Applications.

Supervisor: Prof. R.K. Saxena

Th 21198

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