

## CHAPTER 5

### BIOMEDICINE

#### Doctoral Theses

027. MISHRA (Chandra Bhushan)  
**Design and Synthesis of Novel Adenosine A<sub>2A</sub> Receptor Antagonists as Potential Anti-Parkinsonian Agents.**  
Supervisor : Dr. Pratibha Mehta Luthra  
Th 20237

#### *Contents*

1. Introduction and review of literature 2. Synthesis of tricyclic, bicyclic and monocyclic scaffolds for potential A<sub>2A</sub> receptor antagonist activity. 3. Experimental methodology and characterization of tricyclic thiazolotriazolopyrimidines (series 1), bicyclic thiazolopyrimidines (series 2), monocyclic thiazoles (series 3) and tricyclic Isoxazolotriazolopyrimidines (series 4).

028. SACHDEV (Divya)  
**Development of Diagnostic Assay for Co-detection of Neisseria Gonorrhoeae and Chlamydia Trachomatis and Elucidating the Molecular Mechanism of Antimicrobial Resistance in Neisseria Gonorrhoeae.**  
Supervisor : Prof. Daman Saluja  
Th 19904

#### *Contents*

1. Evaluation and development of in-house pcr for co-detection of C. trachomatis and N. gonorrhoeae. 2. Elucidating the molecular mechanism of antimicrobial resistance mechanism of neisseria gonorrhoeae. Summary. Appendix.

029. SENTHIL KUMAR (J. B.)  
**Synthesis of Ergoline Based Novel Dopaminergics: In-vitro Receptor Binding and in-vivo Pharmacology Using 6-OHDA Rat Model of Parkinson's Disease.**  
Supervisor : Dr. Pratibha Mehta Luthra  
Th 20249

*Contents*

1. Introduction and review of literature 2. Synthesis of indole ring modulated N-alkylated ergoline template. 3. Study the receptor binding profile (K<sub>i</sub>) of the compounds (8-13 and 15-20) to carry out in-vivo antiparkinsonian effect of potent compounds. Publications.

030. SHARMA (Dinesh Kumar)  
**The Evaluation of the Antihypertensive Activity of New Analogs of Diallyldisulfide, an Active Principle of Garlic.**  
 Supervisor : Dr. Manisha Tiwari  
Th 19905

*Contents*

1. Introduction. 2. Review of literature. 3. Object and scope of work. 4. Material and methods. 5. Effects of DADS analogs on blood pressure and heart rate. 6. Effect of DADS analogs on antioxidant paramaters. 7. Effect of DADS analogs on the activity of angiotensin converting enzyme (ACE) and on the levels of superoxide anion. 8. Effect of DADS analogs on nitrite/nitrate levels, cyclic guanosine monophosphate (cGMP) levels, endothelial nitric oxide synthase (eNOS) expression and on vasorelaxation in aorta. 9. Toxicological evaluation of DADS analogs. 10. Summary.

031. SHISHODIA (Gauri)  
**Investigation of Microrna-Based Regulatory Loop in Cervical Carcinogenesis.**  
 Supervisors : Prof. Bhudev C. Das and Dr. Alok C. Bharti  
Th 20235

*Contents*

1. Introduction. 2. Objectives. 3. Review of literature. 4. Materials and methods. 5. Results. 6. Discussion. 7. summary. 8. Conclusion. 9. Bibliography. Annexures.

032. SINGHAL (Jhalak)  
**Immune Regulation in Mycobacterium Tuberculosis Infected dendritic Cells by Using RNA Interference.**  
 Supervisor : Prof Krishnamurthy Natarajan  
Th 19903

*Contents*

1. Introduction. 2. Review of literature. 3. Rationale of the study. 4. Aims and objectives. 5. Materials and methods. 6. Results. 7. Discussion. 8. Summary and conclusions. 9. References. 10. Publications. Appendix.

033. ZACK (Jyoti)

**To Study The Mechanism of Runx1 and Its Mutants in DNA Binding and Altered Gene Expression.**

Supervisor : Prof. Daman Saluja

Th 19906

*Contents*

1. Introduction and review of literature. 2. 2. Bioinformatics approach to study the change in the conformation of mutant runx1 and its interaction with DNA (runx3/lat promoter). 3. Comparative analysis of DNA binding activity of wild type and mutant runx1 protein. 4. To study the effect of mutation in runx1 on the expression of target genes in acute myeloid leukemia patients. 5. Discussion. 6. Summary. Bibliography. Appendix.