

CONTENTS

CHAPTER 1: DRUG DISCOVERY: A BRIEF OVERVIEW

- 1.0 General Introduction
- 1.1 Growth of Medicinal Chemistry as Drug Discovery Process
- 1.2 The drug discovery process
- 1.3 Historical Background
- 1.4 Emerging technologies in drug discovery
- 1.5 Drug Designing
- 1.6 The challenge of drug design
- 1.7 Computer Assisted Drug Design
- 1.8 Quantitative Structure-Activity Analysis: The Centre of Gravity in
Modern Drug Design**

CHAPTER 2: QUANTITATIVE STRUCTURE ACTIVITY RELATIONSHIP

- 2.0 Introduction
- 2.1 Early Developments
- 2.2 Steps involved in QSAR
- 2.3 Development of Physicochemical approach (QSAR)
- 2.4 Major Parameters of QSAR
- 2.5 Hansch Analysis
- 2.6 Free Wilson analysis (the Additivity Model or De Novo aApproach)
- 2.7 Mixed approach (combined approach)

- 2.8 Demands of Biological as well as Physiological Approach
- 2.9. Statistical Methods used in QSAR Analysis
- 2.10. Significance and validity of QSAR Regression equations
- 2.11. Terms commonly used in QSAR analysis
- 2.12. Limitations of QSAR
- 2.13. Important factors to be repeated

CHAPTER 3: CANCER: A BRIEF OVERVIEW

1. Introduction

1.1Challenges of Cancer

1.2Cancer: Categories

1.3 Types of cancer

1.4Cancer cells: Characteristics

1.5 Tumor Cell Biology

1.5.1Cell Division

1.5.2 Cancer Cells

1.5.3. The ideal chemotherapeutic

1.5.4. To produce a cure

1.6 Cause

1.7Cancer Sign and Symptom

1.8 Cancer Approaches

CHAPTER4: LITERATURE SURVEY: CANCER AND QSAR

CHAPTER 5: PRESENT WORK

1. 2D QSAR studies on new Stilbene Derivatives of Resveratrol as new selective Aryl Hydrocarbon Receptor
2. QSAR studies on Hetaryl imidazole Derivatives as novel dual inhibitors of VEGF receptors I and II
3. 2D-QSAR studies on Carbazole sulfonamide Derivatives as Antimitotic Agents Against solid Tumors
4. QSAR studies on 4,5,6,7- Tetrabromobenzimidazole Derivatives as inhibitors of Protein kinase CK
5. 2D-QSAR studies on N-Phenyl-N¹{4-(4-quinolyloxy) phenyl} urea Derivatives as VEGFR-2 Tyrosine Kinase inhibitors
6. QSAR studies of Pyrazolo(3, 4-d) pyrimidine derivatives as potent inhibitors of the Insulin-like growth factor receptor(IGF-IR)
7. QSAR studies of Pyrrolidione Derivatives as potent functional antagonists of human melanocortin-4 receptor
8. QSAR studies of 2-(alkyloxyaryl)-1*H*-benzimidazole Derivatives as antitumor agent
9. QSAR studies on 3, 17-Disubstituted 2-Alkylestra-1, 3, 5(10)-trien-3-ol derivatives as Anticancer Agents

REFERENCES

GLOSSARY

ACHIEVEMENTS