CHAPTER – I  1-15
INTRODUCTION

1.1 Preamble 1
1.2 Proposed Research 3
1.2.1 Statement of Research Title 3
1.3 Explanation of concepts 5
1.3.1 Scientometrics 5
1.3.2 Bibliometrics 5
1.3.3 Productivity 5
1.3.4 Productivity Patterns 5
1.3.5 Authorship pattern 5
1.4 Objectives of the study 6
1.5 Hypothesis 6
1.6 Scope and Limitations 6
1.7 Methodology 7
1.7.1 Data collection 7
1.7.2 Data analysis and interpretation 8
1.8 Summary of major conclusions & Implications 8
1.8.1 Conclusions 8
2.5.3 Bradford's Law 34
2.5.4 Zipf's Law 36
2.5.5 Other empirical laws 37
2.5.5.1 Weber-Fechner psycho-physical laws 37
2.5.5.2 Sengupta Law of Bibliometric 37
2.5.5.3 The law of Mandelbrot 38
2.5.5.4 80/20 Rules 38
2.5.5.5 Zipf-Pareto Law 39
2.5.5.6 Price’s Square Root Law of Scientific Productivity 40
2.5.5.7 Garfield’s Law of Concentration 41
2.5.5.8 Laplace’s Law of succession 42
2.5.5.9 The Law of Leimkuhler 43
2.5.5.10 The Law of Brooks 43
2.5.5.11 Classic Informetric “Laws” 43
2.6 Bibliometric Analysis 44
2.6.1 Equivalence index (EI) 45
2.5.2 Salton Index (SI) 45
2.5.3 Brillouin Measure (BM) 45
2.5.4 Synthetic Author (SA) 46
2.5.5 Activity Index (AI) 46
2.5.6 Total publication Score (TPS) 46
2.5.7 H-Index 47
2.5.8 H-b Index 48
2.5.9 G-Index 48
2.5.10 Bibliometric Techniques 49
2.5.11 Bibliometric Studies 50
2.5.11.1 Bibliometric studies and periodicals 51
2.5.12. Author Productivity 52
2.5.12.1 Year wise Productivity 57
2.5.12.2 Country wise Productivity 57
2.5.12.3 Subject wise Productivity 57
2.5.12.4 Institution wise Productivity 58
2.5.12.6 Domainwise Productivity 58
2.5.12.7 Channels of communication 59
2.5.12.8 Ranklist of Subjects, journals, authors 59
2.5.12.9 Language wise productivity 59
2.5.12.10 Collaboration 60
2.5.12.10.1 Collaboration coefficient (CC) 62
2.5.12.10.2 Collaborative authorship 63
2.5.12.10.3 Degree of collaboration (DC) 64
2.5.12.10.4 Importance of collaborative research 66
2.5.12.10.5 Publication density 67
2.6 Content Analysis 67
2.7 Bibliometric Indicators 68
2.7.1 Direct bibliometric indicators 69
2.7.2 Derived indicators 70
2.7.3 Assigned indicators 70
2.7.4 Non-bibliometric-indicators 71
2.9.5.2 Most Productive Year
2.9.5.3 Productivity co-efficient
2.9.5.4 Productivity age (Life)
2.9.5.5 Fifty- percentile age
2.9.6 Parameters based on analysis of title
2.9.6.1 Title size
2.9.6.2 Degree of compactness of title
2.9.6.3 Substantive words per title
2.9.6.4 Stop words
2.9.7 Channels of Communication
2.9.7.1 Journals
2.9.7.1.1 Journal ranking
2.9.7.1.2 Journal productivity
2.9.7.1.3 Impact factor
2.9.7.1.4 Eigene factor
2.9.7.2 Books
2.9.7.3 Conference proceedings
2.9.7.4 Concentration amongst the channels
2.9.7.4.1 Publication concentration
2.9.7.4.2 Publication density
2.9.8 Parameters based on Place of Publication
2.9.8.1 Country wise productivity of publications
2.9.8.2 Activity Index (AI)
2.9.8.3 Attractivity Index (AAI)
CHAPTER – III

JOURNAL OF ANTIMICROBIAL CHEMOTHERAPY: A PROFILE

3.1 Introduction
3.1.1 Journal of antimicrobial Chemotherapy
3.1.2 Abstracting and Indexing Services
3.1.3 Impact factor and Ranking
3.2 British Society for Antimicrobial Chemotherapy
3.3 Governance
3.4 Council and structure
3.5 Background and Scope of the Journal
3.6 Optional Open Access
3.7 Editorial Board
3.8 Conclusion
CHAPTER - IV
SCIENTOMETRIC STUDY OF JOURNAL OF
ANTIMICROBIAL CHEMOTHERAPY

4.0 Introduction 152
4.1 Journal of Antimicrobial Chemotherapy – Journal data 152
4.1.1 Author productivity 152
4.1.1.1 Rank list of authors 154
4.1.1.1.1 General Rank List of Authors (Author at any position) 154
4.1.1.1.2 Rank list of authors (Author at First Position) 156
4.1.1.2 Bradford’s Law 158
4.1.1.3 Lotka’s Law 160
4.1.1.4 Price square root law of scientific productivity 166
4.1.1.5 Year wise productivity and growth of literature 171
4.1.1.5.1 Relative Growth Rate (RGR) 173
4.1.1.5.2 Doubling Time (DT) 174
4.1.1.6 Year wise productivity of key authors 175
4.1.1.7 Subject wise productivity 178
4.1.1.8 Productivity of Institutions 180
4.1.1.9 Country wise Productivity of Authors 181
4.1.2 Authorship Pattern 183
4.1.2.1 Year wise authorship pattern 188
4.1.2.1.1 Distribution of Co-authorship 191
4.1.2.1.2 Degree of collaboration 191
4.1.2.2 Single V/s Multiple Authorship 192
4.1.2.3 Institution wise authorship 193
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1.2.4 Department wise Authorship Pattern</td>
<td>194</td>
</tr>
<tr>
<td>4.2 Journal of Antimicrobial Chemotherapy – Supplement data</td>
<td>197</td>
</tr>
<tr>
<td>4.2.1 Content Analysis</td>
<td>197</td>
</tr>
<tr>
<td>4.2.2 Rank list of authors</td>
<td>205</td>
</tr>
<tr>
<td>4.2.2.1 General Rank List of Authors (Author at any position)</td>
<td>205</td>
</tr>
<tr>
<td>4.2.2.2 Rank list of authors (Author at First Position)</td>
<td>206</td>
</tr>
<tr>
<td>4.2.3 Year wise productivity and growth of literature</td>
<td>208</td>
</tr>
<tr>
<td>4.2.3.1 Relative Growth Rate (RGR)</td>
<td>210</td>
</tr>
<tr>
<td>4.2.3.2 Doubling Time (DT)</td>
<td>211</td>
</tr>
<tr>
<td>4.2.4 Year wise productivity of key authors</td>
<td>212</td>
</tr>
<tr>
<td>4.2.5 Year wise authorship pattern - Supplements</td>
<td>215</td>
</tr>
<tr>
<td>4.2.5.1 Distribution of Co-authorship</td>
<td>218</td>
</tr>
<tr>
<td>4.2.5.2 Degree of collaboration</td>
<td>218</td>
</tr>
<tr>
<td>4.2.5.3 Single V/s Multiple authorship</td>
<td>219</td>
</tr>
<tr>
<td>4.2.6 Institution wise authorship</td>
<td>220</td>
</tr>
<tr>
<td>4.2.7 Country wise Productivity of Authors</td>
<td>222</td>
</tr>
<tr>
<td>4.2.8 Conclusion</td>
<td>223</td>
</tr>
</tbody>
</table>

**CHAPTER - V**

CONCLUSION & IMPLICATIONS

5.1 Introduction

5.2 Conclusion / findings

5.2.1 Journal of Antimicrobial Chemotherapy
5.2.2 Author Productivity 226
5.2.3 Authorship Pattern 232
5.3 Implications of Results 236
5.4 Areas for further studies 237

Bibliographical References 238-271