

Studies in Natural Products Chemistry

Volume 3

Stereoselective Synthesis (Part B)

Edited by

Atta-ur-Rahman

*H.E.J. Research Institute of Chemistry,
University of Karachi, Karachi 32, Pakistan*



ELSEVIER

Amsterdam — Oxford — New York — Tokyo 1989

CONTENTS

| | |
|--|-----|
| Foreword | v |
| Contributors | ix |
| Synthesis of natural products containing five-membered rings. An evolution of general methodology T. HUDLICKY, F. RULIN, T.C. LOVELACE and J.W. REED | 3 |
| Synthetic studies on natural products possessing eight- or nine-membered rings T. OISHI and Y. OHTSUKA | 73 |
| Total synthesis of polyquinane terpenes S. ITO, T. TSUNODA, M. KODAMA and Y. FUJISE | 117 |
| New synthetic methodology. The trityl salts catalyzed stereoselective Michael reaction leading to natural products T. MUKAIYAMA and S. KOBAYASHI | 125 |
| New methodology for the synthesis of biologically active lactones C.W. JEFFORD, D. JAGGI, A.W. SLEDESKI and J. BOUKOUVALAS | 157 |
| The aureolic acid antitumor antibiotics: a challenge for organic synthesis R.W. FRANCK and S.M. WEINREB | 173 |
| Recent developments in modern synthetic carbohydrate chemistry Z.J. WITCZAK | 209 |
| Recent applications of sigmatropic reactions to the synthesis of highly-oxygenated natural products J. KALLMERTEN and M.D. WITTMAN | 233 |
| A formal total synthesis of colchicine E. WENKERT and H.-S. KIM | 287 |
| Natural and synthetic antitumor agents: synthetic studies on CC-1065 and functionally related agents R.S. COLEMAN and D.L. BOGER | 301 |
| Recent advances on the synthesis of quinolone skeleton by [4+2] cycloaddition reaction and its application to the natural products synthesis T. KAMETANI and H. KASAI | 385 |
| Synthesis of yohimbine and related alkaloids I. NINOMIYA and O. MIYATA | 399 |
| Synthesis of natural products via arynes L. CASTEDO and E. GUITIAN | 417 |
| Synthesis of <i>Erythrina</i> alkaloids Y. TSUDA and T. SANO | 455 |
| The structures, reactions and syntheses of arteannuin (Qinghaosu) and related compounds W.-S. ZHOU and X.-X. XU | 495 |
| Subject Index | 529 |