

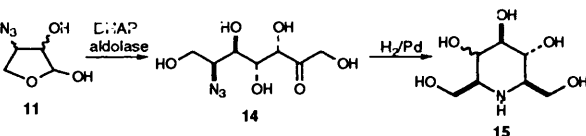
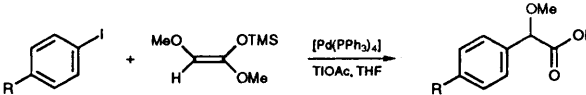
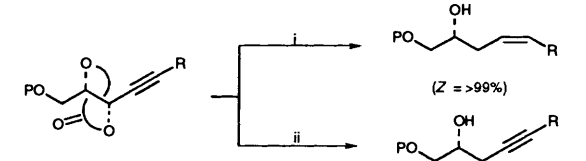
JOURNAL OF THE CHEMICAL SOCIETY

Perkin Transactions 1

Organic and Bio-organic Chemistry

CONTENTS

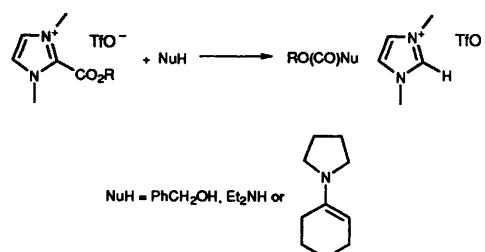
Perkin Communications

231 Synthesis of β-1-homonojirimycin and β-1-homomannojirimycin using the enzyme aldolase	
Karen E. Holt, Finian J. Leeper and Sheetal Handa	<p>The four stereoisomers of C₄ azido sugar 11 have been stereospecifically synthesised and converted into the aza-sugars 15 in two steps including an aldolase-catalysed reaction with dihydroxyacetone phosphate</p>
235 Palladium-catalysed arylation of α-methoxyketene methyl silyl acetals	
Takao Sakamoto, Yoshinori Kondo, Kaoru Masumoto and Hiroshi Tamanaka	
237 Synthesis of (<i>Z</i>)-homoallylic alcohols and homoprop-2-ynylic alcohols via palladium-catalysed hydrogenolysis of prop-2-ynylic cyclic carbonates	<p>P = Bn, MPM R = Et, n-C₅H₁₁</p> <p>Reagents and conditions: i, HCO₂NH₄, [Pd(acac)₂]-Buⁿ₃P (cat.), benzene, reflux; ii, HCO₂NH₄, [Pd(acac)₂]-Buⁿ₃P (cat.), benzene, room temp.</p>

Articles

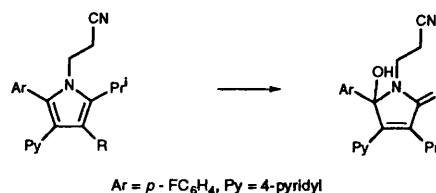
- 239 **Transfer of alkoxycarbonyl from alkyl imidazolium-2-carboxylates to benzyl alcohol, a cyclohexanone enamine and diethylamine**

Cuross Bakhtiar and Edward H. Smith



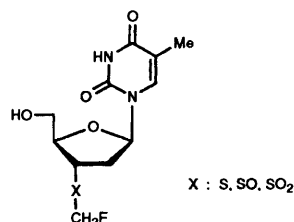
- 245 **A novel oxidative rearrangement of a pentasubstituted pyrrole to an unsaturated hydroxy γ -lactam**

Panayiotis A. Procopiou and Rona M. Highcock



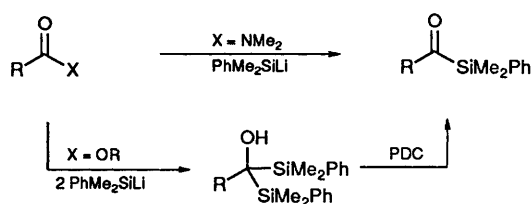
- 249 **Synthesis of 3'-fluoromethylthio-, 3'-fluoromethylsulfinyl- and 3'-fluoromethylsulfonyl-substituted 3'-deoxythymidine**

Piet Herdewijn, André De Bruyn, Piet Wigerinck, Chris Hendrix, Luk Kerremans, Jef Rozenski and Roger Busson



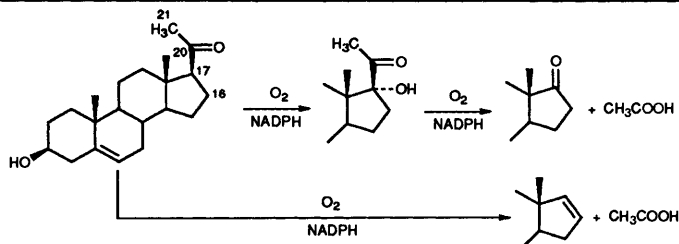
- 257 **Synthesis of acylsilanes from amides and esters, and the selective oxidation of α -silyl alcohols to aldehydes**

Ian Fleming and Usha Ghosh



- 263 **Incorporation of label from $^{18}\text{O}_2$ into acetate during side-chain cleavage catalysed by cytochrome P-450_{17 α} (17 α -hydroxylase-17,20-lyase)**

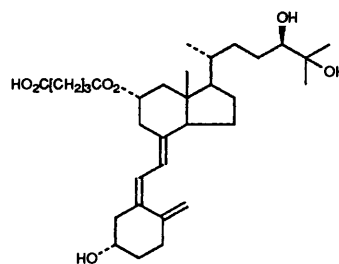
Muhammad Akhtar, David L. Corina, (the late) Sharon L. Miller, Akbar Z. Shyadehi and J. Neville Wright



Pig cytochrome P450_{17 α} catalyses two side-chain cleavages as shown above. In both cases the C₂ fragment released as acetic acid incorporates an atom of oxygen from O₂

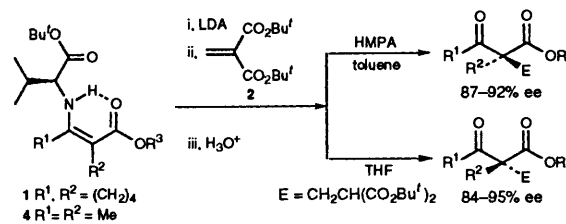
269 Synthesis of (24*R*)-11 α -(4-carboxybutyryloxy)-24,25-dihydroxyvitamin D₃: a novel haptenic derivative producing antibodies of high affinity for (24*R*)-24,25-dihydroxyvitamin D₃

Norihiro Kobayashi, Tatsuya Higashi and Kazutake Shimada



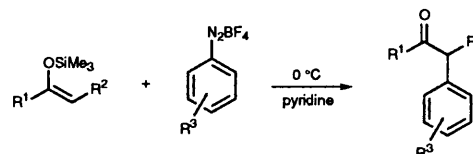
277 Stereoselective reactions. Part 23. Asymmetric Michael reaction of α -alkyl β -keto esters via chiral enamines. Dependence of the diastereofacial selection on the combination of solvents and additives

Kaori Ando, Kousuke Yasuda, Kiyoshi Tomioka and Kenji Koga



283 Reaction of silyl enol ethers with arenediazonium salts. Part 1. α -Arylation of ketones

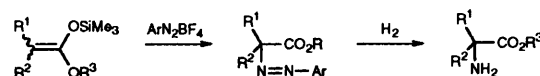
Toshiyasu Sakakura, Masayasu Hara and Masato Tanaka



α -Aryl ketones have been synthesized under mild conditions from silyl enol ethers and arenediazonium salts in pyridine

289 Reaction of silyl enol ethers with arenediazonium salts. Part 2. α -Amination of esters

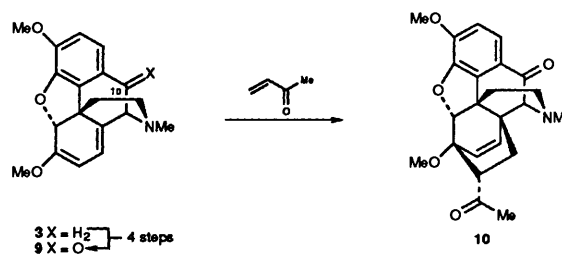
Toshiyasu Sakakura, Masayasu Hara and Masato Tanaka



An amino group can be introduced onto the α -carbon of an ester by reaction of ketene silyl ketals with diazonium salts

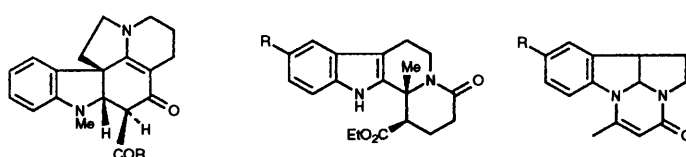
295 Synthesis from thebaine of 10-oxothebaine, potentially a precursor for κ -selective opiates

Calum F. Henderson, Gordon W. Kirby and John Edmiston



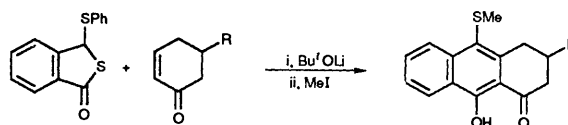
299 Electrophilic substitution in indoles. Part 19. Facile syntheses of the 2*a*,5*a*-diazacyclopenta[*j,k*]fluorene, indolo[2,3-*a*]-quinolizone and aspidoasperma alkaloid ring systems from *N*-acyltryptamines

David J. Wilkins, (the late) Anthony H. Jackson and Patrick V. R. Shannon



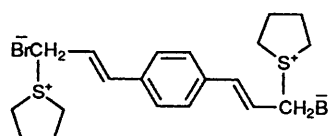
309 Anionic [4 + 2] cycloaddition with thiophthalides: an integrated approach to the synthesis of olivin and pillaromycinone

Gita Majumdar, Ranjan Pal, Kadiyala V. S. N. Murty and Dipakranjan Mal



317 Preparation of *p*-phenylene-3,3'-bis(1-allyltetrahydrothiophenium) dibromide and its reactions in basic solution

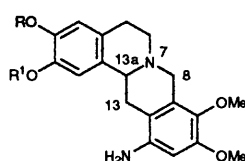
Yoriko Sonoda and Yasuzo Suzuki



p-Phenylene-3,3'-bis(1-allyltetrahydrothiophenium) dibromide was prepared from 1,4-phenylenediacrylaldehyde. Reactions of this salt with sodium hydroxide were carried out in methanol and water with the expectation that it would polymerize under basic conditions

323 Aberrant biosynthesis of 12-amino-protoberberines

Dewan S. Bhakuni and Sudha Jain

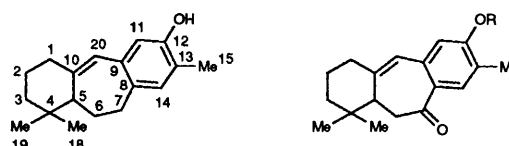


- 6 R = R¹ = Me
 8 R, R¹ = -CH₂-
 10 R = R¹ = Me; 7,8 and 13,13a = double bond
 11 R, R¹ = -CH₂-; 7,8 and 13,13a = double bond

Incorporation of 2'-aminoreticuline into **6**, **8**, **10** and **11** is demonstrated in *Cocculus laurifolius*

327 Synthetic studies towards complex diterpenoids. Part 19. Total synthesis of (±)-deoxofaveline, (±)-faveline methyl ether and (±)-faveline

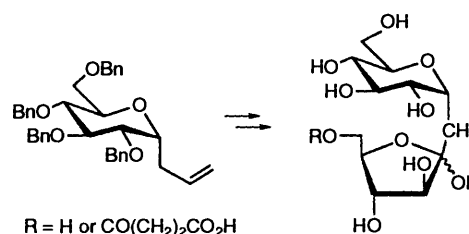
Ajit K. Ghosh, Chhanda Mukhopadhyay (née Ray) and Usha Ranjan Ghatak



(±)-Deoxofaveline (±)-Faveline methyl ether: R = Me
 (±)-Faveline: R = H

333 Synthesis of antimetabolites of sucrose

Luigi Lay, Francesco Nicotra, Cristina Pangrazio, Luigi Panza and Giovanni Russo



Corrigendum

339 Oxidative addition reaction of ω -alkenyl nitronate anions W. Russell Bowman, David S. Brown, Catherine A. Burns and David Crosby

AUTHOR INDEX

- Akhtar, Muhammad, 263
Ando, Kaori, 277
Bakhtiar, Cuross, 239
Bhakuni, Dewan S., 323
Bowman, W. Russell, 339
Brown, David S., 339
Burns, Catherine A., 339
Busson, Roger, 249
Cho, Dong-Gyu, 237
Chung, Jea-Uk, 237
Corina, David L., 263
Crosby, David, 339
De Bruyn, André, 249
Edmiston, John, 295
Fleming, Ian, 257
Ghatak, Usha Ranjan, 327
Ghosh, Ajit K., 327
Ghosh, Usha, 257
Handa, Sheetal, 231
Hara, Masayasu, 283, 289
Henderson, Calum F., 295
Hendrix, Chris, 249
Herdewijn, Piet, 249
Higashi, Tatsuya, 269
Highcock, Rona M., 245
Holt, Karen E., 231
Jackson, Anthony H., 299
Jain, Sudha, 323
Jurg, Kyung-Yun, 237
Kang, Suk-Ku, 237
Kerremans, Luk, 249
Kirby, Gordon W., 295
Kobayashi, Norihiro, 269
Koga, Kenji, 277
Kondo, Yoshinori, 235
Lay, Luigi, 333
Leeper, Finian J., 231
Majumdar, Gita, 309
Mal, Dipakranjan, 309
Masumoto, Kaoru, 235
Miller, Sharon L., 263
Mukhopadhyay (née Ray),
Chhanda, 327
Murty, Kadiyala V. S. N., 309
Nicotra, Francesco, 333
Pal, Ranjan, 309
Pangrazio, Cristina, 333
Panza, Luigi, 333
Park, Dong-Chul, 237
Procopiou, Panayiotis A., 245
Rozenksi, Jef, 249
Russo, Giovanni, 333
Sakakura, Toshiyasu, 283, 289
Sakamoto, Takao, 235
Shannon, Patrick V. R., 299
Shimada, Kazutake, 269
Shyadehi, Akbar Z., 263
Smith, Edward H., 239
Sonoda, Yoriko, 317
Suzuki, Yasuzo, 317
Tamanaka, Hiroshi, 235
Tanaka, Masato, 283, 289
Tomioka, Kiyoshi, 277
Wigerinck, Piet, 249
Wilkins, David J., 299
Wright, J. Neville, 263
Yasuda, Kousuke, 277

NOTE: An asterisk in the heading of each paper indicates the author who is to receive any correspondence.

Forthcoming Articles in Perkin Transactions 1

The Synthesis of 1,6-Methano[10]annulenopyridines by Tandem Aza-Wittig Reaction/Electrocyclisation **T. Bohn, W. Kramer, R. Neidlein and H. Suschitzky**

New Syntheses of Biliverdins, Corroles and Azaporphyrins from 1,19-Dibromo-a,c-biladiene Salts **R.K. Pandey, K.R. Gerzevske, H. Zou and K.M. Smith**

Novel Observations on Thiophosphoryl Group Transfer in Sugar β -Hydroxyphosphorodithioate Systems. Synthesis and Crystal Structure of 1,6-Anhydro-3,4-dideoxy-3,4-epithio-2-O-(*p*-toluenesulfonyl)- β -D-allopyranose **M. Michalska, W. Kudelska, J. Pluskowski, A.E. Koziol and T. Lis**

A Five Fused Ring Non-benzenoid Quinone Containing a Seven-membered Ring: Synthesis and Properties of Benz[1]acepleiadienequinone and Benz[1]acepleiadylenequinone **K. Morita, T. Aida, K. Morinaga and J. Tsunetsugu**

Porphyrin-Crown Ether Macrotricyclic Co-receptors for Bipyridinium Cations **M.J. Gunter and M.R. Johnston**

Porphyrin-Crown Ether Based Macrocyclic Receptors For Bipyridinium Cations **M.J. Gunter, M.R. Johnston, B.W. Skelton and A.H. White**

The Reaction of 3-Aryl-2-Cyanothioacrylamides with Electron-deficient Alkynes: Synthesis of 4-Aryl-4*H*-thiapyrans **J. Bloxham and C.P. Dell**

Nucleoside Analogues. Synthesis of 2',3'-Dideoxy and 2',3'-Unsaturated Ribofuranonucleosides of 2-Mercapto-5,6-dichlorobenzimidazole as Potential Antiviral Agents **C. Mathé, C. Périgaud, G. Gosselin and J.-L. Imbach**

Homolytic Reactions of Ligated Boranes. Part 18. The Scope of Enantioselective Hydrogen-atom Abstraction by Chiral Amine-Boryl Radicals for Kinetic Resolution Under Conditions of Polarity Reversal Catalysis **H.-S. Dang, V. Diart and B. P. Roberts**

Total Synthesis of Optically-active Plagiospirolides A and B. Highly Stereoselective Biomimetic Diels-Alder Reaction **N. Kato, X. Wu, H. Nishikawa, K. Nakanishi and H. Takeshita**

Synthesis of a Novel 5-Diaza-thia Analogue of Tetrahydrofolic Acid *N*-{*p*-[(2-Amino-6,7-dihydro-4(3*H*)-oxopyrimido[5,4-*b*][1,4]thiazin-6-yl)methyl]aminobenzoyl}glutamic Acid **Y. Maki, K. Hirota, M. Sako and R. Totani**

Studies on Pyrazines. Part 27. A New Deoxidative Nucleophilic Substitution on Pyrazine *N*-Oxides; Synthesis of Azidopyrazines with Trimethylsilyl Azide **N. Sato, N. Miwa and N. Hirokawa**

Reaction of *O*-Silyl Selenocarboxylates and IR and NMR Spectra of Heteroatom-substituted Selenocarboxylates **H. Kageyama, K. Kido, S. Kato and T. Murai**

Chiral Synthesis of Lignan Lactones, (-)-Hinokinin, (-)-Deoxypodorhizon, (-)-Isohibalactone and (+)-Savinin by Means of an Enantioselective Deprotonation Strategy **T. Honda, N. Kimura, S. Sato, D. Kato and H. Tominaga**

Preparation and Intramolecular Radical Cyclization of Some Cyclic *N*-Sulfonylenamines **J. Åhman and P. Somfai**