

## Graphical abstracts

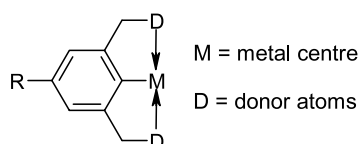
### The uses of pincer complexes in organic synthesis

*Tetrahedron 59 (2003) 1837*

John T. Singleton

*AstraZeneca R&D Charnwood, Process Research and Development department, Bakewell Road, Loughborough, Leicestershire LE11 5RH, UK*

Pincer complexes consist of a tridentate skeleton bound to a metal by at least one metal–carbon  $\sigma$  bond. The highly protected environment for the resident metal gives pincer complexes with excellent potential as catalysts in a wide variety of organic reactions.

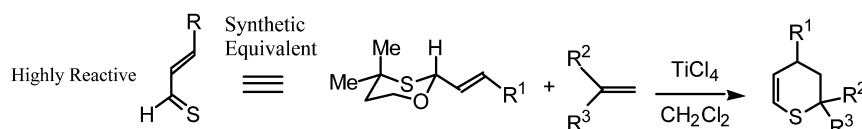


### A novel tandem $[4^+ + 2]$ cycloaddition–elimination reaction: 2-alkenyl-4,4-dimethyl-1,3-oxathianes as synthetic equivalents for $\alpha,\beta$ -unsaturated thioaldehydes

*Tetrahedron 59 (2003) 1859*

Shin-ichi Ohsugi, Kiyoharu Nishide and Manabu Node\*

*Kyoto Pharmaceutical University, Misasagi, Yamashina, Kyoto 607-8414, Japan*

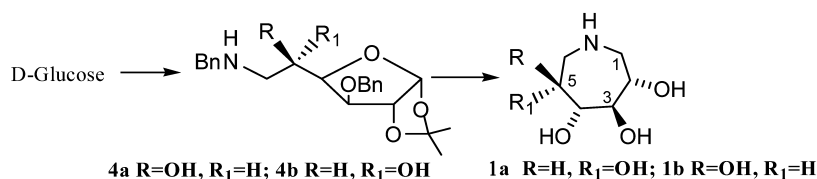


### Concise and practical synthesis of (2*S*,3*R*,4*R*,5*R*) and (2*S*,3*R*,4*R*,5*S*)-1,6-dideoxy-1,6-iminosugars

*Tetrahedron 59 (2003) 1873*

Jayant N. Tilekar, Nitin T. Patil, Harishchandra S. Jadhav and Dilip D. Dhavale\*

*Department of Chemistry, Garware Research Center, University of Pune, Ganeshkhind Road, Pune 411 007, India*



### Synthetic studies of furanosquiterpenoid tetrahydrolinderazulenes. Total synthesis of ( $\pm$ )-echinofuran

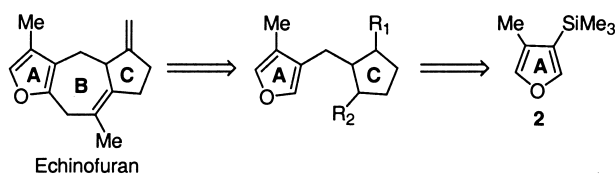
*Tetrahedron 59 (2003) 1877*

Ho-Kee Yim,<sup>a,b</sup> Yun Liao<sup>a</sup> and Henry N. C. Wong<sup>a,b,c,\*</sup>

<sup>a</sup>*Department of Chemistry, The Chinese University of Hong Kong, Shatin, New Territories, Hong Kong SAR, People's Republic of China*

<sup>b</sup>*Central Laboratory of the Institute of Molecular Technology for Drug Discovery and Synthesis, The Chinese University of Hong Kong, Shatin, New Territories, Hong Kong SAR, People's Republic of China*

<sup>c</sup>*Institute of Chinese Medicine, The Chinese University of Hong Kong, Shatin, New Territories, Hong Kong SAR, People's Republic of China*



## Rifamycin antibiotics—new compounds and synthetic methods. Part 1: Study of the reaction of 3-formylrifamycin SV with primary alkylamines or ammonia

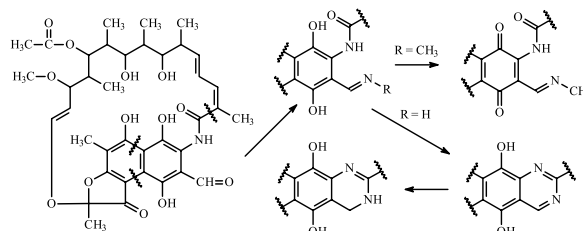
*Tetrahedron 59 (2003) 1885*

Krzysztof Bujnowski,<sup>a,\*</sup> Ludwik Synoradzki,<sup>a</sup> Eckhard Dinjus,<sup>b</sup> Thomas Zevaco,<sup>b</sup> Ewa Augustynowicz-Kopec<sup>c</sup> and Zofia Zwolska<sup>c</sup>

<sup>a</sup>Laboratory of Technological Processes, Faculty of Chemistry, Warsaw University of Technology, Noakowskiego 3, 00-664 Warsaw, Poland

<sup>b</sup>Forschungszentrum Karlsruhe, Institut für Technische Chemie, Bereich Chemisch-Physikalische Verfahren, Postfach 3640, D-76021 Karlsruhe, Germany

<sup>c</sup>Department of Microbiology, National Tuberculosis and Lung Diseases Research Institute, Płocka 26, 01-138 Warsaw, Poland



## Hydroxylation of ionized aromatics including carboxylic acid or amine using recombinant *Streptomyces lividans* cells expressing modified biphenyl dioxygenase genes

*Tetrahedron 59 (2003) 1895*

Kazutoshi Shindo,<sup>a,\*</sup> Ryoko Nakamura,<sup>a</sup> Ikuko Chinda,<sup>b</sup> Yasuo Ohnishi,<sup>c</sup> Sueharu Horinouchi,<sup>c</sup> Haruko Takahashi,<sup>d</sup> Kazuo Iguchi,<sup>d</sup> Shigeaki Harayama,<sup>e</sup> Kensuke Furukawa<sup>f</sup> and Norihiko Misawa<sup>b,e</sup>

<sup>a</sup>Department of Food and Nutrition, Japan Women's University, 2-8-1, Mejirodai, Bunkyo-ku, Tokyo 112-8681, Japan

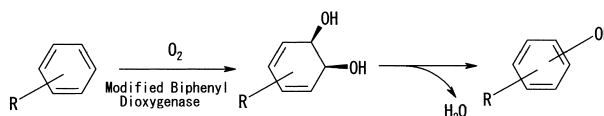
<sup>b</sup>Central Laboratories for Key Technology, Kirin Brewery Co. Ltd, 1-13-5, Fukuura, Kanazawa-ku, Yokohama 236-0004, Japan

<sup>c</sup>Department of Biotechnology, Graduate School of Agriculture and Life Sciences, The University of Tokyo, Bunkyo-ku, Tokyo 113-8657, Japan

<sup>d</sup>Tokyo University of Pharmacy and Life Science, 1432-1, Horinouchi, Hachioji, Tokyo 192-0392, Japan

<sup>e</sup>Marine Biotechnology Institute, 3-75-1, Heita, Kamaishi 026-0001, Japan

<sup>f</sup>Graduate School of Bioresource and Bioenvironmental Sciences, Kyushu University, 6-10-1, Hakozaki, Fukuoka 812-8581, Japan

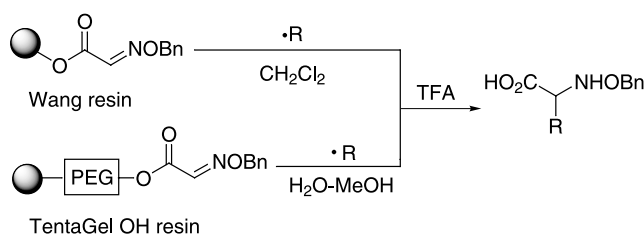


## Carbon–carbon bond construction on solid support: triethylborane-induced radical reactions of oxime ethers

*Tetrahedron 59 (2003) 1901*

Hideto Miyabe, Azusa Nishimura, Yumi Fujishima and Takeaki Naito\*

Kobe Pharmaceutical University, Motoyamakita, Higashinada, Kobe 658-8558, Japan



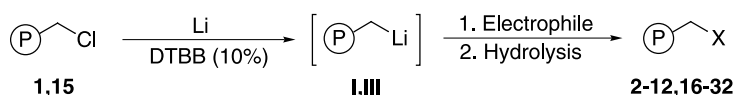
## Functionalised linear and cross-linked polystyrenes from chloromethylated polymers through their organolithium derivatives

*Tetrahedron 59 (2003) 1909*

Miguel Yus,<sup>\*</sup> Cecilia Gómez and Pablo Candela

Departamento de Química Orgánica, Facultad de Ciencias, Universidad de Alicante, Apdo. 99, E-03080 Alicante, Spain

[Electrophile: H<sub>2</sub>O, D<sub>2</sub>O, Me<sub>3</sub>SiCl, Et<sub>3</sub>SiCl, PhMe<sub>2</sub>SiCl, Bu<sup>t</sup>CHO, PhCHO, Et<sub>2</sub>CO, (CH<sub>2</sub>)<sub>3</sub>CO, Ph<sub>2</sub>CO, ClCO<sub>2</sub>Et, ClCO<sub>2</sub>CH<sub>2</sub>Ph, CO<sub>2</sub>, PhCOCl, Bu<sup>t</sup>COCl, HCONMe<sub>2</sub>, PhCH=NPh, CH<sub>2</sub>=CHCH<sub>2</sub>Br, CH<sub>2</sub>=C(Me)CH<sub>2</sub>Br, Ph<sub>2</sub>PCl].



## SmI<sub>2</sub> mediated synthesis of 2,3-disubstituted indole derivatives

Tetrahedron 59 (2003) 1917

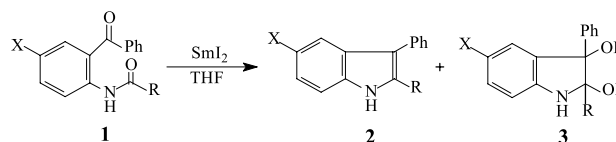
Xuesen Fan<sup>a,b</sup> and Yongmin Zhang<sup>a,c,\*</sup>

<sup>a</sup>Department of Chemistry, Zhejiang University (Campus Xixi), Hangzhou 310028, People's Republic of China

<sup>b</sup>Department of Chemistry, Henan Normal University, Xinxiang 453002, People's Republic of China

<sup>c</sup>State Key Laboratory of Organometallic Chemistry, Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences, Shanghai 200032, People's Republic of China

A novel preparation of 2,3-disubstituted indole derivatives was achieved through SmI<sub>2</sub> induced intramolecular reductive coupling reactions.

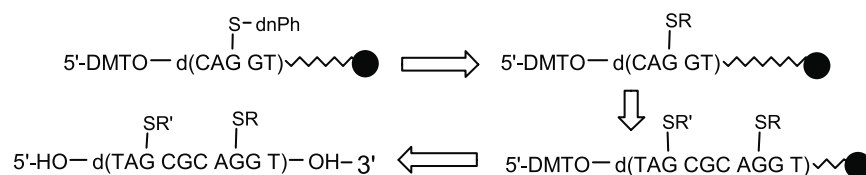


## Introduction of structural diversity into oligonucleotides containing 6-thioguanine via on-column conjugation

Tetrahedron 59 (2003) 1925

Qinguo Zheng,\* Yang Wang and Eric Lattmann

School of Life and Health Sciences, Aston University, Aston Triangle, Birmingham B4 7ET, UK

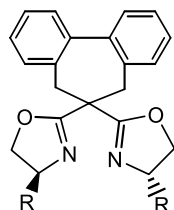


## Novel chiral dibenzo[a,c]cycloheptadiene bis(oxazoline) and catalytic enantioselective cyclopropanation of styrene

Tetrahedron 59 (2003) 1933

Da-Ming Du,\* Bin Fu and Wen-Ting Hua

Key Laboratory of Bioorganic Chemistry and Molecular Engineering of Ministry of Education, College of Chemistry and Molecular Engineering, Peking University, Beijing 100871, People's Republic of China



R: a, i-Bu; b, i-Pr; c, Bz; d, L-Ph; e, D-Ph

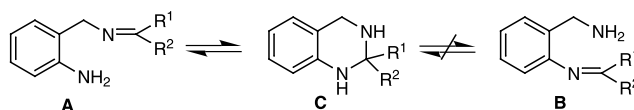
## Ring-chain tautomerism in 2-substituted 1,2,3,4-tetrahydroquinazolines A <sup>1</sup>H, <sup>13</sup>C and <sup>15</sup>N NMR study

Tetrahedron 59 (2003) 1939

Jari Sinkkonen,<sup>a,\*</sup> Kirill N. Zelenin,<sup>b</sup> Abdul-Kadir A. Potapov,<sup>b</sup> Igor V. Lagoda,<sup>b</sup> Valeriy V. Alekseyev<sup>b</sup> and Kalevi Pihlaja<sup>a</sup>

<sup>a</sup>Structural Chemistry Group, Department of Chemistry, University of Turku, Vatselankatu 2, FIN-20014 Turku, Finland

<sup>b</sup>Russian Military Medical Academy, 194044 Saint-Petersburg, Russian Federation



## Synthesis and stereochemical studies of 1- and 2-phenyl-substituted 1,3-oxazino[4,3-*a*]isoquinoline derivatives

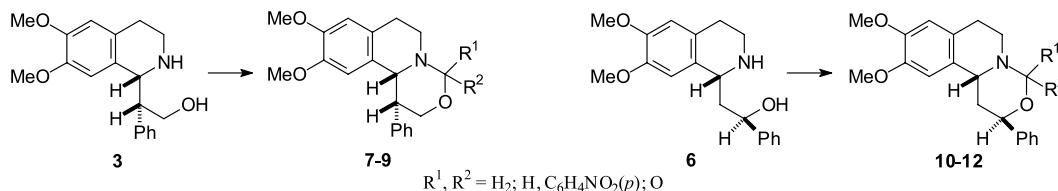
*Tetrahedron* 59 (2003) 1951

Matthias Heydenreich,<sup>a</sup> Andreas Koch,<sup>a</sup> László Lázár,<sup>b</sup> István Szatmári,<sup>a,b</sup> Reijo Sillanpää,<sup>c</sup> Erich Kleinpeter<sup>a,\*</sup> and Ferenc Fülöp<sup>b,\*</sup>

<sup>a</sup>Department of Chemistry, University of Potsdam, POB 69 1553, D-14415 Potsdam, Germany

<sup>b</sup>Institute of Pharmaceutical Chemistry, University of Szeged, H-6701, Szeged, POB 121, Hungary

<sup>c</sup>Department of Chemistry, University of Jyväskylä, FIN-40351 Jyväskylä, Finland



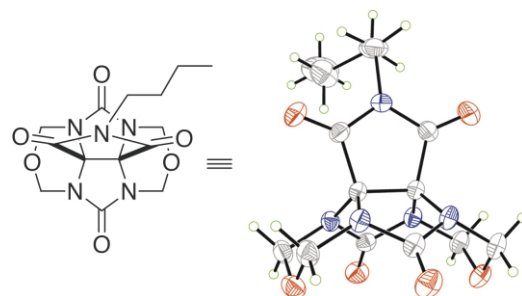
## Preparation of glycoluril monomers for expanded cucurbit[*n*]uril synthesis

*Tetrahedron* 59 (2003) 1961

Christopher A. Burnett,<sup>a</sup> Jason Lagona,<sup>a</sup> Anxin Wu,<sup>a</sup> Jennifer A. Shaw,<sup>a</sup> Daniel Coady,<sup>a</sup> James C. Fettinger,<sup>a</sup> Anthony I. Day<sup>b</sup> and Lyle Isaacs<sup>a,\*</sup>

<sup>a</sup>Department of Chemistry and Biochemistry, University of Maryland, College Park, College Park, MD 20742, USA

<sup>b</sup>School of Chemistry, University College, University of New South Wales, Australian Defence Force Academy, Canberra, ACT 2600, Australia



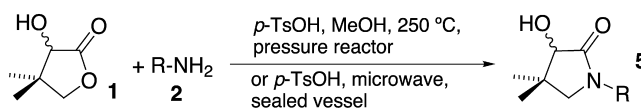
## One-pot synthesis of *N*-substituted pantolactams from pantolactone

*Tetrahedron* 59 (2003) 1971

Ivana Barrios,<sup>a</sup> Pelayo Camps,<sup>a,\*</sup> Mauro Comes-Franchini,<sup>b</sup> Diego Muñoz-Torrero,<sup>a</sup> Alfredo Ricci<sup>b,\*</sup> and Laura Sánchez<sup>a</sup>

<sup>a</sup>Laboratori de Química Farmacèutica (Unitat Associada al CSIC), Facultat de Farmàcia, Universitat de Barcelona, Av. Diagonal 643, E-08028-Barcelona, Spain

<sup>b</sup>Department of Organic Chemistry "A. Mangini", University of Bologna, Viale Risorgimento 4, I-40136 Bologna, Italy



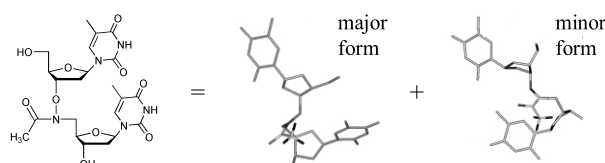
## Proton NMR study on two structures of 3'-*O*-(acetylimino)3'-de(phosphinico)-thymidylyl-(3,5')-deoxythymidine in aqueous solution

*Tetrahedron* 59 (2003) 1981

Yu-Yu Tseng,<sup>a</sup> Te-Fang Yang<sup>b</sup> and Lou-sing Kan<sup>a,\*</sup>

<sup>a</sup>Institute of Chemistry, Academia Sinica, Nankang, Taipei 11529, Taiwan, ROC

<sup>b</sup>Department of Applied Chemistry, Chaoyang University of Technology, Wufeng, Taichung 413, Taiwan, ROC

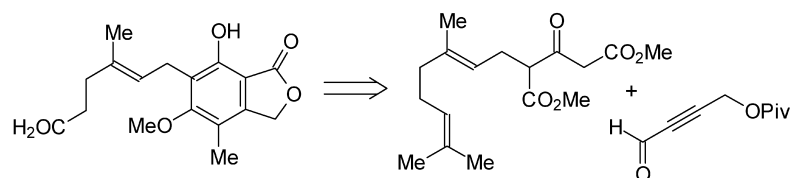


### Total synthesis of mycophenolic acid

Adrián Covarrubias-Zúñiga,\* Armando Gonzalez-Lucas and Mireya M. Domínguez

Instituto de Química, Universidad Nacional Autónoma de México, Circuito Exterior, Ciudad Universitaria, Coyoacán 04510, Mexico

*Tetrahedron* 59 (2003) 1989

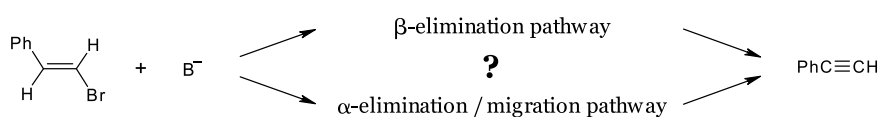


### Study of the mechanism of base induced dehydrobromination of *trans*- $\beta$ -bromostyrene

Mieczysław Mąkosza\* and Alexey A. Chesnokov

Institute of Organic Chemistry, Polish Academy of Sciences, ul. Kasprzaka 44, POB 58, 01-224 Warsaw 42, Poland

*Tetrahedron* 59 (2003) 1995

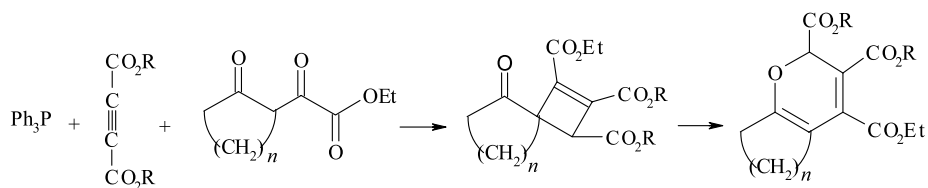


### A new synthesis of highly functionalized 2H-pyran derivatives

Issa Yavari\* and Mohammad Bayat

Department of Chemistry, University of Tarbiat Modarres, P.O. Box 14115-175, Tehran, Iran

*Tetrahedron* 59 (2003) 2001



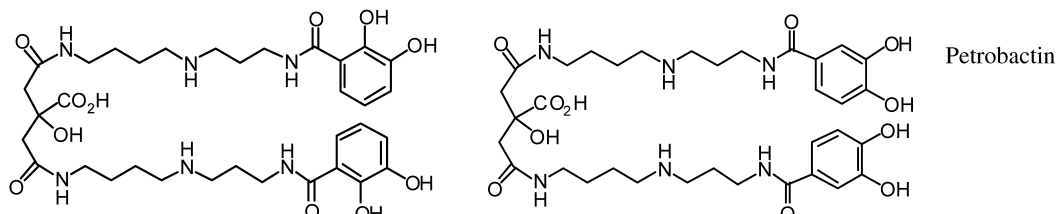
### Total synthesis and structure revision of petrobactin

Raymond J. Bergeron,<sup>a,\*</sup> Guangfei Huang,<sup>a</sup> Richard E. Smith,<sup>a</sup> Neelam Bharti,<sup>a</sup> James S. McManis<sup>a</sup> and Alison Butler<sup>b</sup>

<sup>a</sup>Department of Medicinal Chemistry, University of Florida, Gainesville, FL 32610, USA

<sup>b</sup>Department of Chemistry and Biochemistry, University of California, Santa Barbara, CA 93106, USA

*Tetrahedron* 59 (2003) 2007



**Novel asymmetric total synthesis of the natural  
(+)-6-epicastanospermine**

*Tetrahedron 59 (2003) 2015*

Hong-Xing Zhang,<sup>a</sup> Peng Xia<sup>b</sup> and Wei-Shan Zhou<sup>c,\*</sup>

<sup>a</sup>Department of Chemistry, Medical Center of Fudan University, Shanghai 200032, People's Republic of China

<sup>b</sup>Department of Medicinal Chemistry, School of Pharmacy, Medical Center of Fudan University, Shanghai 200032, People's Republic of China

<sup>c</sup>Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences, 354 Fenglin Lu, Shanghai 200032, People's Republic of China

