

## Graphical abstracts

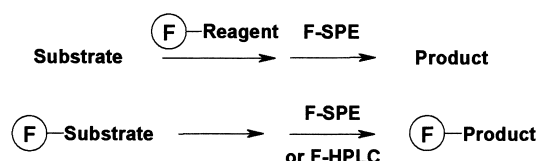
### Fluorous technologies for solution-phase high-throughput organic synthesis

Wei Zhang

Fluorous Technologies, Inc., University of Pittsburgh Applied Research Center, 970 William Pitt Way, Pittsburgh, PA 15238, USA

Recent progresses on the development of fluorous technologies for solution-phase parallel and mixture synthesis are reviewed.

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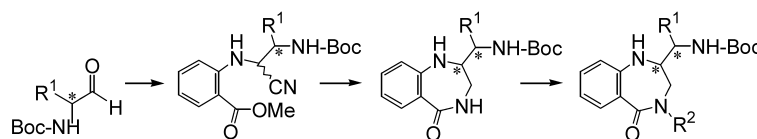
### Versatile synthesis of chiral 2-substituted-5-oxo-1,2,3,4-tetrahydro-5H-1,4-benzodiazepines as novel scaffolds for peptidomimetic building

Susana Herrero,<sup>a</sup> M. Teresa García-López,<sup>a</sup> Edurne Cenarruzabeitia,<sup>b</sup> Joaquín Del Río<sup>b</sup> and Rosario Herranz<sup>a,\*</sup>

<sup>a</sup>Instituto de Química Médica (CSIC), Juan de la Cierva 3, E-28006 Madrid, Spain

<sup>b</sup>Departamento de Farmacología, Universidad de Navarra, Irunlarrea 1, E-31080, Spain

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### Synthesis of new bicyclic lactam peptidomimetics by ring-closing metathesis reactions

Lino Colombo,<sup>a,\*</sup> Marcello Di Giacomo,<sup>a</sup> Valerio Vinci,<sup>a</sup> Matteo Colombo,<sup>b</sup> Leonardo Manzoni<sup>c</sup> and Carlo Scolastico<sup>b</sup>

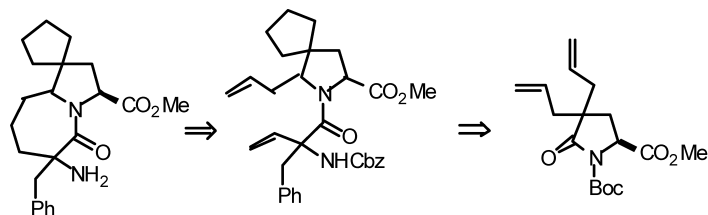
<sup>a</sup>Dipartimento di Chimica Farmaceutica, Università di Pavia, Via Taramelli, 12, I-27100 Pavia, Italy

<sup>b</sup>Dipartimento di Chimica Organica e Industriale, Università degli Studi di Milano, Via Venezian, 21, I-20133 Milano, Italy

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Via Golgi 19, I-20133 Milano, Italy

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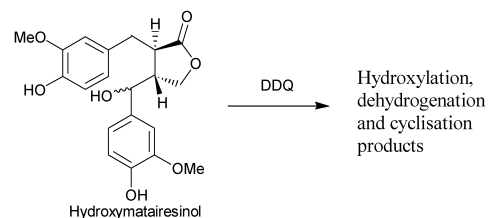


### Oxidative transformation of the natural lignan hydroxymatairesinol with 2,3-dichloro-5,6-dicyano-1,4-benzoquinone

Patrik C. Eklund<sup>\*</sup> and Rainer E. Sjöholm

Process Chemistry Group, Department of Organic Chemistry, Åbo Akademi University, Pöispankatu 8, 20500 Turku, Finland

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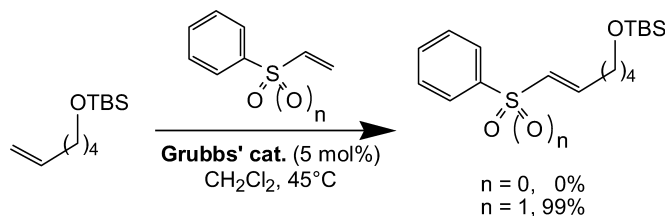


## Cross-metathesis reaction of vinyl sulfones and sulfoxides

Anna Michrowska, Michał Bieniek, Mikhail Kim, Rafał Klajn and Karol Grela\*

Institute of Organic Chemistry, Polish Academy of Sciences, Kasprzaka 4452, P.O.B. 58, PL01-224 Warsaw, Poland

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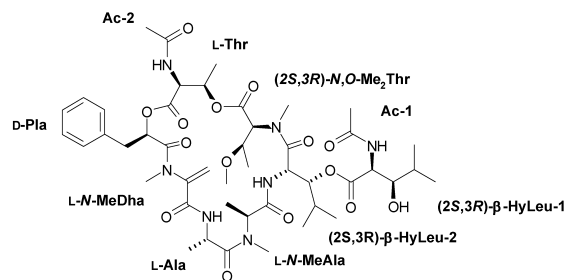
## Structure of YM-254890, a Novel $G_{q/11}$ Inhibitor from *Chromobacterium* sp. QS3666

Masatoshi Taniguchi,\* Ken-ichi Suzumura, Koji Nagai, Tomihisa Kawasaki, Tetsu Saito, Jun Takasaki, Ken-ichi Suzuki, Shigeo Fujita and Shin-ichi Tsukamoto

Institute for Drug Discovery Research, Yamanouchi Pharmaceutical Co., Ltd, 21, Miyukigaoka, Tsukuba-shi, Ibaraki 305-8585, Japan

The isolation and structure elucidation of a novel  $G_{q/11}$  inhibitor, YM-254890, from *Chromobacterium* sp. QS3666 is described. YM-254890 is a cyclic depsipeptide containing uncommon amino acids;  $\beta$ -hydroxyleucine (two residues), *N,O*-dimethylthreonine and *N*-methyldehydroalanine.

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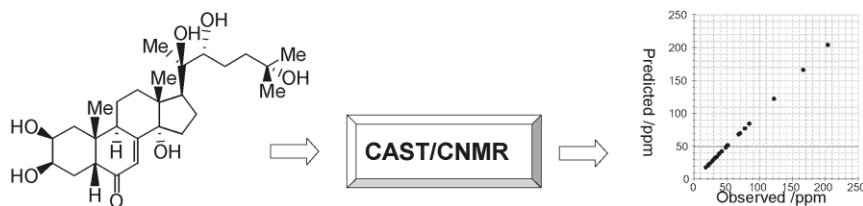
## CAST/CNMR: highly accurate $^{13}C$ NMR chemical shift prediction system considering stereochemistry

Hiroko Satoh,<sup>a,b,c,\*</sup> Hiroyuki Koshino,<sup>a,\*</sup> Jun Uzawa<sup>a</sup> and Tadashi Nakata<sup>a</sup>

<sup>a</sup>RIKEN (The Institute of Physical and Chemical Research), 2-1 Hirosawa, Wako, Saitama 351-0198, Japan

<sup>b</sup>National Institute of Informatics, 2-1-2 Hitotsubashi, Chiyoda-ku, Tokyo 101-8430, Japan

<sup>c</sup>PRESTO, Japan Science and Technology Corporation (JST), 4-1-8 Honcho, Kawaguchi, Saitama 332-0012, Japan

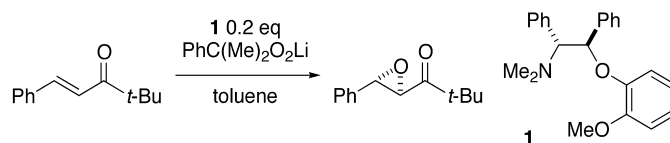


## Chiral ligand-controlled catalytic asymmetric epoxidation of $\alpha,\beta$ -unsaturated carbonyl compounds with peroxide

Yoshihito Tanaka, Katsumi Nishimura and Kiyoshi Tomioka\*

Graduate School of Pharmaceutical Sciences, Kyoto University, Yoshida, Sakyo-ku, Kyoto 606-8501, Japan

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### Investigation of the inhibition mechanism of coumarins on chymotrypsin by mass spectrometry

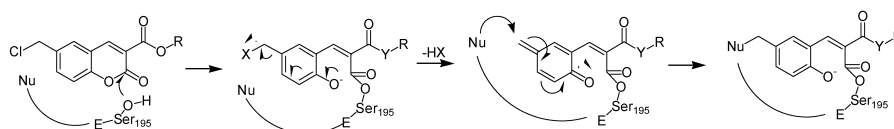
*Tetrahedron* 59 (2003) 4557

Lionel Pochet,<sup>a,\*</sup> Marc Dieu,<sup>b</sup> Raphaël Frédérick,<sup>a</sup> Ann-Marie Murray,<sup>a</sup> Isabelle Kempen,<sup>c</sup> Bernard Pirotte<sup>c</sup> and Bernard Masereel<sup>a</sup>

<sup>a</sup>Department of Pharmacy, University of Namur, FUNDP, 61, rue de Bruxelles, B-5000 Namur, Belgium

<sup>b</sup>Unité de recherche en biologie cellulaire, University of Namur, FUNDP, 61, rue de Bruxelles, B-5000 Namur, Belgium

<sup>c</sup>Natural and Synthetic Drug Research Center, Université de Liège, 1, av. de l'Hôpital bât B36, tour 4, B-4000 Liège, Belgium



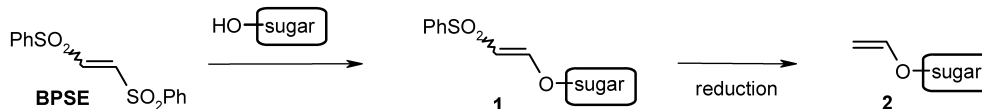
### Synthesis of sugar-based ethenyl ethers through a vinyl bis-sulfone methodology

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Florence Chéry,<sup>a</sup> Matthieu Desroses,<sup>a</sup> Arnaud Tatibouët,<sup>a</sup> Ottorino De Lucchi<sup>b</sup> and Patrick Rollin<sup>a,\*</sup>

<sup>a</sup>Institut de Chimie Organique et Analytique, UMR CNRS 6005, Université d'Orléans, B.P. 6759, F-45067 Orléans, France

<sup>b</sup>Dipartimento di Chimica, Università Ca' Foscari di Venezia, Dorsoduro 2137, I-30123 Venezia, Italy

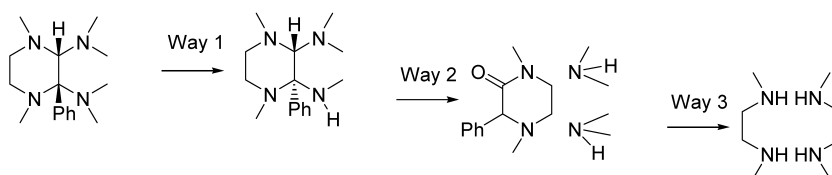


### Phenylglyoxal for polyamines modification and cyclam synthesis

*Tetrahedron* 59 (2003) 4573

Raphaël Tripier, Françoise Chuburu, Michel Le Baccon and Henri Handel<sup>\*</sup>

Chimie, Electrochimie Moléculaire et Analytique, Université de Bretagne Occidentale, UMR CNRS 6521, B.P. 809, 6 avenue Le Gorgeu, 29285 Brest Cedex, France



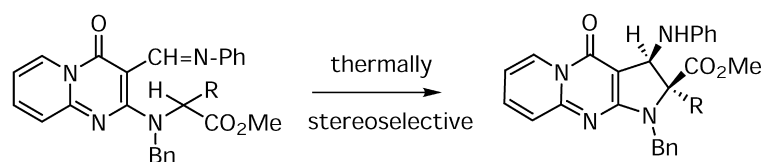
### Stereoselective pyrroline-ring formation through the cyclization of conjugated azomethine ylides at the periphery of pyrido[1,2-a]pyrimidine system

*Tetrahedron* 59 (2003) 4581

Michihiko Noguchi,<sup>a,\*</sup> Masashi Shirai,<sup>a</sup> Kuniko Nakashima,<sup>a</sup> Ichiro Arai,<sup>a</sup> Akiko Nishida,<sup>a</sup> Hidetoshi Yamamoto<sup>a</sup> and Akikazu Kakehi<sup>b</sup>

<sup>a</sup>Department of Applied Chemistry, Faculty of Engineering, Yamaguchi University, Tokiwadai, Ube 755-8611, Japan

<sup>b</sup>Department of Chemistry and Material Engineering, Faculty of Engineering, Shinshu University, Wakasato, Nagano 380-8553, Japan

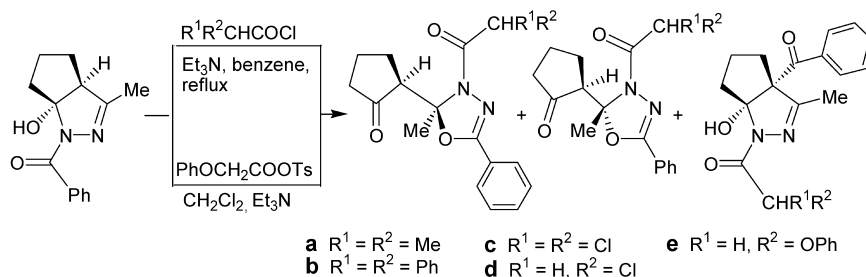


## Unusual reaction of *N*-aroyldihydrocyclopenta-pyrazolidinol with ketenes: formation of 1,3,4-oxadiazoles

*Tetrahedron* 59 (2003) 4591

Constantinos A. Tsoleridis,\*  
Julia Stephanidou-Stephanatou,\*  
Petros Gounaridis, Hara Zika and  
Minodora Pozarentzi

Laboratory of Organic Chemistry,  
Department of Chemistry,  
Aristotle University of Thessaloniki,  
Thessaloniki 54124, Greece



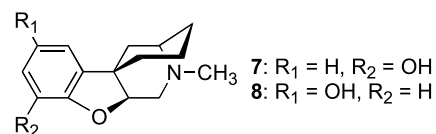
## Probes for narcotic receptor mediated phenomena. Part 31: Synthesis of *rac*-(3*R*,6*aS*,11*aS*)-2-methyl-1,3,4,5,6,11a-hexahydro-2*H*-3,6*a*-methanobenzofuro[2,3-*c*]azocine-10-ol, and azocine-8-ol, the *ortho-c* and the *para-c* oxide-bridged phenylmorphans isomers

*Tetrahedron* 59 (2003) 4603

Dragana Tadic,<sup>a</sup> Joannes T. M. Linders,<sup>a</sup> Judith L. Flippen-Anderson,<sup>b</sup> Arthur E. Jacobson<sup>a</sup> and Kenner C. Rice<sup>a,\*</sup>

<sup>a</sup>Laboratory of Medicinal Chemistry, Department of Health and Human Services, Building 8, Room B1-23, National Institute of Diabetes and Digestive and Kidney Diseases, National Institutes of Health, Bethesda, MD 20892-0815, USA

<sup>b</sup>Laboratory for the Structure of Matter, Naval Research Laboratory, Washington, DC 20375, USA

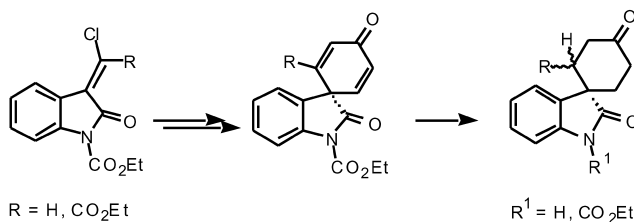


## A new synthetic procedure to spiro[cyclohexane-1,3'-indoline]-2',4-diones

*Tetrahedron* 59 (2003) 4615

Egle Maria Beccalli, Francesca Clerici and Maria Luisa Gelmi\*

Istituto di Chimica Organica 'Alessandro Marchesini', Facoltà di Farmacia, Università di Milano, Via Venezian 21, I-20133 Milano, Italy



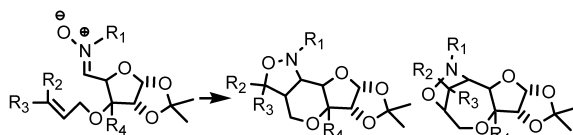
## Synthesis of chiral oxepanes and pyrans by 3-*O*-allylcarbohydrate nitronc cycloaddition (3-OACNC)

*Tetrahedron* 59 (2003) 4623

Ashoke Bhattacharjee,<sup>a</sup> Seema Datta,<sup>a</sup> Partha Chattopadhyay,<sup>a</sup> Nanda Ghoshal,<sup>a</sup> Asish P. Kundu,<sup>a</sup> Arani Pal,<sup>a</sup> Ranjan Mukhopadhyay,<sup>a</sup> Sandip Chowdhury,<sup>a</sup> Anup Bhattacharjya<sup>a,\*</sup> and Amarendra Patra<sup>b</sup>

<sup>a</sup>Department of Chemistry, Indian Institute of Chemical Biology, 4, Raja S. C. Mullick Road, Kolkata 700 032, India

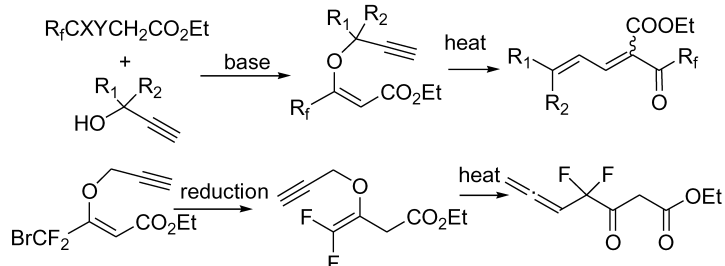
<sup>b</sup>Centre of Advanced Studies on Natural Products, Department of Chemistry, University College of Science, Kolkata 700 009, India



**The synthesis of 2,4-dienyl fluoroalkyl ketones by a tandem three-stage sequence of propargyl 2-fluoroalkylvinyl ether formation, Claisen rearrangement, and allene-to-conjugated diene isomerization**

Weimin Peng and Shizheng Zhu\*

Shanghai Institute of Organic Chemistry,  
Chinese Academy of Sciences, 354 Fenglin Lu,  
Shanghai 200032, People's Republic of China

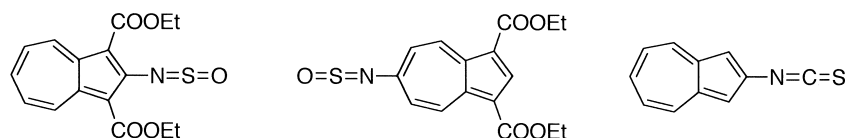


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**Preparation, characterization, and cycloaddition reaction of the heterocumulenes attached directly to azulenes. An efficient strategy for the preparation of azulene-substituted heterocycles**

Shunji Ito,\* Tetsuo Okujima, Chizuko Kabuto and Noboru Morita

Department of Chemistry, Graduate School of Science, Tohoku University, Sendai 980-8578, Japan



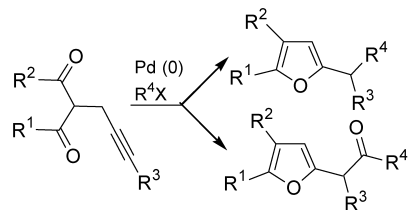
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**Highly substituted furans from 2-propynyl-1,3-dicarbonyls and organic halides or triflates via the oxypalladation-reductive elimination domino reaction**

Antonio Arcadi,<sup>a,\*</sup> Sandro Cacchi,<sup>b,\*</sup> Giancarlo Fabrizi,<sup>b</sup> Fabio Marinelli<sup>a</sup> and Luca M. Parisi<sup>b</sup>

<sup>a</sup>Dipartimento di Chimica Ingegneria Chimica e Materiali della Facoltà di Scienze,  
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<sup>b</sup>Dipartimento di Studi di Chimica e Tecnologia delle Sostanze Biologicamente Attive,  
Università degli Studi "La Sapienza," P.le A. Moro 5, 00185 Rome, Italy



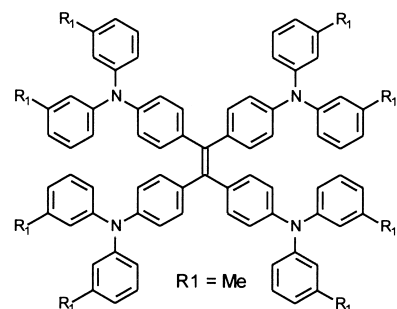
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**Polyaromatic amines. Part 3: Synthesis of poly(diarylamino)styrenes and related compounds**

M. John Plater\* and Toby Jackson

Department of Chemistry, University of Aberdeen, Meston Building, Room G103, Meston Walk,  
Aberdeen AB24 3UE, UK

A series of triarylamines connected by alkene spacers have been prepared and characterised by cyclic voltammetry. The compound shown has an unusually large potential gap of 770 mV between the first and second oxidation potentials.



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**Polyaromatic amines. Part 4: Synthesis of poly(ethynyl)  
linked aromatic amines**

*Tetrahedron 59 (2003) 4687*

M. John Plater\* and Toby Jackson

*Department of Chemistry, University of Aberdeen, Meston Building, Room G103, Meston Walk, Aberdeen AB24 3UE, Scotland, UK*

