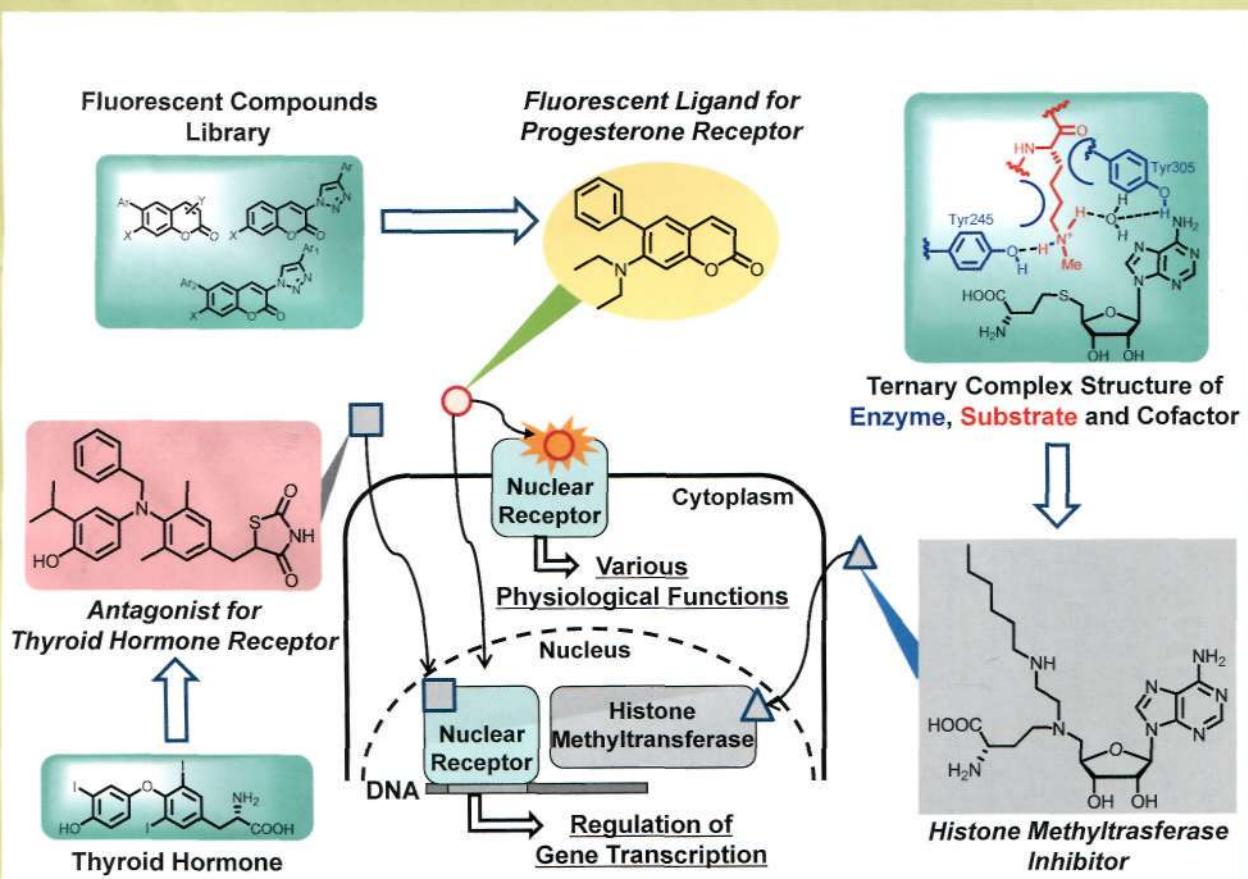


# Chemical and Pharmaceutical Bulletin

February 2013

CPBTAL 61 (2) 111-250 (2013)

Vol. 61 No. 2



Development of Functional Molecules for Elucidation of the Physiological Roles of Several Nuclear Receptors and Their Endogenous Ligands

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THE PHARMACEUTICAL SOCIETY OF JAPAN

<http://cpb.pharm.or.jp>

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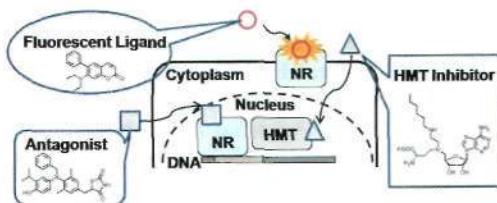
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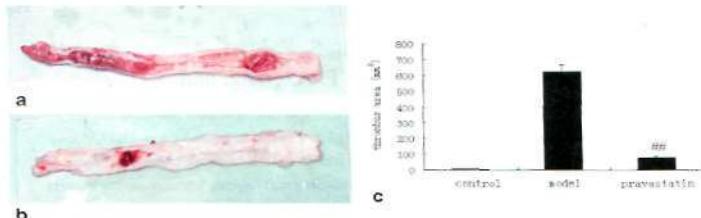


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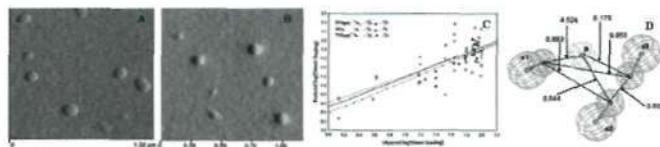
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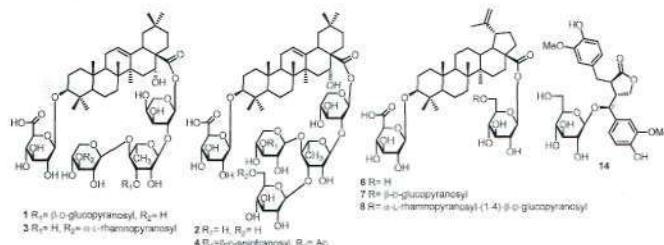
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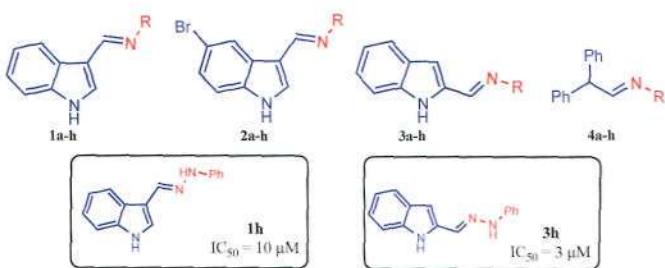
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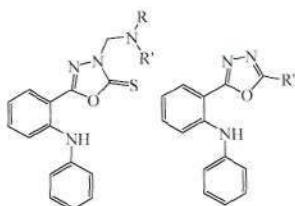
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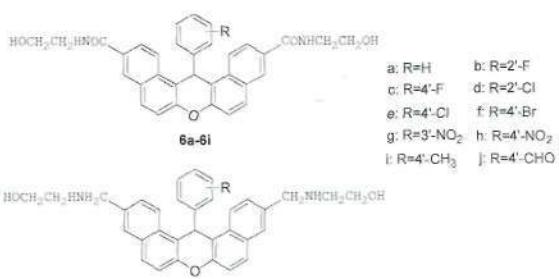
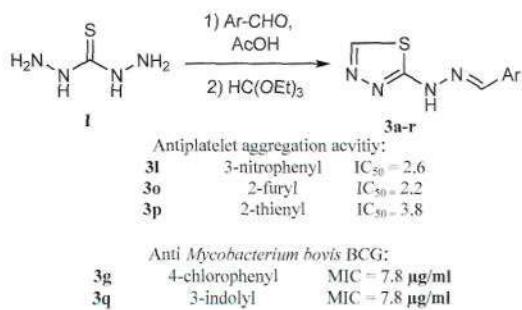
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## Design, Synthesis and Anticancer Activity of *N<sup>3</sup>,N<sup>11</sup>*-Bis(2-hydroxyethyl)-14-aryl-14*H*-dibenzo[*a,j*]xanthenes-3,11-dicarboxamide

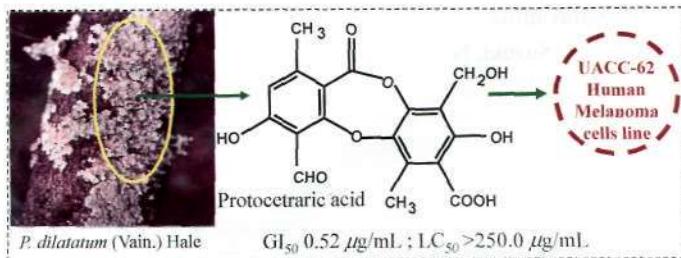
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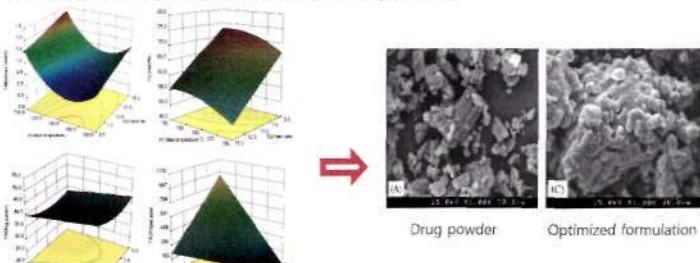


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**Statistical Modeling, Optimization and Characterization of Spray-Dried Solid Self-Microemulsifying Drug Delivery System Using Design of Experiments**

N. Marasini, T. H. Tran, B. K. Poudel, H.-G. Choi, C. S. Yong, and J. O. Kim

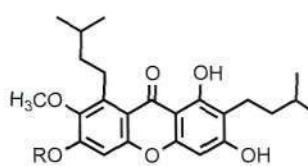
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**Potent Activity against Multidrug-Resistant *Mycobacterium tuberculosis* of  $\alpha$ -Mangostin Analogs**

P. Sudta, P. Jiarawapi, A. Suksamrarn, P. Hongmanee, and S. Suksamrarn

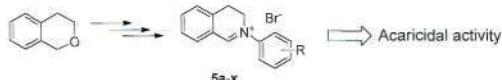


A new series of  $\alpha$ -mangostin analogs was prepared and their antimycobacterial activity was evaluated. The 6-O-alkyl tetrahydro  $\alpha$ -mangostins exhibited highly potent activity against the multidrug-resistant *Mycobacterium tuberculosis* with MICs of 0.78–1.56  $\mu$ g/mL.

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**Synthesis of 2-Aryl-3,4-dihydroisoquinolin-2-iun Bromides and Their *in Vitro* Acaricidal Activity against *Psoroptes cuniculi***

Y.-N. Ma, X.-J. Yang, L. Pan, Z. Hou, H.-L. Geng, X.-P. Song, L. Zhou, and F. Miao



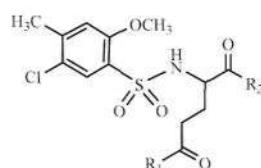
R = H, Me, OH, OMe, NO<sub>2</sub>, CF<sub>3</sub>, F, Cl, Br, I

Twenty-four 2-aryl-3,4-dihydroisoquinolin-2-iun bromides were synthesized by a new approach and evaluated for *in vitro* acaricidal activity against *Psoroptes cuniculi*. Fourteen compounds showed the stronger activity against *P. cuniculi* than a standard drug ivermectin and their natural model compound.

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**Synthesis and Biological Evaluation of Some Substituted-2-N-(5-chloro-2-methoxy-4-methylphenylsulphonyl) Glutamic Acid Derivatives against Prostate Cancer Cell Line PC3**

G. S. Hassan and D. E. Abdel Rahman

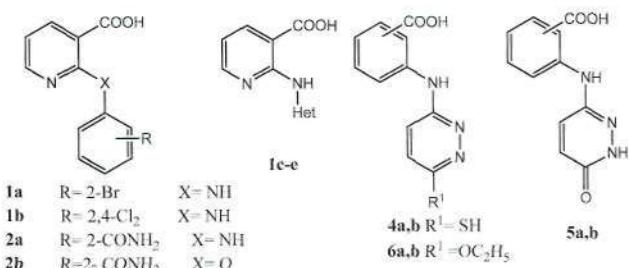


New series of substituted glutamine ( $R_1=NHR$ ,  $R_2=OH$ ) and glutamic acid diamide, diuride, dihydrazide ( $R_1, R_2=NHR$ ) were synthesized from the parent glutamic acid compound ( $R_1, R_2=OH$ ) and evaluated for antitumor activity against PC3 cell line.

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**Synthesis and Biological Evaluation of New Heteroaryl Carboxylic Acid Derivatives as Anti-inflammatory-Analgesic Agents**

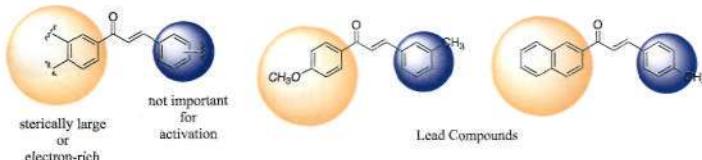
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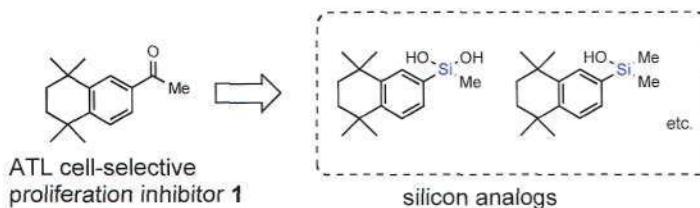
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**Organosilicon Compounds as Adult T-Cell Leukemia Cell Proliferation Inhibitors**

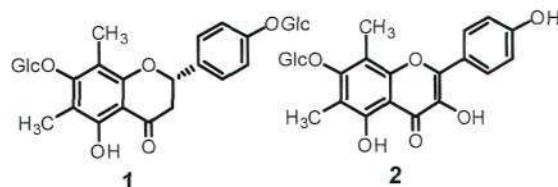
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**Diplomorphanins A and B: New C-Methyl Flavonoids from *Diplomorpha canescens***

H. P. Devkota, M. Watanabe, T. Watanabe, and S. Yahara

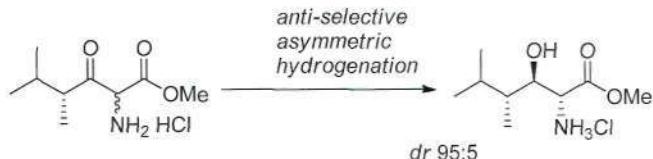


Diplomorphanins A (**1**) and B (**2**) were isolated from the aerial parts of *Diplomorpha canescens* along with farrerol 7-O- $\beta$ -D-glucopyranoside (**3**).

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**Efficient Diastereoselective Synthesis of (2*R*,3*R*,4*R*)-2-Amino-3-hydroxy-4,5-dimethylhexanoic Acid, the Lactone Linkage Unit of Homophymine A**

J. Ohtaka, A. Hamajima, T. Nemoto, and Y. Hamada



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