JANUARY 2008

VOLUME 41

NUMBER 10

## ACCOUNTS

of chemical earch

0 1 4 pation erica pocie

pubs.acs.org/acr

SPECIAL ISSUE ON Modern Molecular Approaches to Drug Design & Discovery



January 2008 = Volume 41 = Number 10
Registered in U.S. Patent and Trademark Office
© 2008 American Chemical Society
ACHRE4 41(1) 1–156 (2008)
ISSN 0001-4842

## Special Issue on Modern Molecular Approaches to Drug Design and Discovery

**GUEST EDITOR: IWAO OJIMA** 

## TABLE OF CONTENTS

1	Editorial
	JOAN SELVERSTONE VALENTINE, KENDALL N. HOUK, PAUL F. BARBARA

4

21

- 2 Guest Editorial: Modern Molecular Approaches to Drug Design and Discovery
  - The Chemical Versatility of Natural-Product Assembly Lines
    CHRISTOPHER T. WALSH
- Inhibitors of Fabl, an Enzyme Drug Target in the Bacterial Fatty Acid Biosynthesis Pathway

  HAO LU AND PETER J. TONGE\*

Epothilones as Lead Structures for the Synthesis-Based Discovery of New Chemotypes for Microtubule Stabilization

FABIAN FEYEN, FRÉDÉRIC CACHOUX, JÜRG GERTSCH, MARKUS WARTMANN, AND KARL-HEINZ ALTMANN\*

- Discovery and Combinatorial Synthesis of Fungal Metabolites
  Beauveriolides, Novel Antiatherosclerotic Agents

  HIROSHI TOMODA\* AND TAKAYUKI DOI
- 40 Function-Oriented Synthesis, Step Economy, and Drug Design PAUL A. WENDER,\* VISHAL A. VERMA, THOMAS J. PAXTON, AND THOMAS H. PILLOW
- Challenges in Modern Drug Discovery: A Case Study of Boceprevir, an HCV Protease Inhibitor for the Treatment of Hepatitis C Virus Infection

F. GEORGE NJOROGE," KEVIN X. CHEN, NENG-YANG SHIH, AND JOHN J. PJWINSKI

- 60 Functionalized Carbon Nanotubes in Drug Design and Discovery MAURIZIO PRATO, KOSTAS KOSTARELOS, AND ALBERTO BIANCO
- 69 Hybrid Molecules with a Dual Mode of Action: Dream or Reality?

  BERNARD MEUNIER