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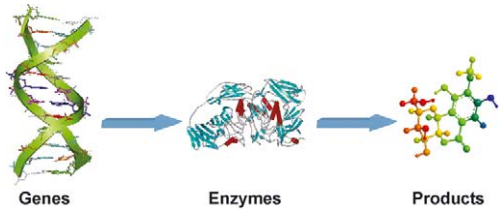
Bioorganic & Medicinal Chemistry

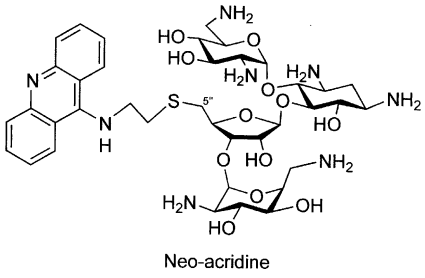
Contents

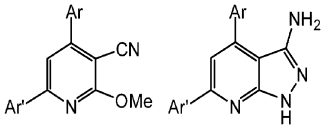
REVIEW



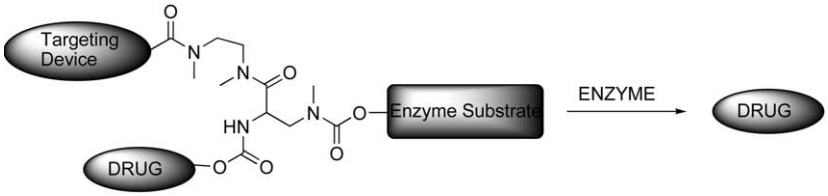
In this review, our intention is to highlight the main landmarks of the last 20 years that have led to transfer the chemical efficiency shown by the enzymes in the cell to the synthesis of bioactive molecules in the laboratory.

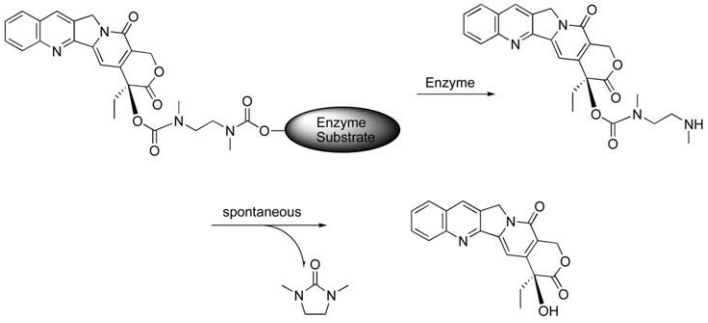
ARTICLES

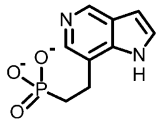


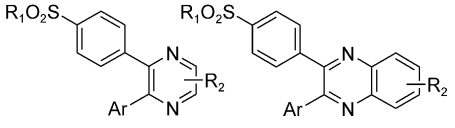


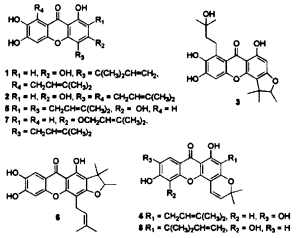
Lewis acid-catalyzed reaction of hydrazine (99%) with 2-methoxy-3-cyano-4,6-diarylpyridines afforded the corresponding 1*H*-pyrazolo[3,4-*b*]pyridines under mild conditions.



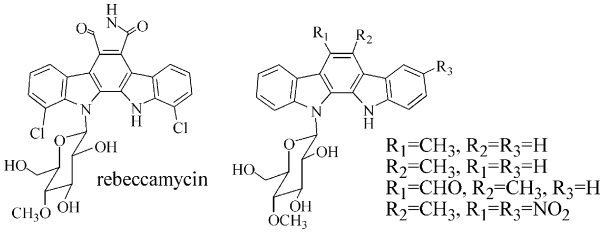


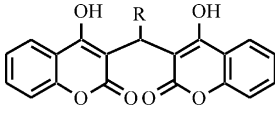






Eight new xanthones, cudratricusxanthones A–H (**1**–**8**), and ten known compounds (**9**–**18**) were isolated from the roots of *Cudrania tricuspidata*. **5**, **7**, cudraxanthone M (**10**), and toxyloxanthone C (**12**) showed inhibitory effects on HCT-116, SMMC-7721, SGC-7901, and BGC-823 cell lines (IC_{50} = 1.6–11.8 μg/mL). **2**, **4**, and xanthone V_{1a} (**11**) displayed significant cytotoxicity against HCT-116, SMMC-7721, and SGC-7901 (IC_{50} = 1.3–9.8 μg/mL).





(**1-21**)

A variety of biscoumarins (**1**–**21**) with variable substituents at C-11 were synthesized with an improved method and evaluated as urease inhibitors.

OTHER CONTENTS

*Corresponding author

Supplementary data available via ScienceDirect

COVER

Advances in biocatalysis and recombinant DNA technologies, made during the last 20 years, have enabled researchers to go from genes to compounds and to apply enzyme catalysis in a variety of approaches to new bioactive compounds. The graphic was designed from the following PDB entries: 1FUA (Dreyer, M. K.; Schulz, G. E. *J. Mol. Biol.* (1996) **259**, 458–466) and 112D (Brown, T., Hunter, W. N., Kneale, G., Kennard, O. *Proc. Natl. Acad. Sci. USA* (1986) **83**, 2402), using the program ViewerPro 4.2.

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