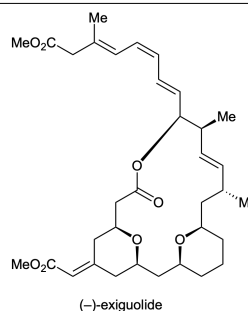


■ REVIEW

- 1709 **Total Synthesis of (-)-Exiguolide, a Potent Anticancer Marine Macrolide**
Haruhiko Fuwa*

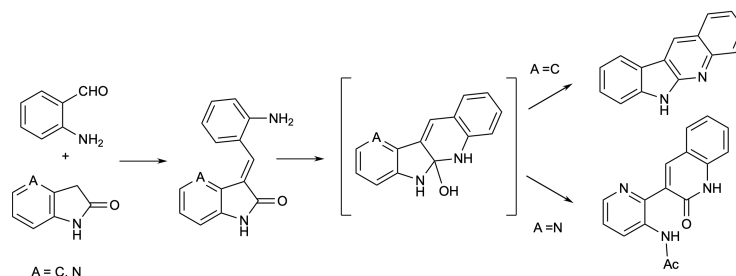


Lee (2008 (ent))
Fuwa (2010, 2022)
Roulland (2010)
Scheidt (2011)
Reddy (2012)
Song (2015, 2015)
Ishihara (2020)

Macrolide Total Synthesis Synthetic Method Synthetic Efficiency

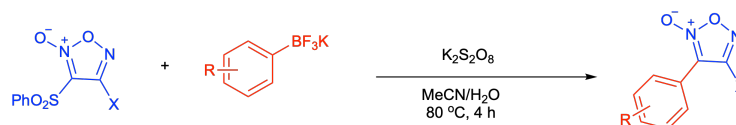
■ PAPERS

- 1745 **Microwave-Induced One Step Synthesis of Structurally Diverse Linear Indoloquinolines: Concise Synthesis of Norneocryptolepine**
Krisztián Biró, János Tatai, Bence Pollák, Márk Molnár, and Miklós Nyerges*



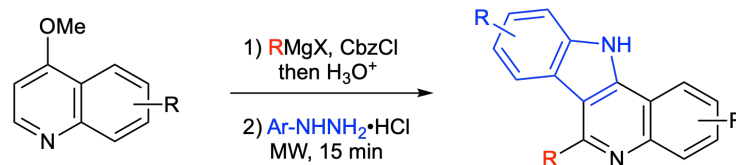
Indole Alkaloid Knoevenagel Condensation Intramolecular Cyclization Quinoline Microwave

- 1770 **Direct Arylation of Furoxan Using Potassium Aryltrifluoroborates**
Chenlu Dong, Masahiko Hayashi, and Ryosuke Matsubara*



Furoxan Radical Arylation Borate

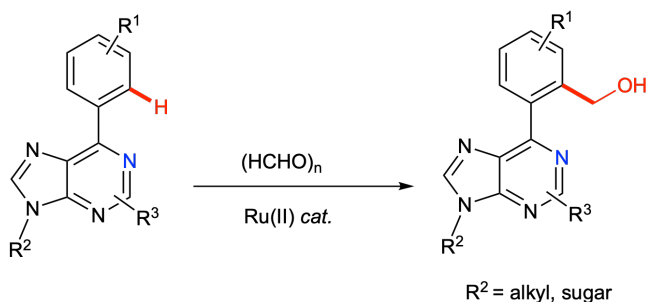
- 1782 **A Microwave-Assisted, Two-Step Synthesis of Indolo[3,2-c]quinolines via Fischer Indolization and Oxidative Aromatization**
Sezgin Kiren,* Faisal Mahmud Yakubu, Hassan Mohammed, and Felicia Grimes



Indolo[3,2-c]quinoline N-Acyl-4-methoxyquinolinium Salt Microwave-Enhanced Reaction Oxidative Aromatization Fischer Indolization

1792 Ruthenium(II)-Catalyzed *ortho* Hydroxymethylation of 6-Arylpurines with Paraformaldehyde via Purine-Directed C-H Activation

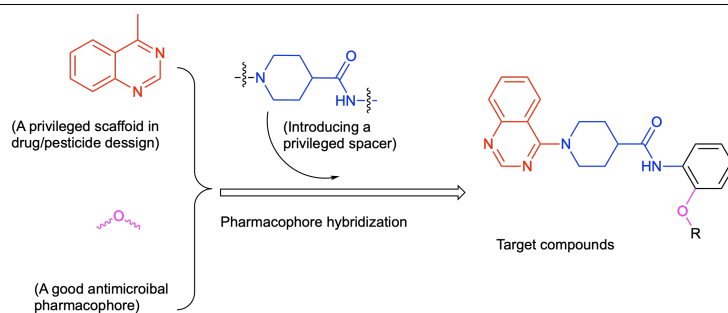
Jiaqi Jiang, Junli Yang, Siqi Li, Yaxi Yang,* and Bing Zhou*



Hydroxymethylation Ruthenium(II) Catalyst Paraformaldehyde

1809 Design, Synthesis, and Biological Activity Analysis of Novel Quinazoliny Ether Derivatives Containing Piperidinamide Structure

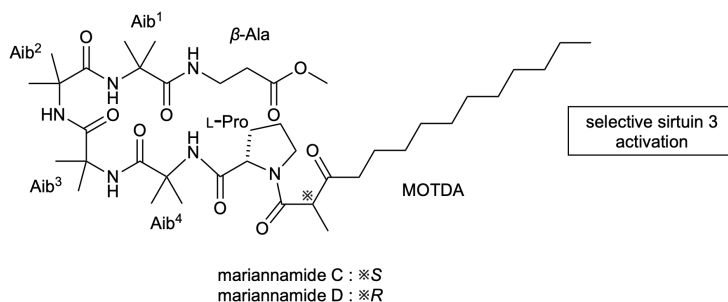
Peijia Li, Yehui Yang, Nan Wu, Ya Yan, Lian An, Guangmin Tian, and Xiaoping Bao*



Quinazoline Antibacterial Mechanism Piperidinamide Ether Derivative

1822 Stereochemistries of Mariannamides C and D, Two Lipohexapeptides, Isolated from *Mariannaea elegans* NBRC102301

Kan'ichiro Ishiuchi,* Akiho Nagumo, Mitsuyasu Kawaguchi, Honoka Furuyashiki, Hidehiko Nakagawa, and Dai Hirose

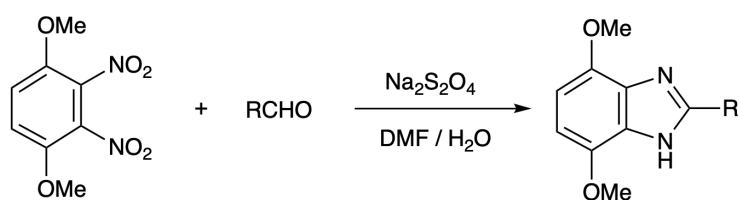


Mariannaea elegans NBRC102301 Mariannamides C-D Lipopeptide Sirtuin 3

■ SHORT PAPERS

1837 Facile Protocol for the Synthesis of Electron-Rich Benzimidazole Derivatives

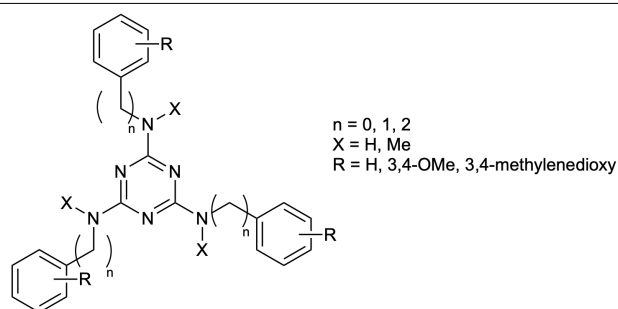
Robert D. Pike and Brian E. Love*



Benzimidazole Synthesis Dinitrobenzene

1845 Antiviral Activity of Some C₃-Symmetrical *N*-Methyl Benzylamine-Substituted 1,3,5-Triazines and Related Compounds

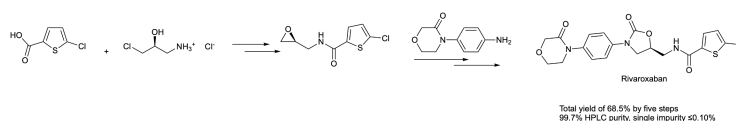
Shunsuke Shimomura, Kazumi Yokomizo, Jian-Rong Zhou, Nobuko Mibu, Makoto Furutachi, and Kunihiro Sumoto*



1,3,5-Triazine Anti-HSV-1 Activity C3-Symmetrical Molecule *N*-Methylation Multivalent

1854 An Improved and Practical Synthesis of Rivaroxaban

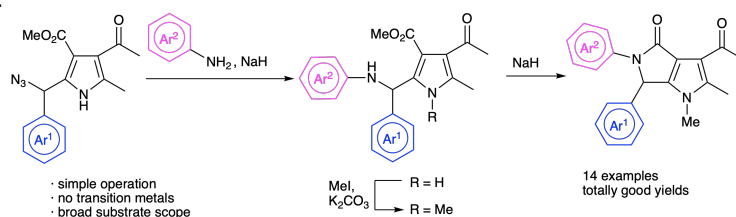
Shovkat Olimjonov, Xiaojun Yang, Yongjian Liu, Abdullajon Odilov, Hongjian Qin, Tianwen Hu, Sharafitdin Mirzaakhmedov, Yuanchao Xie, Fuqiang Zhu,* and Jingshan Shen*



Rivaroxaban Epoxy Ring-Opening Magnesium Salt Process Optimization

1866 Synthesis of Polysubstituted 5,6-Dihydropyrrolo[3,4-*b*]-pyrrol-4(1*H*)-ones from 2-[Aryl(azido)methyl]-1*H*-pyrrole-3-carboxylates via a Concise Three-Step Sequence

Hideyuki Sugimura,* Yukino Nomura, Tomoaki Ohta, Haruka Uda, and Ikuo Sasaki



N-Containing Heterocycle Pyrrolopyrrolone Synthesis

■ TOTAL SYNTHESIS OF HETEROCYCLIC NATURAL PRODUCTS

- 1875 Polyketides
- 1876 Aromatics
- 1880 Terpenes
- 1884 Alkaloids
- 1893 Miscellaneous

■ BRUSH UP YOUR HETEROCYCLES

1895 Brush Up Your Heterocycles

Contributors To This Issue

1809 An, Lian
 1809 Bao, Xiaoping
 1745 Biró, Krisztián
 1770 Dong, Chenlu
 1845 Furutachi, Makoto
 1822 Furuyashiki, Honoka
 1709 Fuwa, Haruhiko
 1782 Grimes, Felicia
 1770 Hayashi, Masahiko
 1822 Hirose, Dai
 1854 Hu, Tianwen
 1822 Ishiuchi, Kan'ichiro
 1792 Jiang, Jiaqi
 1822 Kawaguchi, Mitsuyasu
 1782 Kiren, Sezgin
 1809 Li, Peijia
 1792 Li, Siqi
 1854 Liu, Yongjian
 1837 Love, Brian E.
 1770 Matsubara, Ryosuke
 1845 Mibu, Nobuko
 1854 Mirzaakhmedov, Sharafitdin
 1782 Mohammed, Hassan
 1745 Molnár, Márk
 1822 Nagumo, Akiho
 1822 Nakagawa, Hidehiko
 1866 Nomura, Yukino
 1745 Nyerges, Miklós
 1854 Odilov, Abdullajon
 1866 Ohta, Tomoaki
 1854 Olimjonov, Shovkat
 1837 Pike, Robert D.
 1745 Pollák, Bence
 1854 Qin, Hongjian
 1866 Sasaki, Ikuo
 1854 Shen, Jingshan
 1845 Shimomura, Shunsuke
 1866 Sugimura, Hideyuki
 1845 Sumoto, Kunihiro
 1745 Tatai, János
 1809 Tian, Guangmin
 1866 Uda, Haruka
 1809 Wu, Nan
 1854 Xie, Yuanchao
 1782 Yakubu, Faisal Mahmud
 1809 Yan, Ya
 1792 Yang, Junli
 1854 Yang, Xiaojun
 1792 Yang, Yaxi
 1809 Yang, Yehui
 1845 Yokomizo, Kazumi
 1792 Zhou, Bing
 1845 Zhou, Jian-Rong
 1854 Zhu, Fuqiang