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Institut National de la Recherche Agronomiqu

BULLETIN DES SOMMAIRES DES PERIODIQUES SCIENTIFIQUES

Novembre/Décembre 2016

Avis aux Lecteurs

Le présent bulletin des sommaires concerne le sommaire des périodiques reçus au Service de Documentation de l'INRA.

La consultation du sommaire des périodiques est rendue facile grâce à la liste alphabétique des titres des périodiques ci-jointe. Cette liste renvoie aux pages des sommaires dans ce bulletin, ainsi les articles qui vous intéressent peuvent être commandés auprès du service en respectant de mentionner les données suivantes :

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- Le volume et le numéro du périodique ;
- La cote de rangement du périodique ;
- Le titre de l'article et la page où est située l'article ;
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Formerly *Review of Agricultural Economics*

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Number 3
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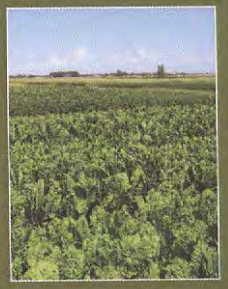

Front cover: Conservation and conventional management practices were compared for sugar beet (foreground) in a 12-yr irrigated rotation study at the Agriculture and Agri-Food Canada Sub-station, Vauxhall, AB. The rotations also included potato (background), dry bean and soft wheat. (Photo credit: Drusilla Pearson). See paper by Larney et al. on p. 776 of this issue.

Page couverture : On a comparé les pratiques de conservation aux pratiques classiques pour la betterave sucrière (premier plan) dans une étude de 12 ans sur l'assolement des cultures irriguées, menée à la sous-station de recherche d'Agriculture et Agroalimentaire Canada de Vauxhall, en Alberta. Ces assolements comprenaient également la pomme de terre (arrière-plan), le haricot et le blé tendre. (Mention de source : Drusilla Pearson) Consulter l'article de Larney et coll. à la page 776 du présent numéro.

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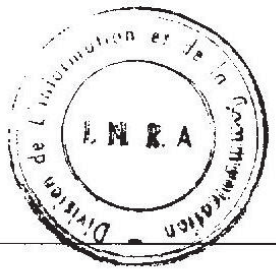

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Cover image 'Common dolphin (Delphinus delphis) in the eastern North Pacific', [copyright Southwest Fisheries Science Center, NOAA Fisheries, NMFS Permit #14097], photographed by Sophie Webb

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'The Population Genetic Group meetings have been a key forum in the last half century for discussion of the maintenance and distribution of genetic variation in natural populations, the genetic basis and evolution of quantitative traits, mechanisms of adaptation, sexual selection and speciation, and much more. The small selection of papers in this Special Issue illustrates the diversity and vibrancy of the 'PopGroup' community and helps to mark this anniversary.

Roger Butlin and John Brookfield

Cover image 1 'Serpentine population of Alyssum serpyllifolium in northeastern Portugal', copyright [J.A.C. Smith, Department of Plant Sciences, University of Oxford, UK] used with kind permission [J.A.C. Smith, Department of Plant Sciences, University of Oxford, UK]
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ON THE COVER: The first of a number of novel bioactive skeletons of marine origin isolated by Professors John Blunt and Murray Munro, University of Canterbury, was that of mycalamides A (Perry et al., *J. Am. Chem. Soc.* **1988**, *110*, 4850−4851) and B (Perry et al., *J. Org. Chem.* **1990**, *55*, 223−227) from a *Mycale* sp., subsequently identified as *M. hentscheli*, collected near the Portobello Marine Laboratory in Otago Harbour, New Zealand, in February 1984. Based on the excellent biological properties of the mycalamides a large-scale collection was later undertaken along the Mole in Otago Harbour to provide material for a wider range of in vitro and in vivo testing. A photograph of the original voucher specimen, PML1-9, and the structures of the mycalamides are shown on the cover. Subsequent collaborative work with Professor Mary Garson, University of Queensland, saw the discovery of mycalamides C and D from an Australian *Stylinos* sp. (Simpson et al., *J. Nat. Prod.* **2000**, *63*, 704−706).

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Trong D. Tran, Ngoc B. Pham, Ron Booth, Paul I. Forster, and Ronald J. Quinn*

1524 DOI: 10.1021/acs.jnatprod.5b01037
7,7-Dimethylaporphine and Other Alkaloids from the Bark of *Guatteria friesiana*
Emmanoel V. Costa,* Maria Lúcia B. Pinheiro, Beatriz Helena L. N. S. Maia, Francisco A. Marques, Ana Lúcia T. G. Ruiz, Gabriela M. Marchetti, João Ernesto de Carvalho, Milena B. P. Soares, Cinara O. S. Costa, Alexandre F. C. Galvão, Norberto P. Lopes, Hector H. F. Koolen, Daniel P. Bezerra, and Andersson Barison

1532 DOI: 10.1021/acs.jnatprod.5b01049
Deuterium-Labeled Precursor Feeding Reveals a New *p*ABA-Containing Meroterpenoid from the Mango Pathogen *Xanthomonas citri* pv. *mangiferaeindicae*
Hesham Saleh, Daniel Petras, Andi Mainz, Dennis Kerwat, Ayse Nalbantsoy, Yalcin Erzurumlu, and Roderich D. Süssmuth*

1538 DOI: 10.1021/acs.jnatprod.5b01063
Polycyclic Polyprenylated Acylphloroglucinol Congeners from *Hypericum scabrum*
Wan Gao, Wei-Zhen Hou, Jun Zhao, Fang Xu, Li Li, Fang Xu, Hua Sun, Jian-Guo Xing, Ying Peng, Xiao-Liang Wang, Teng-Fei Ji,* and Zheng-Yi Gu*

1548 DOI: 10.1021/acs.jnatprod.5b01106
Sesquiterpenes from *Inula japonica* with Inhibitory Effects on Nitric Oxide Production in Murine Macrophage RAW 264.7 Cells
Qinghao Jin, Jin Woo Lee, Hari Jang, Ji Eun Choi, Dongho Lee, Jin Tae Hong, Youngsoo Kim, Mi Kyeong Lee, and Bang Yeon Hwang*

1554 DOI: 10.1021/acs.jnatprod.5b01115
Anti-inflammatory Effect of Methyl Gallate on Experimental Arthritis: Inhibition of Neutrophil Recruitment, Production of Inflammatory Mediators, and Activation of Macrophages
Luana Barbosa Correa, Tatiana Almeida Pádua, Leonardo Noboru Seito, Thadeu Estevam Moreira Maramaldo Costa, Magaiver Andrade Silva, André Luis Peixoto Candéa,* Elaine Cruz Rosas,* and Maria G. Henriques

1567 DOI: 10.1021/acs.jnatprod.6b00066
Bioactive Sesquiterpenoid and Polyacetylene Glycosides from *Atractylodes lancea*
Kuo Xu, Jian-Shuang Jiang, Zi-Ming Feng, Ya-Nan Yang, Li Li, Cai-Xia Zang, and Pei-Cheng Zhang*

1576 DOI: 10.1021/acs.jnatprod.5b00962
Depsidones from Lichens as Natural Product Inhibitors of M-Phase Phosphoprotein 1, a Human Kinesin Required for Cytokinesis
Sandeep K. Talapatra,* Oliver Rath, Eddie Clayton, Sophie Tomasi, and Frank Kozielski*

1586 DOI: 10.1021/acs.jnatprod.6b00094
Antiproliferative and Anti-inflammatory Withanolides from *Physalis angulata*
Cheng-Peng Sun, Chong-Yue Qiu, Ting Yuan, Xiu-Fang Nie, Hong-Xin Sun, Qian Zhang, Hui-Xiang Li, Li-Qin Ding, Feng Zhao, Li-Xia Chen,* and Feng Qiu*

1598 DOI: 10.1021/acs.jnatprod.6b00107
Isolation and Structure of Cancer Cell Growth Inhibitory Tetracyclic Triterpenoids from the Zimbabwean *Monadenium lugardae*
George R. Pettit,* Qinghua Ye, Delbert L. Herald, John C. Knight, Fiona Hogan, Noeleen Melody, Venugopal J. R. V. Mukku, Dennis L. Doubek, and Jean-Charles Chapuis

1604 DOI: 10.1021/acs.jnatprod.6b00110
Daphnane Diterpenes from *Daphne genkwa* Activate Nurr1 and Have a Neuroprotective Effect in an Animal Model of Parkinson's Disease
Baek-Soo Han, Kyoung-Shim Kim, Yu Jin Kim, Hoe-Yune Jung, Young-Mi Kang, Kyu-Suk Lee, Mi-Jin Sohn, Chun-Hyung Kim, Kwang-Soo Kim, and Won-Gon Kim*

1610 DOI: 10.1021/acs.jnatprod.6b00175
α-Pyrones with Diverse Hydroxy Substitutions from Three Marine-Derived *Nocardiopsis* Strains
Haibo Zhang, Kumar Saurav, Ziquan Yu, Attila Mándi, Tibor Kurtán, Jie Li, Xinpeng Tian, Qingbo Zhang, Wenjun Zhang, and Changsheng Zhang*

1619 DOI: 10.1021/acs.jnatprod.6b00186
UPLC-QTOFMS^E-Guided Dereplication of the Endangered Chinese Species *Garcinia paucinervis* to Identify Additional Benzophenone Derivatives
Ping Li, Harini Anandhi Senthilkumar, Mario Figueroa, Shi-Biao Wu, Jimmie E. Fata, Edward J. Kennelly,* and Chunlin Long*

1628 DOI: 10.1021/acs.jnatprod.6b00206
Pepluane and Paraliane Diterpenoids from *Euphorbia peplus* with Potential Anti-inflammatory Activity
Luo-Sheng Wan, Rui Chu, Xing-Rong Peng, Guo-Lei Zhu, Mu-Yuan Yu, Lei Li, Lin Zhou, Shuang-Yang Lu, Jin-Run Dong, Zhi-Run Zhang, Yan Li, and Ming-Hua Qiu*

1635 DOI: 10.1021/acs.jnatprod.6b00217
Methyl Protodioscin, a Steroidal Saponin, Inhibits Neointima Formation in Vitro and in Vivo
Yun-Lung Chung, Chun-Hsu Pan, Charles C.-N. Wang, Kai-Cheng Hsu, Ming-Jyh Sheu, Hai-Feng Chen,* and Chieh-Hsi Wu*

1645 DOI: 10.1021/acs.jnatprod.6b00257
Identification of 6-Hydroxymellein Synthase and Accessory Genes in the Lichen *Cladonia uncialis*
Mona Abdel-Hameed, Robert L. Bertrand, Michele D. Piercey-Normore, and John L. Sorensen*

1651 DOI: 10.1021/acs.jnatprod.6b00227
Leoligin, the Major Lignan from Edelweiss (*Leontopodium nivale* subsp. *alpinum*), Promotes Cholesterol Efflux from THP-1 Macrophages
Limei Wang, Angela Ladurner, Simone Latkolik, Stefan Schwaiger, Thomas Linder, Jan Hošek, Veronika Palme, Nicole Schilcher, Ondřej Polanský, Elke H. Heiss, Herbert Stangl, Marko D. Mihovilovic, Hermann Stuppner, Verena M. Dirsch, and Atanas G. Atanasov*

1658 DOI: 10.1021/acs.jnatprod.6b00310
Biotransformation of Salpichrolides A, C, and G by Three Filamentous Fungi
Ana V. Basso, Viviana E. Nicotra,* Andrés Parra, Antonio Martínez, and Antonia Fernández-Vivas

1668 DOI: 10.1021/acs.jnatprod.6b00295
Condensation of Macrocyclic Polyketides Produced by *Penicillium* sp. DRF2 with Mercaptopyruvate Represents a New Fungal Detoxification Pathway
Marcos V. de Castro, Laura P. Ióca, David E. Williams, Bruna Z. Costa, Carolina M. Mizuno, Mario F. C. Santos, Karen de Jesus, Éverton L. F. Ferreira, Mirna H. R. Seleghim, Lara D. Sette, Edenir R. Pereira Filho, Antonio G. Ferreira, Natália S. Gonçalves, Raquel A. Santos, Brian O. Patrick, Raymond J. Andersen, and Roberto G. S. Berlinck*

1679 DOI: 10.1021/acs.jnatprod.6b00347
Synthesis and Antimalarial Activity of Mallatojaponin C and Related Compounds
Alexander L. Eaton, Seema Dalal, M. Belen Cassera, Shuqi Zhao, and David G. I. Kingston*

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1684 DOI: 10.1021/acs.jnatprod.6b00194
Pyristriatins A and B: Pyridino-Cyathane Antibiotics from the Basidiomycete *Cyathus cf. striatus*
Christian Richter, Soleiman E. Helaly, Benjarong Thongbai, Kevin D. Hyde, and Marc Stadler*

1689 DOI: 10.1021/acs.jnatprod.6b00207
Lanostane Triterpenes Isolated from *Antrodia heteromorpha* and Their Inhibitory Effects on RANKL-Induced Osteoclastogenesis
Jaeyoung Kwon, Hyaemin Lee, Yeo Dae Yoon, Bang Yeon Hwang, Yuanqiang Guo, Jong Soon Kang, Jae-Jin Kim, and Dongho Lee*

1694 DOI: 10.1021/acs.jnatprod.6b00261
Nazumazoles D–F, Cyclic Pentapeptides That Inhibit Chymotrypsin, from the Marine Sponge *Theonella swinhoei*
Kazuya Fukuhara, Kentaro Takada,* Shigeru Okada, and Shigeki Matsunaga*

1698 DOI: 10.1021/acs.jnatprod.6b00325
Protoilludane, Illudane, Illudalane, and Norilludane Sesquiterpenoids from *Granulobasidium vellereum*
Tetsuo Kokubun,* Alison Scott-Brown, Geoffrey C. Kite, and Monique S. J. Simmonds

1702 DOI: 10.1021/acs.jnatprod.6b00286
In Vitro Antibacterial Activity of Curcumin–Polymyxin B Combinations against Multidrug-Resistant Bacteria Associated with Traumatic Wound Infections
Jonathan W. Betts,* Amir S. Sharili, Roberto M. La Ragione, and David W. Wareham

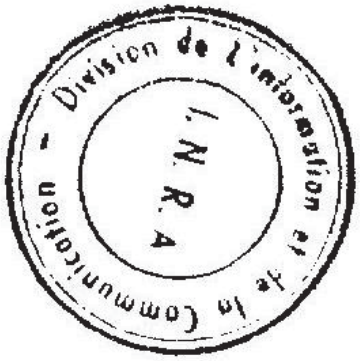
Book Reviews

1707

DOI: 10.1021/acs.jnatprod.6b00503

Review of Drugs of Natural Origin. A Treatise of Pharmacognosy. 7th Revised Edition

Esperanza Carcache de BlancoDrugs of Natural Origin. A Treatise of Pharmacognosy, 7th Revised Edition. By G. Samuelsson and L. Bohlin (Uppsala University). Apotekarsocieteten, Swedish Pharmaceutical Society, Stockholm, Sweden. 2015. 807 pp. 16.5 × 24.5 cm. $116.00. ISBN 978-91-980942-5-1.



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ON THE COVER: *On the cover:* Fungi are a diverse group of microorganisms consisting of roughly 5 million taxa that produce a chemically rich assortment of secondary metabolites. Notably, natural products generated by fungi are responsible for producing a wide variety of biological effects in humans ranging from profound harm to significant good. The divergent impact of fungal natural products among humans is well illustrated, even within the closely related Aspergilli. For example, *Aspergillus flavus* (dark green colonies) is a source of highly injurious aflatoxins (structure of aflatoxin B1 shown) (Kensler et al., *Toxicol. Sci.* **2011**, *120*, S28–S48). These exceptionally hepatocarcinogenic mycotoxins may enter into the human food supply through contaminated grains, corn, and peanuts. Despite rigorous monitoring efforts, aflatoxins continue to be implicated in the morbidity and mortality of people across the globe. In contrast, *Aspergillus terreus* (rusty tan colonies) is one of the fungal sources of statins (structure of lovastatin shown) and was responsible for establishing the first class of drugs used to control high cholesterol levels (Tobert, *Nat. Rev. Drug Discovery* **2003**, *2*, 517–526; Endo, *Proc. Jpn. Acad. Ser. B Phys. Biol. Sci.* **2010**, *86*, 484–493). These fungus-derived compounds are credited with preventing heart attacks and other cardiovascular diseases in innumerable patients, as well as launching what has become a multibillion dollar class of pharmaceuticals. Surveying the thousands of natural products biosynthesized by fungi and projecting how many compounds remain to be discovered, it is evident that fungi have the capacity to deliver many new natural products with promising therapeutic applications and, in so doing, enhance small-molecule-treatment options for managing and curing many human diseases. (Photo credits: preparation and culture of fungi: K. L. Wendt; photograph: R. H. Cichewicz; photo editing: C. M. Coker.)

Full Articles

1709 DOI: 10.1021/acs.jnatprod.5b00958

Isolation and Characterization of Anthocyanins from *Hibiscus sabdariffa* Flowers
Claudia Grajeda-Iglesias, Maria C. Figueroa-Espinoza, Nathalie Barouh, Bruno Baréa, Ana Fernandes, Victor de Freitas, and Erika Salas*

1719 S DOI: 10.1021/acs.jnatprod.5b01051

Total Synthesis of the Naturally Occurring Glycosylflavone Aciculatin
Chun-Hsu Yao, Chi-Hui Tsai, and Jinq-Chyi Lee*

1724 S DOI: 10.1021/acs.jnatprod.5b01090

Occurrence of Benzoic Acid Esters as Putative Catabolites of Prunasin in Senescent Leaves of *Prunus laurocerasus*
Jandirk Sendker,* Therese Ellendorff, and Aljoscha Hölzenbein

1730 S DOI: 10.1021/acs.jnatprod.6b00004

Acredinone C and the Effect of Acredinones on Osteoclastogenic and Osteoblastogenic Activity
Jeong-Tae Yeon, Hiyoung Kim, Kwang-Jin Kim, Jihye Lee, Dong Hwan Won, Sang-Jip Nam, Seong Hwan Kim, Heonjoong Kang,* and Young-Jin Son*

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1737 DOI: 10.1021/acs.jnatprod.6b00124
Synthesis and Antioxidant Activity of Hydroxytyrosol Alkyl-Carbonate Derivatives
Ignacio Fernandez-Pastor, Antonia Fernandez-Hernandez, Francisco Rivas,* Antonio Martinez, Andres Garcia-Granados, and Andres Parra*

1746 DOI: 10.1021/acs.jnatprod.6b00131
Cyclopeptide Alkaloids from *Hymenocardia acida*
Emmy Tuenter,* Vassiliki Exarchou, Aliou Baldé, Paul Cos, Louis Maes, Sandra Apers, and Luc Pieters

1752 DOI: 10.1021/acs.jnatprod.6b00137
Bioassay-Guided Isolation of Prenylated Xanthone Derivatives from the Leaves of *Garcinia oligantha*
Yue-Xun Tang, Wen-Wei Fu, Rong Wu, Hong-Sheng Tan, Zhen-Wu Shen, and Hong-Xi Xu*

1762 DOI: 10.1021/acs.jnatprod.6b00141
Neuroactive and Anti-inflammatory Frankincense Cembranes: A Structure–Activity Study
Federica Pollastro, Samantha Golin, Giuseppina Chianese, Masteria Yunovilsa Putra, Aniello Schiano Moriello, Luciano De Petrocellis, Víctor García, Eduardo Munoz, Orazio Taglialatela-Scafati,* and Giovanni Appendino*

1769 DOI: 10.1021/acs.jnatprod.6b00152
Synthesis of Natural Cyclopentapeptides Isolated from *Dianthus chinensis*
Shengping Zhang, Zaid Amso, Luis M. De Leon Rodriguez, Harveen Kaur, and Margaret A. Brimble*

1775 DOI: 10.1021/acs.jnatprod.6b00189
Dihydroanatoxin-a Is Biosynthesized from Proline in *Cylindrospermum stagnale* PCC 7417: Isotopic Incorporation Experiments and Mass Spectrometry Analysis
Annick Méjean, Klervi Dalle, Guillaume Paci, Stéphane Bouchonnet, Stéphane Mann, Valérie Pichon, and Olivier Ploux*

1783 DOI: 10.1021/acs.jnatprod.6b00218
Penipyridones A–F, Pyridone Alkaloids from *Penicillium funiculosum*
Haibo Zhou, Liyuan Li, Chongming Wu, Tibor Kurtán, Attila Mándi, Yankai Liu, Qianqun Gu, Tianjiao Zhu,* Peng Guo,* and Dehai Li*

1791 DOI: 10.1021/acs.jnatprod.6b00252
Bioactive Phenanthrene and Bibenzyl Derivatives from the Stems of *Dendrobium nobile*
Xue-Ming Zhou, Cai-Juan Zheng, Li-She Gan, Guang-Ying Chen,* Xiao-Peng Zhang, Xiao-Ping Song,* Gao-Nan Li, and Chong-Ge Sun

1798 DOI: 10.1021/acs.jnatprod.6b00255
Polyprenylated Benzoylphloroglucinols with DNA Polymerase Inhibitory Activity from the Fruits of *Garcinia schomburgkiana*
Duy Hoang Le, Katsumi Nishimura, Yukiko Takenaka, Yoshiyuki Mizushina, and Takao Tanahashi*

1808 DOI: 10.1021/acs.jnatprod.6b00274
Effects of Functional Groups and Sugar Composition of Quercetin Derivatives on Their Radical Scavenging Properties
Komei Kato, Masayuki Ninomiya, Kaori Tanaka, and Mamoru Koketsu*

1815 DOI: 10.1021/acs.jnatprod.6b00289
Di-*nor*- and 17-*nor*-pimaranes from *Icacina trichantha*
Brian Guo, Monday M. Onakpa, Xiao-Jun Huang, Bernard D. Santarsiero, Wei-Lun Chen, Ming Zhao,* Xiao-Qi Zhang, Steven M. Swanson, Joanna E. Burdette, and Chun-Tao Che

1822 DOI: 10.1021/acs.jnatprod.6b00290
Maximiscin Induces DNA Damage, Activates DNA Damage Response Pathways, and Has Selective Cytotoxic Activity against a Subtype of Triple-Negative Breast Cancer
Andrew J. Robles, Lin Du, Robert H. Cichewicz,* and Susan L. Mooberry*

1828 DOI: 10.1021/acs.jnatprod.6b00263
Cinnamoyloxy-mammeisin Isolated from Geopropolis Attenuates Inflammatory Process by Inhibiting Cytokine Production: Involvement of MAPK, AP-1, and NF-κB
Marcelo Franchin, Pedro Luiz Rosalen, Marcos Guilherme da Cunha, Rangel Leal Silva, David F. Colón, Gabriel Shimizu Bassi, Severino Matias de Alencar, Masaharu Ikegaki, José C. Alves-Filho, Fernando Q. Cunha, John A. Beutler, and Thiago Mattar Cunha*

1834 DOI: 10.1021/acs.jnatprod.6b00329
Effects of Oleanane-Type Triterpene Saponins from the Leaves of *Eleutherococcus senticosus* in an Axonal Outgrowth Assay
Yue-Wei Ge, Chihiro Tohda, Shu Zhu, Yu-Min He, Kayo Yoshimatsu, and Katsuko Komatsu*

1842 DOI: 10.1021/acs.jnatprod.6b00367
Sesquiterpene Hydroquinones with Protein Tyrosine Phosphatase 1B Inhibitory Activities from a *Dysidea* sp. Marine Sponge Collected in Okinawa
Delfly B. Abdjul, Hiroyuki Yamazaki,* Ohgi Takahashi, Ryota Kirikoshi, Kazuyo Ukai, and Michio Namikoshi

1848 DOI: 10.1021/acs.jnatprod.6b00394
Hypocriols A–F, Heterodimeric Botryane Ethers from *Hypocrea* sp., an Insect-Associated Fungus
Fengxia Ren, Shuaiming Zhu, Bo Wang, Li Li, Xingzhong Liu, Ruibin Su,* and Yongsheng Che*

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1857 DOI: 10.1021/acs.jnatprod.6b00080
Phthalide Derivatives with Anticoagulation Activities from *Angelica sinensis*
Lai-Bin Zhang, Jie-Li Lv,* and Jun-Wei Liu

1862 DOI: 10.1021/acs.jnatprod.6b00171
Janadolide, a Cyclic Polyketide–Peptide Hybrid Possessing a *tert*-Butyl Group from an *Okeania* sp. Marine Cyanobacterium
Hidetoshi Ogawa, Arihiro Iwasaki, Shinpei Sumimoto, Yuki Kanamori, Osamu Ohno, Masato Iwatsuki, Aki Ishiyama, Rei Hokari, Kazuhiko Otoguro, Satoshi Ōmura, and Kiyotake Suenaga*

1867 DOI: 10.1021/acs.jnatprod.6b00203
Caldoramide, a Modified Pentapeptide from the Marine Cyanobacterium *Caldora penicillata*
Sarath P. Gunasekera, Lorelie Imperial, Christiana Garst, Ranjala Ratnayake, Long H. Dang, Valerie J. Paul,* and Hendrik Luesch*

1872 DOI: 10.1021/acs.jnatprod.6b00229
Polybrominated Diphenyl Ethers: Structure Determination and Trends in Antibacterial Activity
Hongbing Liu, Katheryn Lohith, Margaret Rosario, Thomas H. Pulliam, Robert D. O'Connor, Lori J. Bell, and Carole A. Bewley*

1877 DOI: 10.1021/acs.jnatprod.6b00250
Stereochemical Assignment and Biological Evaluation of BE-14106 Unveils the Importance of One Acetate Unit for the Antifungal Activity of Polyene Macrolactams
Kohei Fujita, Ryosuke Sugiyama, Shinichi Nishimura,* Naoki Ishikawa, Midori A. Arai, Masami Ishibashi, and Hideaki Kakeya*

1881 DOI: 10.1021/acs.jnatprod.6b00259
Dinoflagellate-Related Amphidinolides from the Brazilian Octocoral *Stragulum bicolor*
Genoveffa Nuzzo,* Bruno A. Gomes, Elvira Luongo, Maria C. M. Torres, Evelyne A. Santos, Adele Cutignano, Otília D. L. Pessoa, Leticia V. Costa-Lotufo, and Angelo Fontana

1886 DOI: 10.1021/acs.jnatprod.6b00268
Actinomadurol, an Antibacterial Norditerpenoid from a Rare Actinomycete, *Actinomadura* sp. KC 191
Bora Shin, Byung-Yong Kim, Eunji Cho, Ki-Bong Oh, Jongheon Shin, Michael Goodfellow, and Dong-Chan Oh*

1891 DOI: 10.1021/acs.jnatprod.6b00372
Isolation and Structure Elucidation of Cytotoxic Saccharothriolides D to F from a Rare Actinomycete *Saccharothrix* sp. and Their Structure–Activity Relationship
Shan Lu, Shinichi Nishimura, Masashi Ito, Toshio Tsuchida, and Hideaki Kakeya*

Book Reviews

1896 DOI: 10.1021/acs.jnatprod.6b00518
Review of Problems in Organic Structure Determination. A Practical Approach to NMR Spectroscopy
H. Liva RakotondraibeProblems in Organic Structure Determination. A Practical Approach to NMR Spectroscopy. By Roger G. Linington (Simon Fraser University), Philip G. Williams (University of Hawaii), and John B. MacMillan (University of Texas Southwestern Medical Center). CRC Press/Taylor & Francis Group, Boca Raton, FL. 2016. 755 pp. 21 × 28 cm. $119.95. ISBN 978-1-4987-1962-9.

Additions and Corrections

1897 DOI: 10.1021/acs.jnatprod.6b00583

Correction to Bioactive Enmein-Type *ent*-Kaurane Diterpenoids from *Isodon phyllostachys*

Jin Yang, Wei-Guang Wang, Hai-Yan Wu, Xue Du, Xiao-Nian Li, Yan Li, Jian-Xin Pu,* and Han-Dong Sun*

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ON THE COVER: Fungi are a diverse group of microorganisms consisting of roughly 5 million taxa that produce a chemically rich assortment of secondary metabolites. Notably, natural products generated by fungi are responsible for producing a wide variety of biological effects in humans ranging from profound harm to significant good. The divergent impact of fungal natural products among humans is well illustrated, even within the closely related Aspergilli. For example, *Aspergillus flavus* (dark green colonies) is a source of highly injurious aflatoxins (structure of aflatoxin B1 shown) (Kensler et al., *Toxicol. Sci.* **2011**, *120*, S28−S48). These exceptionally hepatocarcinogenic mycotoxins may enter into the human food supply through contaminated grains, corn, and peanuts. Despite rigorous monitoring efforts, aflatoxins continue to be implicated in the morbidity and mortality of people across the globe. In contrast, *Aspergillus terreus* (rusty tan colonies) is one of the fungal sources of statins (structure of lovastatin shown) and was responsible for establishing the first class of drugs used to control high cholesterol levels (Tobert, *Nat. Rev. Drug Discovery* **2003**, *2*, 517−526; Endo, *Proc. Jpn. Acad. Ser. B Phys. Biol. Sci.* **2010**, *86*, 484−493). These fungus-derived compounds are credited with preventing heart attacks and other cardiovascular diseases in innumerable patients, as well as launching what has become a multibillion dollar class of pharmaceuticals. Surveying the thousands of natural products biosynthesized by fungi and projecting how many compounds remain to be discovered, it is evident that fungi have the capacity to deliver many new natural products with promising therapeutic applications and, in so doing, enhance small-molecule-treatment options for managing and curing many human diseases. (Photo credits: preparation and culture of fungi: K. L. Wendt; photograph: R. H. Cichewicz; photo editing: C. M. Coker.)

Full Articles

1899 $ DOI: 10.1021/acs.jnatprod.5b01137
Cytotoxic Tirucallane and Apotirucallane Triterpenoids from the Stems of *Picrasma quassioides*
Jian Xu, Di Xiao, Qing-Hua Lin, Jing-Feng He, Wen-Yuan Liu, Ning Xie, Feng Feng,* and Wei Qu*

1911 $ DOI: 10.1021/acs.jnatprod.6b00118
Chemical Constituents of the Rhizomes of *Bletilla formosana* and Their Potential Anti-inflammatory Activity
Che-Wei Lin, Tsong-Long Hwang, Fu-An Chen, Chia-Hsin Huang, Hsin-Yi Hung,* and Tian-Shung Wu*

1922 $ DOI: 10.1021/acs.jnatprod.6b00158
Ceylonamides A−F, Nitrogenous Spongian Diterpenes That Inhibit RANKL-Induced Osteoclastogenesis, from the Marine Sponge *Spongia ceylonensis*
Ahmed H. El-Desoky, Hikaru Kato, Esther D. Angkouw, Remy E. P. Mangindaan, Nicole J. de Voogd, and Sachiko Tsukamoto*

1929 $ DOI: 10.1021/acs.jnatprod.6b00168
Cytotoxic Guanidine Alkaloids from a French Polynesian *Monanchora* n. sp. Sponge
Amr El-Demerdash, Céline Moriou, Marie-Thérèse Martin, Alice de Souza Rodrigues-Stien, Sylvain Petek, Marina Demoy-Schneider, Kathryn Hall, John N. A. Hooper, Cécile Debitus, and Ali Al-Mourabit*

1938 DOI: 10.1021/acs.jnatprod.6b00204
Chemical Constituents Isolated from the Root Bark of *Cudrania tricuspidata* and Their Potential Neuroprotective Effects
Jaeyoung Kwon, Nguyen Tuan Hiep, Dong-Woo Kim, Sungeun Hong, Yuanqiang Guo, Bang Yeon Hwang, Hak Ju Lee, Woongchon Mar,* and Dongho Lee*

1952 DOI: 10.1021/acs.jnatprod.6b00205
Euphorbesulins A–P, Structurally Diverse Diterpenoids from *Euphorbia esula*
Bin Zhou, Yan Wu, Seema Dalal, Maria B. Cassera, and Jian-Min Yue*

1962 DOI: 10.1021/acs.jnatprod.6b00215
Affinity Crystallography: A New Approach to Extracting High-Affinity Enzyme Inhibitors from Natural Extracts
Adeleke H. Aguda, Vincent Lavallee, Ping Cheng, Tina M. Bott, Labros G. Meimetis, Simon Law, Nham T. Nguyen, David E. Williams, Jadwiga Kaleta, Ivan Villanueva, Julian Davies, Raymond J. Andersen, Gary D. Brayer, and Dieter Brömme*

1971 DOI: 10.1021/acs.jnatprod.6b00251
Polyprenylated Tetraoxygenated Xanthones from the Roots of *Hypericum monogynum* and Their Neuroprotective Activities
Wen-Jun Xu, Rui-Jun Li, Olga Quasie, Ming-Hua Yang, Ling-Yi Kong,* and Jun Luo*

1982 DOI: 10.1021/acs.jnatprod.6b00258
A Grand Challenge. 2. Phenotypic Profiling of a Natural Product Library on Parkinson's Patient-Derived Cells
Marie-Laure Vial, Dusan Zencak, Tanja Grkovic, Alain-Dominique Gorse, Alan Mackay-Sim, George D. Mellick, Stephen A. Wood,* and Ronald J. Quinn*

1990 DOI: 10.1021/acs.jnatprod.6b00260
Myrsinane, Premyrsinane, and Cyclomyrsinane Diterpenes from *Euphorbia falcata* as Potassium Ion Channel Inhibitors with Selective G Protein-Activated Inwardly Rectifying Ion Channel (GIRK) Blocking Effects
Andrea Vasas, Peter Forgo, Péter Orvos, László Tálosi, Attila Csorba, Gyula Pinke, and Judit Hohmann*

2005 DOI: 10.1021/acs.jnatprod.6b00262
Neolignans from the Arils of *Myristica fragrans* as Potent Antagonists of CC Chemokine Receptor 3
Toshio Morikawa,* Ikuko Hachiman, Kazuhiko Matsuo, Eriko Nishida, Kiyofumi Ninomiya, Takao Hayakawa, Osamu Yoshie, Osamu Muraoka, and Takashi Nakayama*

2014 DOI: 10.1021/acs.jnatprod.6b00267
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2022 DOI: 10.1021/acs.jnatprod.6b00327
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2032 DOI: 10.1021/acs.jnatprod.6b00332
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2039 DOI: 10.1021/acs.jnatprod.6b00335
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2045 DOI: 10.1021/acs.jnatprod.6b00349
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2053 DOI: 10.1021/acs.jnatprod.6b00381
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2060 DOI: 10.1021/acs.jnatprod.6b00386
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2066 DOI: 10.1021/acs.jnatprod.6b00403
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2075 DOI: 10.1021/acs.jnatprod.6b00424
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2083 DOI: 10.1021/acs.jnatprod.6b00409
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2089 DOI: 10.1021/acs.jnatprod.6b00433
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2094 DOI: 10.1021/acs.jnatprod.6b00439
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2104 DOI: 10.1021/acs.jnatprod.6b00484
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2113 DOI: 10.1021/acs.jnatprod.6b00428
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2122 DOI: 10.1021/acs.jnatprod.6b00577
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2135 DOI: 10.1021/acs.jnatprod.6b00597
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2143 DOI: 10.1021/acs.jnatprod.6b00417
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Ruishan Wang, Ridao Chen, Jianhua Li, Xiao Liu, Kebo Xie, Dawei Chen, Ying Peng,* and Jungui Dai*

Additions and Corrections

2148 DOI: 10.1021/acs.jnatprod.6b00615
Correction to Rebaudiosides R and S, Minor Diterpene Glycosides from the Leaves of *Stevia rebaudiana*
Mohamed A. Ibrahim, Douglas L. Rodenburg, Kamilla Alves, Wilmer H. Perera, Frank R. Fronczek, John Bowling, and James D. McChesney*

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ON THE COVER: Cover image by Xinyue Zhang, Zhen Wang, and Yapei Wang. The self-assembly behavior of poly(ethylene glycol)-*block*-poly(lactic acid) copolymers is controlled by the cooperation between crystallization and amphiphilicity. The crystallization directs the formation of lozenge platelets that are compared to well-arranged lozenge-shaped firecrackers in the cover graph. The flame represents that the change in block ratios or the solvation effect can break the balance between crystallization and amphiphilicity, thus inducing the morphological transition of self-assembled aggregates. The vesicle-like and cylindrical aggregates are obtained once the contribution of amphiphilicity becomes dominant. The ensemble overall exhibits an image of traditional Chinese folk handicraft Chinese knots, which are used to express good wishes. For more information, see "Cooperation of Amphiphilicity and Crystallization for Regulating the Self-Assembly of Poly(ethylene glycol)-*block*-poly(lactic acid) Copolymers" by Zhen Wang, Yuanyuan Cao, Jiaqi Song, Zhigang Xie, and Yapei Wang (DOI: 10.1021/acs.langmuir.6b02211).

Articles

Interfaces: Adsorption, Reactions, Films, Forces, Measurement Techniques, Charge Transfer, Electrochemistry, Electrocatalysis, Energy Production and Storage

9381 (S) DOI: 10.1021/acs.langmuir.5b04206

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9389 DOI: 10.1021/acs.langmuir.6b01490

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9397 (S) DOI: 10.1021/acs.langmuir.6b01773

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9410 (S) DOI: 10.1021/acs.langmuir.6b01882

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9418 (S) DOI: 10.1021/acs.langmuir.6b02011

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9428 DOI: 10.1021/acs.langmuir.6b02079
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9437 DOI: 10.1021/acs.langmuir.6b02139
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9445 DOI: 10.1021/acs.langmuir.6b02171
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Sandip Ghosal* and John D. Sherwood

9451 DOI: 10.1021/acs.langmuir.6b02073
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9460 DOI: 10.1021/acs.langmuir.6b02411
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9468 DOI: 10.1021/acs.langmuir.6b02415
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9475 DOI: 10.1021/acs.langmuir.6b02463
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9484 DOI: 10.1021/acs.langmuir.6b02521
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9492 DOI: 10.1021/acs.langmuir.6b02585
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9501 DOI: 10.1021/acs.langmuir.6b02623
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9507 DOI: 10.1021/acs.langmuir.6b02639
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9513 DOI: 10.1021/acs.langmuir.6b02729
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9523 DOI: 10.1021/acs.langmuir.6b02762
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9530 DOI: 10.1021/acs.langmuir.6b02904
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Interface Components: Nanoparticles, Colloids, Emulsions, Surfactants, Proteins, Polymers

9540 DOI: 10.1021/acs.langmuir.6b01758
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9548 DOI: 10.1021/acs.langmuir.6b01829
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9557 DOI: 10.1021/acs.langmuir.6b01747
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9566 DOI: 10.1021/acs.langmuir.6b02069
Monolayers of Poly(styrene/α-*tert*-butoxy-ω-vinylbenzyl-polyglycidol) Microparticles Formed by Controlled Self-Assembly with Potential Application as Protein-Repelling Substrates
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9575 DOI: 10.1021/acs.langmuir.6b02118
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9582 DOI: 10.1021/acs.langmuir.6b02157
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9591 DOI: 10.1021/acs.langmuir.6b02449
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9598 DOI: 10.1021/acs.langmuir.6b02759
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9604 DOI: 10.1021/acs.langmuir.6b02832
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9611 DOI: 10.1021/acs.langmuir.6b01341
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9619 DOI: 10.1021/acs.langmuir.6b02188
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9633 DOI: 10.1021/acs.langmuir.6b02211
Cooperation of Amphiphilicity and Crystallization for Regulating the Self-Assembly of Poly(ethylene glycol)-*block*-poly(lactic acid) Copolymers
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Biological and Environmental Phenomena at the Interface

9640 DOI: 10.1021/acs.langmuir.6b01746

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9649 DOI: 10.1021/acs.langmuir.6b01848

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New Concepts at the Interface: Novel Viewpoints and Interpretations, Theory and Computations

9658 DOI: 10.1021/acs.langmuir.6b02378

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9664 DOI: 10.1021/acs.langmuir.6b02495

Thermomechanical Mechanisms of Reducing Ice Adhesion on Superhydrophobic Surfaces
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9676 DOI: 10.1021/acs.langmuir.6b02843

General Strategy for the Design of DNA Coding Sequences Applied to Nanoparticle Assembly
Théo Calais, Vincent Baijot, Mehdi Djafari Rouhani, David Gauchard, Yves J. Chabal, Carole Rossi,* and Alain Estève

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ON THE COVER: Fungi are a diverse group of microorganisms consisting of roughly 5 million taxa that produce a chemically rich assortment of secondary metabolites. Notably, natural products generated by fungi are responsible for producing a wide variety of biological effects in humans ranging from profound harm to significant good. The divergent impact of fungal natural products among humans is well illustrated, even within the closely related Aspergilli. For example, *Aspergillus flavus* (dark green colonies) is a source of highly injurious aflatoxins (structure of aflatoxin B1 shown) (Kensler et al., *Toxicol. Sci.* **2011**, *120*, S28−S48). These exceptionally hepatocarcinogenic mycotoxins may enter into the human food supply through contaminated grains, corn, and peanuts. Despite rigorous monitoring efforts, aflatoxins continue to be implicated in the morbidity and mortality of people across the globe. In contrast, *Aspergillus terreus* (rusty tan colonies) is one of the fungal sources of statins (structure of lovastatin shown) and was responsible for establishing the first class of drugs used to control high cholesterol levels (Tobert, *Nat. Rev. Drug Discovery* **2003**, *2*, 517−526; Endo, *Proc. Jpn. Acad. Ser. B Phys. Biol. Sci.* **2010**, *86*, 484−493). These fungus-derived compounds are credited with preventing heart attacks and other cardiovascular diseases in innumerable patients, as well as launching what has become a multibillion dollar class of pharmaceuticals. Surveying the thousands of natural products biosynthesized by fungi and projecting how many compounds remain to be discovered, it is evident that fungi have the capacity to deliver many new natural products with promising therapeutic applications and, in so doing, enhance small-molecule-treatment options for managing and curing many human diseases. (Photo credits: preparation and culture of fungi: K. L. Wendt; photograph: R. H. Cichewicz; photo editing: C. M. Coker.)

Full Articles

2423 DOI: 10.1021/acs.jnatprod.5b01096

A 2S Albumin from the Seed Cake of *Ricinus communis* Inhibits Trypsin and Has Strong Antibacterial Activity against Human Pathogenic Bacteria

Pedro F. N. Souza, Ilka M. Vasconcelos, Fredy D. A. Silva, Frederico B. Moreno, Ana C. O. Monteiro-Moreira, Luciana M. R. Alencar, Angélica S. G. Abreu, Jeanlex S. Sousa, and José T. A. Oliveira*

2432 DOI: 10.1021/acs.jnatprod.6b00142

Taste-Guided Isolation of Bitter Lignans from *Quercus petraea* and Their Identification in Wine

Lauriane Sindt, Marine Gammacurta, Pierre Waffo-Teguo, Denis Dubourdieu, and Axel Marchal*

2439 DOI: 10.1021/acs.jnatprod.6b00170

Meroterpenoids and Chalcone-Lignoids from the Roots of *Mimosa diplotricha*

Chun-Tang Chiou, Chien-Chang Shen, Tung-Hu Tsai, Yu-Jen Chen, and Lie-Chwen Lin*

2446 DOI: 10.1021/acs.jnatprod.6b00200

Aldgamycins J−O, 16-Membered Macrolides with a Branched Octose Unit from *Streptomycetes* sp. and Their Antibacterial Activities

Chuan-Xi Wang, Rong Ding, Shu-Tai Jiang, Jin-Shan Tang, Dan Hu, Guo-Dong Chen, Feng Lin, Kui Hong,* Xin-Sheng Yao,* and Hao Gao*

2455 DOI: 10.1021/acs.jnatprod.6b00236
Insights into the Three-Dimensional Structure of Amorpha-4,11-diene Synthase and Probing of Plasticity Residues
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2464 DOI: 10.1021/acs.jnatprod.6b00285
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2472 DOI: 10.1021/acs.jnatprod.6b00306
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2479 DOI: 10.1021/acs.jnatprod.6b00315
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2487 DOI: 10.1021/acs.jnatprod.6b00333
Overexpression of the Global Regulator LaeA in *Chaetomium globosum* Leads to the Biosynthesis of Chaetoglobosin Z
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2495 DOI: 10.1021/acs.jnatprod.6b00350
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2504 DOI: 10.1021/acs.jnatprod.6b00351
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Tiago B. Afonso, M. Sofia Costa, Roberta Rezende de Castro, Sara Freitas, Artur Silva, Maria Paula Cruz Schneider, Rosário Martins, and Pedro N. Leão*

2514 DOI: 10.1021/acs.jnatprod.6b00370
Catalyst-Free sp^3 C–H Acyloxylation: Regioselective Synthesis of 1-Acyloxy Derivatives of the Natural Product Tanshinone IIA
Chunyong Ding, Jie Li, Mingkun Jiao, and Ao Zhang*

2521 DOI: 10.1021/acs.jnatprod.6b00392
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2530 DOI: 10.1021/acs.jnatprod.6b00395
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2538 DOI: 10.1021/acs.jnatprod.6b00440
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2545 DOI: 10.1021/acs.jnatprod.6b00449
Rice Bran Protein as a Potent Source of Antimelanogenic Peptides with Tyrosinase Inhibitory Activity
Akihito Ochiai,* Seiya Tanaka, Takaaki Tanaka, and Masayuki Taniguchi

2552 DOI: 10.1021/acs.jnatprod.6b00453
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2559 DOI: 10.1021/acs.jnatprod.6b00489
Arborinane Triterpenoids from *Rubia philippinensis* Inhibit Proliferation and Migration of Vascular Smooth Muscle Cells Induced by the Platelet-Derived Growth Factor
Khong Trong Quan, Hyun-Soo Park, Joonseok Oh, Hyun Bong Park, Daneel Ferreira, Chang-Seon Myung,* and MinKyun Na*

2570 DOI: 10.1021/acs.jnatprod.6b00491
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2580 DOI: 10.1021/acs.jnatprod.6b00497
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2590 DOI: 10.1021/acs.jnatprod.6b00508
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2599 DOI: 10.1021/acs.jnatprod.6b00528
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2606 DOI: 10.1021/acs.jnatprod.6b00532
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2616 DOI: 10.1021/acs.jnatprod.6b00550
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2624 DOI: 10.1021/acs.jnatprod.6b00552
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2635 DOI: 10.1021/acs.jnatprod.6b00554
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2667 DOI: 10.1021/acs.jnatprod.6b00605
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2726 DOI: 10.1021/acs.jnatprod.6b00726
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2731 DOI: 10.1021/acs.jnatprod.6b00742
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2740 DOI: 10.1021/acs.jnatprod.6b00277
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2764 DOI: 10.1021/acs.jnatprod.6b00902
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2765 DOI: 10.1021/acs.jnatprod.6b00837

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On the cover: Green fluorescent protein (GFP)-tagged *Plantago asiatica mosaic virus* (PlAMV) and *Turnip mosaic virus* (TuMV) infection in IRE1 defective *Arabidopsis* plants at 6 days postinoculation. *Arabidopsis* IRE1a and IRE1b contribute differently to potexvirus and potyvirus infection. From left to right, wild-type Col-0, *ire1a-2*, *ire1b-4*, and *ire1a-2/ire1b-4* mutant plants were inoculated with PlAMV-GFP (top row) or TuMV-GFP (bottom row). GFP fluorescence was measured in detached leaves. PlaMV-GFP accumulation was four- to fivefold higher in *ire1a-2* and *ire1a-2/ire1b-4* mutant leaves. Knockdown of ire1b-4 has less impact on *Plantago asiatica mosaic virus* than ire1a-2. TuMV-GFP was four- to sixfold greater in *ire1a-2*, *ire1b-4*, and *ire1a-2/ire1b-4* mutant leaves than in the wild-type Col-0 leaves. IRE1a appears to play a greater role in PlaMV-GFP infection whereas both Ire1a and IRE1b compensate for each other in regulating TuMV-GFP infection. Potexviruses and potyviruses interact with the IRE1-mediated pathways but their interactions are not identical. For the article by Gaguancela et al., see page 750.

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Cover: *Since 2011, Phytophthora fruit rot has become increasingly prevalent in South India, posing a significant threat to eggplant (brinjal) production during southwest monsoon period (June to September). Based on combined mitochondrial and nuclear markers, host-specific lineages of* Phytophthora nicotianae *responsible for severe outbreaks of brinjal were identified. Phytophthora fruit rot appears as small, brown water-soaked lesions that enlarge to form dark brown, elongated spots and covers the entire fruit. (Chowdappa et al., page 1553)*

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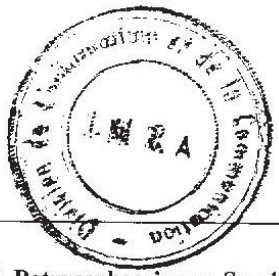

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Schwerpunkt Biodiversität und nachhaltige Landnutzung in Großschutzgebieten

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Photographie de couverture:
***Stevia rebaudiana* est une plante édulcorante sans calories, très appréciée dans l'industrie alimentaire. Elle est originaire du Brésil et du Paraguay. Son potentiel agronomique et son comportement ont été testés en culture de plaine et de moyenne montagne en Valais. (Photo sweetgreenfields.com)**

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