

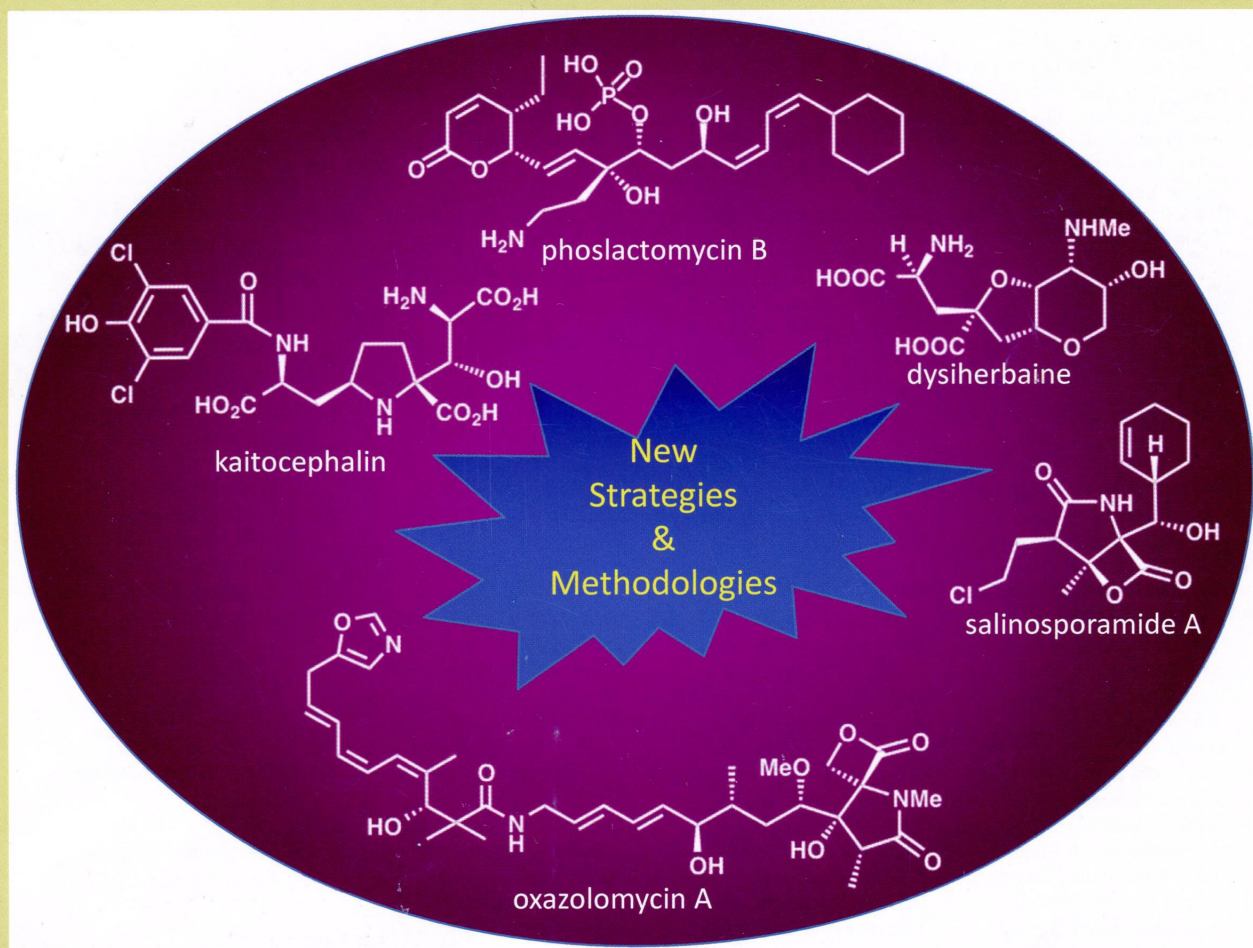
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# Chemical and Pharmaceutical Bulletin

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Total Synthesis of Biologically Active Natural Products Based on  
Highly Selective Synthetic Methodologies

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THE PHARMACEUTICAL SOCIETY OF JAPAN

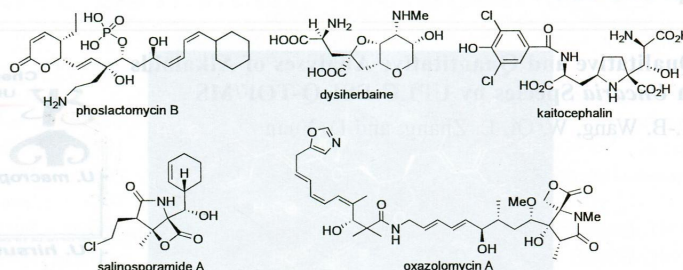
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S. Hatakeyama

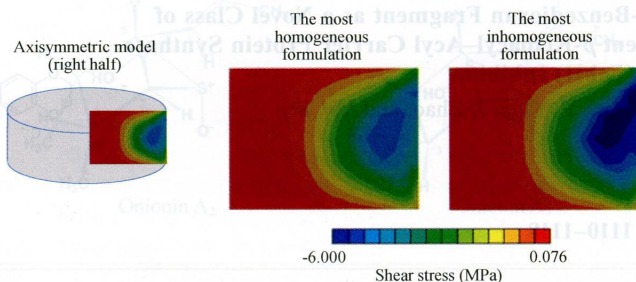


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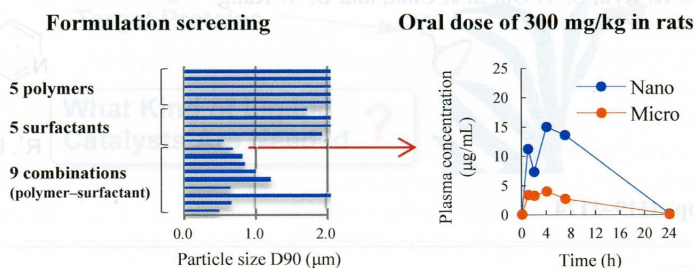
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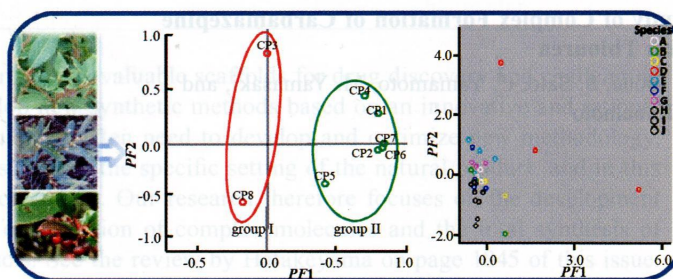
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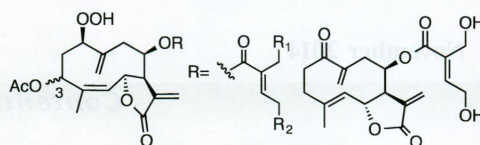
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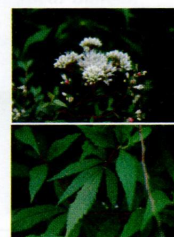
### Germacranolides and Their Diversity of *Eupatorium heterophyllum* Collected in P. R. China

Y. Saito, T. Mukai, Y. Iwamoto, M. Baba, K. Takiguchi, Y. Okamoto, X. Gong, T. Kawahara, C. Kuroda, and M. Tori



$3\alpha\text{-OAc}$ ,  $3\beta\text{-OAc}$   $R_1, R_2 = \text{OAc, OH, H}$

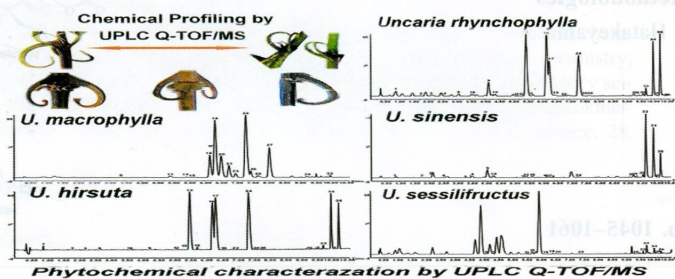
Nine new germacranolides were isolated, eight of which were hydroperoxides.



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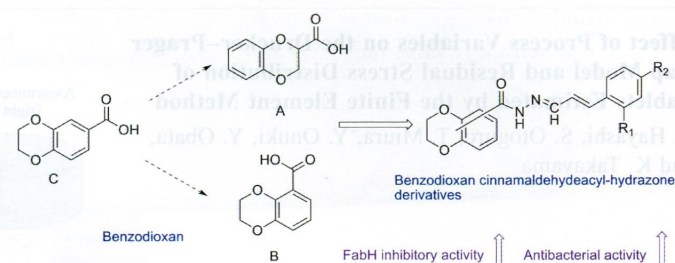
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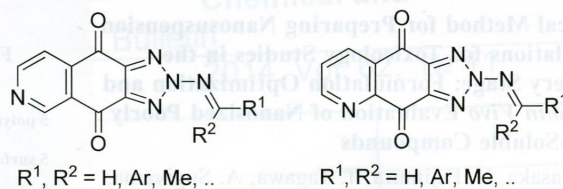
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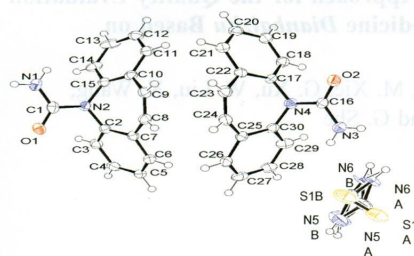


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## Notes

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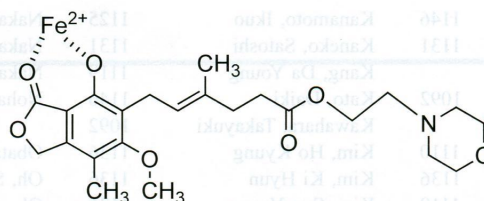


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Structure and packing of TU/CBZ complex in the crystal lattice

### Spectroscopic Investigation for the Interaction of Mycophenolate Mofetil with Ferrous Ions

M. Sakai, S. Kaneko, M. Nakamura, Y. Murakami, H. Hikawa, I. Azumaya, M. Nakakoshi, and Y. Yokoyama

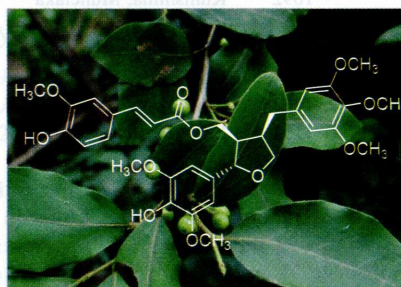


The structure was confirmed by the  $^{13}\text{C}$  NMR, IR, and UV-Vis spectroscopies.

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### Bioactive Lignan Constituents from the Twigs of *Lindera glauca*

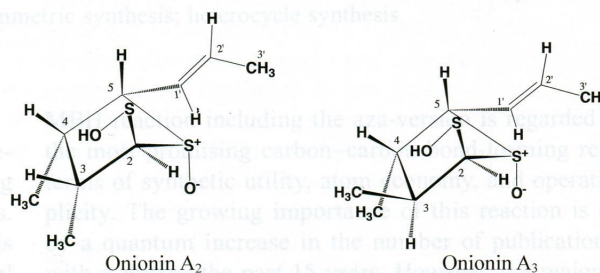
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T. Nohara, Y. Fujiwara, R. Kudo, K. Yamaguchi, T. Ikeda, K. Murakami, M. Ono, T. Kajimoto, and M. Takeya



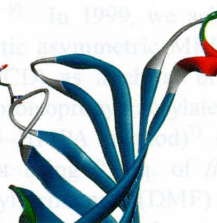
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### Specific Labeling of Streptavidin for Better Understanding of Ligand Modification in Modular Method for Affinity Labeling (MoAL)

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Labeling of Unknown Target Proteins

What Kind of Ligand Catalysts Are Needed ?



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**About the cover:** Natural products are of great importance as valuable scaffolds for drug discovery and challenging synthetic targets that provide an opportunity to develop new synthetic methods based on an innovative and rational strategy. To achieve the synthesis of a target molecule, we often need to develop and optimize new methodology, which extends to more generalized synthetic methods beyond the specific setting of the natural product, and in this way total synthesis brings the development of new chemistry. Our research therefore focuses on the development of new strategies and methodologies useful for the construction of complex molecules and the total synthesis of structurally and biologically intriguing natural products. See the review by Hatakeyama on page 1045 of this issue.