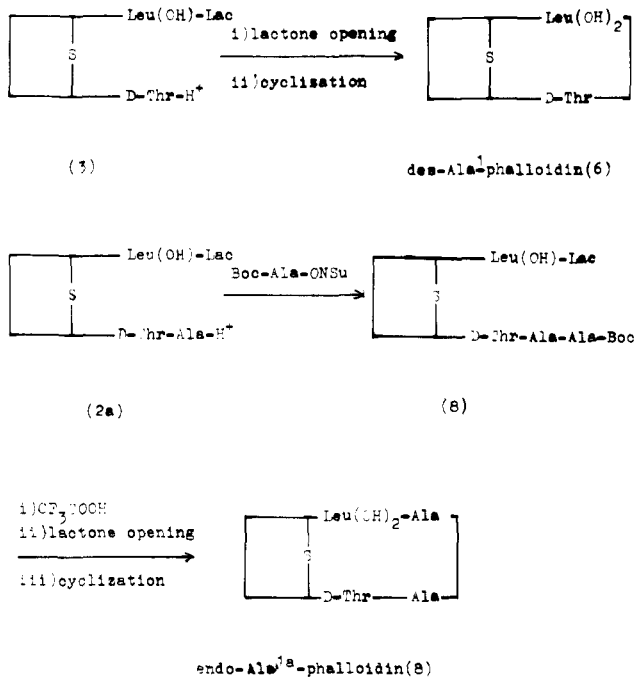
Scheme II



Boc group and opening of the lactone ring (Scheme II).

The yields of the cyclization reactions, R_f values of the analogues on TLC, amino acid analyses, and toxicities in white mice are compiled in Table I.

The CD spectra of the analogues **1d, 1e,** and **1f** are almost identical with that of **1a,** whereas the curve of analogue **1c** is significantly different (Figures 1 and 2). The same is true for the UV-difference spectra of the complexes with rabbit muscle actin,[2b,6] where the Gly^1 analogue **1c** shows a curve deviating from the normal one. Interestingly **1c** possesses toxicity, although to a reduced extent. The hexapeptide **6** and the octapeptide **8** also show abnormal CD spectra and no binding to actin as evidenced by the lack of difference spectra.

The present results extend our knowledge on the structure-toxicity relationships of the phallotoxins as follows. (1) In order to be toxic the bicyclic peptide must consist of seven amino acids, since the hexapeptide **6** and octapeptide **8** are nontoxic. (2) The methyl group of L-alanine may be replaced by an isopropyl (**1d**) or an isobutyl group (**1e**) without loss of toxicity. Toxicity is reduced by substitution of the methyl group by either a hydrogen atom (**1c**) or benzyl group (**1f**). (3) Change of configuration at L-alanine from L to D eliminates the toxic properties of the cyclic peptide. Details of the preparation of the analogues and their binding to actin will be reported in a forthcoming publication.

Acknowledgment. Ms. A. Schmitz, Ingelheim, is thanked for performing the toxicological experiments.

References and Notes

(1) Paper 54. Communication on the Components of the Green Deathcap Toadstool *Amanita phalloides*. 53: E. Munekata, H. Faulstich, and T. Wieland, *Justus Liebigs Ann. Chem.*, in press.
(2) For reviews, see (a) T. Wieland and O. Wieland, "Microbial Toxins", Vol. 8, S. Kadis, A. Ciegler, and S. J. Ajl, Ed., Academic Press, New York, N.Y., 1972, pp 249-280; (b) T. Wieland, "26. Colloquium Mosbach, 1975", L. Heilmeyer, J. C. Rüegg, and T. Wieland, Ed., Springer-Verlag, Berlin-Heidelberg, 1976, pp 203-214.
(3) E. Munekata, H. Faulstich, and T. Wieland, *Angew. Chem.*, **89**, 274 (1977); *Angew. Chem., Int. Ed. Engl.*, **16**, 267 (1977).
(4) T. Wieland and W. Schön, *Justus Liebigs Ann. Chem.*, **593**, 157 (1955). For the purpose of preparation, phalloidin was treated overnight with 50% aqueous trifluoroacetic acid and the seco compound purified chromatographically on Sephadex G-15 in 0.1 M acetic acid.
(5) P. Edman, "Protein Sequence Determination", S. B. Needleman, Ed., Chapman and Hall, London, Springer-Verlag, Berlin-Heidelberg-New York, 1972, pp 211-255.
(6) T. Wieland, J. X. de Vries, A. Schäfer, and H. Faulstich, *FEBS Lett.*, **54**, 73 (1975).
(7) Research fellow of Alexander von Humboldt Foundation, 1974-1976.

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Additions and Corrections

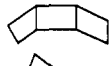
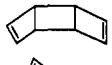
A Study on the Mechanism of the Reaction of *N*-(2,4-Dinitrophenyl)-3-carbamoylpyridinium Chloride with Amines and Amino Acids with Reference to Effect of Polyelectrolyte Addition [*J. Am. Chem. Soc.*, **98**, 2282 (1976)]. By S. KUNUGI, T. OKUBO, and N. ISE,* Department of Polymer Chemistry, Kyoto University, Kyoto, Japan.

On page 2285, in Table II, footnote *a*, "[amine] = 2.5×10^{-3} M" should be deleted.

On page 2286, second column, line 46 should read: "The τ_{s1} process was . . .".

Thermally Promoted Ring Cleavage Reactions of Stereoisomeric Tetracyclo[4.3.0.$0^{2,5}$.$0^{7,9}$]non-3-enes, Pentacyclo[5.3.0.$0^{2,6}0^{3,5}$.$0^{8,10}$]decanes, and Their Epoxide Counterparts [*J. Am. Chem. Soc.*, **98**, 8175 (1976)]. By LEO A. PAQUETTE* and MICHAEL J. CARMODY, Evans Chemical Laboratories, The Ohio State University, Columbus, Ohio 43210.

The lower section of Table III (p 8177) should read as follows:

	$\Delta H^{\pm}$, kcal/mol	$\Delta S^{\pm}$, eu	E_a, kcal/mol	Log A
	*a* 30.8	+1.05		
	31.2	−1.63		
			30.49 ± 0.16	14.22 ± 0.09
			32.59 ± 0.17	14.01 ± 0.09

1,3-Dicarbonyl-2-ketimines. Hydrolysis of 1,3-Dimethyl-5-(*p*-tolylimino)barbituric Acid [*J. Am. Chem. Soc.*, **99**, 2665 (1977)]. By J. M. SAYER* and MARTHA DEPECOL, Department of Chemistry, University of Vermont, Burlington, Vermont 05401.

On p 2668, headings for the last two columns of Table I

should read $M^{-1}\ s^{-1}$ instead of $M^{-2}\ s^{-1}$. These are second-order rate constants as defined by eq 1.

Configuration and Conformation of the α- and β-Anomers of C-Nucleosides by Proton Magnetic Resonance Spectroscopy: New Criterion for Determination of α- and β-Anomers [*J. Am. Chem. Soc.*, **99,** 3267 (1977)]. By SON TRAN-DINH,* JEAN-MICHEL NEUMANN, JEAN-MARIE THIÉRY, TAM HUYNH-DINH, JEAN IGOLEN,* and WILHELM GUSCHLBAUER, Département de Biologie, Centre d'Études Nucléaires de Saclay, BP No. 2, 91190 Gif-sur-Yvette, France, and the Laboratoire de Chimie Organique, Service de Chimie des Protéines, Institut Pasteur, 75024 Paris, France.

Figure 4 and its corrected caption are reprinted below:

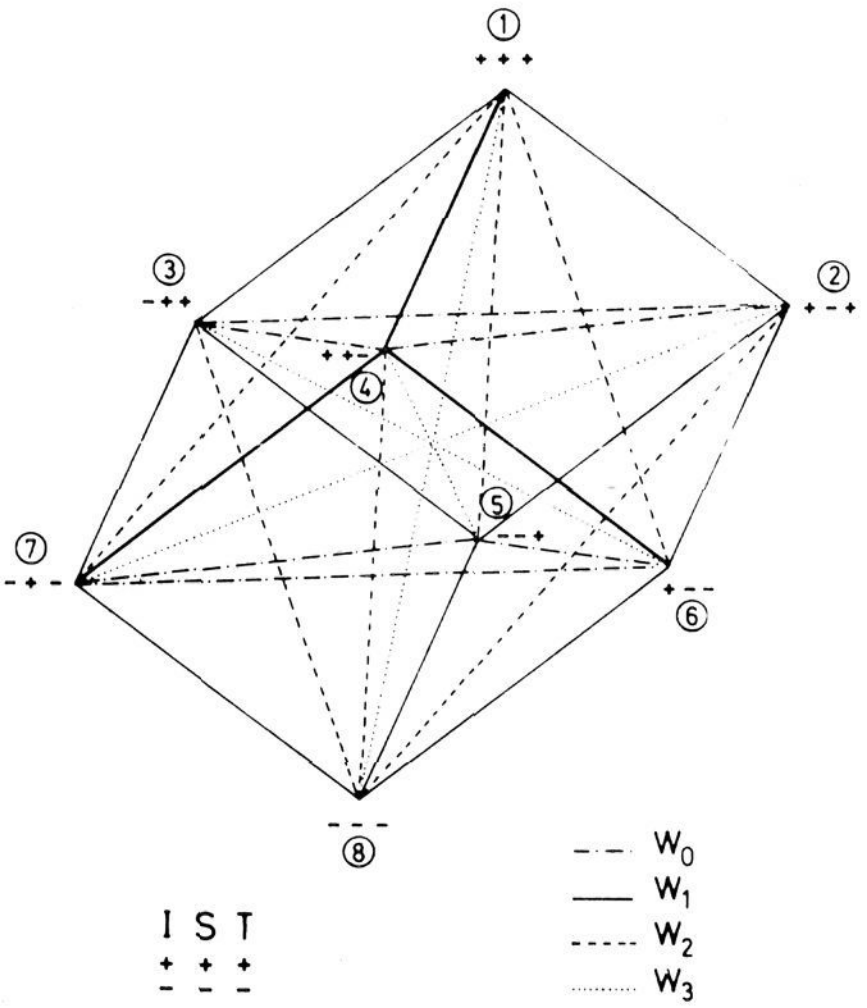


Figure 4. Transition possibilities for *I*, *S*, and *T* three-spin system.

The Occurrence of Permutational Isomerism in the Mechanism of the Thermal Thiaallylic Rearrangement [*J. Am. Chem. Soc.*, **99,** 3441 (1977)]. By H. KWART* and N. A. JOHNSON, Department of Chemistry, University of Delaware, Newark, Delaware 19711.

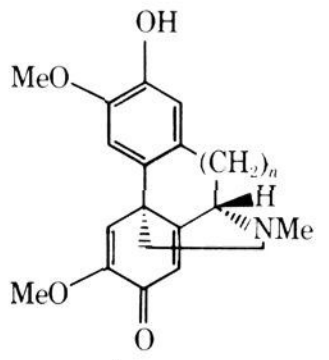
The derivation of eq 6 on p 3442 has neglected a factor of 2. The correct form of eq 6 is

$$-\ln (A - A_e) = 2(k_1 + 2k_2A_0)t$$

This correction entails no changes in any of the activation parameters or in the magnitude of the relative rate constants reported.

Studies on the Syntheses of Heterocyclic Compounds. 700. Syntheses of Isoquinoline Alkaloids with Cuprous Chloride and Oxygen in Pyridine as an Enzymic Model [*J. Am. Chem. Soc.*, **99,** 3805 (1977)]. By TETSUJI KAMETANI,* MASATAKA IHARA, MAKOTO TAKEMURA, YOSHINARI SATOH, HIROFUMI TERASAWA, YOHKO OHTA, KEIICHIRO FUKUMOTO, and KEIICHI TAKAHASHI, The Pharmaceutical Institute, Tohoku University, Aobayama, Sendai 980, Japan, and The Sendai Institute of Heterocyclic Chemistry, Kawauchi-Sanjuninmachi, Sendai 980, Japan.

Structures **4** and **8** in Scheme I on p 3806 should be:



4, $n = 1$
8, $n = 2$

An Approach to Biradical-like Species. Spectroscopy of *o*-Xylylene in Argon Matrix [*J. Am. Chem. Soc.*, **99,** 4840 (1977)]. By KARL L. TSENG and JOSEF MICHL,* Department of Chemistry, University of Utah, Salt Lake City, Utah 84112.

The top spectrum in Figure 2 (p 4841), which did not reproduce in the journal, is shown below, in the complete figure.

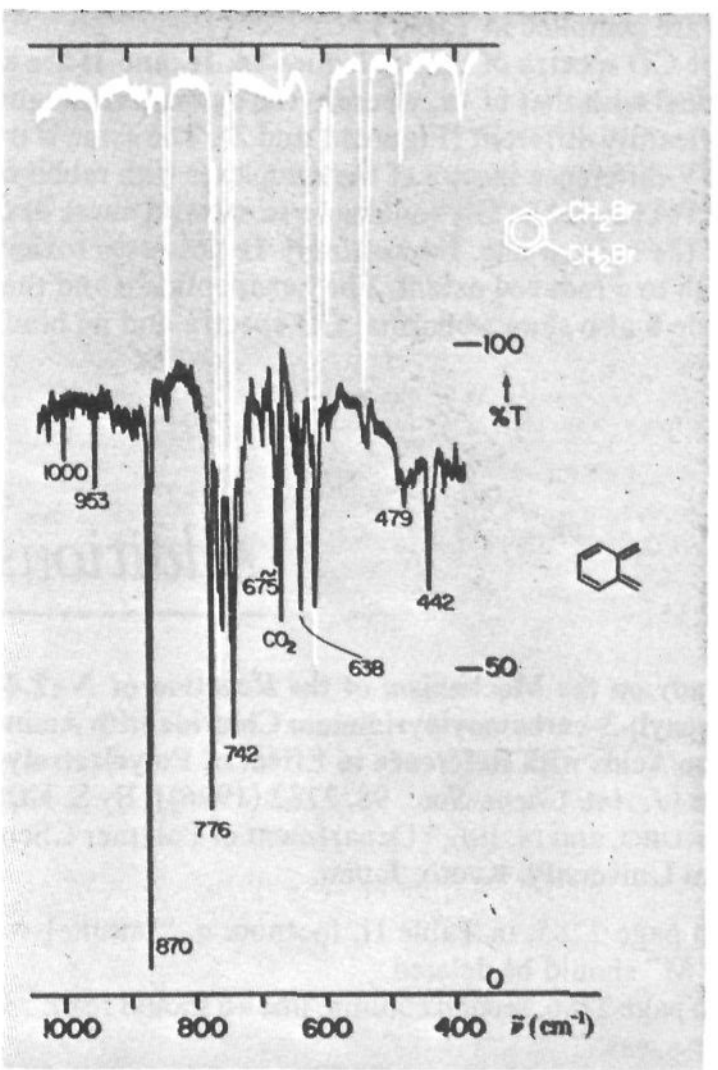


Figure 2. IR spectra of **1** and **2** in argon matrix in the C–H out-of-plane bending and C–Br stretching regions (on the same scale, but shifted vertically).