

Annual Index of the Reports on
Plant Chemistry in 1967

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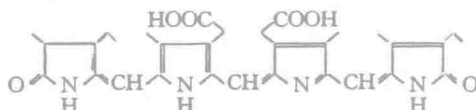
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CYANOPHYTA [藍藻植物]

Oscillatoriaceae [ユレモ科]

Phormidium persicinum — The structure of *phycoerythrobilin* was determined as (I).¹⁾



- 1) D. J. Chapman, W. J. Cole, H. W. Siegelman: J. A. C. S. **89**, 5976 (1967)

Nostocaceae [ネンジュモ科]

Anabaena variabilis — *Plastocyanin*, a copper-containing protein in photosynthetic tissue was isolated.¹⁾

- 1) J. J. Lightbody, D. W. Krogmann: C. A. **67**, 8720 (1967); Biochem. Biophys. Acta **131**, 508 (1967)

Anacystis nidulans — Lipid and lipoprotein were detected.¹⁾

- 1) O. Hirayama: J. Biochem. **61**, 179 (1967)

PYRROPHYTA [炎色植物]

Chryptophyceae [褐色鞭毛藻類]

Cryptophyceae — A new carotene, diacetylenic analog of *zeaxanthin*, was isolated together with *monadoxanthin* and *crocoxanthin*.¹⁾

- 1) A. K. Mallams, E. S. Waight, B. C. L. Weedon, D. J. Chapman, F. T. Haxo, T. W. Goodwin, B. M. Thomas; Chem. Comm. **1967**, 301.

Dinophyceae [恐鞭毛藻類]

Gymnodiniaceae [ギムノデニウム科]

Gyrodinium cohnii — *Dimethyl-β-propiothetin* was isolated.¹⁾

- 1) Y. Ishida, M. Kadota: Agr. Biol. Chem. Japan **31**, 756 (1967)

CHRYSTOPHYTA [黄藻植物]

Chrysophyceae [黄色鞭毛藻類]

Synecryptaceae [シンクリプタ科]

Isochrysis galbana — Two colored substances, probably *pheophytin A* and a typical *chlorophyllide A* were isolated.¹⁾

- 1) D. L. Bruce, D. C. B. Duff, N. J. Antia: C. A. 68, 10594 (1968); J. Gen. Microbiol 48, 293 (1967)

CHLOROPHYTA [緑藻植物]

Chlorophyceae [緑藻類]

Chlorochytridiaceae [クロロキトリジオン科]

Pedinomonas minor and **P. tuberculata** — α -, β -, γ -Carotenes, an unidentified carotene, *lutein*, *zeaxanthin*, *lutein-5,6-epoxide*, *violaxanthin*, *luteoxanthin*, *neoxanthin*, *neochrome*, and *chlorophyll a* and *b* were detected in the former flagellates.

α -, β - and γ -Carotenes, 2 unidentified carotenes, *lycopene*, *lutein*, *zeaxanthin*, *violaxanthin*, *luteoxanthin*, *neoxanthin*, *neochrome*, and *chlorophyll a* and *b* were detected in the latter.¹⁾

- 1) T. R. Ricketts: Phytochem. 6, 19 (1967)

Chlorellaceae [クロレラ科]

Chlorella ellipsoidea — Variation of α -keto acids contents.¹⁾

- 1) T. Kanazawa, K. Kanazawa, T. Nishimura: Plant Cell Physiol. 8, 529 (1967)

Chlorella vulgaris — *Chondrillasterol*, Δ^7 -*chondrillasterenol*, mp. 140~142°, and Δ^7 -*ergosterol*, mp. 148~149° were isolated.¹⁾ Cytokinin like substance against fish was detected.²⁾

- 1) G. W. Patterson: C. A. 68, 10573 (1968); Plant. Physiol, 42, 1457 (1967)
- 2) M. Saidoi: Eiyo to Shokuryo 20, 190 (1967)

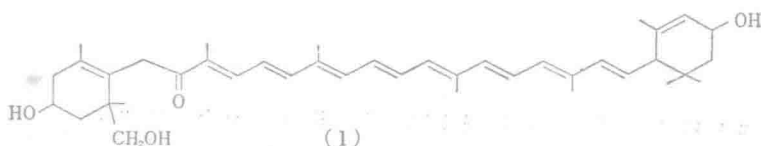
Prasiolaceae [カワノリ科]

Prasiola japonica YATABE (カワノリ) — Cell-wall components consist of a mannan, cellulose and polysaccharide containing *rhamnose*.¹⁾

- 1) H. Takeda, K. Nishizawa, T. Miwa: Bot. Mag. Tokyo 80, 109 (1967)

Caulerpaceae [イワズタ科]

Caulerpa prolifera — *Siphonaxanthin* (I) and *siphonoin* (II) were isolated and the structure was determined for (I).¹⁾



- 1) H. Kleinig, K. Egger: *Phytochem.* **6**, 1681 (1967)

Dasycladaceae [カサノリ科]

Acetabularia mediterranea — β -Carotene, lutein, lutein epoxide, violaxanthin, neoxanthin, astaxanthin, 3-hydroxyechinenone, 3, 3'-dihydroxyechinenone, 3-hydroxycanthaxanthin and an unknown yellow pigment were identified.¹⁾

- 1) H. Kleinig, K. Egger: *Phytochem.* **6**, 611 (1967)

Valoniaceae [バロニア科]

Valonia macrophysa KÜTZING (タマゴバロニア) — L-Ascorbic acid content was studied.¹⁾

- 1) M. Skare, R. Topalovic-Avramov: *C. A.* **69**, 74465 (1968); *Hrana Ishrana* **8**, 719 (1967)

PHAEOPHYTA [褐藻植物]

Heterogenaratae [異形世代綱]

Spermatochneaceae [モズク科]

Nemacystus decipiens KUCKUCK (モズク) — The organic acid constitution was investigated.¹⁾

- 1) H. Osada: *C. A.* **68**, 878 (1968); *Eiyo to Shokuryo* **20**, 31 (1967)

Laminariaceae [コンブ科]

Laminaria religiosa MIYABE (ホソメコンブ) — The organic acid constitution was investigated.¹⁾

- 1) H. Osada: *C. A.* **68**, 878 (1968); *Eiyo to Shokuryo* **20**, 31 (1967)

Laminaria spp. (コンブ) — Analysis of amino acids.¹⁾

- 1) K. Oishi, M. Takagi, N. Kunizaki, S. Okumura: *Nichi. Suisan-shi* **33**, 1038 (1967)

Lessoniaceae [レッソニア科]

Macrocystis pyrifera (giant kelp) — Small amounts of laminitol, succinic acid, glycerol, taurine, amino acids were isolated.¹⁾

- 1) R. G. Schweiger: *C. A.* **66**, 52913 (1967); *Arch. Biochem. Biophys.* **118**, 383 (1967)

Alariaceae [ワカメ科]

Ecklonia cava KJELL. (カジメ) — L-Glutaminyl-L-glutaminyl-L-alanine was detected.¹⁾

- 1) S. Konagaya: *Nichi-Suisan* **33**, 417 (1967)

Undaria pinnatifida SURING. (ワカメ) — The organic acid constitution was investigated.¹⁾

- 1) H. Osada: *C. A.* **68**, 878 (1968); *Eiyo to Shokuryo* **20**, 31 (1967)

Cyclosporaе [円孢子類]

Fucaceae [ヒバマタ科]

Fucus spirilis — Mutatochrome (5,8-epoxy- β -carotene).¹⁾

- 1) R. J. H. Williams, T. W. Goodwin: *Phytochem.* **6**, 1037 (1967)

4 RHODOPHYTA

Fucus virsoides — *L-Ascorbic acid* content was studied.¹⁾

- 1) M. Skare, R. Topalovic-Avramov: C. A. **69**, 74465 (1968); Hrana Ishrana 8, 719 (1967)

Sargassaceae [ホンダワラ科]

Sargassum horschuchi — *L-Ascorbic acid* content was studied.¹⁾

- 1) M. Skare, R. Topalovic-Avramov: C. A. **69**, 74465 (1968); Hrana Ishrana 8, 719 (1967)

Sargassum platycarpum — Ether extracts of this algae has the same physicochemical and antimicrobial properties as that obtained from *S. natans*.¹⁾

- 1) A. T. Hernandez: C. A. **67**, 755 (1967); Bios (Mt Vernon, Iowa) **38**, 32 (1967)

Sargassum spp. — Seasonal variation of *alginic acid* content from 4 species were reported.¹⁾

- 1) H. N. Shah, J. C. Mody, A. V. Rao: Indian J. Technol. **5**, 269 (1967)

RHODOPHYTA [紅藻植物]

Bangiophyceae [ウシケノリ類]

Bangiaceae [ウシケノリ科]

Porphyra purpurea — *Desmosterol* was shown to be a main sterol. *Cholesterol* was also found.¹⁾

- 1) G. F. Gibbons, L. J. Goad, T. M. Goodwin: Phytochem. **6**, 677 (1967)

Florideae [真正紅藻類]

Gelidiaceae [テングサ科]

Gelidium amansii (agar; マクサ) — Hydrolysates of agar were shown to consist of D- and L-galactoses, D-xylose, 6-O-methyl-D-galactose, 4-O-methyl-L-galactose and O-methylpentose.¹⁾

Agarobiose was isolated from hydrolysate of agar and its structure was identified to be a dimer of 3,6-anhydrogalactose with junctures of C₁ among C₄ and C₆.²⁾ However this compound was an artefact.³⁾

Amino acids and sugars of agar were detected.³⁾

- 1) C. Araki, K. Arai, S. Hirase: Bull. Chem. Japan **40**, 959 (1967)
2) C. Araki, K. Arai: *ibid.* **40**, 1452 (1967)
3) K. Hayashi, K. Nonaka: Nihon Shokuhin **14**, 66 (1967)

Corallinaceae [サンゴモ科]

Joculator maximus MANZA (オオシコロ) — Floridean starch of the algae was studied.¹⁾

- 1) H. Ozaki, M. Maeda, Nishizawa: J. Biochem. **61**, 497 (1967)

Grateloupiaceae [ムカデノリ科]

Grateloupia elliptica HOLMES (タンパノリ) — Components of the polysaccharide were isolated as D-galactose, L-galactose, 3,6-anhydro-D-galactose and sulfate.

In addition, D-xylose, 2-O-methyl-L-galactose, 4-O-methyl galactose and 2-O-methyl-3,6-anhydro-L-galactose were detected.¹⁾

- 1) S. Hirase, C. Araki, K. Watanabe: Bull. Chem. Japan **40**, 1445 (1967)

Gigartinaceae [スギノリ科]

Gigartina tenella HARVEY (スギノリ) — Polysaccharide, corraginan was separated to α -saccharide (I) and γ -saccharide, and the structure of I was studied.¹⁾

- 1) S. Hirase, K. Watanabe: Bull. Chem. Japan **40**, 1442 (1967)

Rhodymeniaceae [ダルス科]

Rhodymenia palmata (dulce; ダルス) — *Desmosterol* was shown to be a main sterol. *Cholesterol* was also detected.¹⁾

- 1) G. F. Gibbons, L. J. Goad, T. M. Goodwin: Phytochem. **6**, 677 (1967)

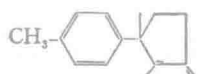
Delesseriaceae [コノハノリ科]

Laingia pacifica YAMADA (コノハノリ) — Water-soluble polysaccharides were extracted. The main component was a starch-like α -glucan, so-called *florida starch*, $[\alpha]_D^{20}$ 182°, which yielded glucose on hydrolysis, and the other component was a galactan, $[\alpha]_D^{20}$ -46°.¹⁾

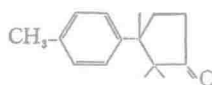
- 1) N. K. Kochetkov, A. I. Usov, L. I. Miroshnikova: C. A. **67**, 108885 (1967); Zh. Obshch. Khim. **37**, 792 (1967)

Rhodomelaceae [フジマツモ科]

Laurencia glandulifera KÜTZ. (オオソゾ) — *Laurene* (I) was converted to α -cuparenone (II). Absolute configuration of (I) and (II) were determined.¹⁾



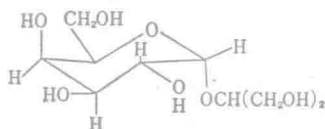
(I)



(II)

- 1) T. Irie, T. Suzuki, S. Ito, E. Kurosawa: Tetrahedron Letters, **1967**, 3187

Laurencia pinnatifida — Hexaacetate of (I) was isolated.¹⁾



(I)

- 1) R. T. Aplin, L. J. Durham, Y. Kanazawa, S. Safe: J. C. S. (C) **1967**, 1346

Odonthalia dentata — 3,5-Dibromo-4-hydroxybenzyl alcohol and 2,3-dibromo-4,5-dihydroxybenzyl alcohol were isolated.¹⁾

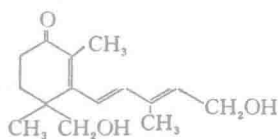
- 1) J. S. Craigie, D. E. Gruenig: Science **157**, 1058 (1967)

FUNGI [真菌植物]

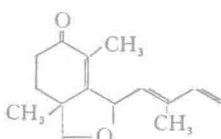
Phycomycetes [藻菌類]

Choanephoraceae [コアネフロ科]

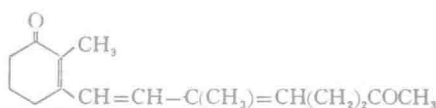
Choanephora trispora SINHA — *Trisporone* (I), $[\alpha]_D^{25}$ 19.4°, and *anhydrotrisporone* (II), mp. 110°, $[\alpha]_D^{25}$ -84.5°, were obtained. Distillation of (I) *in vacuo* gave (II).¹⁾ *Trisporic acid* B methylester (III) was derived from the fungi confirming the structure. Thus the structure of (III) was elucidated.²⁾



(I)



(II)



(III)

1) G. Cainelli, B. Camerino, P. Grasselli, R. Mondelli, S. Morrocchi, A. Prieto, A. Quilico, A. Selva: C. A. 68, 3004 (1968); Chim. Ind. 49, 748 (1967)

2) G. Cainelli, P. Grasselli, A. Selva: C. A. 67, 116979 (1967); Chim. Ind. 49, 628 (1967)

Mucoraceae [ケカビ科]

Rhizopus nigricans — 2, 3-Butyleneglycol was isolated.¹⁾

1) M. L. Fields, B. Richmond: C. A. 68, 10531 (1968); Appl. Microbiol. 15, 1313 (1967)

Ascomycetes [子囊菌類]

Endomycetaceae [エンドミケス科]

Endomyces sp. — *Nigerose*, *maltose*, *isomaltose*, *gentiobiose* and *laminaribiose* were obtained.¹⁾

1) T. Watanabe, S. Kawamura, M. Tanno, K. Matsuda: Nogeishi 41, 470 (1967)

Saccharomycetaceae [コウボキン科]

Saccharomyces cerevisiae HANSEN — Glucan was isolated, and the constituent sugars were identified as glucose and mannose.¹⁾

1) T. Sakaguchi, M. Suzuki, I. Tamaki: Nihon Saikin Shi 22, 267 (1967)

Saccharomyces spp. (yeast) — *Capric* and *lauric* acids were isolated from the yeast head.¹⁾ *Humulone*, the bitter substance of hop, was isolated from yeast head.²⁾ From yeast, *ergosterol*, *dehydroergosterol*, and *zymosterol* were isolated.³⁾

1) W. Riedl, M. Kellner: C. A. 68, 1974 (1968); Brauwissenschaft 20, 312 (1967)

2) W. Riedl, M. Kellner: C. A. 68, 1973 (1968); Brauwissenschaft 20, 312 (1967)

3) A. G. Schering: C. A. 68, 11719 (1968); Ger. 1,252,675, 1,252,674 Oct 26, 1967, appl.

Cryptococcaceae [クリプトコックス科]

Candida albicans SOFF. — *Candidotoxin*, high molecular toxic substance (M. W. 80,000),¹⁾ was isolated.²⁾ Purification and physical constants of *candidotoxin*.³⁾ Production of *cytochrome C* in hydrocarbon fermentation was studied.⁴⁾

1) K. Iwata, K. Uchida: Igaku to Seibutsu 74, 351 (1967)

- 2) K. Iwata, K. Uchida, H. Endo: *ibid.* **74**, 346, (1967)
- 3) K. Iwata, K. Uchida: *ibid.* **75**, 192 (1967)
- 4) A. Tanaka, H. Maki, S. Fukui: *Hakko Ko-Shi* **45**, 1156, 1163 (1967)

Rhodotorula glutinis — A monoacetylenic compound was found.¹⁾

- 1) N. A. Soerensen: *C. A.* **70**, 44842 (1969); *Recent. Advan. Phytochem.* **1**, 187 (1966)

Aspergillaceae [コウジカビ科]

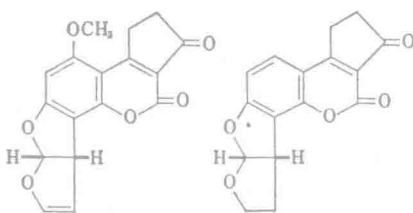
Aspergillus awamori NAKAZAWA and **A. niger** VAN TIEGH. — A new pigment, *asperyellone*, mp. 126~129° was isolated.¹⁾ The structure of *asperyellone* (I) was identified to be 7-methyl-13-phenyl-3-oxotrideca-4, 6, 8, 10, 12-pentaene.²⁾



(I)

- 1) K. Arima, J. Yu, G. Tamura: *Nogeishi* **41**, 571 (1967)
- 2) J. Yu, G. Tamura, N. Takahashi, K. Arima: *Agr. Biol. Chem. Japan* **31**, 831 (1967)

Aspergillus flavus LINK. — The absolute configurations of *aflatoxin B₁* (I) and *aflatoxin B₂* (II), were elucidated.¹⁾ *Aflatoxin B₁* and *G₁* were produced on three month old Cheddar cheeses.²⁾ Isolation and identification of *afratoxins* (*B₁*, *B₂*, *G₁* and *G₂*).³⁾⁴⁾



(I)

(II)

- 1) S. Brechbuehler, G. Buechi, G. Milne: *J. Org. Chem.* **32**, 2641 (1967)
- 2) J. L. Lie, E. H. Marth: *C. A.* **68**, 2038 (1968); *J. Dairy Sci.* **50**, 1708 (1967)
- 3) E. Crieen, E. Mazzucca: *C. A.* **68**, 10533 (1968); *Contrib. Boyce Thompson Inst.* **23**, 361 (1967)
- 4) M. Manabe, S. Matsuura, M. Nakano: *Nogeishi* **41**, 592 (1967)

Aspergillus fumigatus FRES — Galactomannan, $[\alpha]_D^{20} -17.5^\circ$, its componental sugar, galactose and mannose (ratio 1:1), was isolated.¹⁾

- 1) T. Sakaguchi, K. Yokota, M. Suzuki: *Y. Z.* **87**, 1268 (1967)

Aspergillus melleus YUKAWA — A new metabolite, 3-(1,2-epoxypropyl)-5,6-dihydro-5-hydroxy-6-methylpyran-2-one, were isolated.¹⁾

- 1) S. D. Mills, W. B. Turner: *J. C. S., (C)* **1967**, 2242

Aspergillus niger V. TIEGHEN (クロカビ) — *Panose*¹⁾ and its isomeric trisaccharide were synthesized.²⁾ A new pigment, *asperenone* was isolated.³⁾

- 1) M. L. Wolfrom, A. Thompson, T. T. Galkowski: *J. A. C. S.* **73**, 4093 (1951)
- 2) M. L. Wolfrom, K. Koizumi: *J. Org. Chem.* **32**, 656 (1967)
- 3) W. E. Jefferson: *J. Biochemistry* **6**, 3479 (1967)

Aspergillus ochraceus WILH. — *Ochratoxin A* was obtained.¹⁾

- 1) S. Nesheim: C. A. **66**, 118801 (1967); J. Ass. Offic. Anal. Chem. **50**, 370 (1967)

Aspergillus oryzae COH. (コウジカビ) — Fermentation of *kojic acid* was studied on the culture conditions.¹⁾ Producing ability of *ferrichrome* was studied.²⁾

- 1) M. Kitada, H. Kamiyama, E. Suzuki, T. Tomikanehara: Hakko Ko. Shi **45**, 1101 (1967)
2) H. Murakami, M. Makino, J. Sato, M. Fujii, S. Takase: Jozo Shi-ho. **1** (1967)

Aspergillus parasiticus WILB. — Aflatoxin B₁ and G₁ were produced on three month old cheddar cheeses.¹⁾

- 1) J. L. Lie, E. H. Marth: C. A. **68**, 2038 (1968); J. Dairy Sci. **50**, 1708 (1967)

Aspergillus versicolor TIRAB. — 2-η-Hexanoyl-1, 3, 6, 8-tetrahydroxy anthraquinone was isolated.¹⁾

- 1) T. Hamazaki, M. Renbutsu, Y. Hatsuda: Agr. Biol. Chem. Japan **31**, 1513 (1967)

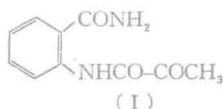
Aspergillus sp. (ムギコウジ) — Aroma of the ferment was analyzed and *vanillic acid*, *ferulic acid* and *vanillin* were identified.¹⁾

- 1) Y. Kuribayashi: Nichi. Shoku. Ko **14**, 549 (1967)

Monascus purpureus WENT. (ベニコウジ) — Mass spectra of *monascorubrin*, *monascamine* and *monascoflavin monascin*.¹⁾

- 1) M. Ohhashi, A. Tatematsu: Shitsuryo Bunseki **15**, 188 (1967)

Penicillium chrysogenum THOM. — A new metabolite, 2-pyruvoylaminobenzamide (I), mp. 181~184°, was isolated.¹⁾



- 1) P. J. Suter, W. B. Turner: C. A. **68**, 1105 (1968); J. C. S. (C) **1967**, 2240

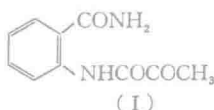
Penicillium expansum LINK. (アオカビ) — 2, 3-Butylene glycol was isolated.¹⁾

- 1) M. L. Fields, B. Richmond: C. A. **68**, 10531 (1968); Appl. Microbiol. **15**, 1313 (1967)

Penicillium griseofulvum — Mechanism of *griseofulvin* formation was studied.¹⁾ *Griseophenone* A was converted to *griseofulvin* by *Coriolus fibula* and *C. hirsutus*.²⁾

- 1) A. N. Klimov, T. P. Efimova: C. A. **68**, 1099 (1968); Antibiotiki **12**, 776 (1967)
2) S. Okuda, H. Izaka, M. Iida, Y. Minemura, H. Iizuka, K. Tsuda: Y. Z. **87**, 1003 (1967)

Penicillium notatum WEST. (ペニシリン産生菌) — A new metabolite, 2-pyruvoylaminobenzamide (I), mp. 181~184°, was isolated.¹⁾ New preparation method of *penicillin*.²⁾



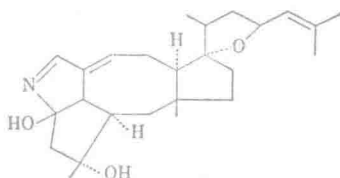
- 1) P. J. Suter, W. B. Turner: J. C. S. (C) **1967**, 2240
2) B. W. Hut, Beecham Group Ltd.: Jap. Pat. 20315 (1967)

Penicillium soppi — Amount and distribution of C₁₃, C₁₅, and C₁₇ fatty acids in lipids, which were affected by components of the media, were investigated.¹⁾

- 1) H. Niewiadomski, J. Salmonowicz: C. A. **68**, 1102 (1968); Roczn. Technol. Chem. Zyrn **13**, 71 (1967)

Pseudosphaeriaceae [タマカビモドキ科]

Ophioborus sp. — Production method of *ophioboramine* (I).¹⁾



(I)

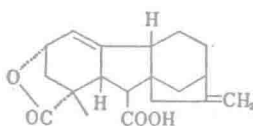
- 1) K. Tsuda, S. Nozoe: Jap. Pat. 14547 (1967)

Hypocreaceae [ニクザキン科]

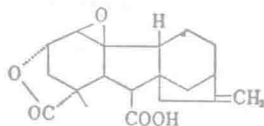
Ahlesia lichenicola — *Pulvic acid*, *pulvic dilactone*, and *vulpic acid* were detected by thin-layer chromatography.¹⁾

- 1) J. Santesson: Phytochem. 6, 685 (1967)

Gibberella fujikuroi WOLL. (イネ馬鹿菌病菌) — Two new compounds were isolated from the culture filtrates. One of them was *3 α -hydroxy-1 β -methyl-8-methylene gibb-4-ene-1 α , 10 β -dicarboxylic acid 1 α $\rightarrow$ 3 α lactone* (I), while the other was tentatively identified as *4, 4a-epoxy-3 α -hydroxy-1 β -methyl-8-methylene-gibbane-1 α , 10 β -dicarboxylic acid 1 α $\rightarrow$ 3 α -lactone* (II).¹⁾ Production methods of *giberellins*.²⁾



(I)



(II)

- 1) J. C. Brown, B. E. Cross, J. R. Hanson: Tetrahedron 23, 4095 (1967)
2) Y. Sumiki, M. Matsui, K. Mori, Kyowa Hakko-Co. Ltd.: Jap. Pat. 25653 (1967)

Gibberella zeae — ($\pm$)-*Zearalenone*¹⁾ was synthesized.²⁾

- 1) W. H. Urry, H. L. Wehrmeister, E. B. Hodge, P. H. Hidy: Tetrahedron Letters 1966, 3109
2) D. Taub, N. N. Girotra, R. D. Hoffsommer, C. H. Kuo, H. L. Slates, S. Weber, N. L. Wendler: Chem. Comm. 225 (1967)

Chaetomiaceae [カエトミウム科]

Chaetomium coarctatum — A metabolite, mp. 64°, from culture filtrate was identified as *2-(buta-1, 3-dienyl)-3-hydroxy-4-(penta-1, 3-dienyl) tetrahydrofuran*.¹⁾

- 1) B. F. Burrows: Chem. Comm. 1967, 597

Clavicipitaceae [バツカクキン科]

Claviceps paspali — Biosynthesis of *chanoclavine*¹⁾ from mevalonic acid-2-¹⁴C was investigated²⁾, and the incorporation of activity to C-Me was confirmed.²⁾

- 1) D. Stanflacher, H. Tschertter: Helv. 47, 2186 (1964)
2) H. F. Floss, V. Hornemann, N. Schilling, D. Groeger, D. Erge: Chem. Comm. 105 (1967).

Claviceps purpurea TULASNE. (ergot; バツカク) — The chemical structure of *clavine* alkaloids present in

10 FUNGI

rye ergot was discussed.¹⁾

- 1) V. Trampetic: C. A. **67**, 93933 (1967); Farm. Glas. **23** 267 (1967)

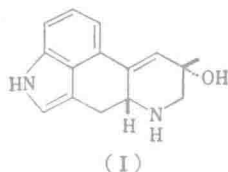
Claviceps sp. — An aged culture of strain SD58 gave *elymoclavine* β -D-fructoside.¹⁾

- 1) H. G. Floso, H. Guenther, U. Mothes, I. Becker: C. A. **67** 108942 (1967); Z. Naturforsch. B. **22**, 399 (1967)

Claviceps sp. (ergot on *Calamagrostis epigeios*) — *Ergosine*, *ergocornine* and *ergocryptine* were isolated.¹⁾

- 1) F. Kaczmarek, H. Speichert, K. Mrugasiewicz: C. A. **68**, 112164 (1968); Herba Pol. **13**, 108 (1967)

Claviceps sp. (*Pennisetum ergot*) — A new alkaloid, *norsetoclavine* (**I**) was isolated. (**I**) was converted to setoclavine and the structure was determined.¹⁾



- 1) E. Ramstad, W. N. Chan Lin, H. R. Sough, K. J. Guldner, R. P. Parikh, E. H. Taylor: C. A. **69**, 19362 (1968); Lloydia **30**, 441 (1967)

Sclerotiniaceae [キンカクキン科]

Sclerotinia libertiana FOCK. — *Sclerin* and *sclerolide*¹⁾ were synthesized.²⁾ Production of *sclerin*.³⁾

- 1) T. Kubota, T. Tokoroyama, T. Kamikawa, Y. Satomura: Tetrahedron Letters **1966**, 5205
- 2) T. Kubota, T. Tokoroyama, T. Nishikawa, S. Maeda: *ibid.* **1967**, 745
- 3) Y. Kuromura: Jap. Pat. 21749 (1967)

Cyttariaceae [キッタリア科]

Cyttaria harioti — *Glycerol*, D-*arabitol*, and D-*mannitol* were isolated from the fruiting bodies.¹⁾

- 1) R. M. DeLederkremer, M. E. Ranalli: C. A. **69**, 74447 (1968); An. Asoc. Quim. Argent. **55**, 199 (1967)

Eutuberaceae [カイキン科]

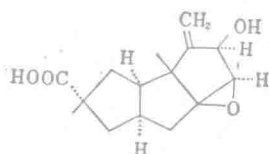
Choiromyces meandriformis VITT. (white truffle) — The fatty acids of white truffle were studied and fourteen acids were identified.¹⁾

- 1) M. Morgantini, A. Bini: C. A. **68**, 46973 (1968); Boll. Lab. Chim. Prov. **18**, 551 (1967)

Basidiomycetes [担子菌類]

Telephoraceae [イボタケ科]

Stereum hirsutum PERS (キウロコタケ) — The structure and stereochemistry of *hirsutic acid* C (**I**) were established as shown.¹⁾



(I)

- 1) F. W. Comer, F. McCapra, H. Qureshi, A. I. Scott: *Tetrahedron* **23**, 4761 (1967)

Hydnaceae [ハリタケ科]

Merulius tremellosus SCHRAD (シワタケ) — *L-Malic acid* was produced in the culture containing xylose.¹⁾

- 1) Y. Sasaki, S. Takao: *Hokkido-dai. No. Ki.* **55**, 174 (1967)

Phlebia strigosozonata LLOYD (ケンワウロコタケ) — The red pigment, *phlebiarubrone* was shown to be 3,6-diphenyl-4,5-methylene dioxy-1,2-benzoquinone.¹⁾

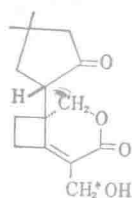
- 1) T. C. McMorris, M. Anchel: *Tetrahedron* **23**, 3985 (1967)

Polyporaceae [サルノコシカケ科]

Corticium rolfsii, **Gleophyllum trabeum** MURR. (キチリメンタケ), **Fomitopsis officinalis** (エブリコ) and **Poria vaporaria** ERIES (ワタグサレタケ) — *Oxalic acid* was produced in the cultures containing xylose.¹⁾

- 1) Y. Sasaki, S. Takao: *Hokkaido-dai. No. Ki.* **55**, 174 (1967)

Fomes annosus COOKE (=Fomitopsis annosus KARST) (ネクチタケ) — The structure of *fomannosin* (I) was established.¹⁾



(I)

- 1) J. A. Kepler, M. E. Wall, J. E. Mason, C. Basset, A. T. McPhail, G. A. Sim: *J. A. C. S.* **89**, 1260 (1967)

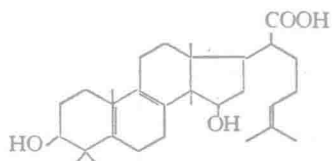
Fomes officinalis FR. (=Fomitopsis officinalis BOND. et SING.) (エブリコ) — *Agaric acid* was shown to be a mixture of *eburicoic acid*, *dehydroeburicoic acid* and *dehydroeburiconic acid*.¹⁾

- 1) K. E. Schulte, G. Ruecker, H. Fachmann: *Tetrahedron Letters* **1967**, 4823

Fomes pinicola FR. (=Fomitopsis pinicoli KARST.) (ツガサルノコシカケ) — *Ergosterol* and *eburicoic acid* were isolated.¹⁾

- 1) K. Sheth, P. Catalfomo, L. A. Sciuchetti: *J. Pharm. Sci.* **56**, 1656 (1967)

Lenzites trabea FR. (=Gleophyllum trabeum) (キチリメンタケ) — *15 α -Hydroxytrametenolic acid* (I) mp. 255°, $[\alpha]_D^{25} +45^\circ$, was isolated¹⁾, besides *trametenolic acid* (II).²⁾ The structure of (I) was determined and confirmed by its conversion into methyl ester of II and by the partial synthesis of the dihydro-ester.



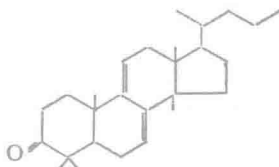
(I)

- 1) W. Lawrie, J. McLean, J. Watson: J. C. S. (C) **1967**, 1776
 2) T. G. Halsall, R. Hodges, G. C. Sayer: J. C. S. **1956**, 2036

Trametes gibbosa FRES. (オオチリメンタケ) **T. heteromorpha** LLOYD (ミヤマシロアミタケ) **T. sanguinea** IMAZ. (ヒイロタケ) — *Oxalic acid* was produced in the cultures containing xylose and CaCO_3 .¹⁾

- 1) Y. Sasaki, S. Takao: Hokkaido-dai. No. Ki. **55**, 174 (1967)

Tyromyces albidus — *Tyromycinic acid* (I), mp. $173\sim 175^\circ$, $[\alpha]_D^{25} 45^\circ$ (CHCl_3), was isolated. Spectral evidences indicated to be 3-oxo-7,9(11),24-lanostatrien-26-oic acid.¹⁾



(I)

- 1) A. Gaudemer, J. Polonsky, R. Gmelin, H. K. Adam, N. J. McCorkindale: Bull. Soc. Chim. Fr. **1967**, 1844.

Boletaceae [イグチ科]

Boletus aereus BULL. (ススケイタチ) — The amino acids were detected by paper chromatography.¹⁾

- 1) V. Constantinescu, E. Poleac: C. A. **68**, 84973 (1968); Rev. Padurilor **82**, 653 (1967)

Boletus scaber (=Leccinum scabrum S. F. GRAY) (ヤマイグチ) — 3,4,5-Trihydroxybenzaldehyde and 3,4-dihydroxycinnamic acid were isolated.¹⁾

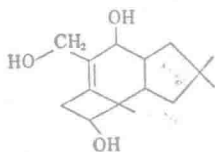
- 1) R. L. Edwards, G. C. Elsworthy: J. C. S. (C) **1967**, 410

Tricholomataceae [シメジ科]

Armillaria mellea QUEL. (=Armillariella mellea KARST) (ナラタケ) — A polysaccharide consisting with D-galactose, D-mannose, and L-fucose residues was obtained from the fruit bodies. Structural studies were carried out.¹⁾

- 1) R. N. Fraser, B. Lindberg: C. A. **66**, 115910 (1967); Carbohydr. Res. **4**, 12 (1967)

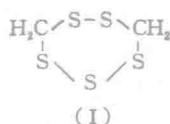
Clitocybe illudens — New metabolite, *illudol*, mp. $130\sim 132^\circ$, $[\alpha]_D^{25} -116^\circ$ (90% EtOH), was isolated and shown to have the structure (I).¹⁾



(I)

- 1) T. C. McMorris, M. S. R. Nair, M. Anchel: J. A. C. S. **89**, 4562 (1967)

Lentinus edodus SING. (=Cortinellus shiitake LLOYD) (シイタケ) — *Lenthionine*, mp. 60~61°, odoriferous substance of the dried fungi, was isolated, and its structure was established to be 1,2,3,5,6-pentathiepane (I).¹⁾ X-ray analysis of *lenthionine*.²⁾



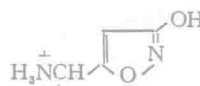
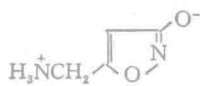
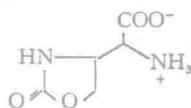
- 1) K. Morita: Kagaku **22**, 542 (1967)
- 2) S. Wada, H. Nakatani, K. Morita: C.A. **68**, 2078 (1968); J. Food Sci. **32**, 559 (1967)
- 3) M. Nishikawa, K. Kamiya, S. Kobayashi, K. Morita, Y. Tomiie: Chem. Pharm. Bull. Japan **15**, 756 (1967)

Schizophyllum commune FR. (スエヒロタケ) — *L-Malic acid* was produced in the culture containing xylose.¹⁾ Mannitol and arabitol were found in homokaryotic fruitbodies.²⁾

- 1) Y. Sasaki, S. Takao: Hokkaido-dai. No. Ki. **55**, 174 (1967)
- 2) D. J. Niederpruen, S. Hunt: C.A. **67**, 29840 (1967); Am. J. Bot. **54**, 241 (1967)

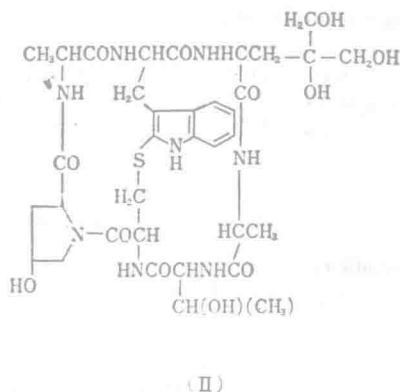
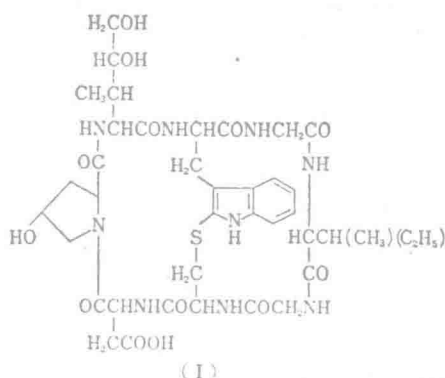
Amanitaceae [テングタケ科]

Amanita muscaria PERS (ベニテングタケ) — The previously assigned structure (I) of *muscazone*¹⁾ was confirmed²⁾ *Muscimole* (II) and *ibotenic acid* (III) were isolated.³⁾



- 1) H. Fritz, A. R. Gagneux, R. Zbinden, C. H. Eugster: Tetrahedron: Letters: **1965**, 2075
- 2) R. Reiner, C. H. Eugster: Helv. **50**, 128 (1967)
- 3) C. H. Eugster: C.A. **68**, 75693 (1968); U. S. Public Health Serv. Publ. No. **1645**, 416 (1967)

Amanita phalloides SECR. (タマゴテングタケ) — Compositions of *amanine* (I) and *phallisine* (II) were determined.¹⁾



- 1) U. Gebert, T. Wieland, H. Boehringer: Ann. **705**, 227 (1967)

Agaricaceae [ハラタケ科]

Agaricus campestris LINN. (ハラタケ) — Nalhydrin-positive compounds were studied.¹⁾

- 1) M. R. Altamura, F. M. Robbins, R. E. Andreotti, L. Long Jr., T. Hasselstrom: C. A. 68, 10201 (1968); J. Agr. Food Chem. 15, 1040 (1967)

Strophariaceae [モエギタケ科]

Namatoloma fasciculare KARST. (ニガクリタケ) — Cytotoxic substance against He La cell, *naematolin*, mp. 145.5°, $C_{17}H_{24}O_6$, was isolated.¹⁾

- 1) Y. Ito, H. Kurita, T. Yamaguchi, M. Sato, T. Okudai: Chem. Pharm. Bull. Japan 15, 2009 (1967)

Pholiota nameko ITO et IMAI (ナメコ) — The mucilage of the edible mushroom was composed of 74.2% sugar and 18.6% ash. The sugar fraction contained 57.9% *galacturonic acid*, 6.5% *xylan*, and small amounts of *xylose*, *galactose*, and *arabinose*.¹⁾

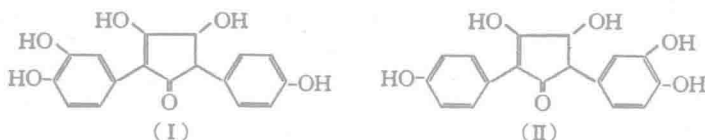
- 1) M. Maki: Kaseigaku Zasshi 18, 307 (1967)

Psilocybe quebecensis — Two psychotropic principles, *psilocybine* and *psilocine* were isolated.¹⁾

- 1) G. Olah, R. Heim: C. R. Acad. Sa. Paris, Ser. D, 264, 1601 (1967)

Paxillaceae [ヒダハタケ科]

Paxillus involutus FR. (ヒダハタケ) — *Involutin* (I or II), $C_{11}H_{14}O_6$, mp. 171~174° (dec.), $[\alpha]_D -23^\circ$, was isolated from the sporophore.¹⁾



- 1) R. L. Edwards, G. C. Elsworthy, N. Cale: J. C. S. (C) 1967, 405

Hymenogastraceae [シヨウロ科]

Rhizopogon roseolus — The puffball fungus produced three cytokinins when it was cultured in liquid media. Two of them were isolated and found to have properties identical to those of synthetic *zeatin* and *zeatin riboside*.¹⁾

- 1) C. O. Miller: C. A. 67, 88324 (1967); Science 157, 1055 (1967)

Sclerodermataceae [ニセシヨウロ科]

Scleroderma aurantium PERS. (ニセシヨウロ) — *Alanine*, *arginine*, *asparagine*, *phenylalanine*, α -*aminobutyric acid*, *aspartic acid*, *glutamic acid*, *leucine*, *lysine*, *serine*, *tyrosine* and *valine* were detected by paper and thin-layer chromatographies.¹⁾ Chemical constituents were investigated.²⁾

- 1) J. Grzybowska: C. A. 68, 112195 (1968); Roczn. Panstw. Zakl. Hig. 18, 581 (1967)
 2) M. Nikonow, J. Grzybowska, I. Karkocha: C. A. 67, 88323 (1967); Roczn. Panstw. Zakl. Hig. 18, 277 (1967)

Phallaceae [スッポンタケ科]

Phallus impudicus PERS. (スッポンタケ) — *Methylmercaptan* and *hydrogen sulphide* were isolated.¹⁾

- 1) P. H. List, B. Freund: Naturwissenschaften 54, 648 (1967)

Fungi Imperfecti [不完全菌類]

Moniliaceae [モニリヤ科]

Cephalosporium acremonium CORDA — A new substance, *monodesacetylcephalosporin* P₁ (I), mp. 197~