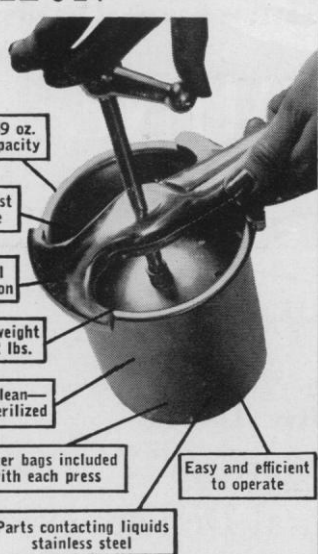


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which is confined chiefly to small extracellular bodies in the tumors. In normal tissues, only sphingomyelin has the affinity for protoporphyrin (1). How to isolate the substance with the affinity for porphyrin from human malignant tumors, excluding sphingomyelin, constituted the basis of our discovery.

On the same basis, we originated a histological method for detecting malignolipin, excluding sphingomyelin, and ascertained that malignolipin could never be found in such tissues as normal liver, kidney, alimentary tract, lung, heart, pancreas, spleen, urinary bladder, and prostate, or in noncancerous tissues from individuals with hepatitis, liver cirrhosis, stomach ulcer, renal tuberculosis, and prostate hypertrophy, but could be found always in cancerous tissues. We studied one cancer of the esophagus, 12 stomach cancers, one cancer of the cecum, three cancers of the rectum, one uterine cancer, one renal adenocarcinoma, one Grawitz' tumor, one breast cancer, two urethral cancers, two seminomata, five cancers of the urinary bladder, one prostate cancer, one Hodgkin's malignant granuloma, and one reticulosarcoma (2).

No malignolipin could be detected histologically in human testicles, in tissues of 2- to 3-month human fetuses, or in chicken embryos of various stages of development (3).

Since malignolipin could be isolated from the blood and ascites of cancer-bearing plants as well as from Ehrlich's cancer ascites of mice, a sensitive method for exact detection of malignolipin in blood was devised. Tests, made in accordance with this method, of the blood of 18 normal persons and of eight patients not bearing malignant tumors were uniformly negative with respect to malignolipin, but tests were positive, without exception, for 25 patients bearing cancer. This method has been stated to be an excellent clinical method for the diagnosis of malignant tumors, especially for their early discovery (2).

Since malignolipin was thus supposed to be intimately related to the malignancy of tumor cells, its effect on the growth of Ehrlich's ascites cancer was examined to test the validity of this supposition and it was ascertained that malignolipin increased the intraperitoneal growth of Ehrlich's ascites cancer and the rate of mitosis of Ehrlich's ascites cancer cells (2).

TAKEKAZU KÔSAKI

Department of Biochemistry,  
Mie Prefectural University  
School of Medicine, Tsu, Japan

#### References and Notes

1. See reports No. 6 and 13 of the studies of T. Kôzaki *et al.* on the affinity of tissue elements for porphyrin, *J. Mie Med. Coll. (Japan)* 5, 29 (1955); 7, 313 (1957).
2. These results have been reported in *Proc. Japan Acad. No. 5* (1958).
3. A paper describing the particulars of these results is in preparation.

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*The information reported here is obtained from manufacturers and from other sources considered to be reliable. Science does not assume responsibility for the accuracy of the information. A coupon for use in making inquiries concerning the items listed appears on page 490.*

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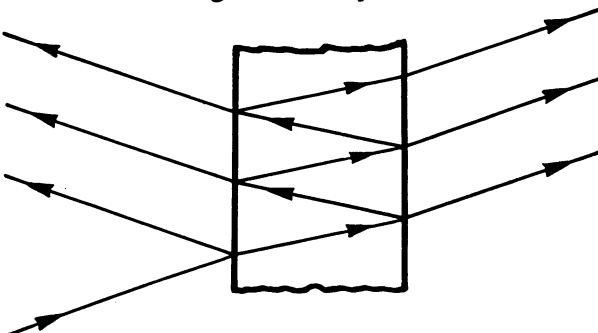
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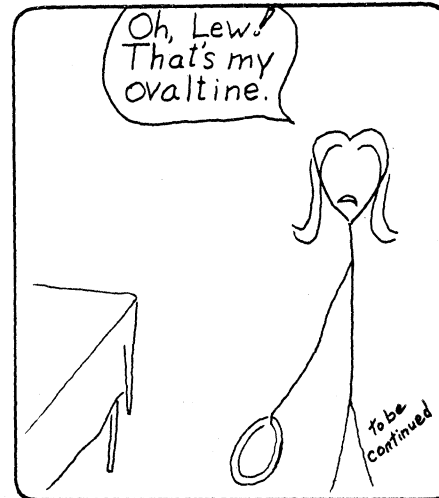
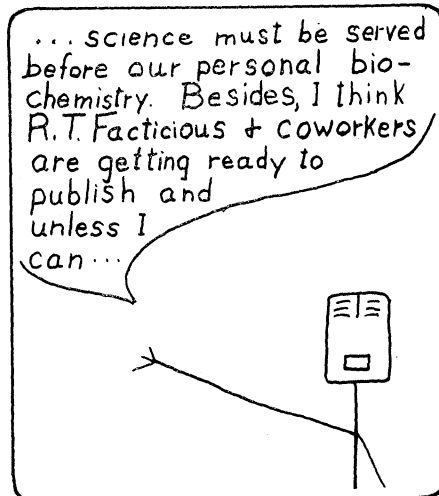
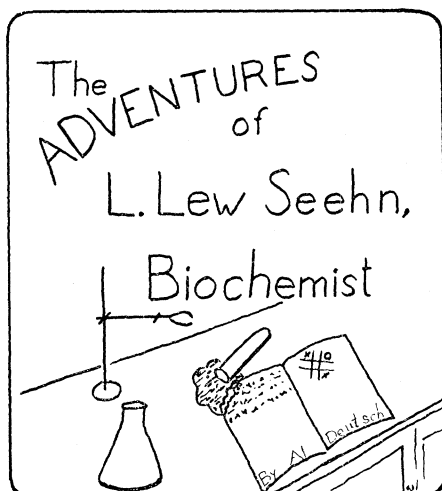
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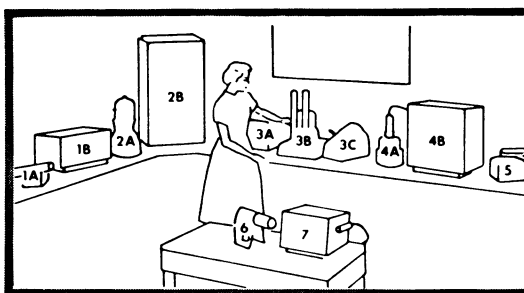
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