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<table>
<thead>
<tr>
<th>TYPE</th>
<th>CHARACTERISTIC</th>
<th>TISSUE BEST SUITED</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Normal balance</td>
<td>Fat cells; Adrenal tissue</td>
</tr>
<tr>
<td>II</td>
<td>High Clostridiopeptidase</td>
<td>Liver, Bone, Thyroid</td>
</tr>
<tr>
<td>III</td>
<td>Low Proteases generally</td>
<td>Mammary</td>
</tr>
<tr>
<td>IV</td>
<td>Low Tryptic activity</td>
<td>Pancreatic Islet cells</td>
</tr>
</tbody>
</table>

The increasing use of Collagenase in cell isolation is encouraging. Credit for the program's success is due to the many researchers who cooperated so openly with their time and talent.

Your comments and interest are welcome. Additional information on this application of Collagenase and a copy of our current catalog are available on request.

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References

1. R. M. May, Stability and Complexity in Model Ecosystems (Princeton Univ. Press, Princeton, N.J., 1973), p. 12. (The 19 percent of figures that are scalars are diagrams of food webs, and the like, which do not admit of scaled axes: I can lay strong claim to being a scaler.)

Mr. Wonderfull's Surprize

Constance Holden's report "Food and nutrition: Is America due for a national policy?" (News and Comment, 3 May, p. 548) refers to "meetings [between nutritionists and] General Foods officials" about a cereal called Mr. Wonderfull's Surprize. She apparently got her generals confused. General Foods makes no such product, but General Mills does.

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Landlubbing Admiral?

In Bruce C. Heezen's review (8 Feb., p. 504) of A. Hallam's book A Revolution in the Earth Sciences (1) the late Harry H. Hess is referred to as (in 1960) "the then-landlubber Princeton geologist." Rear Admiral Hess, USNR, was such a low-keyed man that his modesty probably prevented some "high-seas" folk from realizing that, during World War II, he arranged for the preservation of data from recording fathometers on U.S. naval vessels plying the seas for other than oceanographic purposes.

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The numerous important accomplishments and renowned abilities of the late Harry Hammond Hess were so solid and impressive that it would be sad to see his substantial record replaced by a fanciful legend. Contrary to what Hallam states in his book, Hess was not a submarine commander. He did command a World War II supply vessel (U.S.S. Cape Johnson) and ran a fathometer when the ship's mission took him to the unsounded areas of the western Pacific. To the flat-topped seamounts which abound there,
he gave the name of the Princeton Geology Building (Guyot) (1). After the war, when he returned to his teaching post at Princeton, his seagoing days ended. He did, however, retain his reserve commission in the Navy, eventually rising to the rank of rear admiral. His annual reserve duty was often served at the U.S. Naval Hydrographic (later Oceanographic) Office, where he contoured deep-sea soundings that had been compiled. At Princeton Hess developed a vigorous research program on the geology of the lands surrounding the Caribbean, which was involved in oceanographic research after World War II, preferring to play the role of critic. To be accurate, the contribution to post-World War II marine geology of Admiral Hess was made at a considerable distance from the sea by a "then landlubber."

**Bruce C. Heezen**

*Lamont-Doherty Geological Observatory, Palisades, New York 10964*

**References**


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**Research Chemicals: Supply and Demand**

Certain practices are occurring in the production and distribution of fine chemicals and biochemicals that should be of interest to a large number of scientific researchers dependent upon federal research grants. These practices are not limited to the United States: they are in fact a worldwide problem, occurring in Europe, Japan, and many other countries. Some supply houses, having determined that there is a market for a certain compound or enzyme but that they lack the necessary expertise to produce it themselves, are contacting and hiring as "consultants" scientists who supply them with the compound. Sometimes these compounds are produced in a university or research institute laboratory that is funded by federal research grants. One example involved a university professor of chemistry who was also vice president of a chemical supply house. His federally funded research laboratory was literally a factory for his supply house, until he was caught and his wrist lightly slapped. These practices occur infrequently; research scientists as a group are relatively free of corruption, and in the United States, federal research funds are used with a high degree of cost-effectiveness.

What is the answer? The existing system, in which Professor X produces compound Y for supply house Z, is inefficient and should be retained. Payment of Professor X "under the table" by supply house Z, however, is unethical and should be eliminated. As a practical solution, I propose that Professor X receive a fair payment (perhaps in the form of an honorarium) and that the balance be returned to Professor X's grantor, or Professor X's research fund. There may be better ways of handling the problem; it is basically a question of changing an unethical practice into an "aboveboard" practice.

**R. L. Katzman**

34 Gluskin, Rehovot, Israel

**Telling Time**

Recent discoveries indicate that birds and insects navigate by using polarized light, even in cloudy weather when the sun is obscured. I quote from a letter James Clerk Maxwell wrote to his father about a device he made in 1848 (1).

I have got a lucifer match box fitted up for polarising, thus. The rays suffer two reflections at the polarising angle from glasses A and B. . . In the lid there is set a plate of mica, and so one observes the blue sky, and turns the box around till a particular colour appears, and then a line on the lid of the box points to the sun wherever he is. Thus one can find out the time of the day without the sun.

A diagram of the device is included. One is bound to ask whether the eyes of birds and (some) insects have the counterpart of Maxwell's invention in some biological structure.

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77°K, although some work is being done at 4°K) by inorganic ions such as NO₃⁻ was discussed. Effects of solutes on the thermoluminescence observed from irradiated acid ices were also described. There was considerable discussion of evidences for tunneling of both trapped electrons and hydrogen atoms in experiments at low temperatures. The results of recent experiments on polymerization of formaldehyde at 4°K being conducted in the Institute of Chemical Physics (Moscow) were reported.

Discussions of the radiation chemistry of inorganic systems involved studies both in dilute solutions where abnormal oxidation and reduction states of metal ions were examined by pulse radiolysis techniques and in very concentrated solutions where considerable work is being done on effects of solutes on product formation. Studies on organic solutes focused around the oxidation of alcohols and other relatively simple oxygen-containing compounds (extensive work is in progress both in the Institute of Electrochemistry in Moscow and in the Department of Chemistry of the Byelorusian State University in Minsk). Papers were also presented on the radiolysis of aqueous solutions of both aliphatic and aromatic hydrocarbons. The sessions on biologically important systems were directed toward detailed examination of the products found in the radiolysis of solutions of various sugars, which are being studied in the Institute of Organic Chemistry in Moscow, and toward amino acids and proteins which are being studied in many of the Soviet laboratories.

All in all the symposium appeared to be very successful. As is usual for a conference of this type, considerable benefit was derived from the establishment of very fine personal contacts among the participants. The formal discussions of the presentations were somewhat limited due to lack of time but this seemed to be more than made up by extensive informal technical discussions during which the various scientists emphasized their common problems. While there may have been some reticence toward such informal discussion in cases where a language barrier existed, this reticence appeared to have been largely overcome by the assistance of many of the Soviet scientists who were able to act as interpreters.

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22-25. Cancer of the Skin and Mouth-Advances in Diagnosis and Treatment, Stanford, Calif. (P. H. Jacobs, Dept. of Dermatology, Stanford Univ. Medical Center, Stanford 94305)
22-27. Interallied Confederation of Medical Reserve Officers, 28th annual, Oslo, Norway. (J. H. Kidder, 4545 Connecticut Ave., NW, Washington, D.C. 20008)
24-27. Hormones, Homeostasis and the Brain, 5th intern. congr., Intern. Soc. for Psychoneuroendocrinology, Utrecht, Netherlands. (D. de Wied, Rudolf Magnus Inst. for Pharmacology, Medical Faculty, Univ. of Utrecht, Vondellaan 6, Utrecht)
25-27. Calorimetry Conf., 29th annual, Knoxville, Tenn. (H. Watts, Research & Development Dept., Dow Chemical of Canada, Ltd., P.O. Box 1012, Sarnia, Ont., N7T 7K7, Canada)
28-2. International Assoc. of Applied Psychology, 18th congr., Montreal, P.Q., Canada. (G. Desautels, IAAP, C.P. 242, Station Youville, Montreal)
29-2. Conference on Dynamics of Molecular Collisions, Santa Cruz, Calif. (J. L. Kinsey, Room 6-229, Massachusetts Inst. of Technology, Cambridge 02139)
30-1. American Quaternary Assoc., Madison, Wis. (W. M. Wendland, AMQUA, Center for Climatic Research, 1225 W. Dayton St., Madison 53706)
31-3. Wildlife Disease Assoc., Asilomar, Calif. (B. W. Hudson, Chief, Immunobiology Unit, Center for Disease Control, Ecological Investigations Program, Fort Collins Labs., P.O. Box 2087, Fort Collins, Colo. 80521)

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1-4. International Symp. on Microwave Acoustics, Inst. of Physics, Lancaster, England. (J. K. Wigmore, Dept. of Physics, Univ. of Lancaster, Lancaster, LAI 4YB)
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