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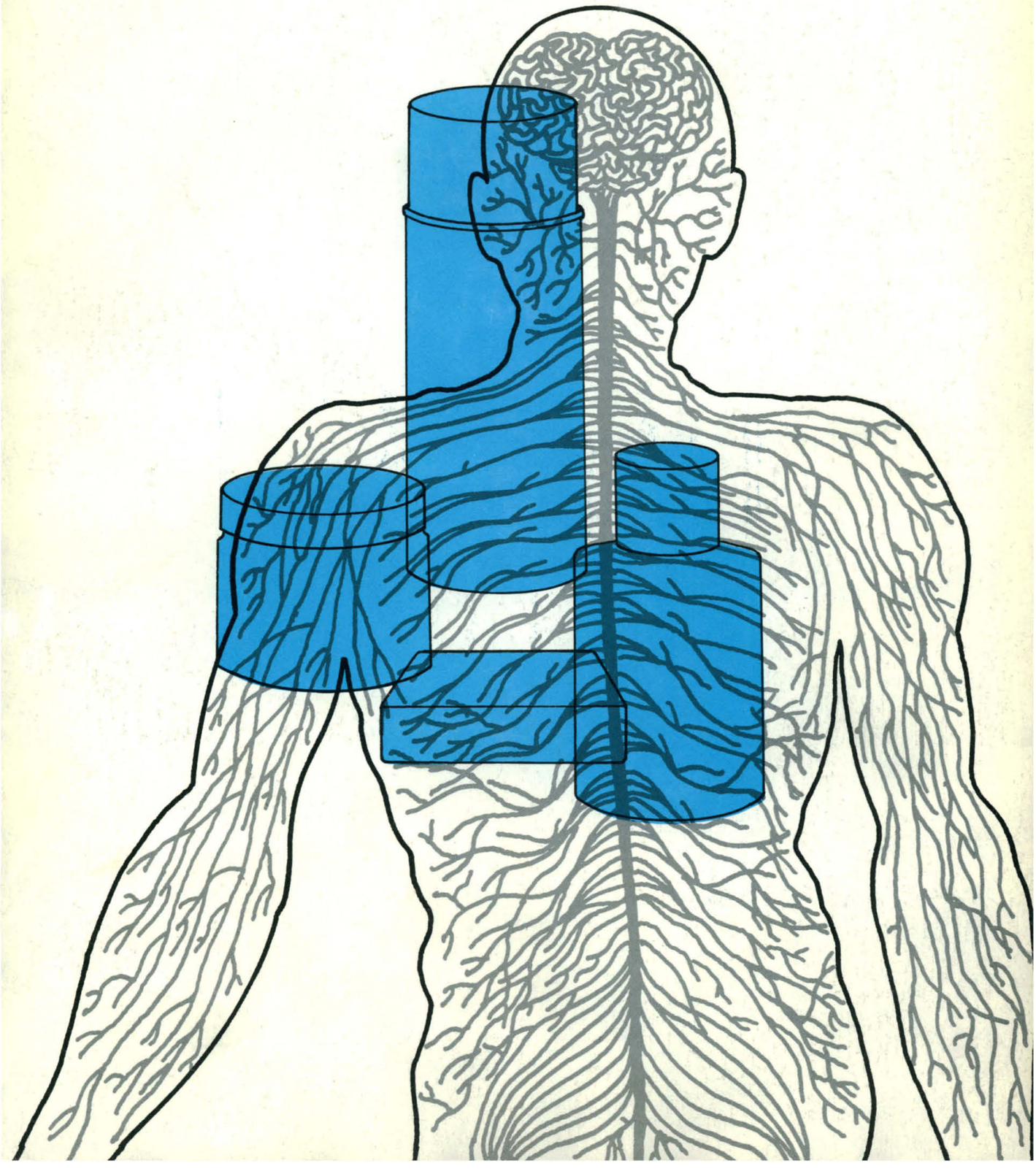

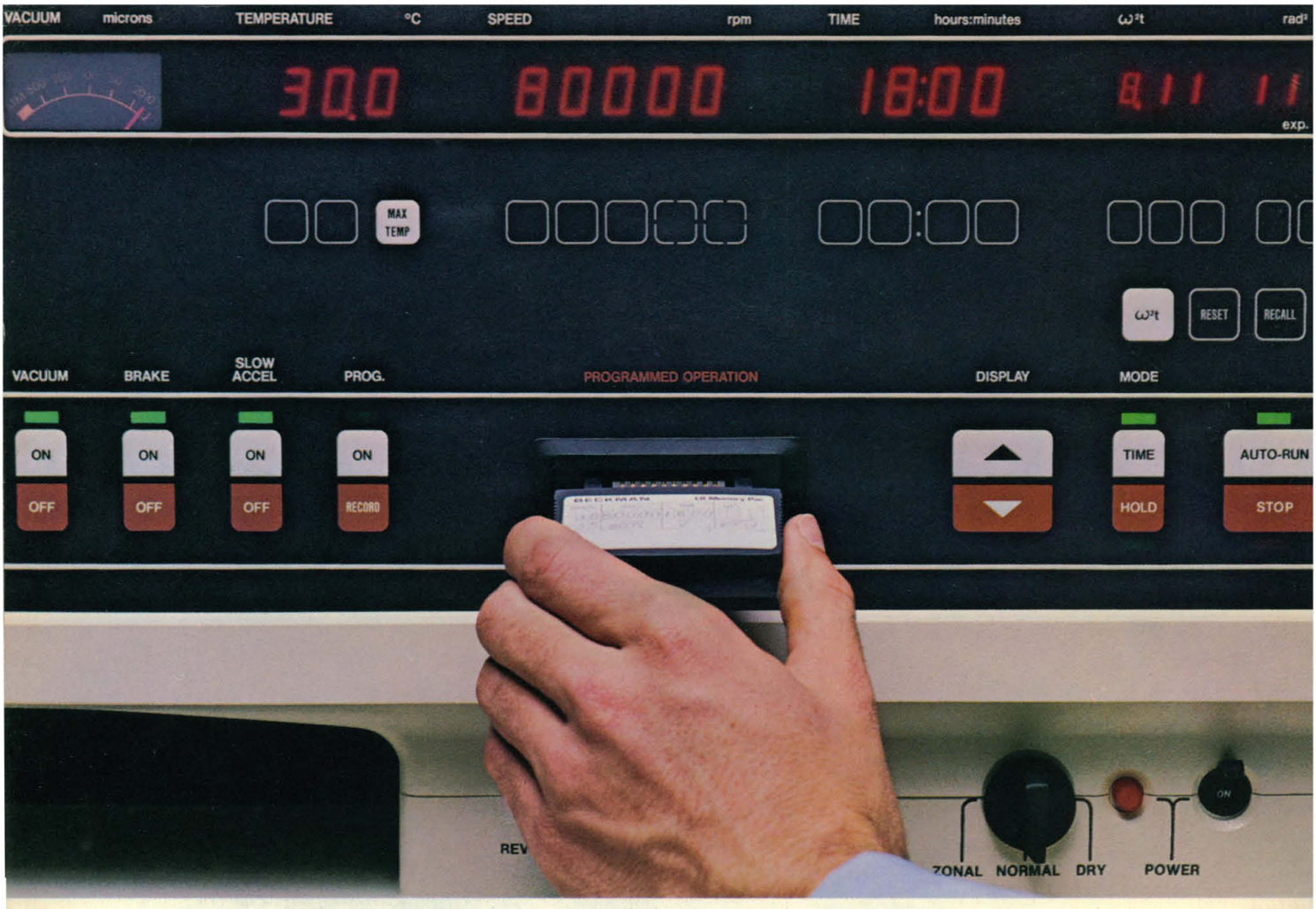

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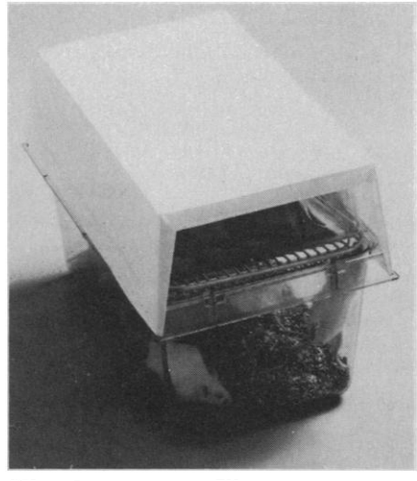

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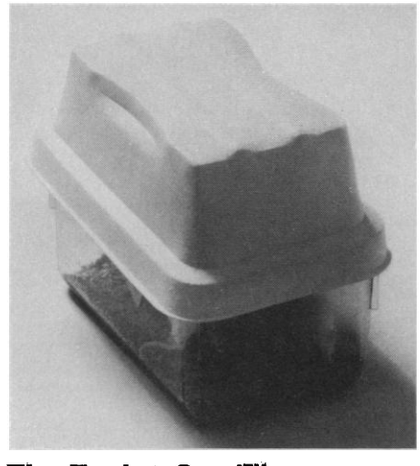

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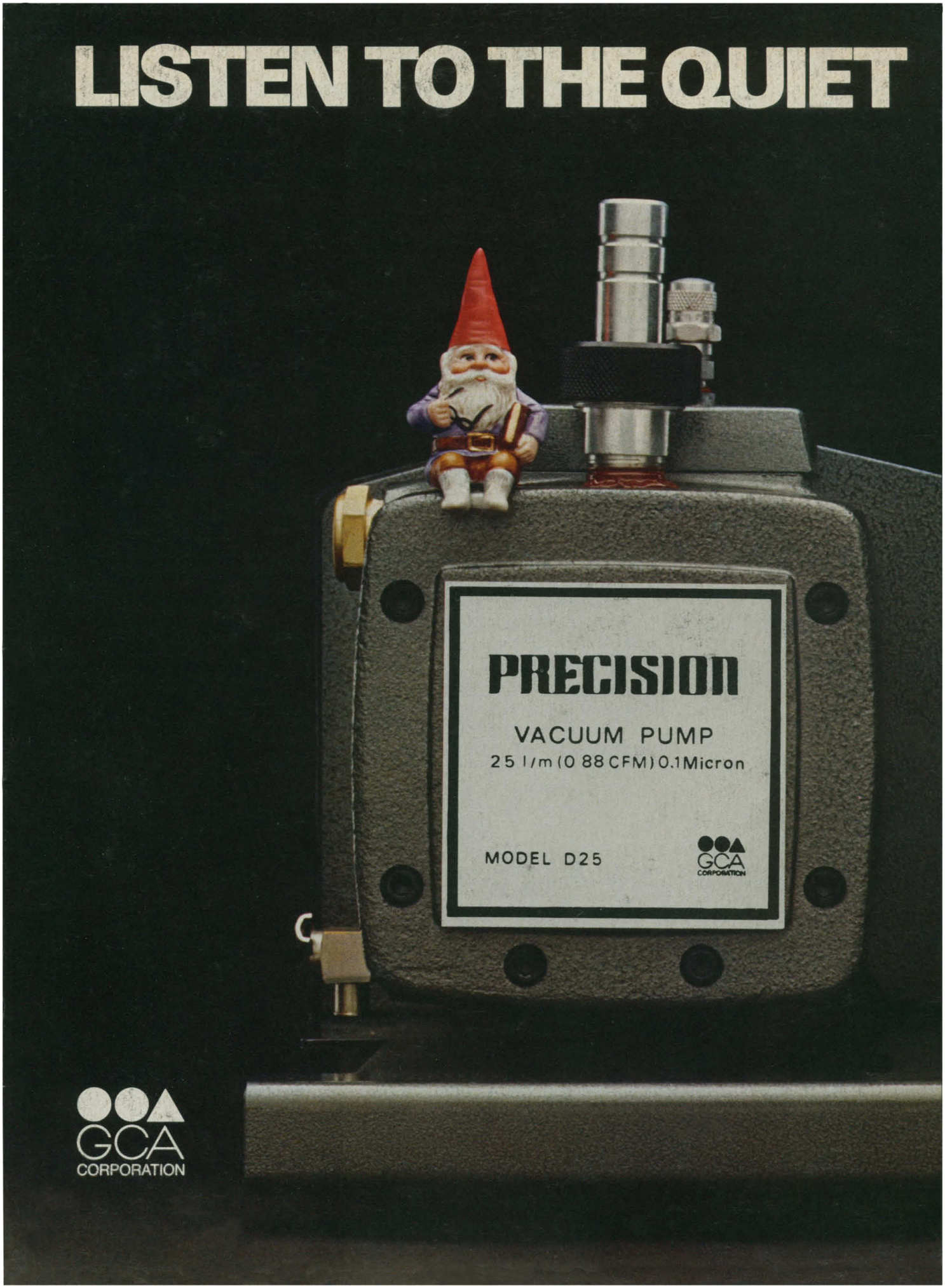
COVER

A musk fragrance that the cosmetics industry has voluntarily withdrawn from all cosmetic preparations on the market causes a blue discoloration of the nervous system of rats when it is applied repeatedly to the skin. See page 633. [Stephen Shepherd, Silver Spring, Maryland]

LISTEN TO THE QUIET



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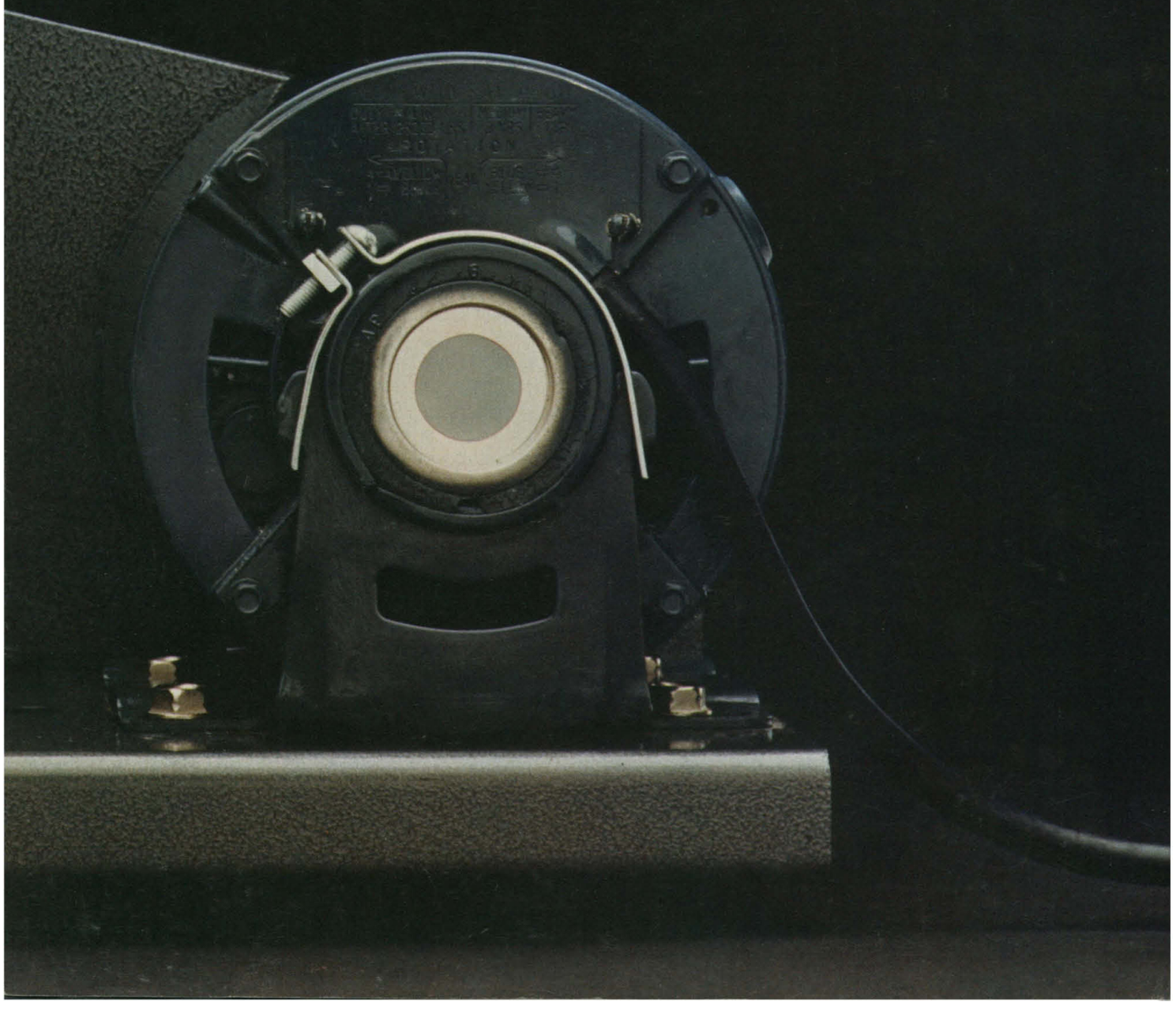

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The aims of the conferences are :
- to foster the exchange of ideas, to evaluate new methods and new lines of investigation ;
- to bring together scientists, mostly from European countries, working in universities and public or private research institutions. The meetings will be held under the direct responsability of a chairman and a co-chairman.

The INSERM CONFERENCES have the following special features :
- only highly topical subjects are dealt with ;
- if possible, the data presented should not have been the subject of any earlier complete publication, a condition which therefore excludes general reviews ;
- the Conferences do not publish proceedings or any other material, even in a summarized form.

The chairman of each INSERM Conference will invite 15 to 20 scientists to give a report in line with the above conditions. The number of contributions will be limited to three of four per session and, at the discretion of the chairman, at least one third of the time will be given over to discussion and brief informal communications.

In addition to the invited speakers, at least fifty participants will attend the meeting, and efforts will be made to select young scientists. Experienced research workers from fields other than those relating to the Conference will also be welcome to attend. Participants will be chosen in such a way as to enable those engaged in all types of scientific research to establish personal contacts, exchange information and find new ways of working together.

PRACTICAL ARRANGEMENTS

The INSERM CONFERENCES 1979 will be held at the Domaine de Seillac, near Blois (180 km from Paris), during the months of September and October 1979 (full address : Domaine de Seillac, 41150 Seillac, France). Each conference will last three and a half days, from Sunday evening (departure from Paris) to Thursday afternoon. Working sessions will be held from 9 a.m. to 12.30 p.m. and from 5.30 p.m. to 8 p.m. On free afternoons, participants will have a wide choice of leisure activities at the Domaine de Seillac and in the surrounding area (Tennis, Table-tennis, bicycling, visit to the Castles of the Loire).

REGISTRATION FEE

Participants whose applications are accepted but who are not invited speakers, will be asked to pay their registration fee and board (1000 FF).

Scientists wishing to attend one of these three conferences have to submit this application form BEFORE JUNE 6th to INSERM Conferences, 101, rue de Tolbiac - 75645 PARIS CEDEX 13, France - Telephone : 584 14-41.

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See overleaf...

PRELIMINARY PROGRAM FOR 1979

SOMATIC GENETICS

GENE TRANSFER AND FUNCTIONAL ANALYSIS IN SOMATIC CELLS - September 23-27
François JACOB, Chairman ; Boris EPHRUSSI and Gérard BUTTIN, co-chairmen

The Conference will deal with three main topics :
- mechanisms of gene transfer
- genetic and epigenetic variation
- lymphocyte hybridomas (the genetic system and its applications)

The list of speakers includes :

R. AXEL	(New York)	D. PATTERSON	(Denver)
D. BOOTSMA	(Rotterdam)	G. PONTECORVO	(Londres)
S. BRENNER	(Cambridge)	K. RAJEWSKI	(Cologne)
R. CASSINGENA	(Villejuif)	N. RINGERTZ	(Stockholm)
M. GEFTER	(Cambridge U.S.A.)	F. RUDDLE	(New Haven)
J. JAMI	(Paris)	R. SCHIMKE	(Stanford)
R. KEMLER	(Paris)	L. SIMINOVITCH	(Toronto)
G. KOHLER	(Bâle)	E. SOLOMON	(Oxford)
C. MILSTEIN	(Cambridge)	M. WEISS	(Gif-sur-Yvette)
M. NABHOLZ	(Epalinges)	K. WILLECKE	(Essen)

IMMUNOLOGY

B CELL DIFFERENTIATION AND IDIOTYPES - October 1-4
M. SELIGMANN, chairman , M.D. COOPER, co-chairman.

Session 1 : **Ontogeny and B cell differentiation**
Speakers : A. COUTINHO (Basel), Nicole LE DOUARIN (Nogent-sur-Marne), P. KINCADE (Rye), F. MELCHERS (Basel)

Session 2 : **Immunoglobulin genes and their expression**
Speakers : Ph. LEDER (Bethesda), T.H. RABBITTS (Cambridge), F. ROUGEON (Paris), I. SCHECHTER (Rehovot)

Session 3 : **Immunoglobulin receptors and secreted antibody products**
Speakers : S. AVRAMEAS (Paris), D. GIVOL (Rehovot), P. LIACOPOULOS (Paris), M. PARKHOUSE (London), P. VASSALLI (Genève)

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Session 4 : **Regulation of B-cell differentiation**
Speakers : C. BONA (Paris), G. MÖLLER (Stockholm), B. PERNIS (New York), E. UNANUE (Boston)

Session 5 : **Human and experimental models of defective B-cell differentiation**
Speakers : M.D. COOPER (Birmingham, USA), H.G. KUNKEL (New York), W. PAUL (Bethesda), J.L. PREUD'HOMME (Paris)

Session 6 : **Heterogeneity of idiotypes and of anti-idiotypic repertoire**
Speakers : P.A. CAZENAVE (Paris), M. FOUGEREAU (Marseille), O. MÄKELÄ (Helsinki), A. NISONOFF (Boston), J. URBAIN (Brussels)

Sessions 7 : **Idiotypes and regulation of immune response (with emphasis on T cell idiotypic determinants)**
Speakers : K. EICHMANN (Heidelberg), K. RAJEWSKY (Köln), B. RUBIN (Copenhagen and Marseille), H. WIGZELL (Uppsala), D. WILSON (Philadelphia).

GENETIC CONTROL AND DISEASES - October 7-11
Jean ROSA, chairman ; André BOUE, co-chairman.

The conference will deal with three main topics :

MOLECULAR ASPECTS OF GENETIC DISEASES :

Y. BEUZARD	(Créteil)	J. OLD	(Oxford)
J. CLEGG	(Oxford)	S. OTTOLENGHI	(Milano)
J. GODDET	(Villeurbanne)	G. STAMATOYANNOPOULOS	(Seattle)
Y. KAN	(San Francisco)	U. TESTA	(Créteil)
P. LITTLE	(London)	D. WEATHERHALL	(Oxford)
U. MAZZA	(Torino)	R. WILLIAMSON	(London)
A. NIENHUIS	(Bethesda)	W.G. WOOD	(Oxford)

POLYMORPHISM AND GENETICALLY DETERMINED DISEASES :

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J.C. DREYFUS	(Paris)	Y. SVENNERHOLM	(Göteborg)
M. FERGUSSON	(Glasgow)	K. VON FIGURA	(Münster)
H. GALJAARD	(Rotterdam)	V. WOLF	(Friburg)
B. HOPKINSON	(London)		

GENETIC CONTROL AND MALIGNANT CELLS :

R. CASSINGENA	(Villejuif)	D. STEHELIN	(Lille)
R. JAENISCH	(Hamburg)	P. TAMBOURIN	(Orsay)
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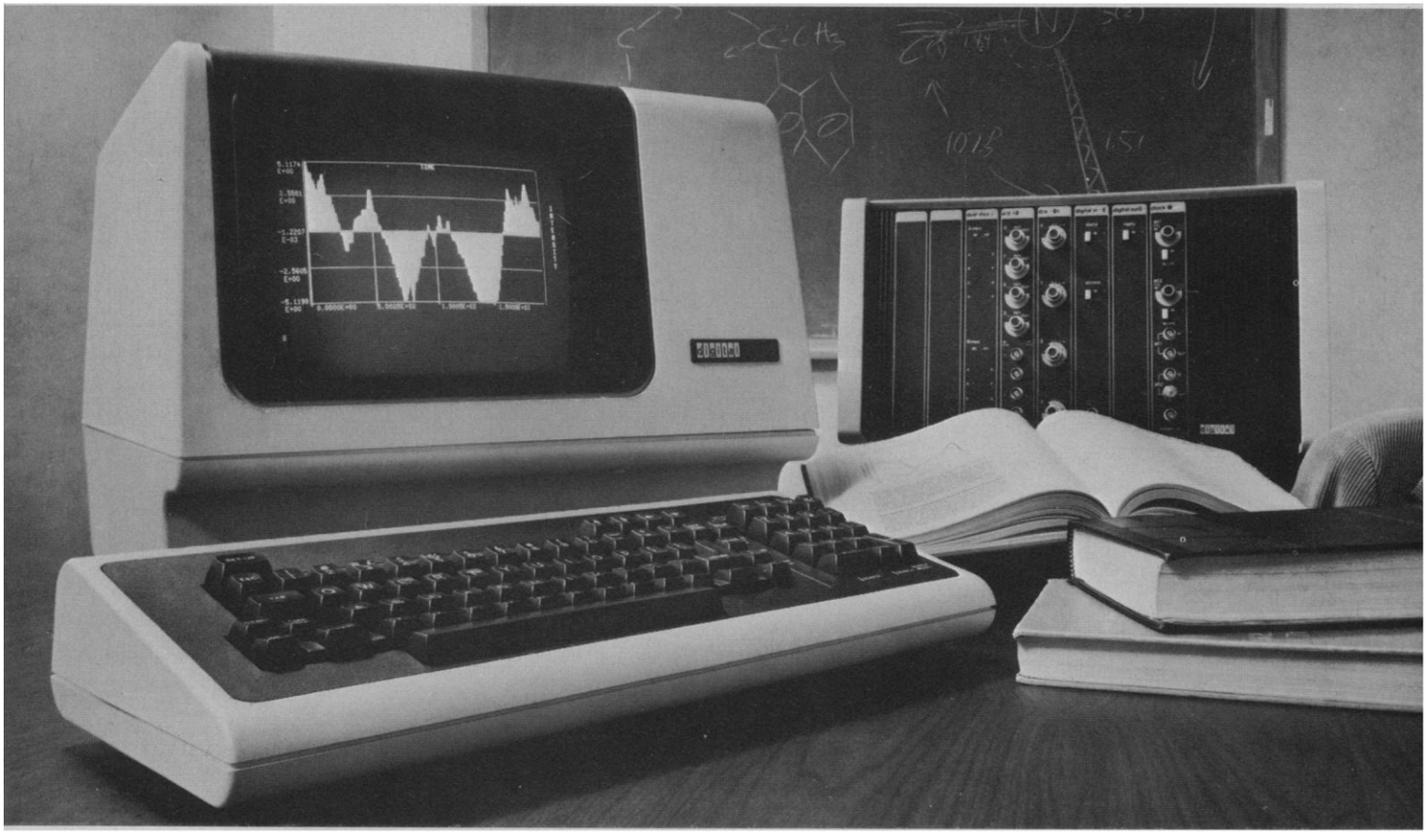

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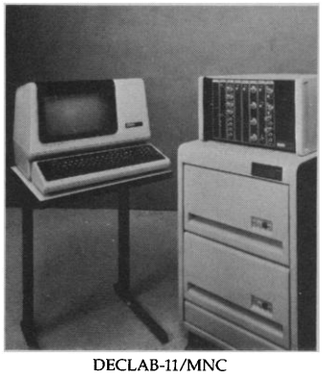

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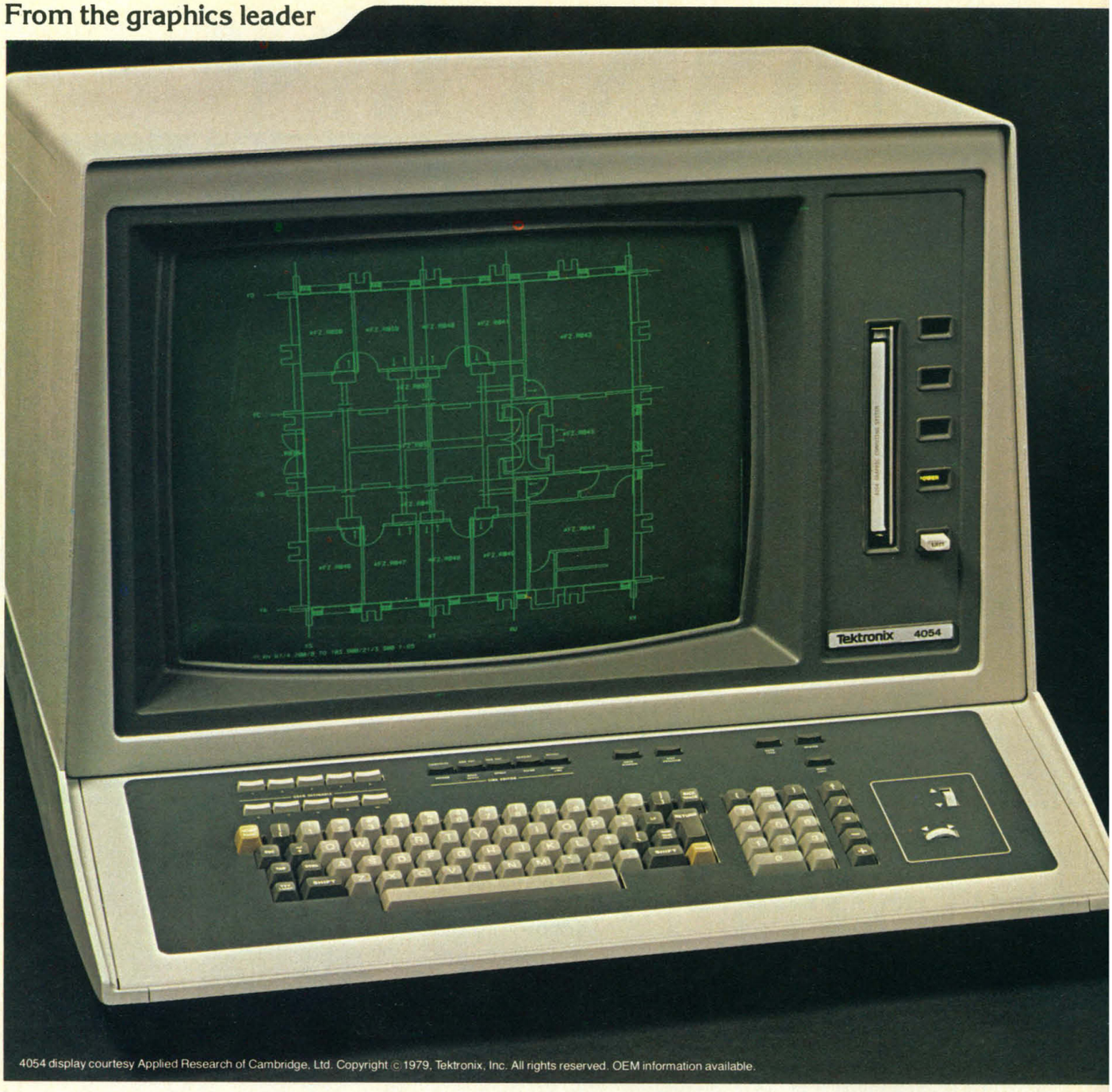

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— Dan Greenberg, New Scientist, 29 June 1978

Now, for the fourth consecutive year, AAAS is preparing its budget analysis and will convene its 4th Annual AAAS Colloquium on R&D and Public Policy. Sponsored by the AAAS Committee on Science, Engineering, and Public Policy, the Colloquium will be held 19-20 June 1979 in Washington, D.C.

You are invited to participate in this Colloquium and in discussions with leaders in government, industry, and the scientific and technical community. Speakers and panelists (including Frank Press, the President's Science Adviser and Thomas R. Pickering, Assistant Secretary of State for the Bureau of Oceans and International Environmental and Scientific Affairs, U.S. Department of State) will examine the relationship between productivity, international competitiveness and the U.S. economy — on the one hand — and innovation, R&D, and the impact of current and proposed federal policies on the other.

Colloquium Topics

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- *Industry R&D and the Economy* • Problems of R&D in industry • Emerging federal policies on innovation • Impacts on economic outlook of federal and industry policies on R&D and innovation
- *International Aspects of R&D* • R&D and international competitiveness • R&D and international cooperation and assistance • R&D and U.S. foreign policy
- *Science and Basic Research* • Impact of federal policies and practices on the conduct of research • Universities and academic science • Federal scientific institutions and capabilities • Basic and long-term research in industry • Public accountability versus excessive paperwork

Research and Development: AAAS Report IV covering R&D in the federal budget for FY 1980, data on R&D in industry, international aspects of R&D, and other topics related to R&D and public policy is being prepared by Willis H. Shapley and Don I. Phillips and will be available in advance to Colloquium registrants. Registrants will also receive the published proceedings of the Colloquium.

Interested individuals are urged to register early by using the Colloquium registration form on the facing page.

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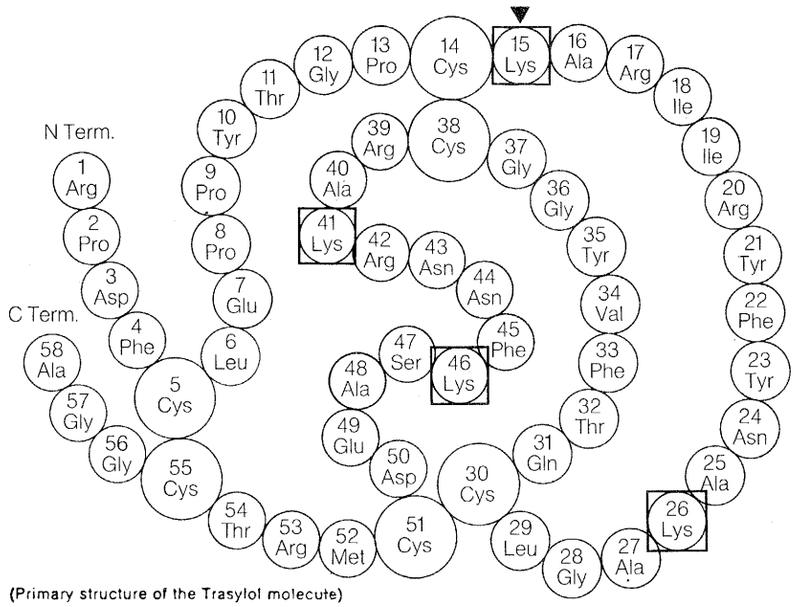

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1) S. R. Bloom: Hormones of the Gastrointestinal Tract. Brit. Med. Bull. 30, 62–67 (1974)
2) A. M. Eisentraut, N. Whissen and R. H. Unger: Incubation Damage in the Radioimmunoassay for Human Plasma Glucagon and its Prevention with "Trasylol". Amer. J. med. Sci. 255, 137–142 (1968).

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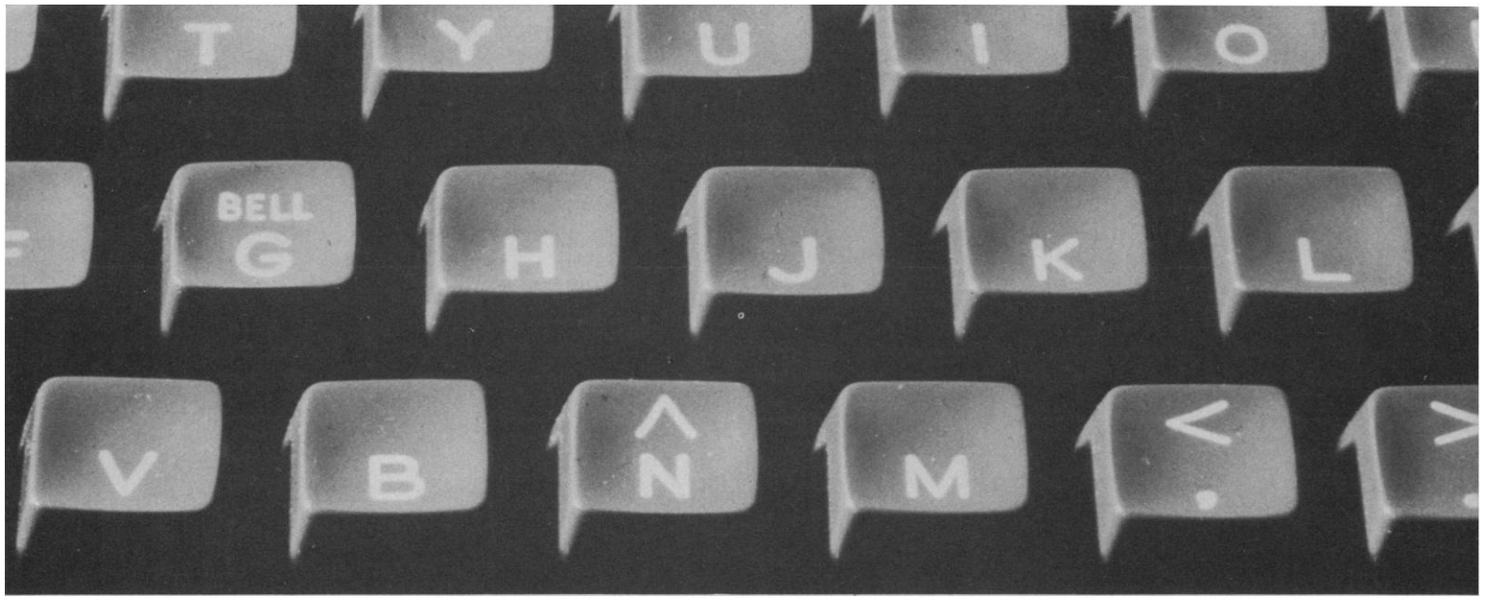

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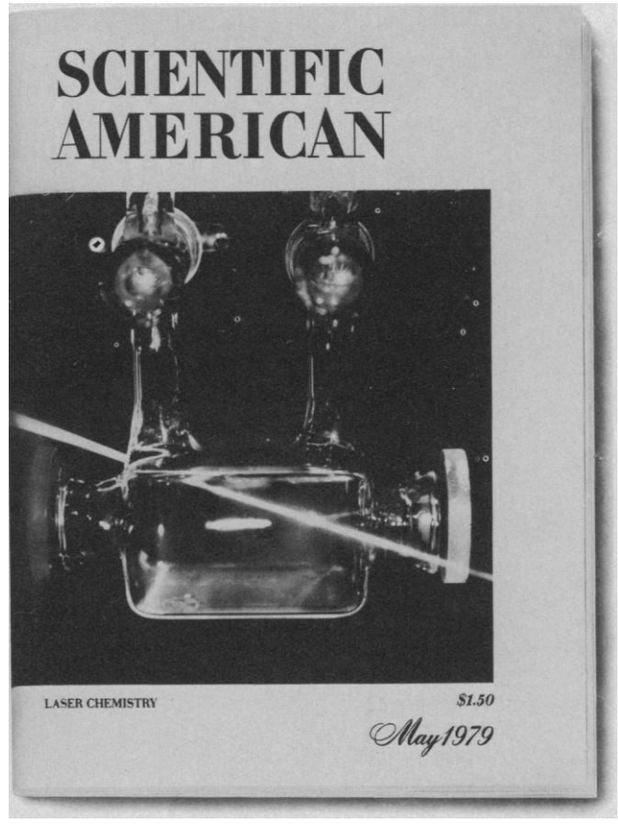

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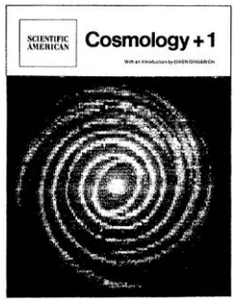

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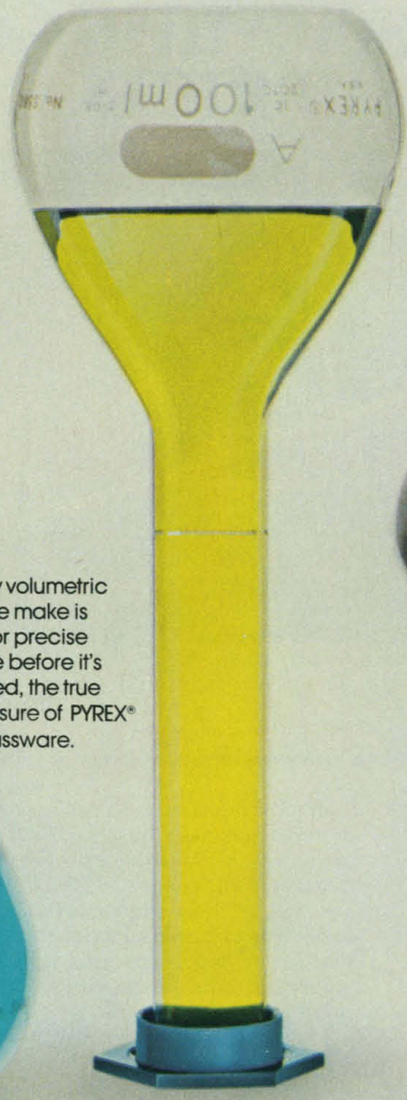

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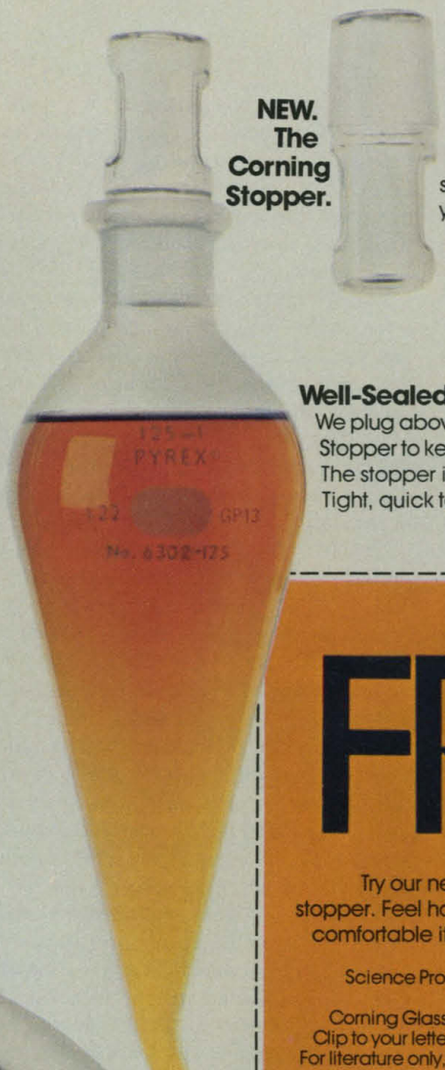

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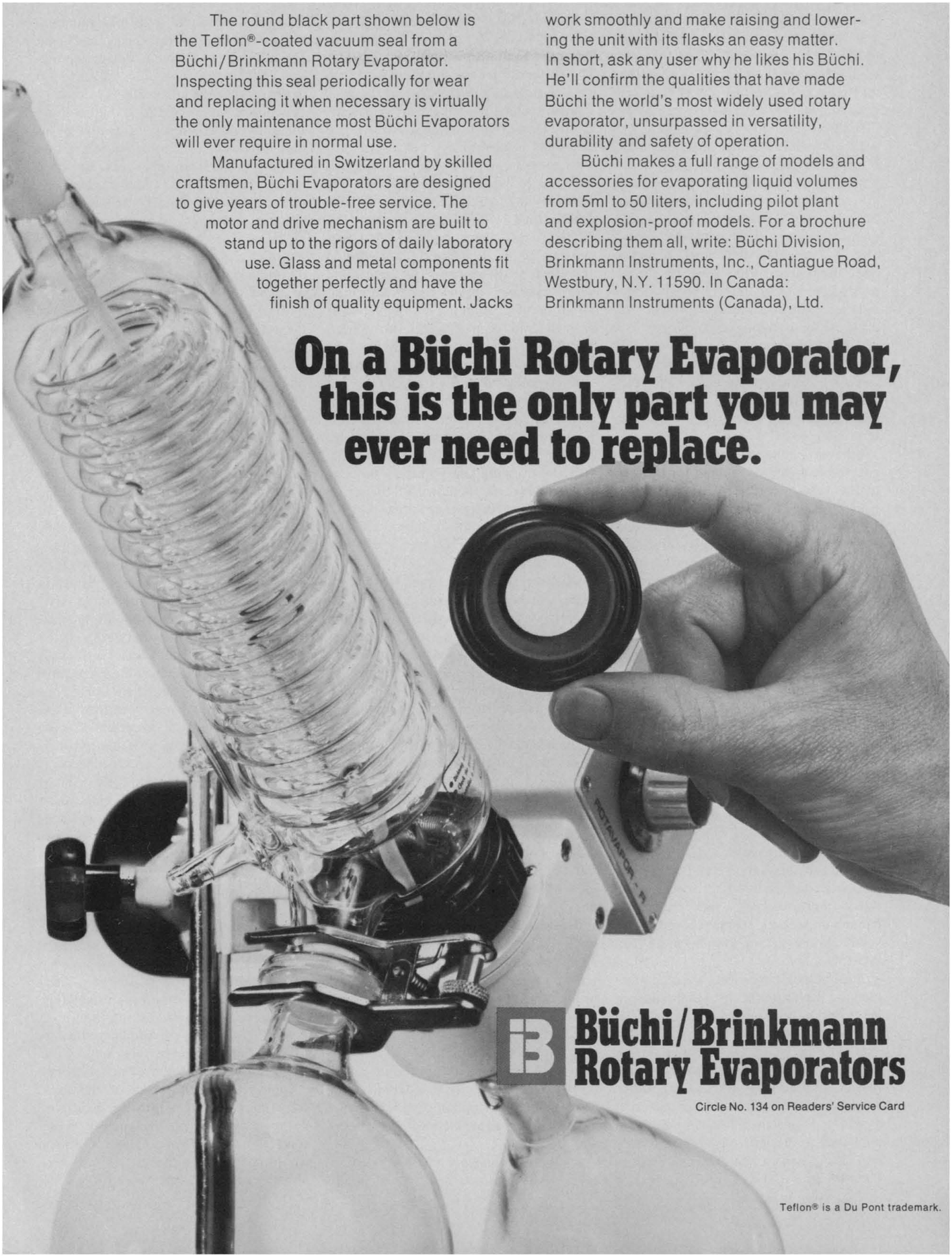

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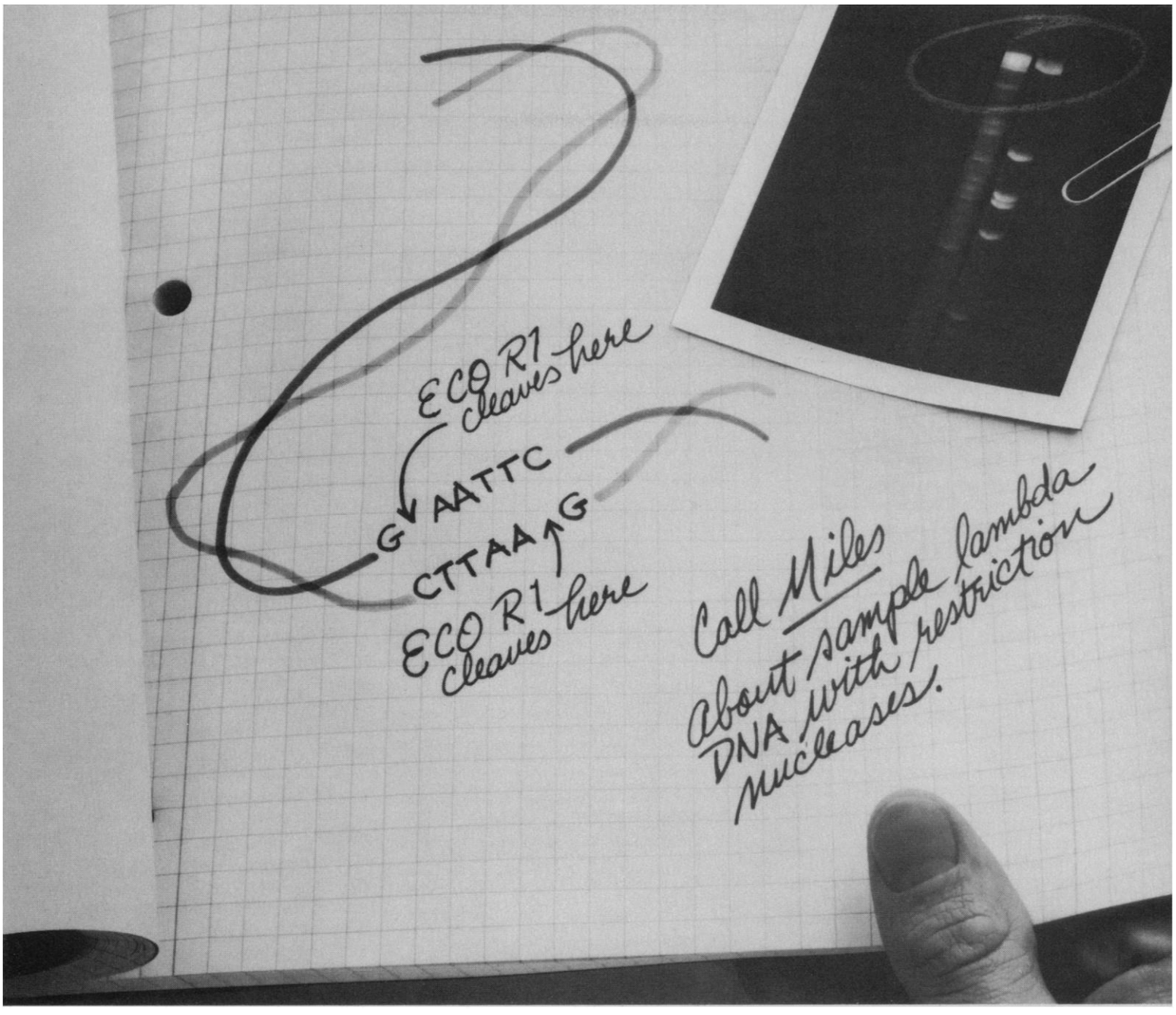

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nonconventional energy technologies, of course, because many needed data are as yet nonexistent, and because important categories of harm are left out of his approach altogether. But by propagating an analysis riddled with distortions, errors, and inconsistencies, Inhaber has muddied rather than illuminated even the circumscribed part of the risk problem he tackled.

JOHN P. HOLDREN
Energy and Resources Group, University of California, Berkeley 94720
KIRK R. SMITH
Resource Systems Institute, East-West Center, Honolulu, Hawaii 96822
GREGORY MORRIS
Energy and Resources Group, University of California, Berkeley

References and Notes

1. H. Inhaber, *Risk of Energy Production* (Report AECB 1119, Atomic Energy Control Board, Ottawa, Ontario, March 1978); *ibid.*, ed. 2, May 1978; *ibid.*, ed. 3, November 1978. The *Science* article does not specify to which of the three editions it refers, and some of its numbers differ from those in all three. Our comments on AECB 1119 here refer to the third edition unless otherwise specified.
2. K. R. Smith, J. Weyant, J. P. Holdren, *Evaluation of Conventional Power Systems* (Report ERG 75-5, Energy and Resources Group, University of California, Berkeley, July 1975). Inhaber's first reference in his AECB report contains 30 citations to this report, 13 direct ones, plus 17 more where Inhaber took the data from our report but mentioned also the original source we had cited.
3. J. P. Holdren, K. Anderson, P. Gleick, I. Mintzer, G. Morris, K. R. Smith, *Risk of Renewable Energy Sources: A Critique of the Inhaber Report* (Report ERG 79-3, Energy and Resources Group, University of California, Berkeley, April 1979).
4. Nuclear Energy Policy Study Group, *Nuclear Power: Issues and Choices* (Ballinger, Cambridge, Mass, 1977). The authors state on p. 179 that "the expected number of cancers could be several times higher, depending on the assumed dose-response model used in deriving the risk estimates," than the values given in the Rasmussen report. On the same page, they note that "the WASH-1400 probability estimate could be low, under extremely pessimistic assumptions, by a factor of as much as 500." The implied upper limit on the product of probability and consequences is a factor of 1500 to 2500 larger than the WASH-1400 "best estimate." Inhaber's "upper limit" is only 6.7 times the WASH-1400 "best estimate."
5. To derive this result we used the upper limit of the National Academy of Sciences' dose-response relation referenced by Inhaber, for the most unfavorable location that the Academy considered (a plant sited 60 kilometers upwind from New York City) and worked backward from Inhaber's figure for public deaths to determine the emissions needed to produce these. See National Academy of Sciences, *Air Quality and Stationary Source Emission Control* (Government Printing Office, Washington, D.C., 1975), chap. 13.
6. R. Manvi, *Performace and Economics of Terrestrial Solar Electric Central Power Plants* (JPL Internal Report 900-781, Jet Propulsion Laboratory, Pasadena, Calif., October 1976). We have consulted the head of the JPL solar project of which this work was a part, and he confirms our analysis of the point and of Inhaber's error (R. Caputo, private communication, March 1979).
7. R. Caputo, *An Initial Comparative Assessment of Orbital and Terrestrial Central Power Systems* (Final Report, Report 900-780, Jet Propulsion Laboratory, Pasadena, Calif., March 1977). Inhaber propagated a number of errors from the 1976 JPL internal memorandum, despite early warnings from Caputo that this material was unreliable (R. Caputo, personal communication); in fact the memorandum appears to have been Inhaber's main source for his methodology and for much of his data relating materials requirements to occupational injuries and diseases.
8. Average insolation on a horizontal surface in the United States is about 180 watts per square meter (averaged over seasons and night and day). Assuming the collectors cover half the land area charged to the plant and that the efficiency of the cells in converting sunlight to electricity is 10 percent, and using the same 30-year lifetime assumed by Inhaber, yields 180 W/m² × 0.10 × 0.50 × 30 years = 270 watt-year/m², which gives 3700 square meters per megawatt-year.
9. C. L. Comar and L. A. Sagan, *Annu. Rev. Energy* **1**, 581 (1976).

Paper Studies

We tabulate and ponder many aspects of our research and development (R & D) process in this country [see, for example, Senator Bayh's concerns with bringing developments to application (Letters, 12 Jan., p. 120)]. Scholars have devised thoughtful models of the process of technological innovation. For instance, Kelly *et al.* (*1*) call attention to its nonlinearity, and Wenk and Kuehn emphasize the multifaceted governmental roles (*2*). However, to the best of my knowledge, neither the conceptualizers nor the empiricists—see (*3*)—have focused on the dimension of "physical" R & D versus paper studies.

It is difficult to specify what fits into the paper study category. I have in mind such things as forecasts, technological feasibility and market studies, cost-benefit analyses, environmental impact statements and technology assessments, systems and policy analyses, and program evaluation. I speculate that such endeavors represent a substantial fraction of the federal R & D budget, and that they play a crucial role in directing the technological innovation process. But I don't know and wonder if anyone does now know.

I suggest that compilation and dissemination of some basic information on the dimension could usefully address a number of issues. For instance, as a faculty member in a department that trains operations researchers and systems analysts, I would like to know the scale of efforts supported in such areas. From a national perspective, one could ask what sort of people perform various paper studies and whether they are suitably trained? For example, the growing commitment to program evaluation requires many professionals. Are we educating such people in the most sensible manner for this task or just relabeling willing contract researchers? It would also seem worthwhile to inquire broadly into who

uses what sorts of analyses (*4*). More pointedly, we might attempt to evaluate the return on investment from such studies and their role in the technological innovation process.

ALAN L. PORTER
Industrial and Systems Engineering, Georgia Institute of Technology, Atlanta 30332

References

1. P. Kelly, M. Kranzberg, F. A. Rossini, N. R. Baker, F. A. Tarpley, Jr., M. Mitzner, *Technological Innovation: A Critical Review of Knowledge* (San Francisco Press, San Francisco, 1978).
2. E. Wenk, Jr., and T. J. Kuehn, in *Perspectives on Science and Technology Policy*, J. Haberer, Ed. (Sage, Beverly Hills, Calif. 1977), p. 10.
3. National Science Board, *Science Indicators-1976* (Government Printing Office, Washington, D.C., 1977).
4. M. R. Berg, J. L. Brudney, T. D. Fuller, D. N. Michael, B. K. Roth, *Factors Affecting Utilization of Technology Assessment Studies* (Center for Research on Utilization of Scientific Knowledge, Univ. of Michigan, Ann Arbor, 1978).

Technical Comments: Delay Time

If a major American automobile manufacturer took longer to admit to an error and recall a model of automobile than it had taken to produce the model in the first place, we would not expect the nation's press to remain silent. Yet this is the position that *Science* consistently finds itself in, and there does not seem to have been any public comment, much less protest. Errors are inevitable in all scientific periodicals; in *Science* the avenue for remedying scientific or editorial errors is the Technical Comments section. We recently made a study of the speed with which these corrections reached print, and the study suggests there is room for improvement.

We examined 20 issues of *Science* published between 25 August 1978 and 12 January 1979. We examined the publication delays for the 26 Technical Comments we found, and for a sample of 40 Reports (two selected at random from each issue). The comparison is striking: The average delay from first submission to publication was more than 100 days longer for Technical Comments than for Reports (*1*). The results are similar if instead we compare the times between the submission of the final revisions and the dates of publications; here the Technical Comments were delayed an average of 71 days more than the Reports (*2*).

It is not difficult to identify the source of this discrepancy; it is the time that passes while *Science* waits for a reply to the Technical Comment by the original authors. For the 15 Technical Comments to which the original author replied, the mean delay between the submission of the final revision of the Technical Comment and the submission of the author's reply was 127 days (minimum delay = 31 days, maximum = 272). Once the author's reply is received, the processing of the Technical Comment seems to be accelerated (mean delay until publication = 77 days, compared with a mean delay from reception to publication of revised Reports of 118 days).

Thus it seems that Technical Comments take more than 100 days longer to process than Reports do because *Science* waits an average of 4 months for the author to reply to the Technical Comment. We suggest that this is too long. We suggest (i) that authors be allotted no more than 1 month to submit a reply, and that failure to meet this deadline result in the deferment of the reply to a later issue; and (ii) that steps be taken to accelerate the editorial handling of the first submissions of Technical Comments (delays now average 3 to 4 months). Not all Technical Comments that are submitted present substantive, correct criticism of published articles, and some delay is inevitable. But the influence of *Science* upon the nation's press is great, and delay in publishing corrections can aggravate the effect of those few mistaken or misleading Articles or Reports that do slip through the editorial sieve. Unless there is some improvement, *Science* risks falling behind science.

STEPHEN M. STIGLER
VIRGINIA L. STIGLER
1243 Los Trancos Road, Portola Valley, California 94025

Notes

1. For the 40 Reports, the mean delay from first submission to publication was 213 days (minimum delay = 71 days, maximum = 434), while for Technical Comments it was 318 days (minimum delay = 114 days, maximum = 631). One of the Reports in the sample was listed as having been originally submitted in 1928. We took this to be a misprint, although it may be an editorial delay fit for the *Guinness Book of Records*.
2. The mean delay from final revision to publication was 129 days for the Reports (minimum delay = 71 days, maximum = 241), while for Technical Comments it was 200 days (minimum delay = 94, maximum = 406).

Erratum: In the Research News article, "Fields Medals (IV): An instinct for the key idea" (17 Nov. 1978, page 737), Jean-Pierre Serre's affiliation was incorrect. He is at the College de France.

Erratum: In the issue of 26 January on page 343, the credit for the photograph of Albert Einstein should have included the name of the photographer, David Rothman.

Erratum: On page 857, second column, third line, of the article about Eugene Garfield (News and Comment, 24 Nov. 1978), "Garfield's gross" should have read "Garfield's dross."

Erratum: Two errors of affiliation were made in the article about Albert Szent-Györgyi in the issue of 9 February (News and Comment, page 522). Harold Swartz is with the Medical College of Wisconsin, not the University of Wisconsin. Gabor Fodor is at the University of West Virginia, not the University of Wisconsin.

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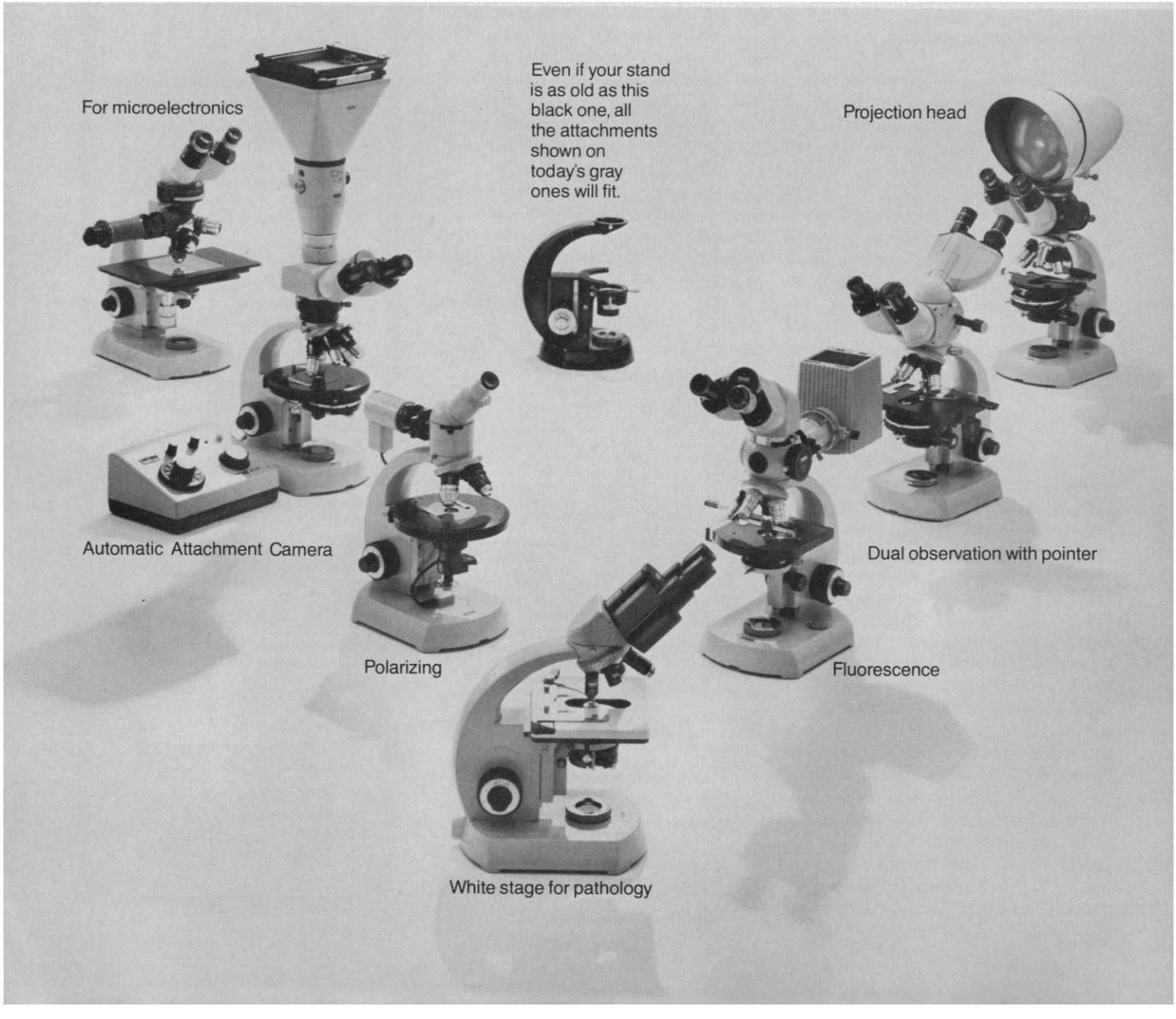

11 May 1979, Volume 204, Number 4393 **SCIENCE**

Nuclear Safety: Is Scientific Literacy the Answer?

Last month 700 scientists, engineers, and technology watchers from industry, government, and academia gathered in San Francisco at the Edison Centennial Symposium, "Science, Technology, and the Human Prospect." The distressing events 3000 miles away at the Three Mile Island nuclear plant were not part of the agenda, but the accident nonetheless contributed to a defensive tone that prevailed throughout the 3-day conference. Some speakers and participants, alluding to both the media coverage and public reaction to the accident, deplored what they saw as widespread "scientific illiteracy" and called for public education in science and technology to forestall what one speaker referred to as a "Luddite revolt."

To the extent that this view, reminiscent of Sputnik days, represents an instinctive reaction of the scientific community to widespread public dismay with technology, its underlying premise deserves some critical comment.

Simply stated, the proposition seems to be this: If the public and media were more scientifically literate (for instance, understood the difference between dose and dose rate, or the meaning of "critical" or "hydrogen explosion"), then a wider consensus on such issues as the safety of nuclear power could be expected. The public reaction to the issue would then be less emotional, more rational.

This hypothesis can be readily tested by considering the extent of harmonious agreement on matters of nuclear safety that exists within the scientific community itself, presumably the best available model of a population possessing scientific literacy. A passing acquaintance with the nuclear safety position of various organizations supported by capable scientists, attendance at a nuclear-licensing hearing, or a day of eavesdropping in the corridors of several well-known government, academic, and consulting scientific organizations would show that scientists are, on this matter, no less influenced by personal feuds and ideological differences than the small-town clergy of a Trollope novel is on matters of ceremony and doctrine. I would go so far as to say that the divisions are deeper and more bitter among the scientifically literate than in the general public.

The paradox—that the best informed are the most confused—disappears only if we consider the whole nuclear power issue as merely symbolic of a deeper ideological rift, comparable to, say, the early 19th-century Romantic revolt. One might wonder whether the whole nuclear safety issue even makes sense in the absence of a deeper societal conflict; presumably a rational visitor from outer space (or perhaps even from China) whose acquaintance with our culture was limited to the movie, *The China Syndrome*, and our mortality statistics, would conclude that the alarm of moviegoers was caused by the film's explicit portrayal of unsafe driving, drinking, and smoking habits, not the hazard of nuclear power.

If, as I am suggesting here, the nuclear safety issue is more of a quasi-religious than a technological conflict, then widespread improvement of scientific literacy is unlikely to improve matters. This is not to suggest that educators do not have an important task before them. Exposure and examination of the ideological aspects of the issue, using both traditional liberal arts and contemporary social science techniques, might do more to restore rationality than widespread improvement of scientific literacy. At the very least, development in young scientists and engineers of a critical ability to distinguish between technical and pseudotechnical social questions would seem desirable, if only to support their morale. As it stands, we have on our hands a generation of students so harried by today's pop ethics that many of the best consider careers in a regulatory bureaucracy or a romantic retreat to the design of small tools as the only remaining respectable form of scientific or technological endeavor.—RICHARD L. MEEHAN, *President, Earth Sciences Associates, Palo Alto, California 94304*

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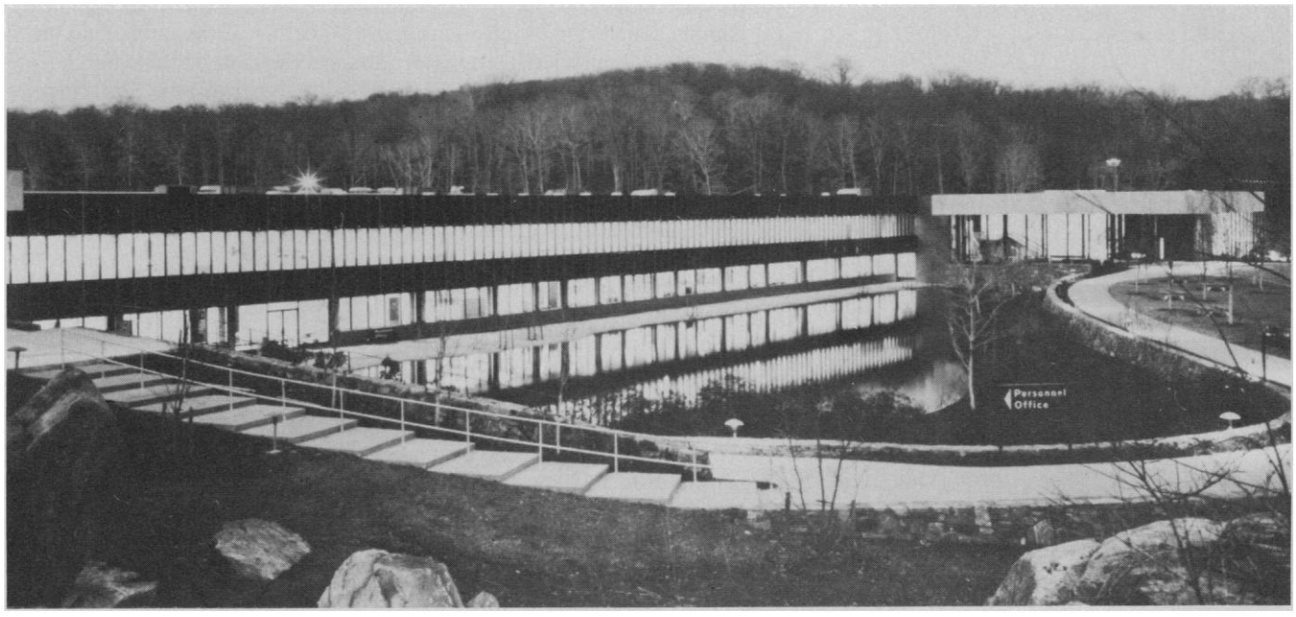

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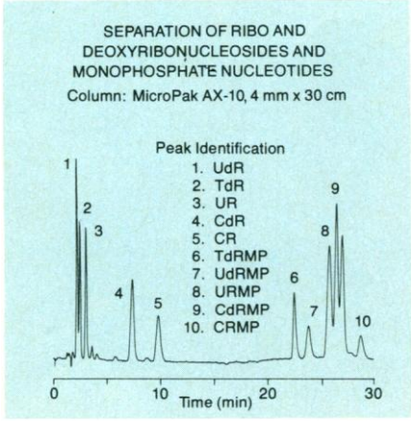

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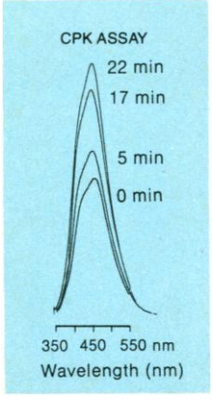

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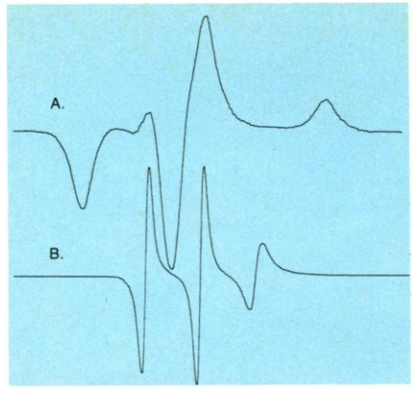

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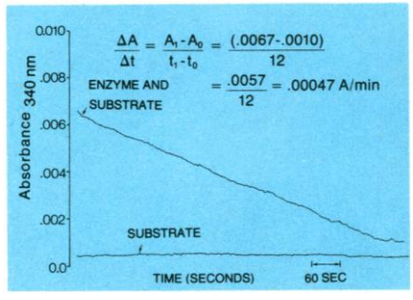

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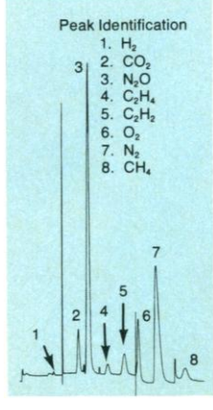

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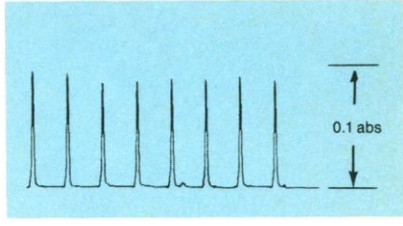

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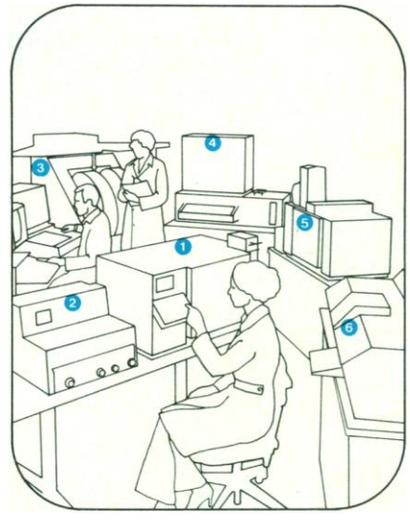

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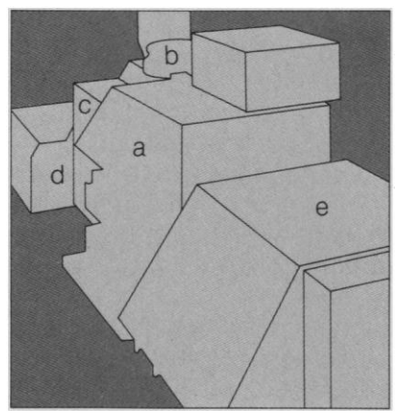

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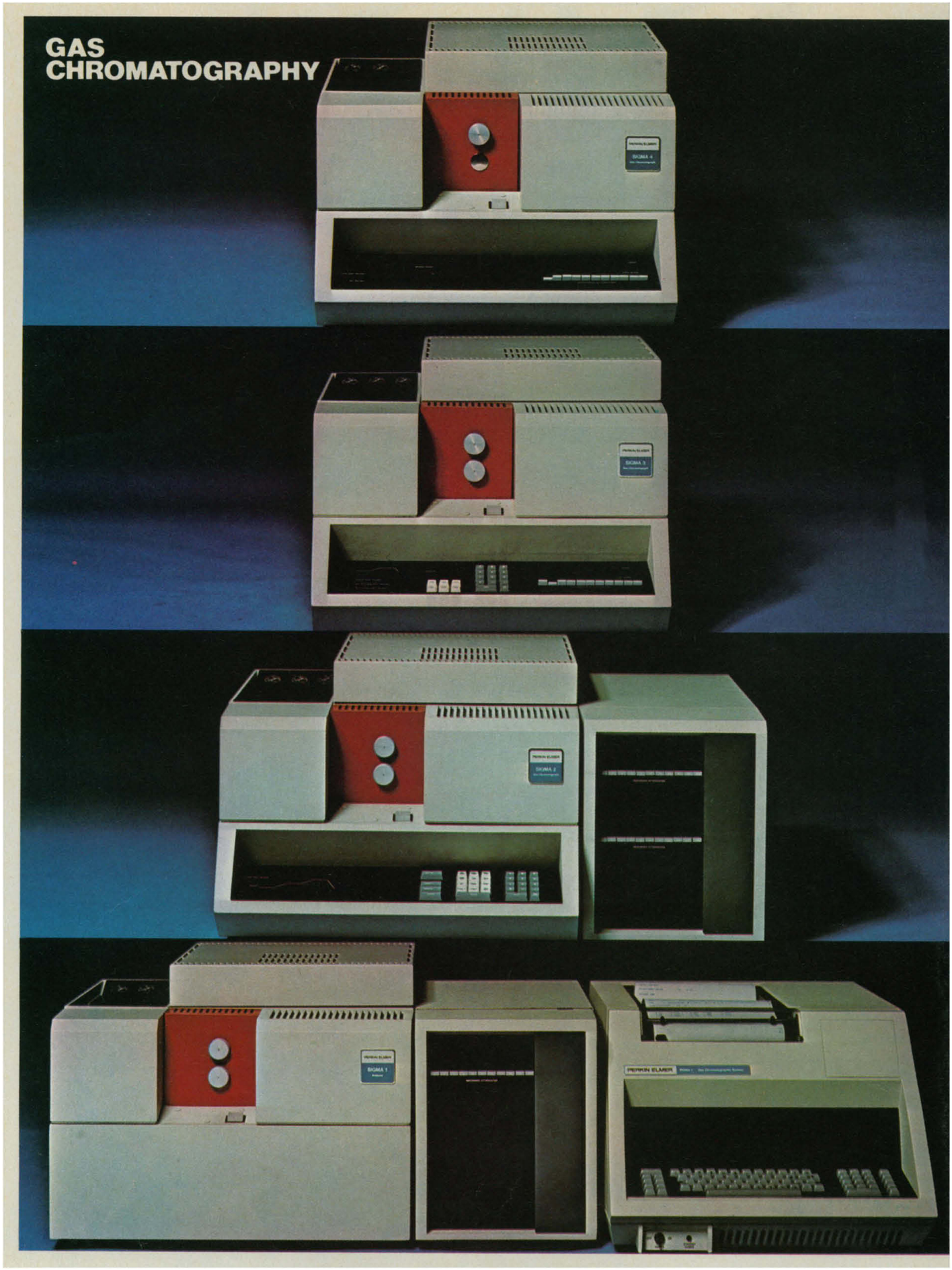
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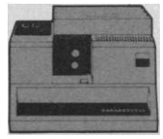

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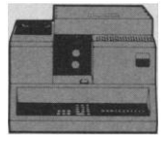

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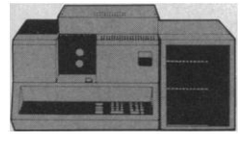

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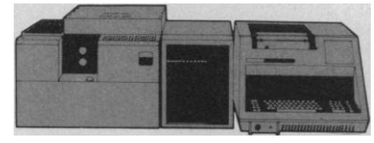

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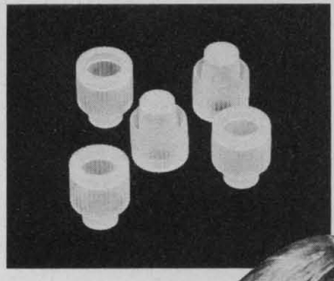

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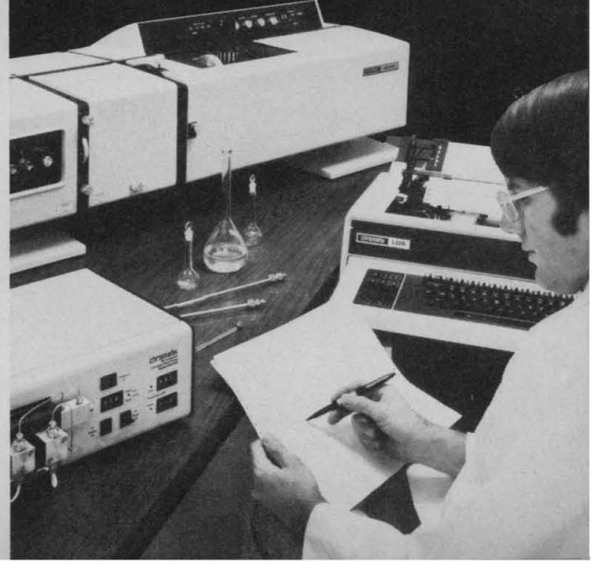

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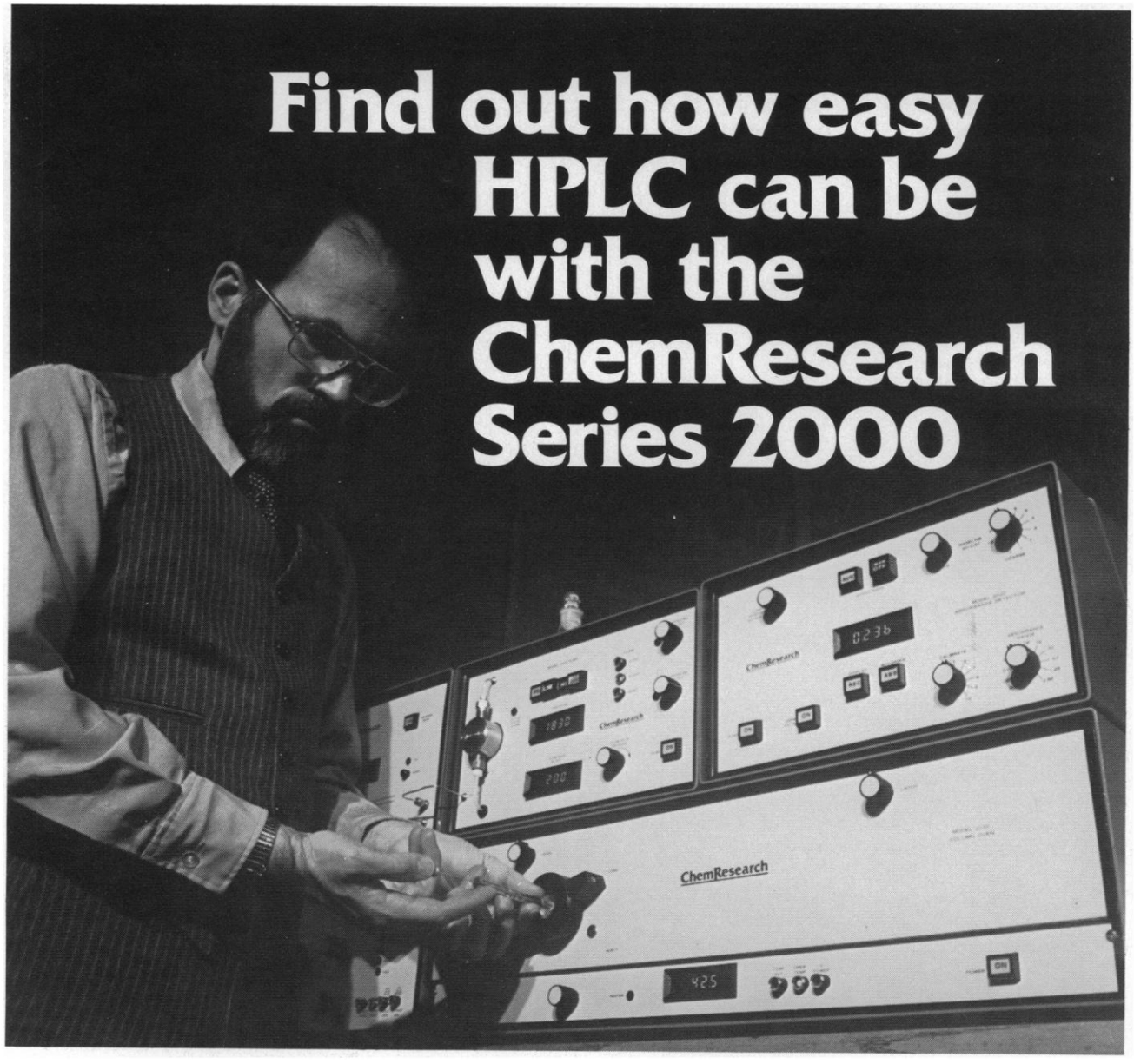

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PRODUCTS and MATERIALS

Water Bath

The Temptronic 100 offers a digital thermometer for readout of actual temperature in the bath and for setting its temperature control. It reads to tenths of a degree Celsius and offers a range of up to 100°C or 75°C with and without a cover, respectively. It holds 22.8 liters and has a recessed control panel to protect against spills. It heats rapidly and uniformly and maintains its temperature to within close tolerances at all typically used laboratory incubation temperatures. Thermolyne. Circle 579.

Scientific Calculators

Models EL-5100 and EL-5101 are hand held and accept alphanumeric formulas as written without translation to machine language. Their rolling displays will accept up to 80 entries for recall or editing in either direction. These approximately 5-ounce calculators operate on 1000-hour silver oxide batteries. Model EL-5100 has a 24-character display, 61 keyed functions, ten data memories, and a feature that retains data and programs when power is off. Model EL-5101 has a 16-character display, stores up to 48 steps, and has data memories, and the Memory Safe Guard feature as well. Sharp Electronics. Circle 580.

Ultracentrifuges

The L8 ultracentrifuges are microprocessor-controlled. Several models are available including L8-80 (80,000 rpm and 602,000*g*), L8-70 (70,000 rpm and 505,000*g*) and L8-55 (55,000 rpm and 407,000*g*). The microprocessor allows the operator to automate procedures and to duplicate experimental conditions precisely. The operator selects rotor speed, spin time, and other parameters by finger pressure on the control panel. Real-time data are displayed during centrifugation. A programmable module called Memory-Pac reduces set-up time and chance for error in repetitive operations. Beckman Instruments, Spinco Division. Circle 581.

Centrifuge

The GLC-4 is a table-top model, designed for research and clinical applications, that features a new rotor, the H-1000. The H-1000 is a swinging-bucket rotor that accommodates 1000-ml loads or up to 16 50-ml tissue culture tubes, 140 12 by 75-mm radioimmunoassay tubes or 100 13 by 100-mm Vacutainer tubes. Maximum speed for the H-1000 is 3200 rpm with a relative centrifugal force of 2190. The GLC-4 will also attain 6000 rpm (relative centrifugal force 4890) with fixed-angle rotors. The GLC-4 offers an automatic dynamic brake for rapid deceleration and an automatic lid-latch safety system. DuPont Instruments, Sorvall. Circle 582.

Combination Light and Electron Microscope

The LEM-2000 combines light and electron optics in a single instrument. This diagnostic device is fully automatic and is aligned for ease of operation. Specimens are mounted in 7-mm (outside diameter) grids. As areas of a specimen are observed, up to 100 specific sets of coordinates may be committed to a memory. At a later observation, any of these may be instantly located again. Magnification varies from 50 power under light microscopy to 45,000 power in the transmission mode. The accelerating voltage is 100 kV. The standard 35-mm photographic system is fully automatic. The stage is controlled precisely with a joystick; stage movement is regulated to compensate for different magnifications. The instrument is desk-sized and is designed as functionally as furniture as it is as a research tool. It is easily maintained and serviced. The manufacturer offers extensive training in its use but stresses that any competent microscopist can easily master the LEM-2000. International Scientific Instruments. Circle 578.

Barrier-Free Science Station

The Portable Science Station is self-contained and has brake casters. It is designed for students and teachers who must do their laboratory work while in wheelchairs. It features push buttons for cold water, air, and vacuum and has electrical receptacles as well. The countertop is one-piece, chemical-resistant fiber glass and the integral sink features a lip to retain spillage. The table measures 30 by 60 inches and is 32 inches high. One side is set up for biology applications and the other side for chemistry and physics work. Accessories are available for designs to specific requirements. Conco Industries. Circle 584.

Literature

Lipid Chemicals contains more than 500 lipids and related compounds for research. Regis Chemical. Circle 774.

Water Purification Equipment features reagent grade systems, distillation apparatus, cartridge systems, and more. Barnstead, Division of Sybron. Circle 585.

Temperature Baths and Circulators describes the Benco/Grant line of equipment for incubation, circulation, study of reaction rates, and chemical tests. Science/Electronics. Circle 586.

Capillary Columns for Gas Chromatography are listed in a brochure with other accessories for flow separations. L. C. Circle 587.

Programmer's Aid #1 is an ROM-based library of routines for graphics, program numbering and linking, tape verification, tone generation, RAM testing, and machine language program relocation. Apple Computer. Circle 588.

Atomic Absorption Spectrophotometers describes the AA-275 single-beam and AA-475 double-beam instruments. Varian, Instrument Division. Circle 589.

Recorders features the Miniservo VI line that permits recovery of information from up to six channels simultaneously. Esterline Angus Instrument. Circle 561.

Newly offered instrumentation, apparatus, and laboratory materials of interest to researchers in all disciplines in academic, industrial, and government organizations are featured in this space. Emphasis is given to purpose, chief characteristics, and availability of products and materials. Endorsement by *Science* or AAAS is not implied. Additional information may be obtained from the manufacturers or suppliers named by circling the appropriate number on the Reader Service Card (on pages 558A and 646A) and placing it in the mailbox. Postage is free.

—RICHARD G. SOMMER

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(Continued from page 610)

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Excavations at Nichoria in Southwest Greece. Vol. 1, Site, Environs, and Techniques. George Rapp, Jr., and S. E. Aschenbrenner, Eds. University of Minnesota Press, Minneapolis, 1978. xxviii, 340 pp., illus., + maps. $29.75.

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Insight and Social Betterment. A Preface to Applied Social Science. James B. Rule. Oxford University Press, New York, 1978. xii, 206 pp. Cloth, $11; paper, $3.50.

Isoquinoline Alkaloids Research, 1972–1977. Maurice Shamma and Jerome L. Moniot. Plenum, New York, 1978. xviii, 426 pp., illus. $39.50.

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Learning with Simulations and Games. Richard L. Dukes and Constance J. Seidner, Eds. Sage Publications, Beverly Hills, Calif., 1978. 152 pp. Paper, $4.95. Sage Contemporary Social Science Anthologies, 2.

The Lie Transformation Group Model for Perceptual and Cognitive Psychology. Papers from a meeting, Marseille, July 1976. Edités par l'Université de Provence, Marseille, 1977. pp. 67–232, illus. Paper, 35 F. *Cahiers de Psychologie*, Vol. 20, Nos. 2-3.

The Life of Yeasts. H. J. Phaff, M. W. Miller, and E. M. Mrak. Harvard University Press, Cambridge, Mass., ed. 2, 1978. xvi, 342 pp., illus. $17.50.

Light Transducing Membranes. Structure, Function, and Evolution. Proceedings of a seminar, Honolulu, Dec. 1977. David W. Deamer, Ed. Academic Press, New York, 1978. xviii, 358 pp., illus. $17.

Like Normal People. Robert Meyers. McGraw-Hill, New York, 1978. x, 204 pp. + plates. $9.95.

Life Styles. An Introduction to Cultural Anthropology. Arthur S. Gregor. Scribner, New York, 1978. xiv, 242 pp., illus. $9.95.

The Life That Lives on Man. Michael Andrews. Taplinger, New York, 1978. 184 pp., illus. Paper, $4.95. Reprint of the 1977 edition.

Liquid Crystals and Ordered Fluids. Vol. 3. Papers from a symposium, Chicago, Aug. 1977. Julian F. Johnson and Roger S. Porter, Eds. Plenum, New York, 1978. x, 550 pp., illus. $45.

The Little Universe of Man. C. D. Darlington. Allen and Unwin, Boston, 1978. 308 pp., illus. $19.95.

Medieval Religion and Technology. Collected Essays. Lynn White, Jr. University of California Press, Berkeley, 1978. xxiv, 360 pp. + plates. $20. Publications of the Center for Medieval and Renaissance Studies, UCLA, 13.

Methanol Technology and Application in Motor Fuels. J. K. Paul, Ed. Noyes Data Corporation, Park Ridge, N.J., 1978. x, 470 pp., illus. $54.

Methods for Assessment of Fish Production in Fresh Waters. Timothy Bagenal, Ed. Black-

well, Oxford, ed. 3, 1978 (U.S. distributor, Lippincott, Philadelphia). xvi, 366 pp., illus. + plates. Paper, $23. IBP Handbook No. 3.

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Modern Perspectives in Epilepsy. Proceedings of a symposium, 1977. Juhn A. Wada, Ed. Eden Press, St. Albans, Vt., 1978. x, 236 pp., illus. $16.

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The Ozone War. Lydia Dotto and Harold Schiff. Doubleday, Garden City, N.Y., 1978. xviii, 342 pp. $10.

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Proceedings of the Nutrition Society of Australia. Vol. 3. Papers from a conference, Adelaide, Aug. 1978. Nutrition Society of Australia, Blacktown, N.S.W., 1978. 112 pp. Paper, A$5.

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