Letters

Lepeshinskaia

Readers of *Science* will be interested to learn that Lepeshinskaia, whose work was reviewed recently there (*1*), has been pressing her "anti-Virchowian thesis" since the early thirties. This thesis states that cells continuously originate from "undifferentiated organic matter"in such a way that living matter recapitulates, in ontogenesis, not only its phylogenetic cellular past but also the precellular phases of biochemical development which, eons ago, presumably led to the first appearance of living entities on earth. Her colleagues refused to take her seriously for the longest time. In the beginning, if they deigned to notice her at all, it was only to point out elementary defects in her laboratory technique and the like (*2*). How she managed not only to survive the contempt of her colleagues but to advance in spite of this to receive the official accolade in 1950 on behalf of her "dialectical materialist theory of cellular development from undifferentiated organic matter" is a story that still awaits telling.

Lepeshinskaia has also been interested in the aging process and has advanced the notion that a 1-percent soda solution slows aging and has healing properties. She likewise believes that the solution increases harvest yields (*3*)! However, little of late has been heard of these extravagant claims. It should be noted that, although her theories were proclaimed as official, their effect has not been particularly baleful, in that *de facto* resistance to them has been in continuous evidence. Mindful of the genetics tragedy in the Soviet Union, one can easily exaggerate the harm wrought by Lepeshinskaia. But she was no Lysenko (*4*).

IVAN D. LONDON
Brooklyn College, Brooklyn, New York

References

1. L. N. Zhinkin and V. P. Mikhailov, *Science* 128, 182 (1958).
2. N. K. Kol'tsov, *Biol. Zhur.* 3, 255 (1934); B. Tokin, *Pod Znam. Marksizma* 16, 116 (1936).
3. O. B. Lepeshinskaia, *On Life, Age, and Longevity* (Znanie, Moscow, 1953).
4. I. D. London, *Bull. Atomic Scientists* 13, 169 (1957).

Author Listings in References

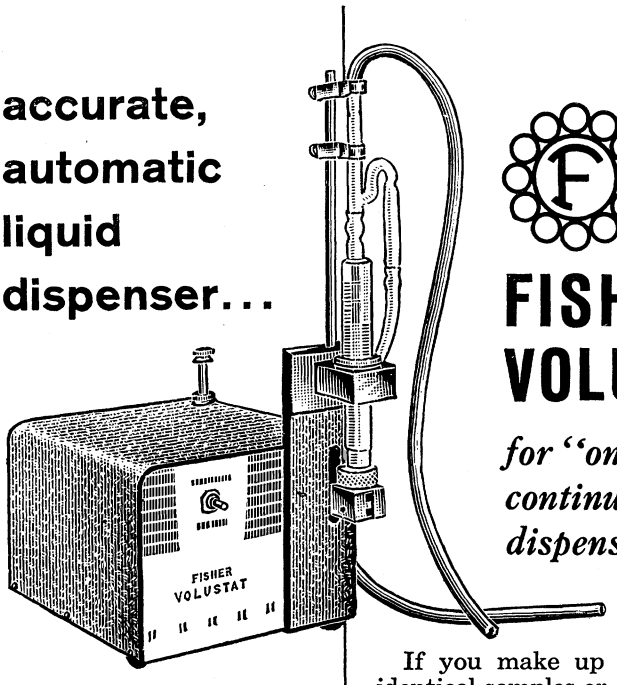
References to previous work in scientific reports facilitate the weaving of new facts into the fabric of our knowledge. Authors' names are an essential part of such references.

Science prints names of authors of quoted articles if there are three or less in number but uses the first author's name and *"et al."* when there are more than three authors. This is a disservice to those interested in such articles. Author names in references are omitted in the text by some journals, often a questionable practice. Even in such instances all the authors are listed in the bibliography. To list all the authors neither in the text nor in the bibliography, as in *Science,* leaves the reference incomplete. It also prevents best integration of the new information.

These are days of extensive cooperative and interdisciplinary research, with several workers attacking problems and publishing the results jointly. The choice of a senior author is often dictated only by the fact that one name, of necessity, must be first, and by no other consideration. Surely the printing of complete references by listing all authors will not put an undue burden on *Science,* which is otherwise so generous with space in its fine new typographical make-up.

Z. I. KERTESZ
New York State Agricultural Experiment Station, Cornell University, Geneva, New York

Done—THE EDITORS.



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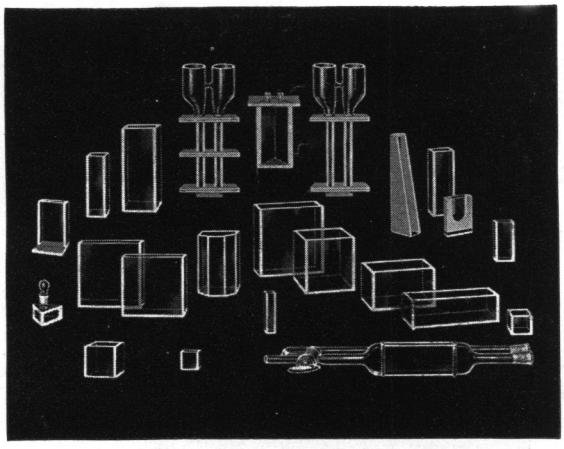

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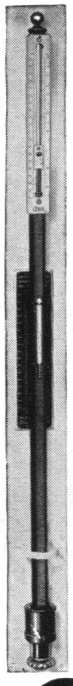

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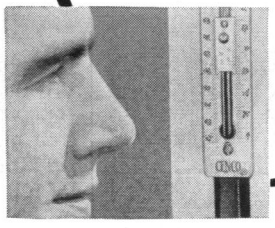

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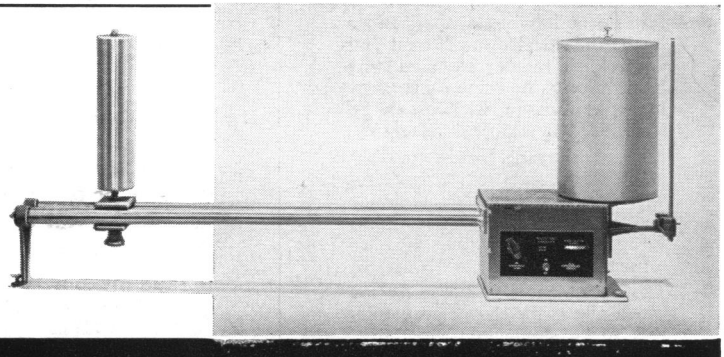

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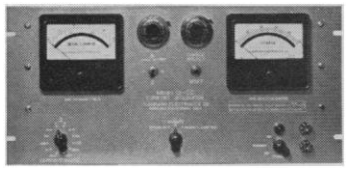

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Equipment

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■ RADIATION SHIELDING WINDOW is filled with a clear zinc bromide solution of density 2.5, which is equivalent to that of normal concrete. Copper lining, instead of coated steel, is used at all points in contact with the solution to prevent clouding-up caused by attack on steel by the solution. (Research Equipment Co., Dept. 299)

■ FREQUENCY-TO-VOLTAGE CONVERTER can be adjusted in a full-scale frequency range from 300 to 900 cy/sec, with a minimum frequency of 10 cy/sec. Output may be 0 to 5 v, 0 to 100 mv, or 0 to 50 mv, d-c. Linearity is ± 0.1 percent of full scale. Long-term stability is ± 0.25-percent. The device will operate in ambient temperatures from −65° to +160°F. (Fischer & Porter Co., Dept. 314)

■ FRACTION COLLECTOR accessory for a gas chromatograph consists of a chromatograph column, with a sample range up to 5 ml, and the collection apparatus. Fractions eluted from the column are condensed in fluted glass collection tubes inside a Dewar flask. Fractions are compacted by centrifugation. (Beckman Instruments Inc., Dept. 315)

■ Q COMPARATOR provides comparison measurements of relative Q, inductance, and capacitance. The instrument is set up for use with a standard component. Other components are compared with the standard by connection into the test circuit and by observation of the displacement of a centered spot in a cathode-ray-tube display. Deviation along the vertical axis indicates a change in Q and deviation along the horizontal axis indicates a change in L or C. (Boonton Radio Corp., Dept. 316)

■ COLORIMETRIC TITRATOR combines a photoelectric colorimeter with a titration adapter to permit objective determination of end-point. The adapter is self-contained and includes a stirring motor and stirrer. A glass cuvette of 35-mm light path serves as a titration vessel. Modification of the colorimeter is not required for installation of the adapter. (Photovolt Corp., Dept. 317)

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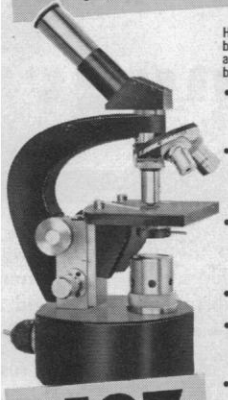

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■ MERCURY ARC LAMP is a water-cooled type available in models rated at 900-w input and 60,000-lu output, or 1 kw and 65,000 lu. Arc dimensions are 2 by 25 mm. The average life for continuous operation is 80 hr. Operation may be on a-c, d-c, pulse, or stroboscopic power. (PEK Labs, Dept. 321)

■ TEMPERATURE INDICATORS for use with resistance thermometers are battery operated. Standard range is 0° to 500°F. Single and multichannel instruments are available. Temperature is indicated directly. Scale divisions are 10°F and 10°C, and controls permit calibration to ±20°F. (Arthur C. Ruge Associates, Inc., Dept. 322)

■ ELECTRONIC COUNTER provides an eight-decade indication and frequency range from 10 cy to 10 Mcy/sec. Time intervals from 1 μsec to 100 days can be measured. Magnetic beam-switching tubes are used for counting, numeral-electrode indicator tubes for display. Frequency-converter units, video amplifiers, extended time-base units, relay test units, and digital recorders are available as accessories. (Lavoie Laboratories, Inc., Dept. 323)

■ MULTIPLEXER provides means to couple five separate voltage inputs to a single voltage output. The devices are of modular design and are interconnectable. For example, four units would provide for time multiplexing of 20 channels to one output. Maximum sampling rate is 25 kcy/sec. Standard input range is ± 10 v, but other ranges from ± 2 to ± 300 can be supplied. Transfer accuracy is ± 0.05 percent of full scale. (Epsco, Inc., Dept. 324)

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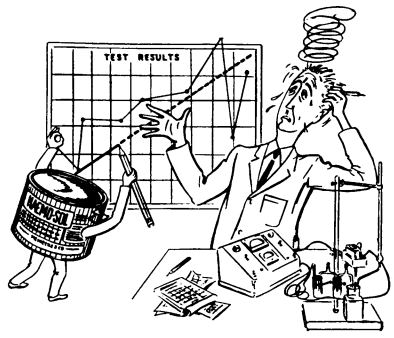

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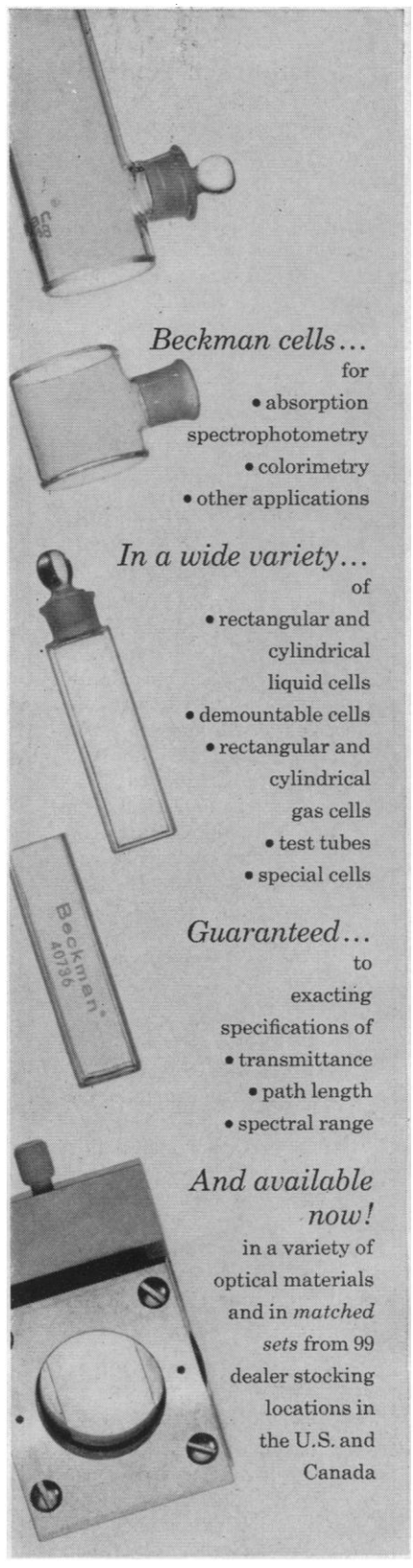

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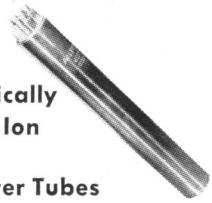

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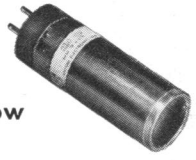

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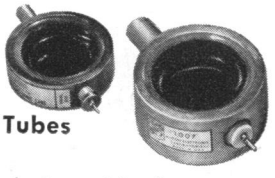

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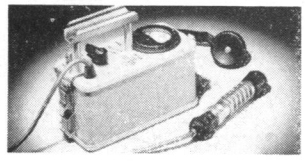

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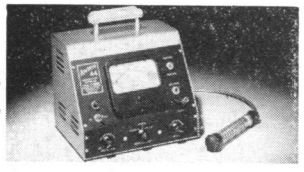

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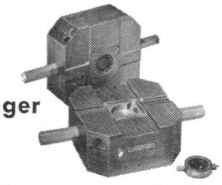
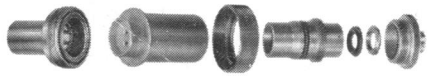
☐ **6001 Sample Changer**



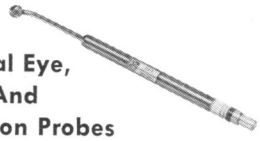
For quick, accurate measurement of low intensity radiation. Designed for use of one or two Anton pancake type, high beta sensitivity, low background counter tubes. Provides 2″ lead plus 3/16″ aluminum shielding in all directions, lowering the background count by a factor of from two to four. Makes possible counting geometry of nearly 100%.

☐ **High Pressure Reactor Connectors**



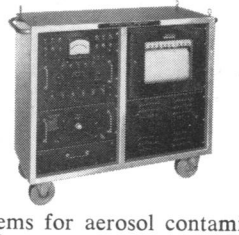
Anton's stainless steel, hermetically sealed reactor heater-end connector withstands 2000 PSI at temperatures of 636°F, with terminals capable of carrying a load of 16 amperes with a potential drop of less than 10 milliwatts. A wide variety of conventional and specialized connectors is available.

☐ **Medical Eye, Brain And Ingestion Probes**



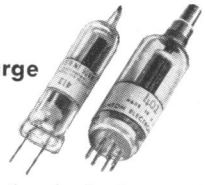
These tubes are rugged, sensitive alpha, beta, gamma radiation detectors specifically designed for reliable, low count medical tracer work. They can be cold sterilized and their pulse intensity obviates the need for a preamplifier.

☐ **Air Particle Monitors**



Monitoring systems for aerosol contamination (alpha, beta, gamma) are available in a full range of moving filter paper, fixed filter paper and impact instruments. Rack mounted, cart mounted and portable instruments available.

☐ **Corona Discharge V-R Tubes (300V-30KV)**



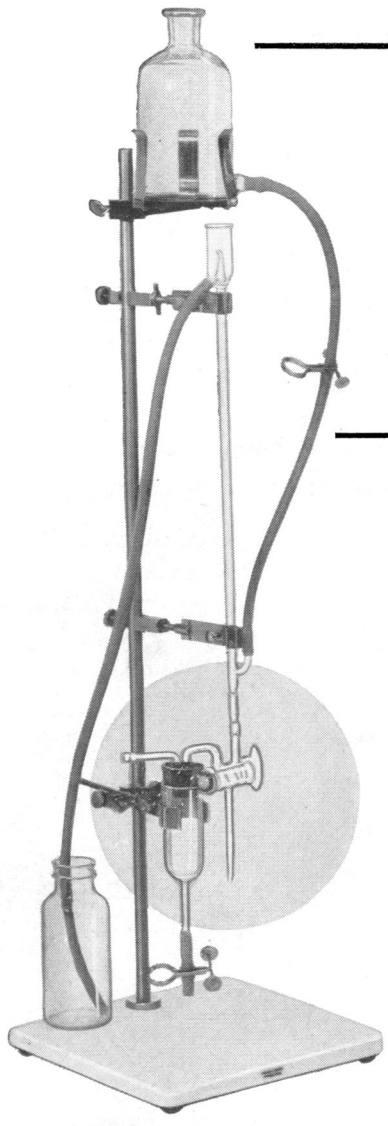
Anton is licensed under the basic patents in this field. Valuable data available concerning this low-cost solution to high voltage low current regulation problems.

. . . and many more. SEND FOR FREE DATA CONCERNING YOUR SPECIFIC NUCLEAR INSTRUMENT, TUBE OR COMPONENT NEEDS.

ANTON ELECTRONIC LABORATORIES, INC.

A subsidiary of United States Hoffman Machinery Corporation

1226 FLUSHING AVE., BROOKLYN 37, N. Y.



8209-F

Thomas-Seligson
AUTOMATIC PIPETTE*
WITH COMPLETE ASSEMBLY OF ACCESSORY EQUIPMENT

A fixed volume pipette permanently attached to a double bore stopcock, which permits rapid filling without adjustment to a reference mark, and complete washout delivery of the contained sample by a measured amount of a second liquid from a burette, pipette, or arbitrarily calibrated tube connected to upper arm. Eliminates need for individual sampling pipettes, and repeated filling of dilution pipettes, realizing a highly significant economy of time and glassware, and assuring reproducible sampling, delivery, and dilution which are especially important in routine clinical chemistry. Applicable, however, to any type analysis in which a standard volume is diluted or reacted directly with a measured volume of a second liquid. See *American Journal of Clinical Pathology, Vol. 28, No. 2 (Aug., 1957), pp. 200-207.*

In use, the pipette is attached to the dispensing burette by means of the upright arm of the stopcock, and to a suction device by means of the bent tube at the left. A waste trap is inserted into the line prior to the suction connection.

Samples are taken by setting stopcock to connect tip with suction line. A small excess is drawn over into the bent tube to serve as an initial rinse for the pipette wall. The sample is delivered by reversal of the stopcock plug to allow solution in the burette to expel the sample through the tip, and to rinse it clean. Following delivery of the required amount of reagent from the burette, the tip, filled with diluent which keeps it clean, is ready for immediate intake of the next sample.

An assembly of accessory equipment for convenience in making multiple dilutions is offered below. It consists of an automatic zeroing type burette with reservoir for washout of sample and addition of diluent or reagent, trap for suction line, waste receiver, support and necessary clamps and tubing for connections.

... eliminates individual sampling pipettes and repeated filling of dilution pipettes

8209-F. Thomas-Seligson Automatic Pipette Assembly, complete as shown in illustration. Without suction device. With automatic zeroing type Burette 10 ml in 1/20ths. *When ordering, please specify size of Pipette required*..... **55.35**

8209-B. Pipettes, Seligson, only, as above described.

To contain, ml.....	0.05	0.1	0.2	0.5	1.0
Tolerance, ml (±).....	0.005	0.005	0.01	0.01	0.05
Calibrated stem, mm...	65	55	65	160	140
Each.....	**11.00**	**11.00**	**11.00**	**11.00**	**11.00**

*Patent applied for.

Copy of Bulletin 131 sent upon request.

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