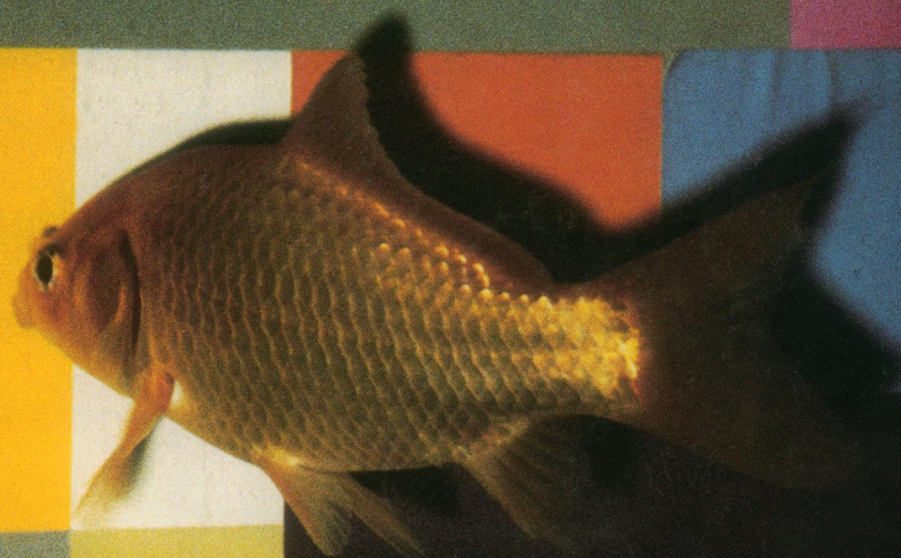


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*Digital accuracy
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The AccuSpin™ centrifuge from Beckman. It brings today's technology to tabletop centrifugation.

Controls are digital for accuracy that can't be matched by analog models. Flashing diagnostics and digital displays let you know run conditions at a glance. A digital speed control system maintains set speed with no overshoot—accurate to 10 rpm.

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you select a gentle stop. And the AccuSpin is so quiet, it's hard to believe it's running.

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The AccuSpin centrifuge reaches 5900 rpm and 4800 *g* with fixed angle rotors, 4200 rpm and 3200 *g* with the horizontal rotor. Maximum capacity is one full liter.

Designed for Convenience

The AccuSpin FR has an advanced, frost-free refrigeration system so there's never ice or water in the rotor chamber. Both models have an easy-to-clean, removable bowl and front motor access for fast brush changes and minimal down time.



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The digital AccuSpin centrifuge. It's setting new standards for tabletop centrifuges. For details ask your Beckman representative, or write: Beckman Instruments, Inc., P.O. Box 10200, Palo Alto, CA 94304.

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COVER

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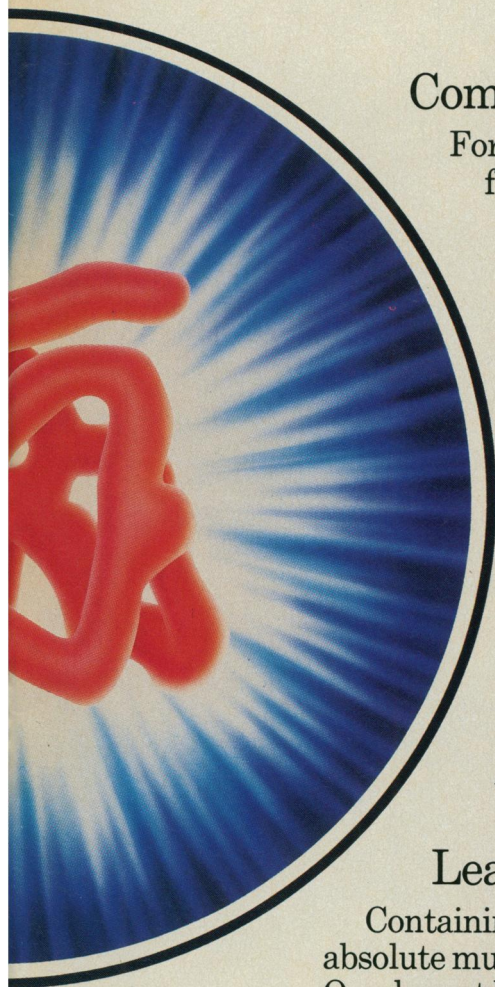
GTi gives you completely inert fluidics. A true HPLC pump eliminates stainless steel at every liquid interface. From pump heads to fraction collector, glass, titanium and inert polymers provide a unique flow line that guarantees the complete integrity of your sample.

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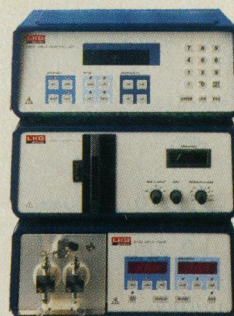
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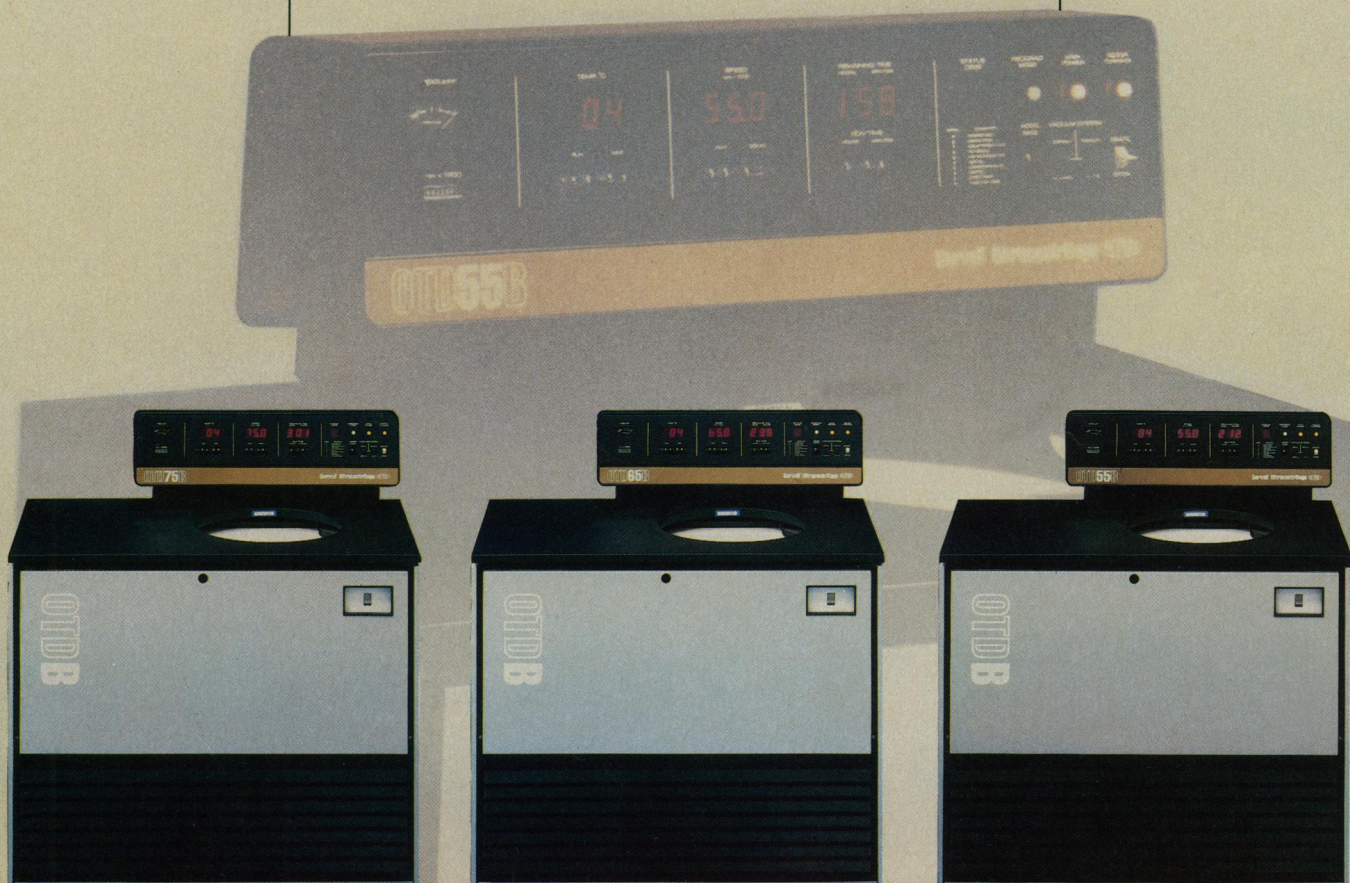
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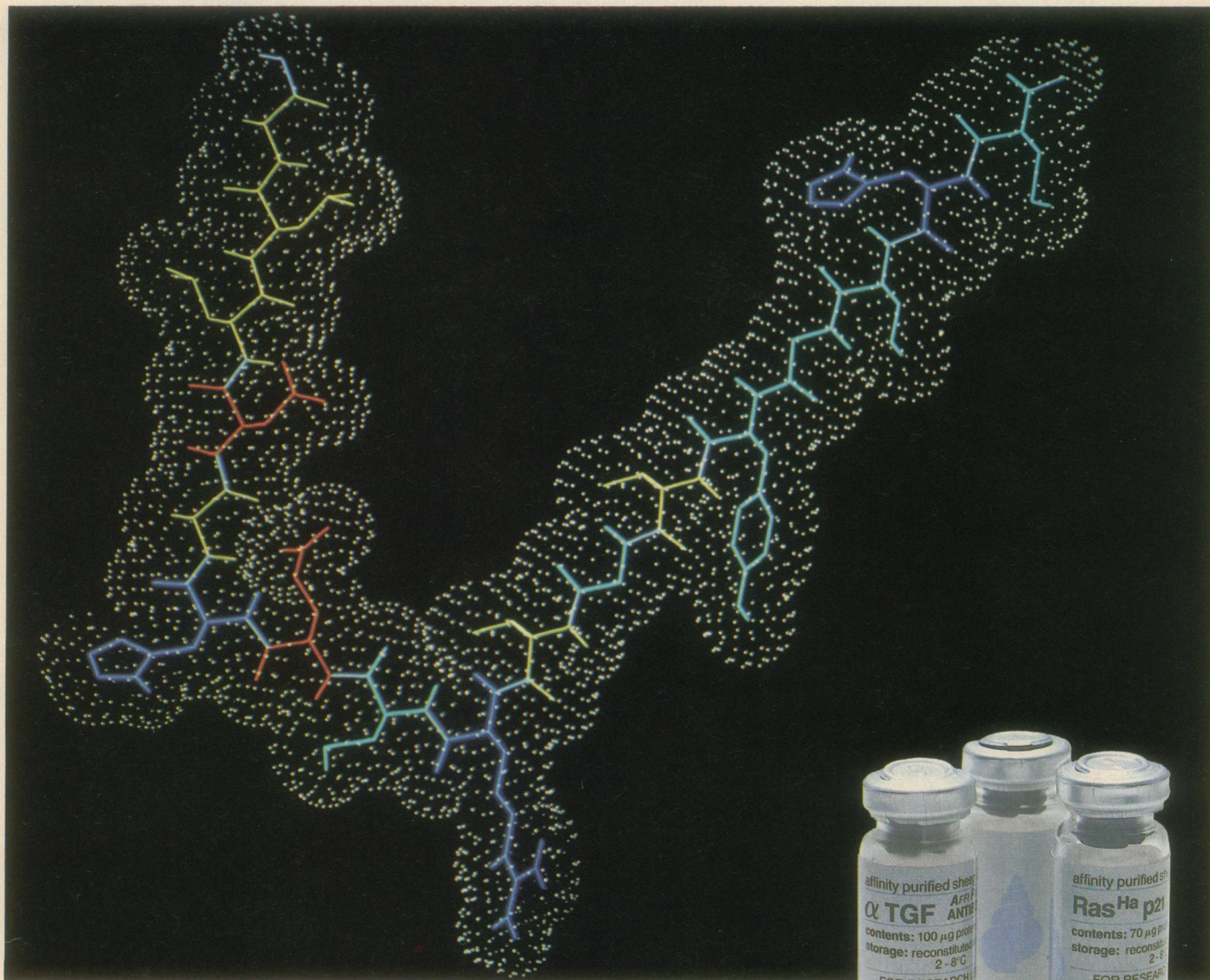
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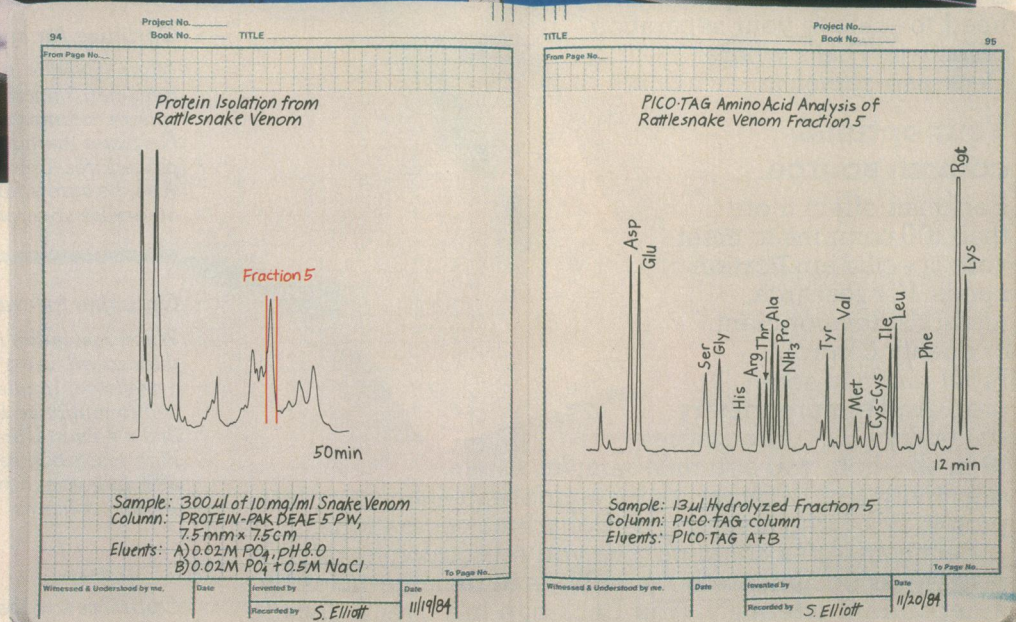


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The Waters PICO·TAG Amino Acid Analysis System that was described as "spectacular for routine analysis"¹ just got better. Now this same system will isolate your proteins and peptides in just minutes with higher resolution, purity and recovery.

For the first time it's easy and practical for you to purify your protein today and have a complete amino acid compositional analysis by the next day, using a single HPLC system. And, switching from protein isolation to amino acid analysis is fast and uncomplicated—simply change the column and elution buffers.

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¹Thomas H. Maugh II, "New Tool for Amino Acid Analysis," *Science*, 6 July 1984, Vol. 225, No. 4657, p. 42.

²Ibid.

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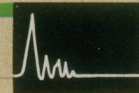
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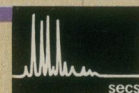
Optimize from the start.

For most initial analyses, select Beckman Ultrasphere™ 150 x 4.6mm columns. These columns feature a minimum count of 9750 plates! That's better efficiency than most 300mm columns—and you'll get twice the speed using 50% less solvent. Once your initial separation is complete, adjust your solvent so that the first peak of the critical pair has a $K' = 2-4$. Then, optimize for speed, resolution, load, or sensitivity.



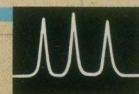
Optimize for speed.

When speed is of the essence, use Beckman 3 micron, 75 x 4.6mm Ultrasphere columns for simple isocratic separations. For faster methods development and scouting procedures, use repeated fast isocratic separations. Also, be sure your system has a fast time constant, otherwise apparent efficiency will decrease rapidly.



Optimize for resolution.

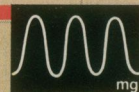
When resolution is more important than speed, use a longer column and a shallower gradient with a low dead-volume flow cell to minimize band broadening. Beckman 250 x 4.6mm Ultrasphere columns are ideal for high resolution separations. They give you a 29% increase in peak capacity compared to 150mm columns.



Optimize for load.

Laboratory prep-scale applications require increased column diameter.

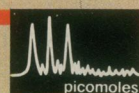
Beckman 10mm diameter columns are packed with exactly the same media as our analytical and micro columns. So you can easily scale-up your separation to semi-prep simply by equalizing the linear velocities.



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For highest HPLC sensitivity, use microbore (≤ 2 mm) columns and a fine-tuned LC system. Beckman/Altex microbore columns consistently improve sensitivity up to 10X that of 4.6mm ID columns.

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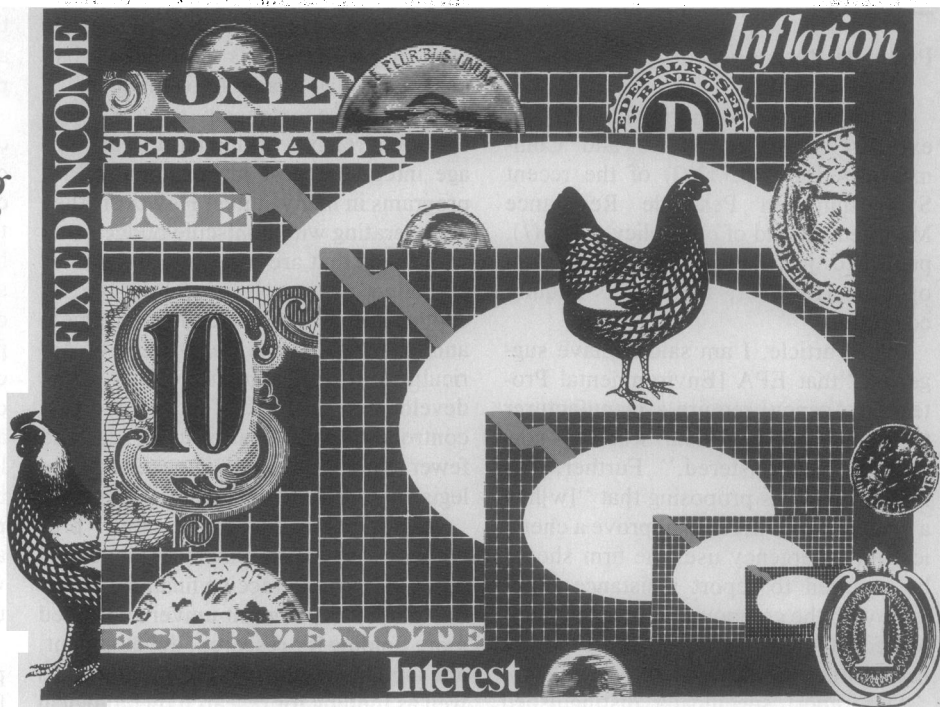
tution's payroll system. You only pay ordinary income taxes when you withdraw cash or receive benefits from SRAs.

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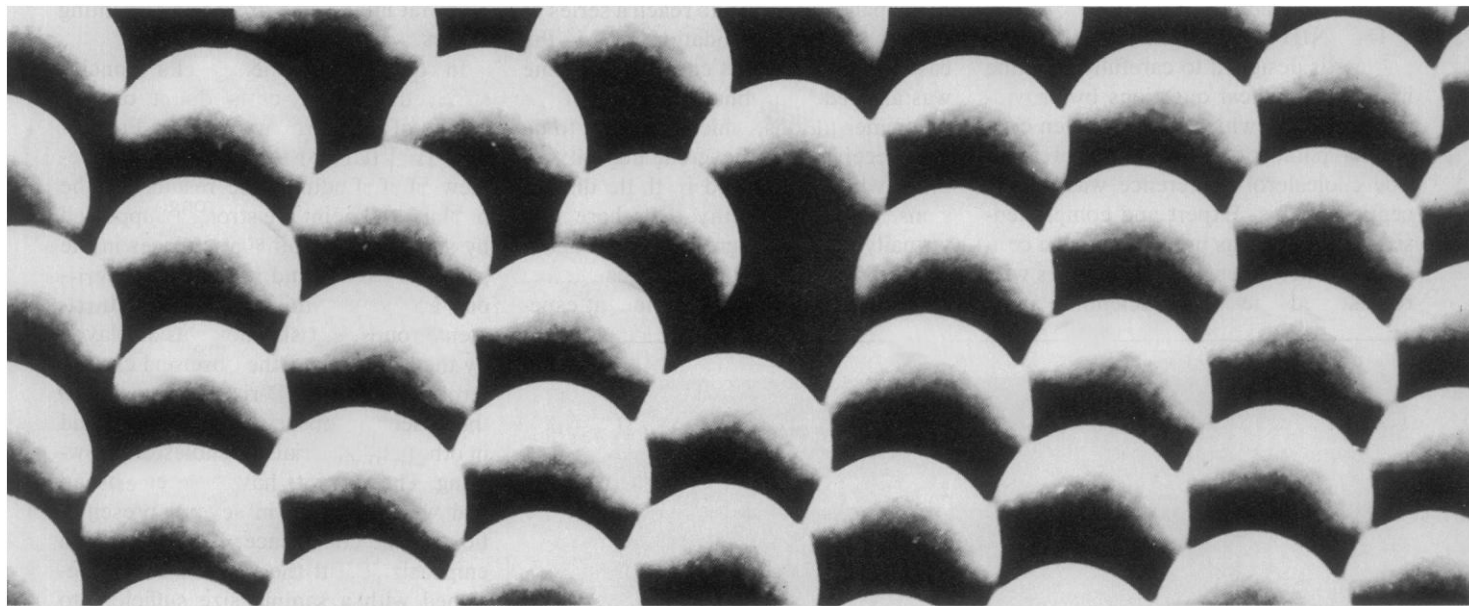
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Monoclonal antibodies.	Haemoglobin A _{1c} .	oxidase
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Synthetic oligonucleotides.	NADP.	Labile citrate synthase.
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predominantly upon the opinions of a few dissenters and by a limited presentation of the majority view, the article does not convey the extent of the consensus that was actually reached.

The NIH Consensus Development process is designed to carefully examine important medical questions by providing a forum in which various, even conflicting, points of view can be expressed. The cholesterol conference was no exception to this. Expert and comprehensive testimony was presented to the consensus panel by a series of speakers who represented the many scientific areas

and viewpoints that relate to the questions under consideration. On the basis of these presentations and the resulting open discussion, members of the broad-based panel were able to reach a series of unanimous recommendations. As is the case for all consensus conferences, time was allotted for public discussion of the recommendations, which appeared to be well received by the great majority of those who participated in these discussions. It is noteworthy that there was virtually complete agreement that about one-quarter of all adult Americans have cholesterol levels that put them at espe-

cially high risk of CHD and that such people should be identified and treated. The panel's recommendations that Americans moderately reduce their dietary fat intake also drew few dissenting voices.

In questioning the panel's conclusions, the article casts doubt on the results of the Coronary Primary Prevention Trial (CPPT) through a limited review of its finding. The results for the primary end point are strongly supported by similar and significant changes in the secondary CHD end points and by various analyses within each of the treatment groups. Consistency was displayed by the similarity of the observed cholesterol-change to CHD-risk relationship to those seen in observational studies and in other clinical trials of cholesterol-lowering. These points have been published and were reported in several presentations at the conference. It has also been emphasized that the CPPT was not designed with a sample size sufficient to address the impact of cholesterol-lowering on cardiovascular or all-cause mortality.

This wide array of evidence from the CPPT for the efficacy of cholesterol-lowering in preventing clinical manifestations of CHD is impressively consistent, requires careful consideration, and cannot be lightly dismissed. It also should be noted that the panel took into account much other new information in reaching its conclusions.

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Erratum: Two statements in the article "Heart panel's conclusions questioned" by Gina Kolata (Research News, 4 Jan., p. 40) were not accurate. The first, in the third paragraph on page 40, should have read, "But these trials failed to show that cholesterol-lowering saves lives," instead of, "But these trials failed to show that cholesterol-lowering prevents deaths from heart disease." A second statement, in the ninth paragraph on page 41, should have read, "The incidences of angina, bypass surgery, and abnormal exercise electrocardiograms all came down in the cholestyramine group. All but bypass surgery were statistically significant."

Correction

Due to a printer's error, a recent meeting of the Planetary Society in Washington, D.C., was incorrectly identified as a "Planetary Soviet" meeting in the News and Comment article by R. Jeffrey Smith, "A fresh start for arms control" (25 Jan., p. 389).

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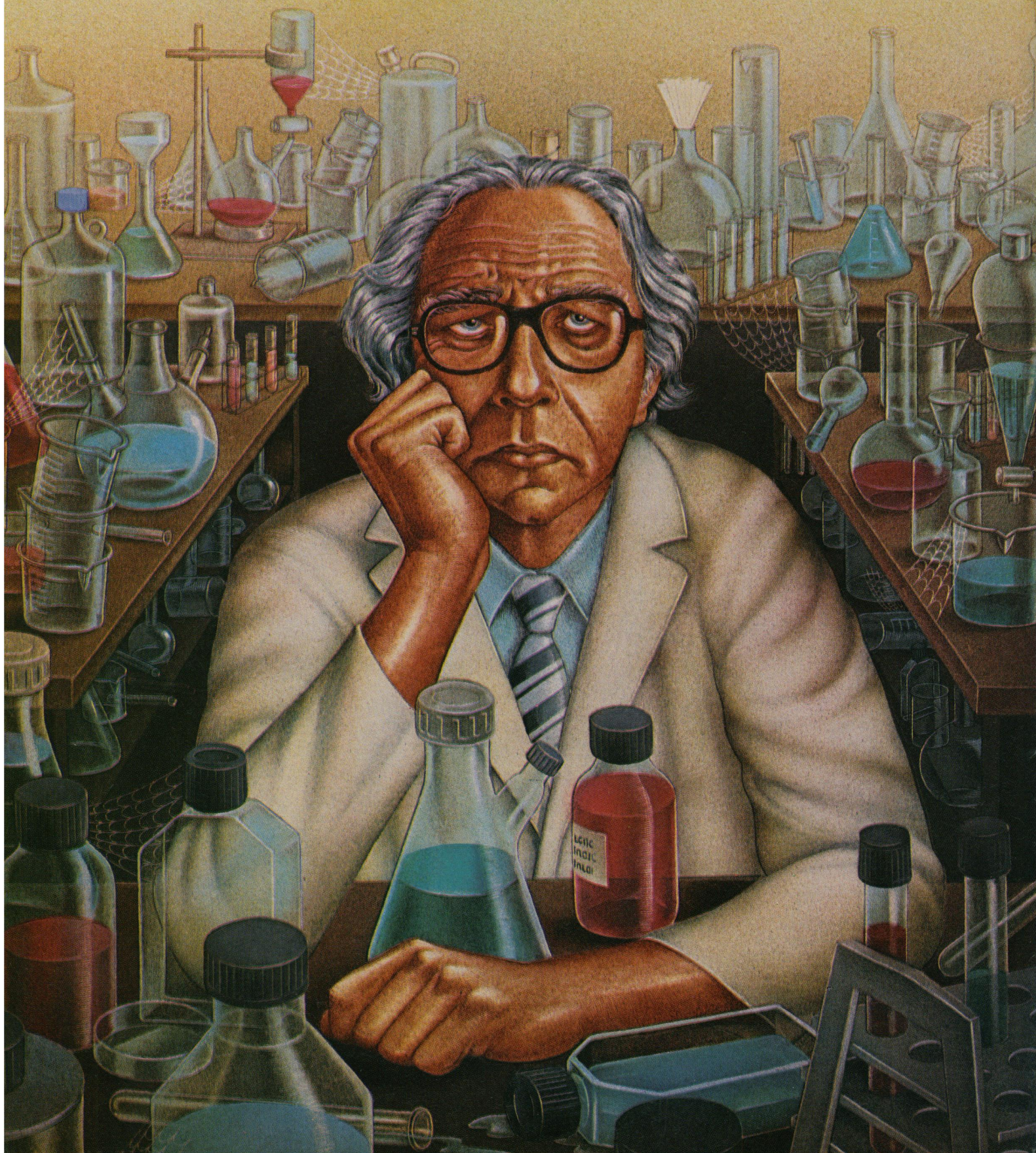
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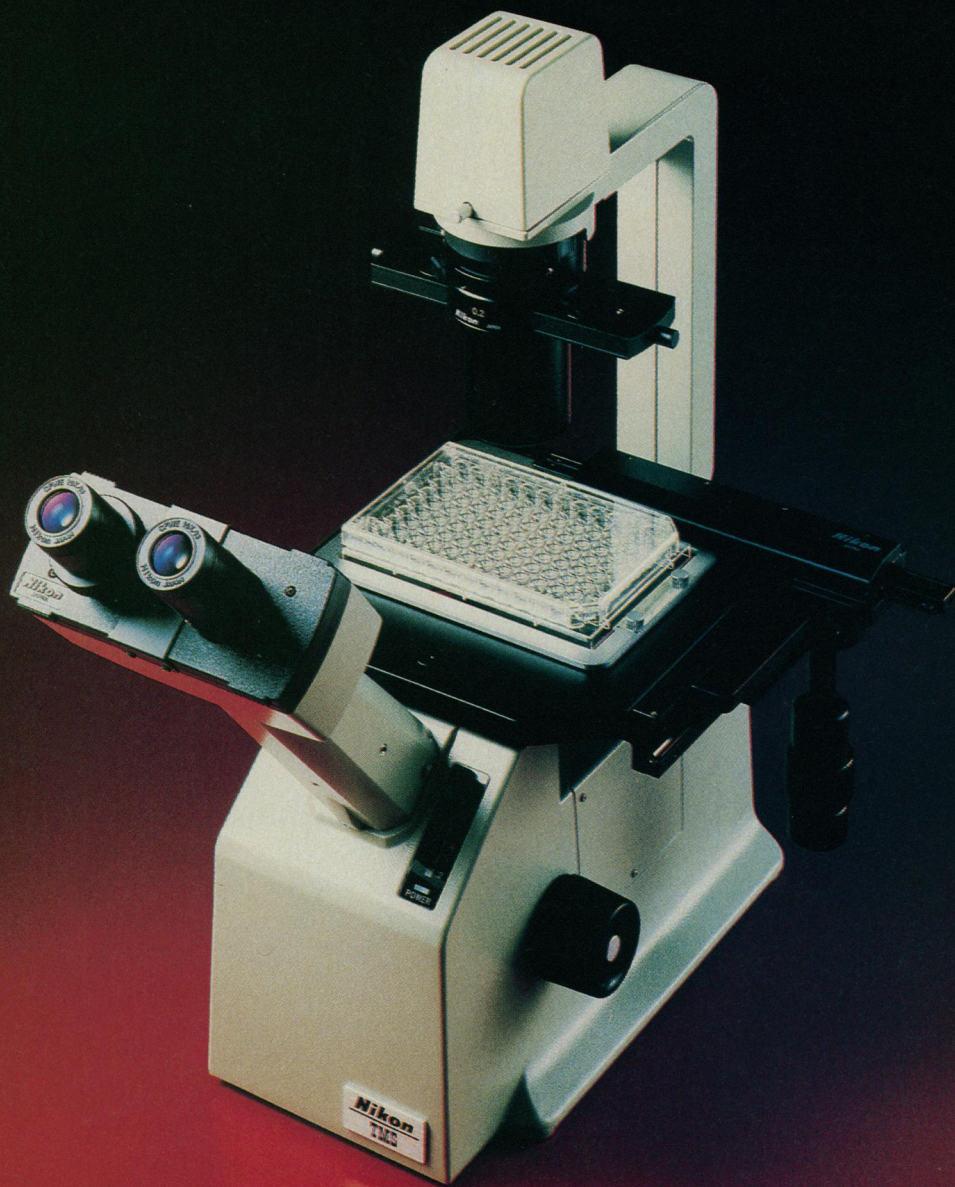
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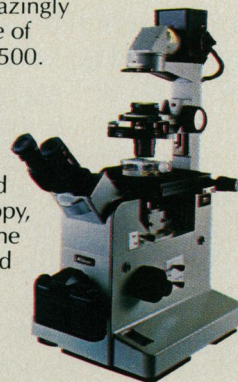


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A Department of Science?

The news that a cabinet-level Department of Science is being contemplated is important to every citizen, scientist and nonscientist, in the country. Before detailed plans are unveiled, it is premature to decide whether such a step is a blessing or a hazard, but it is not too early to consider the criteria on which judgments can be made.

Scientific research and development have grown increasingly larger in dollars, more pervasive in areas of application, and more important to the material well-being of society with each passing year. In fiscal 1984 the U.S. federal budget allocated \$7 billion for basic research and \$38 billion for applied research and development. In addition to the well-accepted roles of research in preventing illness, providing for our defense, and improving our agriculture, there is a growing realization that a nation that pays high wages must have the technological head start provided by basic research to provide goods at internationally competitive prices.

One argument for a Department of Science is administrative tidiness. The present sprawling giant with fingers reaching into numerous departments and agencies does not produce aesthetic organization charts or clear lines for policy implementation. The consequent pluralism in funding and in administrative mechanisms could be vastly simplified in a single department. An accountant's nightmare, however, may be a scientist's sweet dream of happiness. Science is basically untidy—a mixture of big science and little science; programs that need expensive hardware, like astronomy, and programs that need only time for thinking, like some mathematics; programs that can be planned in advance, like a space station, and programs that arise unexpectedly, like the response to the AIDS epidemic. A single department could succumb to the hobgoblin of internal consistency and thus eliminate the individualistic administrative practices on which science has thrived.

A second argument for a single department is budgetary tidiness. Scientific research and development could be made into a "zero sum game," in which a space station is weighed against a supercollider, polymer chemistry against biotechnology, and economics against solid state physics. A better formula would seem to consider basic research financing as a "percentage game" based on the gross dollar value of a given output. Du Pont spends 6 percent of its total sales on research. Extending these percentages to other areas provides a logical impetus for major growth in basic research in areas such as criminal justice, demography, and environmental protection. These areas are at the moment vastly underfunded in basic research, but they relate to problems for which society is in desperate need of solutions. It is not difficult to argue that a small diversion of funds to generate new ideas in these areas is a good investment, given the large outlays for prisons, immigration control, and toxic waste disposal. It is much more difficult to make the argument for funds at the expense of highly successful research programs in medicine, chemistry, and physics, none of which are at the 6 percent level.

A Department of Science could be useful if it is devoted to untidiness and evangelism. It could serve as a catalytic force for increasing scientific research and generating scientific approaches in all phases of our society and our governmental structures. It could send out its missionaries to bring the gospel of basic research to the heathen in the outer darkness. For research is not only an endless frontier but a peaceful one in which the gains of one country are not made at the expense of others. The temporary technological edge achieved in one country is eventually reflected in increased living standards for all. Mankind should be conquering ignorance, not territories. If a Department of Science is designed to be a focal center for the expansion and encouragement of research, it would be a boon. If it is too tidy and too encapsulated, it would be far better to abandon the idea and to consider modifications of the present pluralistic structure to achieve the same goals.—DANIEL E. KOSHLAND, JR.

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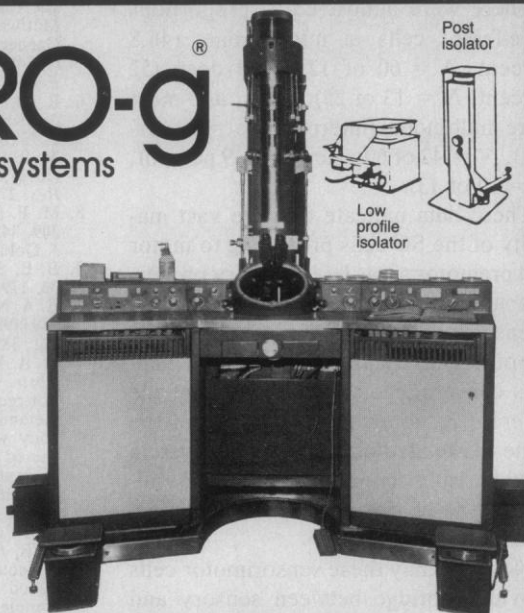
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