teractions for precise environmental adaptation. Moreover, with the use of embryonal cells to prepare protoplasts for regenerating hybrids and genetically modified variants, we have ways not only to clone trees but to introduce new genetic variation at a time when man's assault on forests is becoming alarming.

Don J. Durzan
Professor
Department of Pomology
University of California
Davis, CA 95616

A LOVE FOR AFFINITY

To the editor:

I was interested to see Walter Stadnisky of Millipore Corp. quoted in your recent article titled "Currents in Chromatography" (*Bio/Technology* 5:246-250, March '87) as seeing "little interest in production affinity purification." I can assure you that there are, in fact, a large number of manufacturers who use affinity methods as the basis of their production processes. Published examples include Hoffmann-La Roche (leukocyte interferon), Celltech (monoclonal antibodies), Kabi (antithrombin III,

plasminogen), and a brief search of patent literature will uncover a host of other methods under development. This trend is also reflected in our sales of media for large-scale affinity chromatography.

The key features of affinity chromatography that make it so attractive—and popular—with process users are the high resolution (sometimes greater than 1,000-fold purification) and recovery (greater than 90 percent) that can be obtained in a single step.

I hope this information gives a more balanced picture of the use of different techniques in protein purification. Perhaps, however, it's just another example of the "extreme partisanship" you point out we manufacturers are so guilty of!

Duncan Low, Ph.D.
Director, Process Services
Pharmacia AB
S-75182 Uppsala, Sweden

AIDS ALERT

To the editor:

I quite agree with Harvey Bialy's view in the May "Commentary" that one should avoid scare tactics

when referring to AIDS.

As an example to be avoided, however, is his own statement that the AIDS epidemic is the "most serious of the century." I believe the flu epidemic during World War I still deserves that title. It was rapid, worldwide, highly fatal, and the virus was much more difficult to avoid. Why not just say that AIDS "may be the most serious"? After all, there are lots of other diseases that cause havoc among us and still deserve research funds. And it may even be someone doing basic research who provides the key to the AIDS problem—perhaps even someone studying behavioral science, since a difficult modification of human behavior seems urgently needed here.

A. R. Krall
Professor of Biochemistry
Medical University of South Carolina
171 Ashley Avenue
Charleston, SC 29425-2211

I quite agree with Dr. Krall's historical assessments, but I fear that he missed my point. The phrase he takes issue with is preceded by "rather suddenly." Perhaps my sarcasm was somewhat understated, but our views are really identical. —HB

MACROSORB™ KAX HIGH PERFORMANCE ADSORBENTS FOR INDUSTRIAL SCALE PROTEIN SEPARATIONS

MACROSORB KAX - The Ideal Matrix

The essential requirements for industrial scale chromatography are purification and throughput. Macrosorb KAX composites were designed to give high performance by combining high purity agarose with a rigid, inert skeleton, Macrosorb K.

Products based on the Macrosorb KAX matrix are now available as spheroidal beads with a size range 100-300 micron. These beads give effective resolution of proteins using pH or ionic strength gradients. The beads are dense and may also be used in fluidised beds to contact crude process streams.

An Order of Magnitude Faster

Macrosorb KAX products may be used with linear flow rates of 5-10 cm/min, eg. a 30 × 27cm (19L) bed of Macrosorb KAX.DEAE was used to purify BSA at a flow rate of 200L/hr. (see inset). Even at this high flow rate elution within one column volume is possible.

HIGH THROUGHPUT

Column: 30cm × 27cm, column volume 19L
Flow rate: 5ml/cm²/min, 210L/hr
Sample: Desalted bovine serum, 16.5L, 300g albumin
Cycle time: 48 minutes

LOW PRESSURE

Column: 30cm × 27cm, column volume 19L
Amicon G300 × 500
Packing: Macrosorb KAX.DEAE (100-300 micron)
Pipework: 13mm/1/2 inch

Product Range

KAX: composite matrix for affinity and ion exchange chromatography
KAX.DEAE: diethyl aminoethyl weak cation exchanger
KAX.CM: carboxymethyl weak cation exchanger
KAX.QMA: quaternary methyl ammonium, strong anion exchanger
KAX Cibacron Blue: pseudo affinity ligand

Sterling Organics

Sterling Organics Limited, Edgefield, Avenue,
Fawdon, Newcastle upon Tyne NE3 3TT,
England. Tel: Tyneside (091) 2858283
Telex: 537197 STERGA G

Sterling Organics US,
33 Riverside Avenue,
New York, NY 12144, U.S.A.
Tel: (518) 445 8932 Tx: 7104418252

Write in No. 153 on Reader Service Card