Big News for the TL-100 Benchtop Ultracentrifuge

The Beckman TL-100 Ultra-centrifuge—with a choice of fixed angle, swinging bucket and vertical tube rotors—has become the preferred way to separate small sample volumes, typically taking only one-fifth the time required by floor-model ultracentrifuges.

Now a new rotor, the TLA-100.3, brings even more capabilities to benchtop ultracentrifugation:

**Larger Capacity**

The rotor spins six open-top tubes that hold 3 mL each, triple the volume of any other TL-100 open-top tube. The fixed angle rotor also can run six 3.5-mL tubes for a maximum capacity of 21 mL.

**Higher Performance**

At a top speed of 100,000 rpm, the TLA-100.3 generates forces of 541,000 g (vs. a previous high of 436,000 g) and has a k factor of 16.5 for fast, efficient runs.

**Microcentrifuge Tubes**

With adapters, the new rotor also can spin 1.5-mL conical-bottom microcentrifuge tubes at speeds to 50,000 rpm—ideal for pelleting subcellular fractions and DNA or protein precipitates. You'll find the 30°-angle titanium rotor useful for plasmid preps, protein binding studies and mRNA studies too.

Big NEWS! For the complete story on the TL-100 benchtop ultracentrifuge, its rotors, tubes, accessories and applications, write Beckman Instruments, Inc., Spinco Division, 1050 Page Mill Road, Palo Alto, CA 94304. Offices worldwide.
For cells in culture

Discover the Power of the ACAS™470

Controlled Laser Illumination
with the ACAS 470 (Anchored Cell Analysis and Sorting) brings new light to discovery in cell biology. Focus the laser beam where you want it for:
- fluorescence excitation
- photobleaching
- photoactivation
- cell surgery
- cell ablation
without disturbing the extracellular environment and attachment of cells.

Now you can use fluorescence to quantitatively measure:
- orientation and localization of cellular components
- cell-cell interactions
- fluorescence redistribution after photobleaching (FRAP)
- cell subpopulations
and much more.

Computer-Controlled Stage Movement allows precise and automatic targeting of the laser beam. Stage speed provides for rapid sorting of cell monolayers in culture. Stage coordinates can be used for repositioning with the high accuracy necessary for automated sequential cell analysis.

Isolate cells for propagation or analysis

Cell Sorting of anchorage-dependent cells is now possible with the ACAS 470. Selective sorting is achieved by destroying unwanted cells via the laser beam, or by physical separation through a unique cookie-cutter selection method. In this way, homogeneous cell progeny can be obtained from a heterogeneous cell population.

Quantitative Fluorescence Analysis is optimized with the ACAS 470. Cells are imaged for convenient manual or automated interaction. For fluorescence analysis, the ACAS 470 sequentially exposes only small areas of a cell to brief laser pulses. The resulting fluorescence represents emitted light from targeted fluorescent molecules, giving three-dimensional information.

Convenient Software that is easy to learn and to use is the heart of the ACAS 470. Experimental parameters are set, data are accessed and the stage is controlled through an alphanumeric keyboard or hand-held mouse. The CRT screen displays collected data, results, menus and prompts for greater user interaction.

Are you considering instrumentation for CELL SORTING? FLUORESCENCE ANALYSIS?
TALK WITH US! Only the ACAS 470 brings the methods of cell sorting and analysis to cells in culture. Call collect, (517) 349-7200, for more information.

By integrating computer-controlled laser illumination and stage movement, the ACAS 470 lets you explore new frontiers in cell research. Now you can automatically isolate:
- subpopulations of cells
- mutant cells
- transfected cells
for propagation or analysis.

Are you considering instrumentation for
CELL SORTING?
FLUORESCENCE ANALYSIS?
TALK WITH US! Only the ACAS 470 brings the methods of cell sorting and analysis to cells in culture. Call collect, (517) 349-7200, for more information.

Bringing Analytical Power to the Cell in Culture
Meridian Instruments, Inc.
2310 Science Parkway
Okemos, Michigan 48864

Circle No. 150 on Readers' Service Card
As simple and friendly as soft gel chromatography. Powerful and productive as HPLC. Now uniquely combined into one totally new and radically different system. ULTRACHROM GTi. To separate, purify, quantitate and recover proteins, peptides, nucleic acids and even carbohydrates. With biological activity that can reach 100%. And in runs that only take minutes.

From pump heads to fraction collector, GTi means glass, titanium and inactive polymers. Giving you bio-compatibility for complex protein mixtures. Replacing stainless steel at every liquid interface. Securing protection against buffers. Against corrosion by halide ions. Against denaturization by organic solvents. But with all the performance of a truly advanced and highly proven HPLC pump. Meeting all your needs for multi-dimensional separation. Beginning with GFC. Switching columns for Ion Exchange, and then again for Hydrophobic Interaction Chromatography. Getting you higher resolution and increased purity all the way. With rapid analysis of sample complexity, continuously progressive purification and successful isolation of your important biomolecules. Completing separation strategies in hours instead of days. Solving particular problems with the most appropriate chromatography. Even reversed phase including microbore and fast LC. On just one system with unlimited potential. Giving you the most versatile chromatography in the world. Already being used by hundreds of biochemists. Getting them more results. Much faster. Much simpler. More reliably. One word says it all. GTi. You'll find it solving problems faster and better than any other separation system available. Get in touch with LKB. You're in for a winner.
Start your separations off on the right foot.

Start with Bio-Rad's sample preparation products.

Almost every separation or analysis requires treatment of the sample. Because of this, Bio-Rad offers a complete line of quality sample preparation products. These well-established tools include ion exchange resins, filtration products, disposable columns, and cartridges. Among the many sample prep applications that we satisfy are:

- desalting
- buffer exchange
- sample concentration
- buffer preparation
- metal removal
- particulate removal
- detergent removal
- deproteinization
- deionization
- adsorption of organics
- HPLC deashing

If you’re involved in chromatography, electrophoresis, immunochemistry, molecular biology, or HPLC, you’ll find the “Guide to Sample and Reagent Preparation” invaluable. Contact us for your free copy.

1414 Harbour Way South
Richmond, CA 94804
(415) 232-7000
800-4-BIO-RAD

Also in Rockville Centre, NY; Hornsby, Australia; Vienna, Austria; Mississauga, Canada; Welford, England; Munich, Germany; Milan, Italy; Tokyo, Japan; Utrecht, The Netherlands; and Glattbrugg, Switzerland.

Circle No. 228 on Readers’ Service Card
The Breaking of Bodies and Minds
Torture, Psychiatric Abuse, and the Health Professions

A documentation of systematic use and effects of physical and mental torture throughout the world

Edited by Eric Stover and Elena O. Nightingale
With a Foreword by David A. Hamburg

Contents

Part I  Torture
Torture and the Ethics of Medicine
Albert R. Jonsen and Leonard Sagan

Victims of Torture:
Two Testimonies
Compiled by Cornelius A. Kolff and Roscias N. Doan

Physical and Psychiatric Effects of Torture: Two Medical Studies
Federico Allodi, Glenn R. Randall, and others

Torture on Trial: The Case of Joelito Filartiga and the Clinic of Hope
Richard Pierre Claude

Medical Action Against Torture
Eric Stover and Michael Nelson

Part II  Psychiatric Abuse
Psychiatrists and Dissenters in the Soviet Union
Sidney Bloch and Peter Reddaway

A Question of Conscience
The Cases of Alexei Nikitin and Anatoly Koryagin
Kevin Close

Unwilling Patients
Anatoly Koryagin

The Case of General Grigorenko: A Second Opinion
Walter Reich

The World of Soviet Psychiatry
Walter Reich

A Response to Psychiatric Abuse
Paul Chodoff and Ellen Mercer

Toward the Prevention of Torture and Psychiatric Abuse
Elena O. Nightingale and Eric Stover

This eye-opening book brings together for the first time writings on the role of medical personnel in cases of torture and psychiatric abuse. Through analyses and case histories, psychiatrists and other health care professionals, political scientists, ethicists, and other writers discuss the systematic use and effects of physical and mental torture in the Soviet Union, Latin America, and other parts of the world.

The book also details the complicity of an alarming number of medical personnel in torture and psychiatric abuse and examines the ways in which governments use a medical rationale to seek legitimacy for human destruction. Finally, it describes efforts by medical and other associations both to combat offensive practices and treat victims.

The Breaking of Bodies and Minds is important reading for anyone concerned with the preservation of basic human rights.

1985 352 pages

Paperbound $11.95; AAAS members $9.50
Hardcover $21.95; AAAS members $17.50

Order from AAAS Marketing, Dept. ES, 1333 H Street, NW, 8th Floor, Washington, DC 20005.

Please add $1.50 postage and handling per order. Allow 6-8 weeks for delivery. To charge your order to VISA or Mastercard, please call the Sales Department at (202) 326-6405.

Published by W.H. Freeman and Company
This year, before you pay hundreds of dollars more in taxes than necessary, discover how simply you can turn that money into savings with SRAs—Supplemental Retirement Annuities from TIAA-CREF.

SRAs are flexible, highly competitive, cashable tax-deferred annuities—totally separate from your basic retirement plan.

For more information, return the coupon below. Or call our toll-free number:

800 223-1200

A free Folon poster. Our illustration is by the Belgian artist Folon. A limited edition of full-color posters has been reproduced from the painting. To request one, check below.

Federal tax legislation now pending may impose restrictions and penalties on early withdrawals from SRA-like vehicles and may also reduce the amounts that may be contributed.

In addition, current federal pension law may require your spouse's consent to a cash withdrawal.

TIAA-CREF
730 Third Avenue
New York, NY 10017
Offices in Atlanta, Boston, Chicago, Dallas, San Francisco and Washington, D.C. area

Yes, I'd like to turn taxes into savings.

□ Please send me more information about SRAs. I understand SRAs are available only to staff members of colleges, universities, independent schools and other nonprofit educational and research organizations.

□ I'd also like a free Folon poster.

Name
Institution
Address
City
State Zip
This meeting will focus mainly on interleukins, interferons, and cytotoxic cytokines, highlighting their potential importance in human disease. This meeting is timely because many of these agents are available in pure form as a result of advances in conventional protein purifications and molecular biologic techniques. An attempt will be made to integrate studies of the mechanism of actions of these agents and their application in the treatment of disease.

The symposium will take place Monday and Tuesday from 8:30 am – 6:00 pm and Wednesday until 12 noon. Discussion groups based on poster sessions will be held Monday and Tuesday evenings. Table top exhibits will also be presented.

CO-CHAIRMEN
Stanley Cohen, Professor of Pathology, University of Connecticut Health Center, Farmington
Jan T. Vilcek, Professor of Microbiology, New York University Medical Center, New York

TENTATIVE PROGRAM
SUNDAY EVENING, AUGUST 10

KEYNOTE ADDRESS: MECHANISMS OF CELL PROLIFERATION
Speaker: Renat Baserga

MONDAY, AUGUST 11

TUMOR NECROSIS FACTOR AND OTHER CYTOTOXIC MEDIATORS
Chairman: P. Henggart
Comparison of TNF and Lymphotixin: B.B. Aggarwal
Cachetin: B. Bezler
Interplay of TNF, IL 1, and Interferons in Monocyte Cytotoxicity: Lois B. Epstein, M.D.
Soluble Factors in Cell-Mediated Cytotoxicity: P. Henggart
Regulation of Hematopoietic Cells by Cytotoxins: T. Trinchieri

INTERLEUKIN 2 AS REGULATORY AGENTS
Chairman: M. Revel
Regulation of Interferon Gene Expression: John D. Stobo, M.D.,
Regulation of Data Interferon: T. Maniatis
Beta, Interferon: M. Revel
Interferon Receptors: S. Pestka
Regulations of Oncogenes Expression by Interferons: R.M. Friedman

TUESDAY, AUGUST 12

INTERLEUKIN 2 AND OTHER GROWTH FACTORS
Chairman: T.A. Waldmann
The Nature of IL 2 Receptor: T.A. Waldmann
IL 2 Ligand-Receptor Interations: K.A. Smith
Intracellular Transduction Pathways in IL 2 Stimulation: C.A. Cohen
Protein Kinase C in IL 2 Action: W.L. Farrar
B Cell Growth Factor: A.L. Maizer

INTERLEUKIN 1, COLONY STIMULATING FACTORS
Chairman: C.A. Dinarello
Structural Studies of IL 1: C.A. Dinarello
The Role of IL 1 in the Central Nervous System:
L.B. Lachman
IL 1 and Rheumatoid Arthritis: E. Amento
Biologic Effects of Colony Stimulating Factors: M. Moore
Growth Factors as Interferon Inducers: J. Vilcek

WEDNESDAY, AUGUST 13

POTENTIAL CLINICAL APPLICATIONS
Chairman: C.F. Nathan
LAK and IL 2 in Cancer Therapy: M.T. Lotze
Adoptive Transfer of Interferon-Activated Macrophages: H.C. Stevenson
Interferon in Malaria: Victor Nussenzweig, M.D.
Inhibition of Intracellular Micro-organism by Cytokines:
Christine W. Czarniecki
Gamma Interferon in Leprosy and AIDS: C.A. Nathan

REGISTRATION FORM
$350 – Pre-Registration Fee (Received by July 1, 1986)
$400 – On-Site Fee
$175 – Student fee, undergraduates & graduates only (status must be confirmed in writing)

Attendance will be limited. Make checks payable to: Scherago Assoc., Inc., L & C Congress

Please reserve _______ space(s): Registration Fee must be included.

☐ Request Poster Session Abstract Form

Cancellations must be received in writing by July 1, 1986.

Name ___________________________
Dept. ___________________________
Organization ___________________________
Street ___________________________
City ___________________________ State _______ Zip _______
Telephone: ( ) ___________ ___________

Return to: CONGRESS ON RESEARCH IN LYMPHOKINES AND CYTOKINES
c/o Scherago Associates, Inc.
1516 Broadway, New York, NY 10036 • (212) 730-1050

CONCLUDING REMARKS: S. Cohen, J. Vilcek