



Cancer Research

VOLUME 38 • NO. 12 CNREA8 • PP 4377-4907

December 1978



A page of information on flow cytometry from Ortho.

State-of-the-art cell sorting and analysis

Ortho announces the most powerful, precise, and versatile instrument for cell sorting and analysis ever available commercially: the Ortho Cytofluorograf™ System 50. It combines a rapid cell sorter (based on the electrostatic droplet deflection principle) with a flexible, wide-ranging analysis package in a single versatile unit.

Ortho System 50 for analysis.

Its dual-laser excitation system provides three modes of excitation. There are two single individual-excitation sources for different purposes: a .8 milliwatt helium-neon laser for ultra-high-precision scatter measurements, and a 4-watt argon laser for fluorescence measurements.

There are four detectors: two are photomultiplier tubes for broad visible-range response, two are solid-state photo sensors for axial light loss and narrow forward-



with the Cytofluorograf System 50

angle scatter. A photomultiplier tube provides for measuring wide-angle scatter.

12 measurement parameters.

The System 50 Cytofluorograf permits for the first time the yielding of morphological information by a flow cytometric instrument. Because pulse height analysis, pulse area analysis, and pulse width analysis can be selected for every detector output, a total of 12 distinct measurement parameters is available with the

System 50. Other features of the system include two bi-dimensional regions of interest, dual histogram multi-channel analyzer with cytogram mode, ultra-sensitive optics, and easy sample entry.

Complete details of System 50 are available in a new brochure available from your Ortho Instruments representative or direct from Ortho Instruments.

Protocols No. 25 describes discrimination of mitotic phases by cytofluorographic analysis.

We would like to bring your attention to an application note: *Discrimination of G₀, G₁, S, G₂, and M phases by Cytofluorographic Analysis* contributed by Z. Darzynkiewicz, Ph.D. of Memorial Sloan Kettering Cancer Center, New York, No. 25 in the Ortho Protocols series.

It includes some interesting computer-drawn histograms in its description of how to distinguish mitotic cells from cells in interphase based on differences in chromatin structure. Methods and results are described, with discussion and references.

For a copy of Protocols No. 25, write or call Ortho Instruments

New brochure available on Ortho Cytofluorograf™ systems for flow cytometry.

Complete details are given on Ortho Cytofluorograf systems in a new brochure. It lists and describes the different combinations of Cytofluorograf modules that permit

you to build a flow cytometry system that precisely meets your present needs and can be modified to suit any future requirements.

With both mercury-arc and dual-laser illumination measurement modules, the new Ortho Cytofluorograf systems offer resolution, sensitivity and versatility unmatched by any other commercially available flow cytometric equipment.

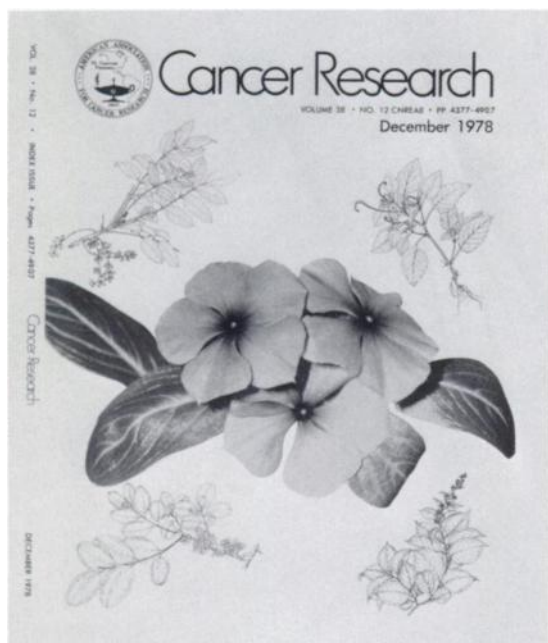
For a copy of this new brochure, phone or write Ortho Instruments.

For any of the information offered on this page, or for additional data about Ortho Cytofluorograf instruments, accessories, and technology, write or phone the Research Instruments Division.



ORTHO INSTRUMENTS
410 UNIVERSITY AVE., WESTWOOD, MA 02090
CYTOFLUOROGRAF

COVER LEGEND



Plants have been the source of several carcinostatic chemicals, with the prime example of vincristine and vinblastine from *Catharanthus roseus* (Linn.), the periwinkle *Vinca rosea* (center). A systematic search for other carcinostatic agents among plants is part of the national cancer

chemotherapy program, summarized in *Cancer Treat. Rept.*, 60: 973-1215, 1976.

Four plants from which chemicals with antineoplastic activity in animal screens have been isolated are pictured from the report. These chemicals are now in preliminary clinical trials. The plants, from upper left, clockwise, are: *Brucea antidysenterica*, native to Ethiopia, source of Bruceantin; *Heliotropium indicum*, a widely distributed weed, the source of Indicine N-oxide; *Tripterygium wilfordii*, native to Eastern China and Formosa, with a major active compound, Triptioidide; *Maytenus buchananii*, an African plant, the source of Maytansine.

We are indebted to Dr. Robert E. Perdue, Jr., of the Agricultural Research Service, United States Department of Agriculture, for the illustrations and information, and to the Division of Cancer Treatment of the National Cancer Institute for assistance.

M. B. S.