

TEXAS SOCIETY FOR ELECTRON MICROSCOPY

NEWSLETTER

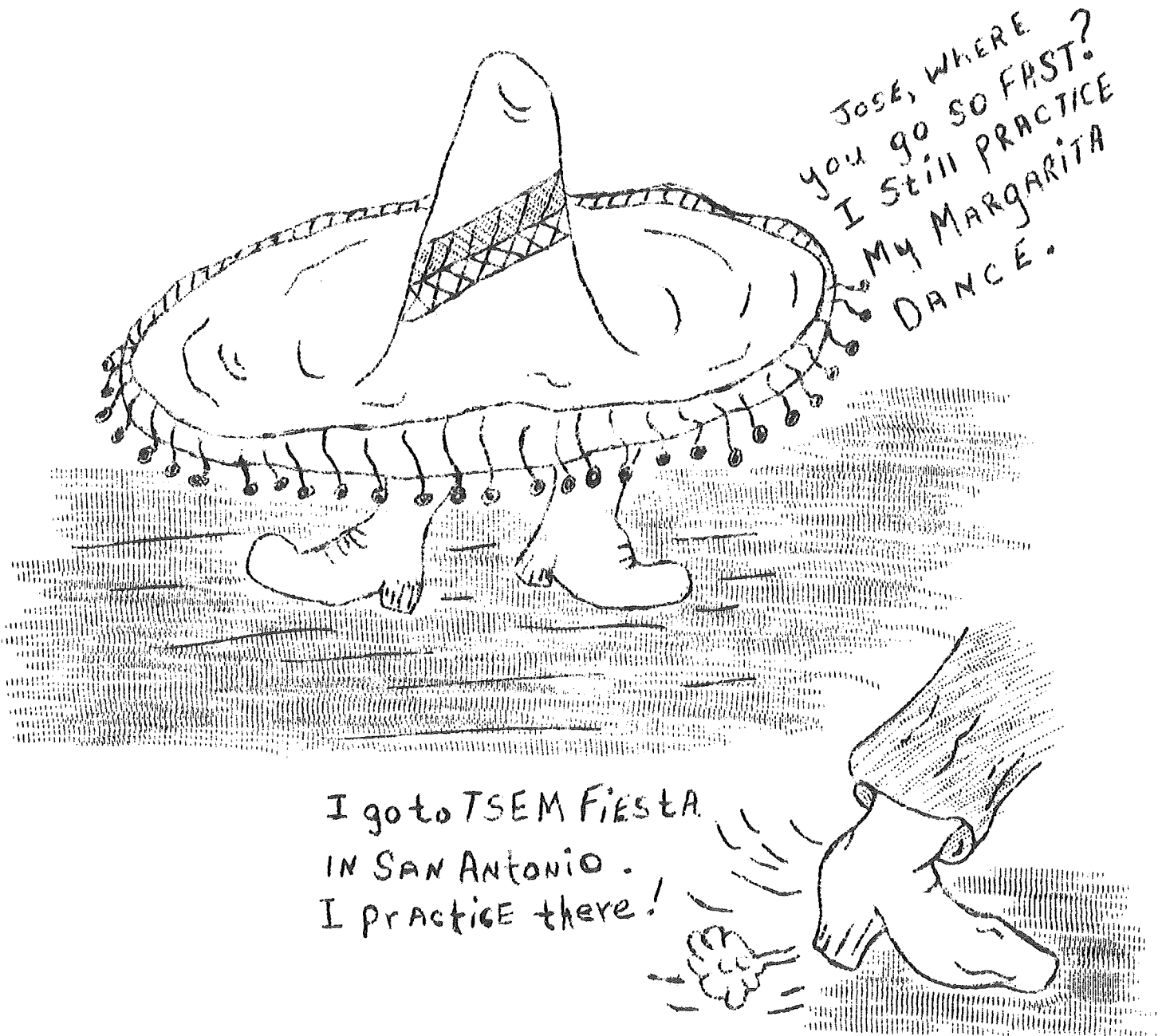
Number 13

5 March, 1970

ANNOUNCING SPRING MEETING

SAN ANTONIO, TEXAS, APRIL 24-25

HILTON PALACIO DEL RIO



## OF MOON AND MEMBERS

" . . . . The approaching lunar mountains were utterly unlike those or earth; they lacked the dazzling caps of snow, the green, close-fitting garments of vegetation, the moving crowns of cloud. Nevertheless, the fierce contrasts of light and shadow gave them a strange beauty of their own. The laws of earthly aesthetics did not apply here; this world had been shaped and molded by other than terrestrial forces, operating over eons of time unknown to the young, verdant earth, with its fleeting Ice Ages, its swiftly rising and falling seas, its mountain ranges dissolving like mists before the dawn. Here was age inconceivable-but not death, for the moon had never lived-until now."

- Arthur C. Clarke  
2001. A Space Odyssey

Somehow it seemed almost comical, unbelievable really, to hear our NASA tour guide, Tom Walton, use such phrases as ". . . when they go to the moon". For this writer remembers all too clearly when trips to the moon and planets were only read about in the Buck Rogers comic strip.

We who explore the micro worlds understood some of the awe and wonder, and technical achievements encountered by those who explore the macro worlds. For our common bond is the adventure of viewing what previously has not been seen.

On the whole, we are most appreciative toward the MSC Public Affairs Office for the opportunity to tour some of their facilities. It was not as extensive as we had hoped; but then, the group size was not as small as the Public Affairs Office had hoped, either. Tom Walton is to be commended for guiding 130 people through the tour without losing anyone while achieving his time schedule. A special thanks goes to Dr. Stephen Kinsey for a most interesting lecture on the use of the electron microprobe, and to Dr. Ann Goldstein, local arrangements chairman, for setting the tour up and working under what appeared to be administrative inefficiency in the MSC Public Affairs Office.

The MSC tour was meant to be a part of the overall meeting and program, complementing the excellent presentations from the Executive Officers of EMSA. Especially apropos was Dr. Delbert Philpott's paper on the search for living fossils from lunar soil samples. However, apropos derien was the fact that came meeting time many of the members who attended the tour were nowhere to be found. Although the sessions, both of Friday evening and Saturday morning, were well attended, it appeared we have some fair weather members in TSEM. We schedule social events to enhance the communication among members. This is the cohesion which renders us a young verdant society. And, although we are tolerant of our "moon" members with their "fierce contrasts" of the here and gone, the evolution of the Society will be shaped and molded by those who actively work and participate within it.

Editor

## PRESIDENT'S MESSAGE

Judging from the comments and enthusiasm expressed by members around the state, the Winter Symposium at Nassau Bay Hotel, February 6-7, was a great success. Perhaps the NASA tour could have been more effective had we been allowed to go through in smaller groups. Nevertheless, the young man who served as our tour guide did a sensational job under the circumstances.

I want to especially thank Joyce Kephart, Program Chairman, for the excellent program and Dr. Ann Goldstein, Local Arrangements Chairman, for handling all the nitty gritty details. I personally appreciated the support demonstrated by the large number of members who turned out on this wet, Wintry week-end to attend the meeting (and stayed for the banquet!).

Dr. Bill Winborn, Local Arrangements Chairman, has promised sunshine, flowers, tequila, beautiful senoritas, etc., in San Antonio this April when we hold our Spring Symposium at the Hilton Hotel. This will coincide with Fiesta Week and should be a great opportunity for everyone to bring wives, kids, dogs, sweethearts, roommates, etc., and live it up in ole San Antone! Viva Max!

Bill Brinkley  
President, TSEM

TSEM SPRING MEETING: SAN ANTONIO, TEXAS: APRIL 24-25, 1970.

Hotel Accommodations: Hilton Palacio del Rio, 200 South Alamo Street

Hotel reservations have been made for 150 rooms. The meeting coincides with the 75th Annual FIESTA San Antonio week which ends April 26. An additional 50 rooms are on reserve for members who wish to stay for another day. April 10th is the "cut-off" date for room reservations. The hotel is located in the center of the FIESTA activities. The following FIESTA events are scheduled:

Friday, April 24.

9:00 A.M. to 5:00 P.M.--Art Show. Paseo del Rio.  
2:00 P.M. ---Battle of Flowers Parade.  
5:00 P.M. to 10:00 P.M.---"A Night In Old San Antonio". At La Villita.  
10:05 P.M.---Mariachi Festival. Paseo del Rio.

Saturday, April 25.

9:00 A.M. to 5:00 P.M.--Art Show. Paseo del Rio.  
1:00 P.M.---King William Fair. King William Area.  
7:30 P.M.---Fiesta Flambeau Parade.  
10:00 P.M.---Mariachi Festival. Paseo del Rio.

TSEM SYMPOSIUM MEETING SITE

River Room of the Convention Center  
(Hemisfair Plaza)-across the street from the  
Palacio del Rio.

Registration: April 24 - Palacio del Rio, 4:00 P.M. to 8:00 P.M.  
April 25 - River Room, 8:00 AM to 10:00 A.M.

Local Arrangements Chairman: Contact - Dr. William B. Winborn  
Department of Anatomy  
University of Texas Medical  
School at San Antonio  
7703 Floyd Curl Drive  
San Antonio, Texas 78229  
Tele: 512-696-6541

Society Luncheon: April 25, 12 o'clock Noon - La Reina Room of the  
Palacio del Rio.

Business Meeting: April 24, 7:30 P.M. to 8:30 P.M. - Ballroom of the  
Palacio del Rio. All members are invited.

Social Hour: April 24, 9:00 P.M. to 9:45 P.M. - River Boat Ride with refreshments - sponsored by Curtin Scientific Company .

April 24, 10:15 P.M. to 12:00 Midnight - Margarita Party - Sponsored by Philips Instruments.

Tentative Program

Friday, 24 April

7:30 P.M. - 8:30 P.M. Open Business Meeting.

All members invited. Results of election of officers for 1970-71 will be announced.

9:00 P.M. - Social

Saturday, 25 April

Morning Session

8: 9:00 A.M. - Symposium on Reproductive Biology

Dr. Dan S. Friend  
Department of Pathology  
University of California  
San Francisco Medical Center

Dr. Don W. Fawcett  
Department of Anatomy  
Harvard Medical School  
Boston, Mass.

1 12:00 Noon - Luncheon

Afternoon Session

1:30 - 3:30 P.M. - Symposium on Techniques  
Panel discussion and audience participation.  
Instrumentation, tissue processing, photography, and  
maintenance.

Moderator: Robert A. Turner  
(Members - bring your problems with you!)

Full program schedules will be available at the registration  
desk.

## 28th ANNUAL MEETING - EMSA

HOUSTON, TEXAS

### Program:

The Twenty-Eighth Annual Meeting of the Electron Microscopy Society of America will be held at the Shamrock-Hilton Hotel in Houston, Texas on October 5-9, 1970. A tentative program includes special sessions on: "High Voltage and High Resolution Electron Microscopy" and "Space Sciences". A special education seminar on "Freeze Etching" is also planned.

Additionally, there will be sessions on the techniques of Scanning Electron Microscopy, both physical and biological. Also, we anticipate that papers utilizing these techniques in the various contributed topic areas will be submitted.

A tentative list of the topics for contributed sessions includes the following: Metals, Non-Metals, Magnetic and Electric Properties, Instrumentation, Physical Preparation, Biological Techniques, Viruses, Cytology, Histology, Pathology, Macromolecules, Reproductive Biology, and Neoplasia.

It is planned to supplement the scientific portion of our meeting with tours of the NASA-MANNED SPACECRAFT CENTER, the Astrodome and other local laboratory facilities.

### Student Participation:

The EMSA will aid in the expenses of twenty students to attend the National meeting of EMSA in Houston, October 5-9, 1970. The twenty will be chosen, competitively, from abstracts for presentations submitted to Dr. Russell L. Steere, USDA, Beltsville, Maryland. Ten will be chosen in the Biological Sciences and ten in the Physical Sciences. The applicants must reside at least one-hundred miles from the place of the meeting (Houston). The awards will be \$100.00 each and will include registration fee and cost of the abstracts and program. Awards will be made after the presentations of the papers. Local students can obtain the abstracts and program for \$5.00.

### International EMSA Meeting:

Those interested in attending the International EMSA Meeting in Grenoble, France, 30 August - 5 September, 1970, and taking advantage of reduced air fare, contact either Dr. Sydney Breese, Jr., USDA, Plum Island Disease Laboratory, Greenport, Long Island, New York, or air France in Houston.

For a minimum of eighty people per plane the fare is \$196.00 round trip. The fare is subject to change depending on the number of people actually signed on for the special rate. Those desiring to respond to this opportunity should also pre-register for the meeting by writing to Havas-Congres, 48 Rue Vivienne, 48-Paris, 2<sup>e</sup> France.

There will be an Executive Council meeting for the officers at Dr. William Winborn's home in San Antonio, on Saturday, 21 March, address: 2915 Deer Ledge.

#### Manpower:

Those of you who have available funds (please stand up!) might be thinking again about the plea to hire underprivileged youth in your laboratories this summer. The President's Council on Youth Opportunity is continuing the effort to place as many disadvantaged youth as is possible on projects supported by the Public Health Service. If you can employ one of these persons on your Public Health Service supported project, please contact your local Employment Security Officer, U.S. Employment Service; the local Community Action Program, Office of Equal opportunity, or the guidance counselors in your local schools.

#### IT'S THE GOSPEL

From Dr. Jerry Berlin, Department of Biology, Texas Tech University in Lubbock comes the following technique hint:

" . . . . For the past three years I have been using a reduced staining time in uranyl acetate and lead citrate of 15 and 15 seconds respectively. I stain by submerging the grid in a deep of the appropriate stain on a small strip of Parafilm. Special precautions to prevent contamination are not required other than good, clean water for washing the grids after staining. Previously, I used Triton X-100 (one drop per 50 ml in both the UA and lead solutions) and, without a serious study, I still think that this helps to reduce contamination. Addition of compounds to alter surface properties is certainly not necessary if normal cleanliness procedures are employed. Incidentally, any detergent, such as Dreft, produces the same result; however, Triton X-100 is nonionic and this could be important. In any case, contrast enhancement is identical to that obtained using the longer times. The short staining regimen has been used with a variety of embedding media and on a variety of different plant and animal tissues and routinely works."

#### For Microscopists on the Go

A complete line of EM supplies is now available from one company. For information and catalogue write to: Mr. Dan Moffett, % Vaughn, Inc. 2176 Dunn Road, Memphis, Tenn., 38114, Ph. (901) 743-0751.

## Philips Electronic Instruments

Philips Electronic Instruments has just announced its new scanning Electron Mirror microscope Model AMR-900. The scanning Electron Microscope is one of the most important tools to develop from modern Electron Optics. Because of the interaction of the high energy electrons on the specimen, a significant deterioration of the specimen to be viewed has been observed - consequently the scanning Electron Microscope must be considered in a sense, as a destructive testing device.

The development of a truly nondestructive method has resulted in the introduction of the Mirror Microscope. In the Mirror Microscope, the specimen to be viewed is maintained at controlled potential such that as the electrons approach it they are decelerated, stopped very close to the surface, and then reaccelerated in the opposite direction, the specimen surface thus acting as a Mirror. Details of the above instrument are available from Philips Electronic Instruments, 6400 Westpark Drive, Suite 264, Houston, Texas 77027.

### AREA NEWS

#### Houston

University of Texas M. D. Anderson Hospital: Dr. Ann Goldstein, now with the Department of Experimental Oncology, is working with a Siemens IA. the laboratory is also equipped with two microntones, a MT-2 and MT-1, and staffed with two technicians. Dr. Goldstein is presently working on three projects:

1. A study of striated visceral muscle in insects, 2. Route of transfer of oncogenic viruses in Drosophila, and 3. the effects of immunosuppressive drugs on primary antigen localization in lymph node of rats.

Recent publications: A morphological and cytological study of sarcoplasmic reticulum and T-system of fish extraocular muscle. zeit. f. zellf., 102:31-39. Anionic binding of ruthenium red in fish extraocular muscle. zeit. f. zellf., 102:459-465.

Department of Biology: Dr. Bill R. Brinkley is presently teaching a course in the GSBS, "Biological Ultrastructure II".

Rice University: Department of Biology: S.A. Ernst and C.W. Philpott-Preservation of Na-K-Activated and Mg-Activated Adenosine triphosphate Activity of Avian salt gland and teleost gill with formaldehyde as fixative. This paper will appear in Journal of Histochemistry and Cytochemistry. Other papers presented at Meetings: Quinton, PM, proposed model system for assay of CF Humoral Factors; to be presented at the annual meeting of the Cystic Fibrosis Club at Atlantic City in April: Moller, P.C. and C.W. Philpott-Observations on the

Circulatory System of Amphioxus, to be presented at the 83rd Annual Meeting of the American Association of Anatomists, at Chicago in April.

#### San Antonio

University of Texas Medical School at San Antonio: Recent guest lecturers at the University of Texas Medical School at San Antonio: Dr. R.J. Barrnett, Professor and Chairman (Chief Witch Doctor of Gamboa Cay)- Department of Anatomy, Yale University School of Medicine Subject: "Cytochemical Observations of Adenyl Cyclase in Heoatic Cells and Triglyceride Synthetase in Intestinal Absorptive Cells", Dr. Arnold Lazarow, Professor and Chairman, Department of Anatomy, University of Minnesota Medical School, Subject: "Medical Education and the New Technology", Dr. J.W. Everett, Department of Anatomy, Duke University Medical Center, Subject: "Neural Mechanism Controlong the Ovulatory Surge of Gonadotrophins". Senior Research Associate at the University of Texas Medical School at San Antonio: Dr. Masataka Shiino from University of Miyazaki (Japan) is back with Dr. Ed Rennels. Dr. Shiino will continue his research work on the anterior pituitary.

#### Denton

North Texas State University: Bob Heidenreich, Bell Laboratories, recently lectured on "Scanning Electron Microscopy". He is sponsored by the Robert A. Welch Foundation.

#### Galveston

University of Texas Medical Branch: Department of Anatomy. Dr. Robert D. Yates, Associate Professor of Anatomy, has been named an associate editor of The Anatomical Record, official journal of the American Association of Anatomists. Accepted for publication, "Microscopic Observations on Abdominal Sympathetic Paraganglia", by Joe A. Mascorro and Robert D. Yates. It will appear in the Spring issue of Texas Reports on Biology and Medicine.

Dr. C. Ward Kischer recently presented a seminar to the Department of Dermatology, Baylor University Medical School, V.A. Hospital, entitled, "Recent Studies on the Effects of Prostaglandins on Developing Skin".

Department of Pathology: Drs. C.W. Philpott, H. Mayor, and B. Brinkley gave seminars to the Cell Structure and Function course for graduate students. Paper accepted, "Ultrastructure of Ovarian Tumors. Part I. Papillary Serous Cystadenocarcinoma." The paper is authored by Dr. Dan K. Roberts and will appear in Cancer.

Dr. Richard B. Marshall, Director of Surgical Pathology gave a morning workshop at the interim meeting of the American Society of Clinical Pathologists February 9, 1970 on "Endocrine Pathology - Light and Ultrastructural". On Tuesday he presided at a Round Table luncheon with the topic, "Applications of Electron Microscopy to Surgical Pathology".

### Lubbock

Texas Tech University: Dr. Jerry Berlin reports the awarding of two grants incident to his EM laboratory 1. from the Cotton Producers Institute, Studies on The Fine Structure of Cell Wall Formation in Cotton Fibers; from the AEC, The Effects of X-irradiation on the Human Testis: An Electron Microscope and Cytochemical Study. Dr. Berlin has also authored a paper to appear in Laboratory Investigation: Comparative Morphological and Functional Studies of Neptunium-induced livers in rats.

### Huntsville

Sam Houston State University: Dr. Terry Hoage brought a number of students with him to the recent NASA Meeting. Joyce Tolas, Marjorie Weichert, Willie Joe Wilson, Neil Williams, and Jesse Cocke. All our new members to TSEM, and we welcome you. Dr. Hoage is continuing to equip his laboratory and recently acquired a varian VE-10 evaporator, two MT-1 ultramicrotomes, and a rotary print dryer. In addition, the Department of Biology acquired NSF matching funds (ISEP), \$9,000, for cytology. Dr. Hoage is conducting a Cell Biology Seminar series on cell division, in which Dr. Brinkley has contributed a lecture.

### Austin

University of Texas Institute of Cell Research: Joyce Kephart reports that the HU 11E, previously in storage, is now being installed in a newly renovated area.

### Houston

Texas Children's Hospital: Department of Pathology: From Dr. Don Singer comes a description of his studies involving EM.

"Since 1964, the members of the Department of Pathology at Texas Children's Hospital, Houston have studied approximately 300 cases of renal disease and 300 cases of liver disease by light and electron microscopy. Sequential studies of giant cell hepatitis in infants have yielded valuable information about the natural history of that disease. Similar sequential studies of acute glomerulonephritis have shown persistence of ultra structural lesions long after bright field structure has returned to normal. These studies, while considered primarily research, have also had their practical application. The definitive diagnosis and consequently the treatment of the nephrotic syndromes in children often rests on ultra structural findings. The staff has also begun the study of pulmonary vascular disease in childhood and the ultra structure of tumors peculiar to infants and children."

## PLACEMENT SERVICE

### Positions Wanted

Electron microscope technician: M.S., experienced, female, US citizen. Available immediately. Reference #1.

Electron microscope technician: B.S., experienced, female, US citizen. Desires position in Houston area. Available immediately. Reference #3.

Electron microscopist: B.S., M.S., Ph.D. (August, 1969, Tulane University) male. Training in physics. Desires position in pure or applied physics. Reference #4.

Electron microscope technician: B.A., experienced, female, US citizen. Available immediately. Reference #5.

Electron microscopist: Ph. D., experienced, male, US citizen. Present position research associate. Available immediately Reference #6.

Electron microscope technician: M.S., experienced, female, US citizen. Available July 1, 1970. Reference #7.

Electron microscope technician: B.S., experienced, female, US citizen. Available immediately. Reference #8.

Electron microscope trainee: B.A., female. Wants to learn EM techniques in Houston area. Available immediately. Reference #9.

Electron microscope technician: M.S. Biology, four years experience, female. Desires position in Houston. Available immediately. Reference #10.

### Positions available

Electron microscopist: Ph. D. to supervise nice EM facility and teach course in electron microscopy. Rank Assistant Professor. Salary approximately \$13,000/year. Contact Dr. Tom Sergeant, Chairman, Biology Department, Trinity University, 715 Stadium Drive, San Antonio, Texas.

Experienced E.M. technician: B.S. degree, skilled in microtomy and general EM techniques. Contact Dr. Jim Martin, Pathology Department, Baylor University, Medical Center, Dallas, Texas.

Experienced E.M. technician: B.S. degree or equivalent experience. Contact Dr. C. W. Goff, College of Arts and Sciences, Indiana State University, Terre Haute, Indiana.

Experienced EM technician: B.S. degree or equivalent experience in ultramicrotomy and EM technology. Contact Dr. Don Singer, Department of Pathology, Texas Children's Hospital, Houston, Texas, 77025.

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