

NEWS LETTER

For the Physicians of Texas

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LIFE TIME AWARD

Endowment of Chair for Cancer Research in Biochemistry

A. Clark Griffin, head of the biochemistry department at MDAH for the past six and one-half years, has been given a life time award which will enable him to conduct cancer research for the remainder of his research career.

The award, sponsored by the American Cancer Society, Inc., is a Faculty-Level Position Grant established for the purpose of furthering creative imagination and maximal productivity in cancer research. It has been awarded to a limited number of investigators of exceptional promise in those branches of the medical, biological and related sciences of importance to the cancer problem. The duration of the award may be for that period of time until the grantee's retirement.

Dr. Griffin has been in charge of the administrative duties of the biochemistry department at MDAH, and has had teaching responsibilities. He also served as the head of the biochemistry department at Baylor University College of Medicine.

Dr. Griffin's active research career has been spent in studying the mechanism of cancer induction. This work began while a graduate student at the University of Wisconsin, under the supervision of Professor Carl Baumann. The study continued while he was a

postdoctoral student at Stanford University, where he studied under Professor J. Murray Luck. While at Stanford, Dr. Griffin collaborated with Professor Luck in studying the factors involved in the control and regulation of the free amino acids of the blood. He has continued the cancer induction studies at MDAH.

He found the dietary factors which influence the process of azo dye liver cancer induction in the rat, and has spent considerable effort in elaborating the role of riboflavin in liver carcinogenesis, and has made many other contributions toward a better understanding of the origin and nature of cancer. His studies of the metabolism of normal, precancerous and cancerous liver have shown that nucleic acids play an important role in malignant behavior.

At MDAH, he has initiated a major study of tumor-host interrelations. Results of this study have established that actively growing malignant tissues have the capacity to influence nucleic acid metabolism in the normal tissues or organs of the host.

Dr. Griffin, in collaboration with Kazuo Yunoki, a visiting scientist from Kagoshima University School of Medicine, Japan, has isolated and purified a substance from tumor tissue known as toxohormone. This substance, present only in cancer tissue, may be of considerable importance in understanding the nature of cancerous growth.

With the award of the Faculty-Level Position Grant, Dr. Griffin will be relieved of most of the administrative work in the biochemistry department at MDAH and will devote his major effort to cancer research in this institution. A new staff member will be appointed in order to free Dr. Griffin's time for his research work. He has resigned as chairman of the department of biochemistry at Baylor, and will serve in the future as a consultant.

He will continue to follow the study of the mechanism of cancer induction, the study on toxohormone and other aspects of tumor-host relations, and the role of nucleo-proteins in the origin and growth of malignant tumors.

SYMPOSIUM SPEAKERS ANNOUNCED

Plans for the Fifteenth Annual Symposium on Fundamental Cancer Research have been announced by Saul Kit, associate biochemist at MDAH and chairman of the symposium. The Molecular Basis of Neoplasia is the topic of the symposium, to be held February 23, 24 and 25, 1961, at MDAH.

Scientists from England, Scotland, Austria and Israel, and 13 states will be among the guest speakers during the six sessions of the meeting.

Van R. Potter, McArdle Memorial Laboratory, The University of Wisconsin, Madison, Wisconsin, is chairman of the opening session on Nucleic Acids. Speakers for the session are Harry H. Ransom, President, The University of Texas, Austin; Julius Marmur, Department of Chemistry, Brandeis University, Waltham, Massachusetts; Liebe Cavalieri, The Sloan-Kettering Division, Cornell University Medical College, New York City; K. S. Kirby, Pollards Wood Research Station of the Institute of Cancer Research, Chalfont St. Giles, England; E. S. Cannellakis, Department of Pharmacology, Yale University, New Haven, Connecticut; John Josse, Department of Biochemistry, Stanford University Medical Center, Palo Alto, California; and Gary Felsenfeld, Department of Biophysics, University of Pittsburgh, Pittsburgh, Pennsylvania.

Nucleic Acids and Proteins is the topic of the second session, with David Novelli, Biology Division, Oak Ridge National Laboratory, Oak Ridge, Tennessee, as chairman. Speakers are P. D. Lawley, The Chester Beatty Institute, Institute for Cancer Research, London, England; Saul Kit, Department of Biochemistry, MDAH; Wacław Szybalski, McArdle Memorial Laboratory, The University of Wisconsin, Madison, Wisconsin; Irwin Tesson, Department of Biological Sciences, Purdue University, Lafayette, Indiana; Max Lauffer, Department of (Symposium Speakers, continued on page 2)

(Symposium Speakers, cont. from page 1)

Biophysics, the University of Pittsburgh, Pittsburgh, Pennsylvania; and Harris Busch, Department of Pharmacology, Baylor University College of Medicine, Houston.

The third session on Protein Conformation and Sequence will be presided over by Max Lauffer. Speakers are Charles Tanford, Department of Biochemistry, Duke University Medical Center, Durham, North Carolina; Bruno Jirgensons, Department of Biochemistry at MDAH; Alfred M. Holtzer, Department of Chemistry, Washington University, St. Louis, Missouri; Hans Tuppy, Institute for Biochemistry, University of Vienna, Vienna, Austria; V. M. Ingram, Division of Biochemistry, Department of Biology, Massachusetts Institute of Technology, Cambridge, Massachusetts; and William J. Dreyer, Laboratory of Cellular Physiology and Metabolism, National Heart Institute, Bethesda, Maryland.

Felix L. Haas, Department of Biology at MDAH, is chairman of the fourth session on Controlling Mechanisms and Enzyme Synthesis. Speakers are S. R. Suskind, McCollum-Pratt Institute, Johns Hopkins University, Baltimore, Maryland; Bruce N. Ames, National Institute of Arthritis and Metabolic Diseases, Bethesda, Maryland; N. H. Horowitz, Kerckhoff Laboratories of Biology, California Institute of Technology, Pasadena, California; and Robert P. Wagner, Department of Zoology, The University of Texas, Austin, Texas. R. Lee Clark, Jr., Director and Surgeon-in-Chief at M. D. Anderson Hospital and Tumor Institute, will present the Bertner Foundation Award for outstanding achievement in the field of cancer research, and the Bertner Foundation Lecture will be presented.

Joseph Melnick, Department of Virology and Epidemiology, Baylor University College of Medicine, Houston, is chairman of the fifth session on Controlling Mechanisms and Biochemical Alterations Induced by Viral Nucleic Acids. Speakers are James B. Walker, Department of Biochemistry,

CONFEREES MEET

More than 200 physicians and scientists from Texas and 17 other states, Canada, Mexico, and Sweden, attended the Fifth Annual Clinical Conference on Cancer of the Uterine Cervix, Endometrium and Ovary, held October 21 and 22 at MDAH.

R. Lee Clark, Jr., Director and Surgeon-in-Chief at MDAH, introduced the topic of the conference by a discussion of the current status of the various therapeutic measures employed, the incidence and the present cure rate for cancer of the three sites. Felix Rutledge, gynecologist and chairman of the conference, presented the MDAH material and philosophy of management.

Dr. Hans-Ludwig Kottmeier, director of gynecology, Karolinska Sjukhuset Radiumhemmet, Stockholm, Sweden, one of the world's outstanding gynecologic radiotherapists, said

Baylor University College of Medicine, Houston; J. N. Davidson, Department of Biochemistry, University of Glasgow, Glasgow, Scotland; David Novelli, Biology Division, Oak Ridge National Laboratories, Oak Ridge, Tennessee; Norman P. Salzman, Laboratory of Cell Biology, National Institute of Allergy and Infectious Diseases, Bethesda, Maryland; Renato Dulbecco, Division of Biology, California Institute of Technology, Pasadena California; and Stanfield Rogers, The University of Tennessee Memorial Research Center, Knoxville, Tennessee.

A. Clark Griffin, Department of Biochemistry at MDAH, is chairman of the sixth session on Ribosomes and Protein Synthesis. Speakers are Alfred Tissieres, The Biological Laboratories, Harvard University, Cambridge, Massachusetts; R. B. Roberts, Department of Terrestrial Magnetism, Carnegie Institution of Washington, Washington, D. C.; David Elson, Biochemistry Section, The Weizmann Institute of Science, Rehovoth, Israel; David H. Ezekiel, Department of Biology, MDAH; Mary L. Petermann, The Sloan-Kettering Institute for Cancer Research, New York City; and Vincent Allfrey, The Rockefeller Institute for Medical Research, New York City.

The symposia on fundamental cancer research are sponsored annually by MDAH. To register, write to Symposium Registration, M. D. Anderson Hospital and Tumor Institute, Texas Medical Center, Houston 25, Texas. The papers presented at the symposium will be published in a monograph.

that the high cure rate of patients with cancer of the cervix at MDAH shows what carefully analyzed and highly individualized treatment of every patient means; the MDAH cure rate has equaled that of the Radiumhemmet—better than 58 per cent. The success, he believes, is achieved by the individualized therapy practiced in both institutions.

During the first session on carcinoma of the cervix, Gilbert H. Fletcher, MDAH radiotherapist, evaluated policies of treatment, and Dr. Rutledge discussed experience with pelvic lymphadenectomy. Carcinoma of the cervix and pregnancy, the value of urological studies, and multiple foci of carcinoma in the cervix and vagina were discussed by MDAH clinical assistant gynecologists Joseph A. Lucci, R. Vernon Colpitts, and Dean J. Candis during the second session on cervical carcinoma. Guest lecturer James W. Reagan, Institute of Pathology, Western Reserve University, Cleveland, Ohio, spoke on microscopic grading and radiosensitivity. The prognostic value of interval biopsy during therapy was discussed by Hector del Castillo, clinical assistant in gynecology at MDAH, and Heinrich W. Neidhardt, MDAH associate pathologist, presented morphological changes in the cervical smear induced by ionizing radiation. Dr. Rutledge spoke on surgical treatment of recurrence.

Technique and evaluation of preoperative radium therapy, and surgical treatment were reviewed in a session on carcinoma of the endometrium. Speakers were Paul M. Chau, MDAH assistant radiotherapist, and Dean J. Candis, clinical assistant gynecologist at MDAH. Dr. Kottmeier was moderator of a panel discussion on cancer of the endometrium, with Saul B. Gusberg, Columbia University College of Physicians and Surgeons, New York City, and W. G. Cosbie, Ontario Cancer Research and Treatment Foundation, Toronto, Canada, as panelists.

The session on carcinoma of the ovary was introduced by Dr. Kottmeier, who discussed the fundamental problems. H. Stephen Gallager, assistant pathologist at MDAH, spoke on difficulties in histologic diagnosis. J. Raul Herrera, assistant in radiation therapy at MDAH, presented radiotherapy cobalt-60 strip technique. The use of alkylating agents and the use of radioactive colloidal gold were discussed by MDAH assistant internists Melvin L. Samuels and Raymond G. Rose.

The NEWS LETTER of the University of Texas M. D. Anderson Hospital and Tumor Institute, Houston 25, Texas, is published to relay information of the research activities and policies of M. D. Anderson Hospital. IT IS MADE POSSIBLE BY A GIFT FROM MRS. HARRY C. WIESS.

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Drs. Taylor, Farr, Farber, Clark and Copeland

CHILDHOOD CANCER SYMPOSIUM TOPIC

During a two day Clinical Symposium on the Management of Children with Cancer, chemotherapy, surgical treatment, and x-ray therapy were discussed.

In his introduction to the symposium, Dr. R. Lee Clark, Jr., Director and Surgeon-in-Chief at MDAH, said that pediatric patients comprised two per cent of the total admissions to the institution. Since March, 1944, 1,074 pediatric cases have been seen, of which 491 were malignant.

Dr. Sidney Farber, founder and director of research at the Children's Cancer Research Foundation and Harvard Medical School, Boston, outlined developments in chemotherapy as a weapon against cancer. He reported that at Children's Medical Center, 50 per cent of leukemia patients have survived for 14 months, and 10 per cent have survived for 32 months, in contrast to a survival time of only four to

six months before antimetabolites and corticosteroids became available.

Among the guest speakers at the symposium were Drs. G. J. D'Angio and W. Hardy Hendren of the Children's Medical Center and Harvard Medical School, Vincent P. Collins and Russell J. Blattner of Baylor, and Richard G. Martin, Grant Taylor, and Wataru W. Sutow of MDAH.

Dr. Lee E. Farr, medical director of Brookhaven National Laboratory, Upton, Long Island, spoke on the therapeutic challenge of intracranial neoplasms in children. The management of leukemia and lymphoma in children was discussed by Dr. Lois M. Murphy from the Sloan-Kettering Institute for Cancer Research in New York City.

The symposium, held Nov. 11 and 12 at MDAH, was jointly sponsored with The University of Texas Postgraduate School of Medicine.

GRANTS FOR LEUKEMIA RESEARCH

The Leukemia Society, Inc., has granted \$45,954 for a three year study of composition and biosynthesis of nucleic acid fractions from leukemic tissues. Saul Kit, associate biochemist, is in charge of the study. The work is based on the theory that carcinogenesis involves the induction of abnormalities in nucleic acid structure or function. As the nucleic acids of the chromosomes and viruses are the chemical entities which embody genetic information, they provide a meeting point for both the mutation and viral theories of cancer. Studies will be undertaken to investigate the heterogeneity of composition of DNA and of

RNA from normal and malignant tissues as well as the nucleic acids of virus-infected cells. The grant is a continuation of one previously awarded to Dr. Kit by the Leukemia Society, Inc.

Leon Dmochowski, virologist, has been granted \$27,416 for a one year study of the role of viruses in the origin of leukemia in animals, from the National Cancer Institute. John A. Sykes and Clifford E. Grey, section of virology and electron microscopy, will assist in the study.

The National Cancer Institute awarded \$12,000 for research on chromatography and metabolism of DNA of tumors, to Dr. Kit.

STAFF ACTIVITIES

David E. Anderson, associate biologist, delivered a paper on "The Influence of Sunlight on Cancer Eye in Cattle" to the annual meeting of the American Society of Animal Production in Chicago, Illinois, November 25.

Paul M. Chau, assistant radiotherapist, presented an exhibit, "Method of Analysis for Evaluation of Treatment in Oropharynx Cancers and Cancer of the Cervix," co-authored by Gilbert H. Fletcher, radiotherapist, and Eleanor J. Macdonald, epidemiologist, at the Radiological Society of North America meeting in Cincinnati, Ohio, December 5 to 9.

Murray M. Copeland, assistant director for education, attended the National Advisory Cancer Council meeting in Bethesda, Maryland, November 13 to 16. He addressed the staff of the Brooke General Hospital on "Bone Tumors," and the Bexar County Medical Society on "Some Personal Reflections on the Army Medical Service in Europe: Italy, Germany and France," in San Antonio, November 17. He participated in a panel discussion on "Nodules of the Neck" at the American Medical Association 14th Clinical Meeting in Washington, D. C., November 28 to December 1. He spoke on "Classification of Tumors for End Result Reporting" and "The Activities of the American Joint Committee for Clinical Classification of Cancer and End Result Reporting" during the Southern Surgical Association Meeting in Boca Raton, Florida, December 6 to 8.

W. C. Dewey, assistant physicist, spoke on "Medical Uses of Radioisotopes" in Midland, Texas, at the Midland Memorial Hospital, December 3.

Leon Dmochowski, virologist, presided over a meeting of the Southwest Branch of the American Association for Cancer Research, October 14 and 15, in Galveston. Reports given were "Studies on Polyoma-induced Tumors in Mice, Rats and Hamsters" and "Tissue Culture Studies of Polyoma Virus" by L. Dmochowski, E. Bereczky, and C. E. Grey. Also presented were "Electron Microscopic Studies of Chicken Renal Adenocarcinoma" by L. Dmochowski, B. R. Burmester, W. G. Walter, and C. E. Grey, and "Tissue Culture Studies of Human Leukemia" by L. Dmochowski, C. C. Shullenberger, C. D. Howe, and J. A. Sykes. A total of nine reports representing work in the departments of biochemistry and biology, sections of

(Staff Activities, continued on page 4)

pathology and virology were presented during the two day meeting.

Gerald D. Dodd, associate radiologist, spoke on "Combined Radiologic and Gastroscopic Evaluation of Gastric Ulceration" at the Radiological Society of North America meeting in Cincinnati, Ohio, December 5 to 9.

Robert L. Egan, assistant radiologist, delivered a paper, "Mammography," at Lackland Air Force Base November 18, and to the Wichita County Medical Society in Wichita Falls on December 13.

Gilbert H. Fletcher, radiotherapist, presented a series of lectures to the Society of Venezuela Radiologists at a symposium on "Diagnostic and Treatment of Malignant Tumors of the Breast" in Caracas, Venezuela, November 14 to 18. At a symposium sponsored by the American Cancer Society, Oklahoma Division, in Oklahoma City on December 3, he lectured on "Clinical Evaluation of Supervoltage Roentgen Therapy" and "The Place of Radiation Therapy in the Treatment of Breast Carcinoma." He gave a refresher course on "Clinical Experience with Several Thousand Cases Treated by Supervoltage and Megavoltage Therapy" at the annual meeting of the Radiological Society of North America in Cincinnati, December 5 to 7, and spoke at the New York Gynecological Society's meeting at Columbia University, December 9, on "The Evolution of Radiotherapy Technique in Carcinoma of the Cervix."

A. Clark Griffin, biochemist, met with other members of the Advisory Committee on Research on the Pathogenesis of Cancer of the American Cancer Society, in New York City on November 28 and 29, to review research programs and grants. On December 12, he participated in a panel discussion on "New Approaches Toward Cancer Chemotherapy" at the society's meeting for recipients of Lifetime Professorships.

Felix L. Haas, biologist, spoke on "Effects of Pre-irradiation and Post-irradiation Cellular Synthetic Events on Mutation Induction in Bacteria" at a symposium on "Mutation and Plant Breeding" at Cornell University, Ithaca, New York, November 28 to December 2.

Renilda Hilkemeyer, director of nursing, spoke on "Practical Applications of Functions, Standards, and Qualifications for Professional Nurse Practice" at a workshop sponsored by the Texas Graduate Nurses' Associa-

tion, in San Antonio, November 11 to 12.

Saul Kit, associate biochemist, participated in a panel discussion at the Conference on Biochemistry of Human Tumors in Madison, Wis. Nov. 19.

R. A. Kolvoord, medical communications, was instructor at the television workshop of the Council on Medical Television of the Institute for the Advancement of Medical Communications, held at the University of Florida Medical Center, Gainesville, October 27 to 29.

R. J. Shalek, associate physicist, presented a paper at the meeting of the Radiological Society of North America in Cincinnati, Ohio, December 7, entitled "The Calculation of Isodose Distributions in Interstitial Implantations by a Computer," co-authored by **Marilyn A. Stovall**.

Herman D. Suit, assistant radiotherapist, presented a paper on "Interstitial Radiation Therapy: Use of After-Loading Technique with IR-192 Wires," co-authored by **J. Robert Andrews** of the National Cancer Institute, Bethesda, Maryland, at the Radiological Society of North America meeting in Cincinnati, Ohio, December 5 to 9.

LECTURES IN SOUTH AMERICA

William S. MacComb, head and neck surgeon, toured some 17 cancer institutes, medical schools, and medical societies in 11 South and Central American countries as the Mike Hogg visiting lecturer. The 45 day program was arranged by South and Central American physicians, a number of whom were formerly residents under the supervision of Dr. MacComb at Memorial Hospital in New York and at MDAH.

Dr. MacComb's topics for the series of lectures were: treatment of head and neck cancer, treatment of carcinoma of the paranasal sinuses, salivary gland tumors, treatment of carcinoma of the pharynx and larynx, and thyroid.

Among the institutions visited were the Sociedad Venezolana de Oncologia, Caracas, Venezuela; National Cancer Service, Rio de Janeiro, Brazil; Institute de Cancer, Sao Paulo, Brazil; Medical School of Paraguay and Medical Association of Paraguay, Asuncion, Paraguay; Sanatorio Britanico S.R.L., Rosario, Argentina; Medical School of Mendoza and Mendoza Surgical Society, Mendoza, Argentina; Chilean Cancer Society, Santiago, Chile; Instituto Nacional de Enferme-

STAFF APPOINTMENTS

V. William Cole was appointed research associate in the department of medicine. Dr. Cole received his B.S. degree from New York University, and his M.D. degree from Harvard University Medical School. He has held appointments as a graduate assistant in preventive medicine, endocrinology and cardiology at Baylor University College of Medicine.

Kenneth M. Griffith was appointed research associate, part-time, in the department of pathology. He was awarded B.A. and M.A. degrees by the University of Houston, and received his M.D. degree from Baylor University College of Medicine. His internship was at Jefferson Davis Hospital. Dr. Griffith is assigned to the pulmonary cytology project.

Carolyn E. Somers was appointed research associate in the section of experimental cytology, department of biology. She received her B.S. degree from Texas Woman's University, and Ph.D. from The University of Texas.

STAFF PUBLICATIONS

Recent publications by staff members include the following:

Alston, Frances, Hilkemeyer, Renilda, White, Margie, and Schmolke, Helen: Perfusion. *Am. J. Nursing*, 60(11):1603-1607, November 1960.

Dewey, W. C., and Hunter, J. D.: Inhomogeneity of Iodinated Human Serum as Detected with Rat Liver. *J. Appl. Physiol.*, 15(5):961-962, September 1960.

Ehni, George, Gol, Alexander, and Leavens, Milam E.: The Surgery of Intracerebral Hemorrhage. *Texas J. Med.*, 56(10):783-785, October 1960.

Jirgensons, B., Ikenaka, T., and Gorguraki, V.: A Study of Trypsin Inhibitors. *Die makromolekulare chemie*, 39(1, 2):149-165, July 1960.

Kit, Saul: Compositional Heterogeneity of Normal and Malignant Tissue Deoxyribonucleic Acids (DNA). *Biochem. & Biophys. Res. Comm.*, 3(4):361-367, October 1960.

Kit, Saul: Kinetics of Thermal Degradation of Deoxyribonucleic Acid (DNA) and Ribonucleic Acid (RNA). *Biochem. & Biophys. Res. Comm.*, 3(4):377-381, October 1960.

Klatt, Oleta, Griffin, A. C., and Stehlin, John S., Jr.: A Method for Determination of Phenylalanine Mustard and Related Alkylating Agents in Blood. *Proc. Soc. Exper. Biol. & Med.*, 104(4):629-631, August-September 1960.

Seybold, W. D.: Closed Intrathoracic Ruptures of the Trachea and Bronchi. *Arch. Surg.*, 81(3):473-478, Sept. 1960.

dates, Lima, Peru; medical schools in Uruguay, Argentina, Ecuador, Colombia, Nicaragua and Guatemala.

The lecture tour was partially sponsored by the Mike Hogg Fund.