DEPARTMENT OF PATHOLOGY

ANNUAL REPORT

JULY 1, 1983 - JUNE 30, 1984

Report Compiled by:
Anna Northcott
Departmental Assistant

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FACULTY, ADMINISTRATION AND HEAD TECHNOLOGISTS

FACULTY

EMERITUS

Dr. Nathan Kaufman
Dr. G.F. Kipkie

PROFESSORS

Dr. A.F. Clark
Dr. W.E.N. Corbett
Dr. R. Kisilevsky
Dr. T.F. McElligott
Dr. H. Steele

ASSOCIATE PROFESSORS

Dr. A.J. de Bold
Dr. A.R. Giles
Dr. R. Kerbel
Dr. S.K. Ludwin
Dr. S. Nag
Dr. R.S. Prentice
Dr. S. Wasan

ASSISTANT PROFESSORS

Dr. J.M. Dennis
Dr. D.F. Dexter
Dr. B.E. Elliott
Dr. J.T. Feltis
Dr. W.A. Fletcher
Dr. A. Lagarde
Dr. P.N. Manley
Dr. M. Raymond

CLINICAL ASSISTANT

Dr. S.E. Ford

JOINT APPOINTMENT

Dr. R. Bell

CROSS APPOINTMENT

Dr. P.M. Ford

HOSPITAL APPOINTMENTS

Dr. P. Chadwick
Dr. G.F. Delisle
Dr. J.J. Holden

Faculty, Administration, and Head Technologists (continued)

SESSIONAL APPOINTMENTS

Dr. J.C. Kennedy
Dr. S.A. Bencosme

PROFESSIONAL ASSISTANT

Dr. J.J. Raymond

ADMINISTRATION

N.A. Meyers	Administrative Assistant
Anna J. Northcott	Departmental Assistant

LABORATORY SUPERVISORS - HEAD TECHNOLOGISTS

L. Fidler	Bacteriology
M. Waugh	Chemistry
P. Fardella	Hematology
L. Franchi	Histology
P. Gribbon	Blood Bank
J. Hauser	Cytology
D. More	Neuropathology
L. Kennedy	Pathologist Assistant

LABORATORY MEDICINE AND PATHOLOGY

LABORATORY MEDICINE AND PATHOLOGY

The Department of Pathology and Laboratory Medicine is responsible for all areas of clinical pathology and anatomic pathology, including hematology, immunopathology, neuropathology, clinical chemistry, surgical pathology, autopsy pathology and cytology. Consultations go on daily over the microscope with clinicians. A myriad of telephone consultations are carried out continuously by the clinical pathologists, clinical chemists and microbiologists.

The university Department of Pathology, which is responsible for the residency training programs, utilizes the facilities of the two university affiliated general hospitals, Kingston General Hospital and Hotel Dieu Hospital. In addition, diagnostic services are provided for several university affiliated hospitals in the Kingston area including St. Mary's of the Lake Hospital, Kingston Psychiatric Hospital, and Rideau Regional Hospital School. The combined laboratory statistics for 1983 for the Department of Pathology at Kingston General Hospital and Hotel Dieu Hospital are as follows:- autopsies 432; surgical specimens 18,073; cytology 34,068; and DBS units done in clinical pathology are 19,428,894.

PERSONNEL, AWARDS & HONOURS

PERSONNEL

Dr. J.C. Wyllie, Associate Professor of Pathology, Queen's University, and Assistant Pathologist, Kingston General Hospital, retired from the department on December 31, 1983. Dr. Wyllie, who graduated from Queen's University Medical School in 1952, was appointed Assistant Professor of Pathology at Queen's University, and Assistant Pathologist at Kingston General Hospital, in 1964. Subsequently he was promoted to Associate Professor in 1968. During Dr. Wyllie's twenty-five years in the department he made a significant contribution to teaching, research and service. His scholarly achievements included over fifty publications in scientific journals.

Dr. W.E.N. Corbett was promoted to Professor in the department effective July 1, 1983. Dr. S. Nag was promoted to Associate Professor effective the same date.

AWARDS

Dr. David Munoz-Garcia and Dr. S.K. Ludwin received Honourable Mention for the Moore Award given for the best paper in clinicopathological correlation at the annual meeting of the American Association of Neuropathologists in St. Louis in June 1983. The title of the paper was, "Some New Observations in Pick's Disease".

Lorraine Brosseau, Research Technologist in the laboratory of Dr. A.R. Giles, was awarded the Teklad Speaker's Award for the most outstanding technical paper at the annual convention of the Canadian Association for Laboratory Animal Science which was held in Vancouver in July 1983. The title of Ms. Brosseau's paper was, "Birth of a Hemophilic Dog Colony" (with S.J. Tinlin, A.R. Giles, R. Greenwood, P. Greenwood and H. Hoogendoorn). This meeting was held in conjunction with the VIIIth Symposium of the International Council of Laboratory Animal Science.

Dr. Robert H. More former Head of the Department of Pathology at Queen's University, and Pathologist-in-Chief at Kingston General Hospital, from 1951-1966, has been elected to be the recipient of the F.K. Mostofi Distinguished Service Award in 1985. This award is being made in recognition of Dr. More's devoted service and leadership in the United States-Canadian Division of the International Academy of Pathology. The meeting of the I.A.P. in Toronto in March 1985 will be the occasion of the presenting of this award.

AWARDS

Dutkevich Trust Fund was established by Dr. E. Dutkevich, previously a pathologist at Peterborough, Ontario, for the support of individuals in their first year of training in Pathology. Queen's University was awarded a portion of the available funds during 1983-84, with specific guidelines outlining which first year trainees in Pathology would be eligible for some financial support. The Departmental Postgraduate Education Committee met to consider the dispersement of the Award, and recommended four of the resident staff whom they felt were deserving. The office of the Associate Dean through the trustees of the Dutkevich Memorial Trust Fund made four awards to the trainees in Pathology.

Dr. David F. Dexter, Assistant Professor in the Department of Pathology, and a member of the Attending Staff at both the Kingston General Hospital and Hotel Dieu Hospital, was awarded the Aesculapian Society Lecturer of the Year Award for 1983-1984. This annual award is made to a member of the Faculty of Medicine judged to have outstanding teaching abilities.

HONOURS

Dr. David M. Robertson was elected President of the International Academy of Pathology, United States-Canadian Division, at the 73rd Annual Meeting of the I.A.P. in San Francisco in March 1984. The Academy was founded in 1906 under the name of the International Association of Medical Museums. The United States-Canadian Division has approximately 4,000 members, and holds week-long annual meetings at which the major emphasis is on continuing education and research. Dr. Robertson previously served as Vice-President from 1978 to 1982 of the World organization of the I.A.P., and as a member of Council from 1976-1978 and 1984-1986. He also served with the United States-Canadian Division as member of Council from 1976-1979, and as a member of the Program and Education Committee from 1973 to 1976. In addition, Dr. Robertson was Associate Editor of Laboratory Investigation, the Academy's Journal of Pathology, from 1972 to 1975.

The election of Dr. Robertson as President is notable in that Queen's University has the distinction of being the only university in North America to have three Chairmen of Pathology serve as Presidents of the Academy. These are Dr. R.H. More, 1968; Dr. Nathan Kaufman, 1974; and Dr. Robertson, 1984.

DR. DAVID M. ROBERTSON, PRESIDENT, INTERNATIONAL ACADEMY OF PATHOLOGY U.S.-CANADIAN DIVISION, AND OUTGOING PRESIDENT DR. STEPHEN VOGEL MARCH 1984 SAN FRANCISCO

UNDERGRADUATE, GRADUATE AND POSTGRADUATE EDUCATIONAL PROGRAMS

UNDERGRADUATE, GRADUATE & POSTGRADUATE EDUCATIONAL PROGRAMS

UNDERGRADUATE: The undergraduate medical student teaching program in the Department of Pathology for academic year 1983-1984 consisted of medical courses General Pathology and Special Pathology. Teaching formats in General and Special Pathology remained essentially unchanged, with lectures, demonstration periods, review seminars and clinicopathological conferences. General Pathology dealt with the general tissue and cellular reactions to the various types of injurious factors, and Special Pathology involved the study of reactions of specific organs and systems in specific situations and disease entities. The primary text in Basic Pathology continued to be Pathologic Basis of Diseases, 2nd Edition, by Robbins and Cotran. A syllabus was prepared by departmental faculty entitled, "Outline for General Pathology" and "Outline for Special Pathology". Students were provided with self-learning aids, and access to the student laboratory was provided on a 24 hour basis in order that the students could avail themselves of the slide carousels. Staff-Student Liaison Committee meetings were held at monthly intervals during the academic year. At these meetings students had the opportunity to evaluate the General and Special Pathology courses, the examination format, the assessment of senior staff teaching expertise and to air any concerns they might have pertaining to the course. Seventy-three students were registered in second year medicine during 1983-1984 academic year. Nine medical undergraduates were in the Department of Pathology during the summer of 1983, engaged either as summer interns or in research. One medical undergraduate took an elective in the department during 1983.

GRADUATE: Four Master of Science candidates were registered as graduate students in the department (D. Renwick; D. Munoz-Garcia; O. Tadross and E. Alvarez). Two Ph.D. students were registered in the graduate program in the department (D. Carlow and A. Snow). In addition, two candidates were registered in the Department of Biochemistry, but were working under the supervision of Dr. R. Kisilevsky or Dr. R. Kerbel in the Department of Pathology (K. Tomcik and A. Lyon).

The Department of Pathology introduced a new graduate course, Pathology 823, Cancer Biology, in January 1984. This course was designed to consider cancer in the broadest possible perspective without sacrificing detailed analysis of questions being examined in present day research. The

course was geared to graduate students who do not necessarily have an M.D., although medical graduates engaged in a graduate program are not excluded. The course considered the manner in which malignancies are thought to begin, a detailed consideration of present knowledge of "oncogenes", consideration of how a cancer progresses, and exploration of the properties of malignant cells. The faculty presenting the course were drawn from the Department of Pathology, the National Cancer Institute of Canada Clinical Trials Unit, the Cancer Research Group, and members of the Departments of Biochemistry, Microbiology and Immunology, and invited speakers. Nine students took the course and a final examination with essay type questions was held in April 1984.

POSTGRADUATE: Eighteen housestaff were registered in the postgraduate training program in the Department of Pathology for 1983-1984. In addition, two residents from the Department of Obstetrics & Gynecology were on rotation in the department. During 1983-1984 four residents who had received their training in the Department of Pathology were successful in passing the Royal College of Physicians and Surgeons of Canada Fellowship exams. A Departmental Postgraduate Education Committee, composed of the Head of the department, six senior staff members, and one resident representative, met at regular intervals. The function of this committee is to develop and carry out departmental and faculty policies on in-training evaluation, resident program evaluation and other matters relating to the department.

FELLOWS: Two postdoctoral fellows continued their appointments in the Cancer Research Group. Dr. Robert G. Liteplo was a Medical Research Council Fellow under Dr. R. Kerbel's supervision, and Dr. S. Laferte was a postdoctoral fellow supported by the National Cancer Institute under the supervision of Dr. B. Elliott. Dr. David Lillicrap was awarded a Medical Research Council Fellowship in June 1983 for a period of two years. Dr. Lillicrap is spending this time at the Welsh National School of Medicine, Cardiff, under the supervision of Dr. A.L. Bloom, and is continuing studies in the area of hemostasis and thrombosis.

ELECTIVES: Clerks participate as members of a team, with pathologists and residents, in the analysis and correlation of clinical, laboratory and pathological data. The orientation is in general to surgical and/or autopsy pathology; the program may be specifically directed to gynecological pathology, hematological pathology, neuropathology, et cetera, according to interests of the student. Assignment to specific supervisors is made according to field of interest. One clerk (Rebekka Young) had an elective in hematological pathology in the department from November 22 - December 2, 1983.

MEDICAL RESEARCH PROGRAMS

MEDICAL RESEARCH PROGRAMS

The medical research programs developed during the past several years in the Department of Pathology are based on the belief that research directly contributes to higher quality patient care and student education. An environment of inquiry by students, residents, technologists and staff is fostered in the department in order to enhance the understanding of diseases and the ability to care for and treat patients. Advanced technology is utilized by the department in its research programs.

The strong commitment and support of the department to research has resulted in considerable grant support, the publication of numerous articles in major scientific journals, and chapters in various books. The department is represented on committees of the Medical Research Council, the National Cancer Institute, and on the editorial boards of several scholarly journals. This has brought national and international recognition to the university.

Several individuals in the department who carried out research have achieved major recognition. Dr. A.R. Giles was successful in obtaining funding under the Ontario-Quebec Exchange Program in support of studies on patients with "Factor V Quebec", an inherited disorder of coagulation. A French-Canadian family with an apparently significant bleeding disorder was followed by Dr. G. Rivard of the Hospital Ste Justine, Montreal. Dr. Giles, in collaboration with Dr. K. Mann, of the Department of Hematology Research of the Mayo Clinic, demonstrated that the affected family members had a qualitative abnormality of Factor V. This was the first description in the world literature of such a disorder, and was presented by Dr. Giles at the IXth International Congress on Thrombosis and Hemostasis in Stockholm in July 1983. A summer student employed by Dr. Giles performed field studies in the Quebec communities where known family members lived. Dr. Adolfo J. de Bold has focussed international attention on the Department of Pathology with the discovery of a substance produced by the heart. This substance - a peptide - is a powerful diuretic and natriuretic agent, i.e. it has the ability to induce the kidneys to excrete increased amounts of water and salt. This new substance, named cardionatrin, is of interest to researchers investigating clinical entities such as hypertension and congestive heart failure. The discovery of cardionatrin was the culmination of fourteen years of uninterrupted research by Dr. de Bold.

The investigators in the department have sought to optimize the resources and opportunities by linking their efforts with individuals in other departments and institutes on campus. The department has developed major research programs in the biochemical and molecular mechanisms in pathology (Dr. A.F. Clark; Dr. A.J. de Bold; Dr. A.R. Giles; Dr. R. Kisilevsky); studies in cell biology of malignancy and tumor progression (Cancer Research Group: Dr. R. Kerbel, Dr. J.W. Dennis, Dr. B. Elliott, Dr. A. Lagarde); mechanisms of the blood-brain barrier, studies on the mechanism of remyelination and studies of cerebro-vascular permeability (Neuropathology group: Dr. David M. Robertson, Dr. S. Ludwin, Dr. S. Nag); and research in morphological pathology (Dr. T. Feltis; Dr. A. Fletcher; Dr. P. Manley; Dr. T.F. McElligott; Dr. H. Steele and Dr. S. Wasan).

Dr. A.F. Clark: Dr. Clark's research program is concerned with androgen metabolism. He has been studying androgen metabolism in the rat especially as it relates to the prostate gland. Prostatic enzymes involved in androgen metabolism are being studied so as to understand their role in controlling the expression of androgenic activity. The androgen dependence of the prostatic enzyme, acid phosphatase, is being studied. Prostate cell culture studies are being utilized to investigate androgen metabolism, indicators of androgen actions, and the mechanism of androgen actions in normal cells. He is also associated with Dr. C. Bird of the Department of Medicine in studies on the kinetics of androgen metabolism in humans.

Dr. A.J. de Bold: Dr. de Bold's research is mainly directed to further advance the field of cardionatrins. Cardionatrins are peptides produced by the heart with important pharmacological properties. Through collaborative work with the Departments of Biochemistry and Microbiology and Immunology, Dr. de Bold is involved in chemical structural studies, cDNA-characterization, and antibody production. The potential commercial value of the cardionatrin discovery has prompted Queen's University to protect this intellectual property. Several important contract and grant monies have been obtained. Dr. de Bold has been a guest at several international symposia in the cardionatrin field.

Dr. B.E. Elliott: The general objective of Dr. Elliott's current research program is to identify tumor cell surface components (e.g. target structures and self-MHC antigens) and host effector cell types involved in host/tumor immune

interactions leading to regression or rejection of neoplasia. Although the majority of spontaneously arising tumors in low cancer incidence mouse strains, like the majority of human tumors are poorly, or not at all, immunogenic, immunogenic variants can be isolated from such non-immunogenic variants following mutagenesis treatment. Two possible mechanisms for the generation of immunogenic variants are currently being investigated. One is the expression of new antigen determinants, which render the tumor more immunogenic. The second possibility is altered expression of self-major histocompatibility complex antigens on the immunogenic variant, such that the tumor now becomes more susceptible to MHC restricted T cell recognition and effector (e.g. killer cell) mechanisms. Information from Dr. Elliott's program will determine whether specific changes in the expression of associated and self-major histocompatibility antigens can lead to the rejection of spontaneous neoplasia, and will provide a possible novel means of generating highly immunogenic variants from poorly immunogenic tumors (e.g. by selecting clones with high levels of MHC antigens). This knowledge in turn is important in assessing the relevance of the immunotherapeutic treatment of human cancer.

Dr. P.M. Ford: As Chairman of the Protocol Study Group of the Plasma Exchange Study Group of the Ottawa Red Cross, Dr. Ford organized submission of a two-year multi-center grant on a double blind cross-over controlled study of lymphocytopheresis in the treatment of rheumatoid arthritis, submitted to Health and Welfare Canada. Dr. Ford is also studying the interaction of rheumatoid factor with immune complexes in the pathogenesis of immune complex associated disease on a two year grant from the Arthritis Society.

Dr. A. Giles: Basic and applied studies are being performed in the field of coagulation and fibrinolysis. In all cases there is a major emphasis on *in vivo* study using a number of defined models of hemostatic disorders. Of particular importance is the availability of a hemophilic (Factor VIII:C deficiency) dog colony. Studies include the development of innovative approaches to clotting factor replacement including genetic engineering. A second major interest is the regulation of coagulation and fibrinolysis *in vivo*. Close affiliations have been established with the Departments of Biochemistry, Biology and Medical Genetics.

Dr. R.S. Kerbel: Dr. Kerbel has continued and expanded his research studies of tumor progression, tumor cell heterogeneity and metastasis. The first concerns the possible contribution that the spontaneous cell fusion in vivo can occur between tumor cells and normal hosts of bone marrow origin leading to so-called hybrid cells. Some of these hybrids may generate offsprings which behave in a much more aggressive fashion than the parent tumor cells. Dr. Kerbel and one of his colleagues, Dr. Phil Frost (California), have put forward a new hypothesis to account for some aspects of tumor progression which is essentially an 'epigenetic' (i.e. non-mutational) mechanism: DNA hypomethylation. Extensive studies are being carried out to assess the effects of non-mutagenic DNA hypomethylating agents (5-azacytidine, ethionine....) on the malignant properties of cells. Many interesting results have been obtained showing such agents can induce astonishingly high frequencies of phenotypic (immunologic or metastatic) changes in a variety of tumor cell populations. The third project concerns the development of new models to study the biology of human tumor cell progression and metastasis in vivo. Once again very significant progress has been made using a melanoma cell line. A number of variants have been selected which appear to possess virtually unique levels and patterns of metastasis when injected into 'nude' athymic mice. These lines are now being distributed around the world to various laboratories interested in using them for a plethora of different studies where cell lines which are metastatic in nude mice are required.

Dr. R. Kisilevsky: Dr. Kisilevsky's research concerns the protein synthesizing apparatus of liver cells, and the manner in which this apparatus is upset in induced disease states. The current problems being explored are: modulation of ribosome structure; an examination of several enzymes involved in ribosomal protein phosphorylation; mRNA metabolism; and initiation factor phosphorylation - all during induced cell injury. A second area of study is the pathogenesis of experimental murine amyloidosis.

Dr. A.E. Lagarde: The general objective of Dr. Lagarde's program is to study the multiple steps involved in the gradual conversion of normal cells into benign and malignant (metastatic) tumors. Dr. Lagarde's primary interest is analyzing the network of interactions between cells and their environment which participates in the control of their division cycle. A number of cell lines of independent origin have been chosen as models to determine how their state of dependence towards natural hormone-like growth factors correlates with their ability to form tumors upon transplantation into appropriate

recipients. It was found that normal cells require several factors to initiate DNA replication whereas highly malignant tumor cells invariably secrete and respond to their own multiplication-stimulating factors. The efforts are directed to purify and characterize these tumor-derived molecules, to investigate their mode of action at the molecular level, and to examine aspects of the genetic regulation underlying their production.

Dr. S.K. Ludwin: Dr. Ludwin conducts a research program which deals with the mechanisms of remyelination and oligodendrocyte mitogenesis in the central nervous system. This study involves the use of Cuprizone to cause demyelination in the central nervous system of young mice, non-specific traumatic wounds to the cortex and the use of organotypic C.N.S. cultures by means of electron microscopy, radio-autography and immuno-histochemistry, involved in remyelination.

Dr. P.N. Manley: Dr. Manley's research activities involve the diagnostic specificity of prostatic acid phosphatase, an analysis by immunohistochemistry and radioimmunoassay.

Dr. T.F. McElligott: Dr. McElligott continues to study the morphologic aspects of hepatotoxicity of drugs with the support of the Canadian Liver Foundation.

Dr. S. Nag: Dr. Nag's research program deals with the morphologic and permeability studies of cerebral vessels in acute and chronic hypertension. Specific experiments which are underway include ultrastructural studies of the distribution of lectin receptors on normal cerebral endothelium and the permeable arterioles in acute hypertension.

Dr. M. Raymond: Dr. Raymond has continued the development and improvement of the methodologies employed in the clinical chemistry laboratory. His research interest is the investigation of the potential applications for computers within the clinical laboratories. This ongoing study is concerned with the possible impact of computerization on the handling of patient data, laboratory management and resident teaching programs within the department. In addition, a new study has been undertaken to investigate the applications of computer-aided diagnosis to laboratory medicine.

Dr. D.M. Robertson: Dr. Robertson's research deals with the mechanisms of alteration of the blood-brain barrier to proteins in hypertension and lesions of the cerebral cortex, and the effects of various drugs on stabilizing the barrier function. Dr. Robertson, with co-investigators Drs. Kerbel, Elliott, Dennis, and Lagarde, of the Cancer Research Group, are jointly carrying out research in tumor biology and immunogenetics.

Dr. H.D. Steele: Dr. Steele, with Dr. H. Gorwill of the Department of Obstetrics and Gynecology, are using a mouse model to study the effects of certain hormones on cervico-vaginal development, and the relationship of these to neoplasia. With co-investigator Dr. J. Carmichael of the Department of Obstetrics and Gynecology, Dr. Steele is reviewing the cytologic history and findings of recently diagnosed cases of carcinoma of the cervix.

Dr. S. Wasan: Dr. Wasan's research involves the following areas: study of corneal lesions by light and scanning electron microscopy in association with Dr. W.E. Willis of the Department of Ophthalmology, and study of contact lens and Timolol induced corneal lesions in rabbits, in collaboration with Dr. W.E. Willis, and funded by PSI.

RESEARCH GRANTS IN PROGRESS

DEPARTMENT OF PATHOLOGY

APRIL 1, 1983 - MARCH 31, 1984

NAME	GRANTING BODY	AMOUNT OF GRANT	TITLE OF PROJECT
Dr. A. Clark	National Cancer Institute	8,000	Terry Fox Cancer Research clerkship
Dr. A. Clark	Medical Research Council	77,000	Steroid Metabolism and Actions
Dr. A.J. deBold	Ontario Heart Foundation	51,035	Studies on a Natriuretic Factor Isolated from Heart Atria
r. A.J. deBold	Medical Research Council	29,000	Isolation and Characterization of Atrial Natriuretic Factor
r. A.J. deBold	Q.U. Principal's Devt. Fund	56,000	Amino acid sequence of cardionatrin
r. J. Dennis	National Cancer Institute	37,000	Cancer metastasis: biochemical studies using membrane mutant sublines
r. J. Dennis	Medical Research Council	37,200	Identification of tumor cell oligosaccharides involved in cell attachment of metastasis
. J. Dennis	Dean's M.R.C. Fund	3,500	Identification of tumor cell oligosaccharides involved in cell attachment of metastasis

NAME	GRANTING BODY	AMOUNT OF GRANT	TITLE OF PROJECT
Dr. B.E. Elliott	Medical Research Council	46,322	Clonal Analysis of Ctyolytic lymphoreticular cells in host defense: Physiology, serology and biochemistry of effector and target interactions
)r. T. Feltis	Medical Research Council	22,500	Ultrastructural studies in murine AA Renal Amyloidosis
)r. A.R. Giles	Alpha Therapeutic Corporation	79,275 (1982-84)	Developemnt of Factor VIII Bypass
)r. A.R. Giles	Health and Welfare Canada	69,179	An Investigation of Mechanisms Responsible for the Thrombo-genicity of Prothrombin Complex Concentrates in Patients with Liver Disease
r. A.R. Giles	Medical Research Council	28,000	The Role of Phospholipid in Bypassing Factor VIII (Anti-hemophilic Factor) Activity and/or Inhibition in vivo
:. A.R. Giles	National Institute of Health	40,302 (1984)	Canine Model of Hemophilia with Antibodies to F. VIII: C
'. A.R. Giles	Q.U. Dean's Fund	10,400	Extension of Hemophilic Dog Colony
. R.S. Kerbel	Medical Research Council	55,000	Studies of the membrane biology of activated tumoricidal macro-phages and lymphocytes

NAME	GRANTING BODY	AMOUNT OF GRANT	TITLE OF PROJECT
Dr. R.S. Kerbel	National Cancer Institute	399,337	A program in tumor biology and immunogenetics
Dr. R. Kisilevsky	Medical Research Council	58,900	Molecular Pathology - the protein synthesizing apparatus of liver cells in an induced pathological state: a biochemical dissection of pathological reactions
Dr. R. Kisilevsky	Medical Research Council	85,000	Amyloidogenesis: An analysis of the causative factors in an experimental murine model
Dr. A.E. Lagarde	National Cancer Institute	38,800	Somatic cell genetic approaches of tumor-host interactions during tumor progression
Dr. S.K. Ludwin	Medical Research Council	45,651	Studies in Central Nervous System Remyelination
Dr. S.K. Ludwin	P.S.I. Foundation	40,000	Tissue Culture Study of Oligodendrocyte Mitogenic Factors
Dr. P. Manley	National Cancer Institute	16,290	Hormone receptors and tissue specific proteins in the diagnosis and therapy of carcinoma with emphasis on the prostate
Dr. T.F. McElligott	Canadian Liver Foundation	12,000	Morphological Aspects of Drug-Induced Hepatotoxicity
Dr. T.F. McElligott	Atkinson Charitable Foundation	20,802	Purchase of Ultracentrifuge

NAME	GRANTING BODY	AMOUNT OF GRANT	TITLE OF PROJECT
Dr. T.F. McElligott	Principal's Devt. Fund	10,165	Purchase of Teaching-related Equipment
Dr. S. Nag	Ontario Heart Foundation	38,931	Mechanisms of Cerebral Damage in Hypertension
Dr. D. Robertson	Medical Research Council	39,576	Maintenance Cost of Electron Microscopic Unit for the Study of Molecular Pathology
Dr. D. Robertson (Dr. H. Dinsdale)	Medical Research Council	41,256	Research in Cerebrovascular Disease
Dr. D. Robertson Dr. R. Kerbel, Dr. S. Elliott, Dr. A. Lagarde, Dr. J. Dennis, Dr. J. Roder	Medical Research Council	38,730	Maintenance Grant for Fluorescence Activated Cell Sorter
Dr. D. Robertson	Principal's Devt Fund	10,000	Category C - Minor Equipment Replacement
Dr. H.D. Steele Dr. R.H. Gorwill)	Medical Research Council	10,155	Studies on the Effect of Clomiphane Citrate on Vaginal Differentiation in the Mouse
Dr. S. Wasan	Physicians Services Inc.	20,000	The Specular Microscopic Bio-chemical and Ultrastructural Effects of Topical Timolol on The Rabbit Cornea - Alone and in Conjunction with an Extended Wear Hydrogel Contact Lens

GUEST LECTURERS

GUEST LECTURERS

1983 - 1984

The department has continued to provide seminars for continuing education of the staff and residents. We have hosted the following guest lecturers:

"Changes in Host Lymphocyte Subsets During Tumour Development"
Dr. Pnina Brodt, Dept. of Experimental Surgery, McGill University

"Cytotoxic Responses and Hybridoma Cells As Targets"
Dr. John Marbrook, Associate Professor of Pathology, University of Auckland School of Medicine, Auckland, New Zealand

"Carrier Testing in Hemophilia"
Dr. E. Briet, University of Leiden, The Netherlands

"Adhesive Properties of Metasizing and Non-Metasizing Neoplastic Cells"
Dr. Avraham Raz, The Weismann Institute of Science, Rehovot, Israel

"Glycoprotein Biosynthesis: Inhibitors of Processing of Carbohydrates"
Dr. Annette Herscovics, McGill Cancer Centre, McGill University

"Human Saccadic Eye Movements"
Dr. Peter Hallett, Dept. of Physiology, University of Toronto

"Pathological Changes Involving Skeletal Muscle in Patients with Venous Insufficiency" and "Problems in Diagnostic Muscle Biopsies"
Dr. Reid R. Heffner, Professor of Pathology, State University of New York at Buffalo

"Diabetic Neuropathy - Biochemical, Electrophysiological and Structural Correlates"
Dr. Anders Sima, Head, Section of Neuropathology, Health Sciences Centre, University of Manitoba

"Morphometric Changes in Synapses of Chick Ciliary Ganglia Produced by Stimulation"
Dr. J.P. Tremblay, Dept. of Neurosciences, Laval University, Quebec

Guest Lecturers (Continued)

"The Role of Dentate Nucleus in the Initiation of Short Reaction Time Movements"
Dr. Yves Y. Lamarre, Professor of Physiology, Director of Neuroscience Research Centre, University of Montreal

"Various Biological and Immunological Aspects of Tumor Progression"
Dr. Arnold Greenberg, Manitoba Institute for Cell Biology, Winnipeg

"The Functional Role of Gaba in Cat Somatosensory Cortex: Shaping the Receptive Field of Corical Neurons"
Dr. Robert Dykes, Department of Physiology, McGill University

"A Resistant Phenotype as a Common Step in Liver Carcinogenesis" and "Models of Malignancy"
Dr. E. Farber, Professor and Head, Department of Pathology, University of Toronto

"Neuropharmacology of Neurotensin"
Dr. F. Jolicoeur, Department of Psychology, Sherbrooke University, Quebec

"A Different Look at the Abnormal Behaviour Induced by Stimulation of Dopamine Receptors with Apomorphine"
Dr. Henry Szechtman, Department of Neurosciences, McMaster University

"Postural Control Mechanisms - Evidence for an Organization in Terms of Muscle Synergies"
Dr. J. MacPherson, Department of Anatomy, Queen's University

"Pathology of the Conduction System in Transposition of the Great Arteries, and Hypoplastic Left Heart Syndrome"
Dr. Richard D. Rowe, Professor of Pediatrics, University of Toronto and Director, Division of Cardiology, Hospital for Sick Children, Toronto

Guest Lecturers (Continued)

"Cellular Development of the Brain: A New Look" and "Reactive Astrocytes in Tissue Culture"
Dr. Sergei Fedoroff, Chairman, Department of Anatomy, University of Saskatchewan

"Tumor Markers and Differentiation Antigens"
Dr. Serge Jothy, Department of Pathology, McGill University

"Chemotherapy and Drug Resistance"
Dr. V. Ling, Ontario Cancer Institute

"Regulation of Immune Responses to Cell Surface Alloantigens Using Cloned T Cells"
Dr. Trevor Owen, Department of Zoology, University College, London, England

"Brain Damage in Non-Missile Head Injury" and "Brain Smears - Diagnosis and Techniques"
Dr. Hume Adams, Professor of Neuropathology, Institute of Neurological Sciences and the University of Glasgow, and the Eleventh Maitland Baldwin Lecturer

"Nerve Growth and Nerve Growth Factor in Peripheral Nerve"
Dr. P.M. Richardson, Associate Professor, Department of Neurosurgery, McGill University

"Myelin Associated Glycoprotein in Demyelinating Neuropathies and in Myelinogenesis"
Dr. Peter E. Braun, Department of Biochemistry, McGill University

"Christmas Disease - A Canadian Tradition" and "Von Willebrand's Factor - Its Importance in Pathology and Medicine"
Professor Arthur Bloom, Welsh National School of Medicine, Cardiff, Wales

"Development of a Model of Human Prostate Tumor Metastasis in Adult Athymic Nude Mice"
Dr. Joy L. Ware, Department of Surgery, Duke University Medical Center, Durham, N.C.

Guest Lecturers (Continued)

"In Vitro Techniques for Studying Control of Vasopressin Release"
Dr. Celia D. Sladek, Department of Anatomy and Neurology, University of Rochester School of Medicine, Rochester, N.Y.

"Cell Lineages in Early Mouse Development"
Dr. Janet Rossant, Department of Biological Sciences, Brock University, St. Catherines

"Somebody Has to Live Downstream"
and the Medical Sciences Lecture in Etherington Hall auditorium "The Assembly of Blood Clotting Enzyme Complexes on Natural and Synthetic Membranes"
Dr. K.G. Mann, Professor of Biochemistry, Vice-Chairman for Research, Department of Medicine, Mayo Medical School, Rochester, Minnesota

COMMITTEES AND EDITORIAL BOARDS

REGIONAL, PROVINCIAL AND NATIONAL COMMITTEE MEMBERSHIPS

Dr. A.F. Clark: Scientific Officer, Medical Research Council Major Equipment Grants Panel; Member, Ontario Cancer Treatment and Research Foundation Advisory Research Committee; Member, Ontario Cancer Treatment and Research Foundation - Working Party on CEA and Estrogen Receptors; Member, Queen's University Statlab Review Committee.

Dr. W.E.N. Corbett: Consultant Pathologist, Ontario Cancer Treatment and Research Foundation, Kingston; Member of the Residency Training Committee of the Canadian Association of Pathologists; Reference Pathologist, National Institute of Canada Clinical Trials (Malignant Lymphoma); Member, Hematology Morphology Committee, LPTP, Ontario Medical Association; Member, Hematology Subcommittee, School of Medical Terminology, St. Lawrence College.

Dr. B.E. Elliott: External Referee, Medical Research Council of Canada Grants Panel.

Dr. W.A. Fletcher: Secretary-Treasurer of the Canadian Society of Cytology; member of the Canadian Association of Pathologists Commission on Continuing Education; Vice-Chairman of the Toronto Institute of Medical Technology Advisory Council on Cytotechnology; Member of the Medical Audit Committee at Kingston General Hospital; Chairman of the Infection Control Committee, Lennox & Addington County General Hospital; Member, Perinatal Mortality & Infection Control Committees, Moose Factory Hospital.

Dr. P.M. Ford: Member, Arthritis Society Medical and Scientific Manpower Development Committee; Ontario Medical Association representative on the Faculty of Medicine Continuing Medical Education Committee.

Dr. A.R. Giles: Chairman, Ontario Hemophilia Study Group; Member, Canadian Hemophilia Society Medical Scientific Advisory Committee; Member, Ontario Factor VIII Supplier/User/Fractionator Group; Co-Chairman, Subcommittee for Animal Models of the International Society of Thrombosis and Hemostasis; Member, Canadian Standards Association Committee on Extracorporal Circulation; Member, Canadian Plasma Exchange Study Group Rheumatology Protocol Committee; Chairman, Therapeutic Pheresis Committee at Kingston General Hospital.

Committee Memberships (Continued)

Dr. R.S. Kerbel: Member, Executive Committee for the 6th International Congress of Immunology, Toronto 1986; Member, Pathology B Study Section, National Institutes of Health, U.S.A.

Dr. R.S. Kisilevsky: Member, Special Study Section Consultant, National Institutes of Health, Washington, D.C.

Dr. S.K. Ludwin: Member, Pathology and Morphology Grants Committee, Medical Research Council; Member, Specialty Committee in Laboratory Medicine, Royal College of Physicians and Surgeons of Canada; Chairman, Specialty Committee Neuropathology, Royal College of Physicians and Surgeons of Canada; Examiner in Neuropathology, Royal College of Physicians and Surgeons.

Dr. P.N. Manley: Member of Council, Ontario Association of Pathologists; Treasurer, Physicians for Social Responsibility, Kingston; Consultant for the Canadian Tumour Registry Gastrointestinal Panel.

Dr. T.F. McElligott: Member, Standing Committee on Records and Statistics, Ontario Cancer Treatment and and Research Foundation; Secretary-Treasurer, Canadian Association of Pathologists and Representative from the C.A.P. to both the Canadian Blood Committee and the International Council of Laboratory Medicine of Canada; Examiner in Pathology for the Examination in General Surgery for the Royal College of Physicians and Surgeons of Canada; Dean's Academic Colleague, Council of Ontario Faculties of Medicine; Member, Hotel Dieu Hospital Planning Committee; Member, Hotel Dieu Hospital Cyclical Planning Committee; Member, Hotel Dieu Hospital Committee to Review Administrative By-Laws.

Dr. R.S. Prentice: Member of Council, Ontario Association of Pathologists; Reference Pathologist, Canadian Tumour Reference Center Skin Tumour Panel; Reference Pathologist, National Cancer Institute of Canada Clinical Trial on Immunotherapy for Malignant Melanoma and Clinical Trial on Surgical Management for Malignant Melanoma; Member, Hotel Dieu Hospital Tissue and Audit Committee.

Dr. M.J. Raymond: Member, Medical Audit Committee, Kingston General Hospital; Member, Isotope Committee Kingston General Hospital; Member, Patient Information System Task Force, Kingston General Hospital.

Committee Memberships (Continued)

Dr. David M. Robertson: Scientific Officer, Major Equipment Committee, Medical Research Council; Member, Test Committee for Neuropathology, American Board of Pathology; Consultant in Pathology, Ontario Cancer Foundation Kingston Clinic; National Advisory Committee, Canadian Brain Tissue Bank; Vice-President International Academy of Pathology (United States-Canadian Division) 1983-84 and President 1984-85; Consultant Neuropathologist, Canadian Tumour Reference Center; Ontario Cancer Treatment and Research Foundation Research Personnel Committee; Chairman, Wild Leitz Committee, Canadian Association of Pathologists; Member of Council, International Academy of Pathology; Chairman, Medical Advisory Committee, Kingston General Hospital; Chairman, Biohazard Committee Queen's University; Chairman, Postgraduate Education Committee, Queen's University.

Dr. H.D. Steele: Member, Committee of Consultant Pathologists, Ontario Cancer Foundation; Member, Medical Advisory Committee, St. Mary's of the Lake Hospital; Chairman, Infection Control Committee, St. Mary's of the Lake Hospital; Member, Royal College of Physicians and Surgeons of Canada Test Committee in Anatomical Pathology.

Dr. S. Wasan: Secretary-Treasurer, Medical Advisory Committee and Medical Staff, Hotel Dieu Hospital; Member, Advisory Committee of Ban Righ Foundation (Women's Studies), Queen's University.

EDITORIAL BOARDS

Dr. A.J. de Bold:	Hypertension Journal Editorial Board
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	Laboratory Investigation Editorial Board

SENIOR STAFF

INVITED LECTURES OUTSIDE OF KINGSTON

INVITED LECTURES OUTSIDE OF KINGSTON

Dr. A.J. de Bold:

The Cardionatrins: Diuretic, Natriuretic and Hypotensive Peptides Produced by the Heart
Institute for Experimental Pharmacology, Buenos Aires, Argentina, October, 1983; and at the XVth Annual Meeting for Argentina Society for Experimental Pharmacology, La Falda (Cordoba), Argentina, November, 1983

Isolation and Purification of the Cardionatrins
Pfizer Inc., Groton, Conn., November, 1983

Cardionatrins: Diuretic and Vasoactive Peptides Produced by the Heart
DuPont Inc., Wilmington, Delaware, February, 1984

Chemistry and Biology of Peptides
Gordon Research Conference, Santa Barbara, California, February, 1984

Atrial Natriuretic Factors. Workshop Co-Chairperson
IXth International Congress of Nephrology, Los Angeles, June, 1984

Isolation and Purification of the Cardionatrins
Toronto Hypertension Society, Toronto, November, 1983

Diuretic and Vasoactive Peptides Produced by the Heart
Heart Institute, Ottawa Civic Hospital, February, 1984

Cardionatrins: A Family of Diuretic and Natriuretic Peptides Porduced by the Heart
Endocrinology Lab, Royal Victoria Hospital, Montreal, March, 1984; and Conference on Cardionatrin, BioMega, Montreal, March, 1984

Dr. J.W. Dennis:

Asn-Linked Carbohydrates and Cell Attachment
Ludwig Institute for Cancer Research, Toronto, Feb. 1984

Metastasis and Cell Attachment
German Cancer Center, Heidelberg, West Germany
September, 1983

INVITED LECTURES (continued)

Dr. P.M. Ford:

Immune Complexes in the Kidney
Department of Immunology, London School of Hygiene and Tropical Medicine, London, England, March 1983

Plasmapheresis in Rheumatoid Arthritis - A Double Blind Controlled Study
Haemonetics Research Institute Tenth Annual International Advanced Aphereis Seminar, Boston, May, 1983

Abnormal Sedimentation Rate
Twenty-First Meeting of the Ontario Chapter of Family Physicians, Toronto, October, 1983

Methods of Extracorporeal Therapy in Rheumatic Diseases - Workshop Chairperson
Xth European Congress of Rheumatology, Moscow, U.S.S.R., July, 1983

Dr. A.R. Giles:

Use of an Animal Model to Evaluate Hemophilia Therapies
International Symposium on Factor VIII Inhibitors, Farmington, Connecticut, November, 1983

A Controlled Study of Plasma Exchange in Rheumatoid Arthritis
Fifth Annual Meeting International Apheresis Society Chicago, October, 1983

Dr. R.S. Kerbel:

DNA Hypomethylation as a Possible Mechanism of Tumor Heterogeneity and Tumor Cell Phenotypic Instability
Gordon Conference on Cancer, New Hampshire, August, 1983; and lecture also given at First Annual UICC Workshop on Basic and Clinical Aspects of Cancer: Metastasis, Annapolis, Maryland, September, 1983

Aspects of Tumor Progression - Chairperson's Introductory Talk
Molecular and Cellular Biology of Neoplasia
Honey Harbor, October, 1983

INVITED LECTURERS (continued)

Dr. R.S. Kerbel (continued)

Tumor Cell-Host Cell Fusion In Vivo: Possible Contribution to Tumor Progression and Metastasis
Laboratory of Pulmonary Function and Toxicology, NIH Environmental Health Sciences Research Triangle Park, North Carolina, October, 1983

Effects of 5-azacytidine, a DNA Hypomethylating Agent on Malignant Properties of Tumor Cells: Implications for Tumor Progression
Smith, Kline and Beckman, Co., Philadelphia, November, 1983

Tumor Heterogeneity and its relevance to Metastasis
Department of Pathology, University of Gainesville, Florida, February, 1984

High Frequency Changes Induced in the Malignant Properties of Tumor Cell Populations by Low Doses of 5-azacytidine, a Poorly Mutagenic DNA Hypomethylating Agent
Brookhaven Symposium on Assessment of Risk from Low-Level Exposure to Radiation and Chemicals: A Critical Overview, Upton, New York, May, 1984

Spontaneous Cell Fusion in Malignancy: Relevance to Neoplasia
Cancer Research Laboratory, Experimental Pathology Group, Los Alamos National Laboratory, New Mexico, June, 1984

Genetic and Epigenetic Aspects of Tumor Progression and Tumor Cell Heterogeneity: Some Biological and Biochemical Considerations
Canadian Association of Pathologists, Halifax, June, 1984

Dr. R. Kisilevsky:

Amyloidosis
Department of Pathology, McGill University, April, 1984

Dr. A. Lagarde:

Lectin Resistant Mutants of the MDAY-D2 Metastatic Cell Line
University of Calgary, July, 1983 and lecture also given at McGill University, April, 1984

INVITED LECTURES (continued)

Dr. S.K. Ludwin:

Oligodendrocyte Regeneration and Myelin Protein Synthesis
Winter Conference on Brain Research, January, 1984

Dr. P.N. Manley:

Antisera In Immunohistochemistry
Ontario Society of Medical Technologists, Ottawa, October 1983

Dr. M. Raymond:

Computers in Hospitals
Ontario Society of Medical Technologists, Belleville, October, 1983

PRESENTATIONS

PRESENTATIONS

Dr. A.F. Clark, Orlowski, J., Downey, J., Ray, G., Bird, C.E. 'Changes in Androgen Status and Acid Phosphatase Characteristics of Rat Ventral Prostate During Sexual Maturation'. Abstract of a paper presented as a poster at the Southern Ontario Reproductive Biology Annual Meeting, Guelph, April, 1983

Dr. A.F. Clark, Sethi, S. and Orlowski, J. 'Dose Dependent Effects of Androgens on Castrated Rat Prostates: A Microscopic Study'. Abstract of paper presented as a poster at the Southern Ontario Reproductive Biology Annual Meeting, Guelph, April 1983

Dr. A.F. Clark, Downey, J., Bird, C.E. and Mobbs, B.G. 'Acid Phosphatase (AP) in rat Dunning Prostate Tumours'. Abstract of paper presented at the Second International Congress on Hormones and Cancer, Monte Carlo, September 1983

Dr. A.F. Clark, Sethi, S., and Bird, C.E. 'Breast Tumour Estrogen Receptor Assays: A Comparison of Histochemical and Biochemical Assays'. Abstract of paper presented at the Ontario Association of Pathologists annual meeting, Montebello, Quebec, October, 1983

Dr. W.E.N. Corbett, Robertson, R. 'Hemophagocytic Syndrome Due to Systemic Fungal Infection in a Patient with Acute Lymphoblastic Leukemia'. Canadian Congress of Laboratory Medicine, Halifax, June 1984

Dr. A.J. de Bold, and Flynn, T.G. 'Cardionatrin I. A Potent Diuretic and Natriuretic Peptide Isolated from the Heart Atria'. Federation of American Society Experimental Biologists, St. Louis, Mo., April, 1984

Dr. J. Dennis, Kiyohira, T. and Roder, J. 'Evidence for a New Natural Killer Cell Triggering Receptor' Federation of American Societies of Experimental Biologists, St. Louis, Mo., April 1984

Dr. J. Dennis, Kerbel, R., Lagarde, A., and Siminovich, L. 'Comparative Studies on Lectin-Resistant Mutants of the MDAY-D2 Metastatic Cell Line. INSERM-CNRS Meeting "Endogenous Lectins" Aussois, France, March 1984

Presentations (Continued)

Dr. S.E. Ford 'Diagnosis and Misdiagnosis of Congenital Bicuspid Aortic Valves' Ontario Association of Pathologists, October, 1983

Dr. S.E. Ford 'In Vitro Validation of a Two-Dimensional Echocardiographic Method of Left Ventricular Mass Estimation Using Intact Post-Mortem Hears' Canadian Cardiovascular Society, October, 1983

Dr. P.M. Ford 'Plasmapheresis in Rheumatoid Arthritis - A Double Blind Controlled Study' at the Xth European Congress of Rheumatology, Moscow, U.S.S.R., July, 1983

Dr. A.R. Giles 'Studies of Factor V/Va Coagulation (DIC)'. The IXth Congress of the International Society of Thrombosis and Hemostasis, Stockholm, July 1983

Dr. A.R. Giles 'Factor V (Quebec): A Bleeding Diathesis Associated with a Defective Platelet Factor V' The IXth Congress of the International Society of Thrombosis and Hemostasis, Stockholm, July 1983

Dr. A.R. Giles 'Canine Model of Hemophilia with Antibodies to Factor VIII:C'. The IXth Congress of the International Society of Thrombosis and Hemostasis, Stockholm, July 1983

Dr. A.R. Giles 'Post-Transfusion Purpura (PTP) Associated with Changes in High Molecular Weight (HMW) Multimers of Factor VIII'. The IXth Congress of the International Society of Thrombosis and Hemostasis, Stockholm, July 1983

Dr. A.R. Giles 'A Combination of Factor Xa and Coagulant-Active Phospholipid Bypasses Factor VIII:C In Vivo'. The Annual Meeting of the American Society of Hematology, San Francisco, December 1983

Dr. A.R. Giles 'Use of Animal Model to Evaluate Hemophilia Therapies'. International Symposium on Factor VIII Inhibitors, Farmington, Connecticut, November, 1983

Dr. A.R. Giles ' A Controlled Study of Plasma Exchange in Rheumatoid Arthritis'. The 5th Annual Meeting of the International Apheresis Society, Chicago, October, 1983

Presentations (Continued)

Dr. R.S. Kerbel 'Possible Role of DNA Hypomethylation in Tumor Progression: An Hypothesis'. A.A.C.R. meeting, Toronto, May 1984

Dr. R. Kisilevsky, Snow, A. 'The Temporal Relationship Between Glycosaminoglycan Accumulation and Amyloid Deposition During Experimental Amyloidosis'. Abstract presented at the International Academy of Pathology, U.S.-Canadian Division, San Francisco, March 1984

Dr. A. Lagarde, Pouyssegur, J. 'Relaxation from Growth Factor Controls and Immune Restrictions Are Both Required for the Tumor Progression of a Hamster Cell Line Transplanted Into Nude Mice'. First Terry Fox Cancer Research Conference "Oncogenes and Cancer", Vancouver July 1983

Dr. S.K. Ludwin 'The Perineuronal Satellite Oligodendrocyte'. Canadian Association of Neuropathologists, Banff, September 1983

Dr. P. Manley 'Prostatic Acid Phosphatase and the Human Female'. International Academy of Pathology United States-Canadian Division, San Francisco, March, 1984

Dr. T.F. McElligott, R.M. Walker 'Acetaminophen-Induced Hepatic Congestion in Mice'. Society of Toxicology meeting, February 1983

Dr. S. Nag 'Alteration of Endothelial Surface Charge in Hypertension'. XIth International Symposium on Cerebral Blood Flow and Metabolism, Paris, June, 1983

Dr. S. Nag 'Alteration of Surface Charge on Cerebral Endothelium in Hypertension'. American Association of Neuropathologists, St. Louis, June, 1983

Dr. S.M. Wasan, Dr. P. Mozarowski 'Breast Aspiration Cytology'. Ontario Association of Pathologists, Montebello, Quebec, October 1983.

PUBLICATIONS

PUBLICATIONS

Clinical, Functional, Histological and Immunological Evaluation of Ethiopian Patients with Non-Ulcer Dyspepsia

E. Tsega, P. Manley, H. Choremi, D. Doniach and T. Tegene
IN: Non-Ulcer Dyspepsia and Gastritis in Ethiopia
Ed. Edemariam Tsega, Addis Ababa University
Artistic Printers, Addis Ababa, 1983

Basal and Pentagastrin-Stimulated Gastric Acid Secretion in Ethiopian Patients with Non-Ulcer Dyspepsia and Gastritis

E. Tsega, N. Tegene, P. Manley, T. Asfaw, A. Kidane
IN: Non-Ulcer Dyspepsia and Gastritis in Ethiopia
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Clinical, Radiological, Endoscopic and Histological Studies in Patients with Non-Ulcer Dyspepsia and Asymptomatic Controls

E. Tsega, T. Asfaw and P. Manley
IN: Non-Ulcer Dyspepsia and Gastritis in Ethiopia
Ed. Edemariam Tsega, Addis Ababa University
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Autoantibodies in Ethiopian Patients with Non-Ulcer Dyspepsia and Gastritis

E. Tsega, H. Choremi, G. Botazzo, D. Doniach, P. Manley, T. Asfaw
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P. Manley, E. Tsega, T. Asfaw and I. Sin
IN: Non-Ulcer Dyspepsia and Gastritis in Ethiopia
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Gastritis as a Global Problem

P. Manley
IN: Non-Ulcer Dyspepsia and Gastritis in Ethiopia
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Gastritis: A Histological Discussion

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Synchronous Independent Primary Osteosarcoma and Adenocarcinoma of Kidney
T. Moon, David Dexter, A. Morales
Urology XXI (6): p. 608, 1983

Plasmapheresis Therapy in Rheumatoid Arthritis
I. Dwosh, A. Giles, P. Ford, J. Pater, T. Anastassiades
New Eng. J. Med. 308: 1124, 1983

The Effect of Aspirin on the Pharmacokinetics of Sulfinpyrazone in Man
M. Buchanan, L. Endrenyi, A. Giles, J. Rosenfeld
Thrombosis Research, Supplement IV; 145, 1983
Pergamon Press Ltd., U.S.A.

Paraneoplastic Subacute Necrotic Myelopathy
Adrian Handforth, Sukriti Nag, Daniel Sharp, David M. Robertson
Can. J. Neurol. Sci. 10: 204, 1983

Mitral Regurgitation Due To Lupus Endocarditis Treated With Valve Replacement
F. James Brennan, Sally E. Ford, Peter Ford, Peter Morrin, Gary Burggraf, Tomas Salerno
Can. Med. Assoc. J. 129: 584, 1983

Rat Prostatic Acid Phosphatase: Androgenic Control of Isoelectric Focusing Patterns
J. Downey, D. Mahan, T.G. Flynn, C.E. Bird, A.F. Clark
Can. J. Biochem. & Cell Biol. 61: 744, 1983

Biology of Disease Amyloidosis: A Familiar Problem in the Ligth of Current Pathogenetic Developments
Robert Kisilevsky
Lab. Invest. 49: 381, 1983

Ultrastructural Effects of Acetaminophen in Isolated Mouse Hepatocytes
Robin Walker, T.F. McElligott, Thomas Massey, William Racz
Exp. & Molec. Path. 39: 163, 1983

Ribosome Topography in Baby Hamster Kidney Cells Infected With Sindbis and Vesicular Stomatitis Viruses
R. Philip McGuire, Bryan T. Eaton, Robert Kisilevsky
Biochimica et Biophysica Acta, 741: 258, 1983

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Cervical Myelpathy Due to Atlantoaxial and Subaxial Subluxation in Rheumatoid Arthritis
Herbert J. Manz, Alfred J. Luessenhop, David M. Robertson
Arch. Path. and Lab. Med. 107: 94, 1983

Batrachotoxin Induced Axonal Necrosis Followed By Regeneration
G.R.W. Moore, D.M. Robertson, R.J. Boegman
Brain Res. 279: 246, 1983

Scanning Electron Microscopic Examination of Acetaminophen-Induced Hepatotoxicity and Congestion in Mice
Robin M. Walker, William J. Racz, T. Francis McElligott
Am. J. Path. 113: 321, 1983

Un Giro Copernicano en Neuropatologia
David Munoz Garcia
Arch. de Nuerobiol. 46(3): 159, 1983

Increased Acetaminophen-Induced Hepatotoxicity After Chronic Ethanol Consumption in Mice
Robin M. Walker, Timothy F. McElligott, Ellen M. Power, Thomas E. Massey, William J. Racz
Toxicology 28: 193, 1983

Cerebral Changes in Chronic Hypertension: Combined Permeability and Immunohistochemical Studies
S. Nag
Acta Neuropathol. (Berl.) 62: 178, 1984

Two-Dimensional Echocardiographic Determination of Left Ventricular Mass: Use of Intact Postmortem Hearts For In Vitro Validation
Henryk Kafka, Sally Ford, Gary W. Burggraf
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Hepatic Adenylate Cyclase and Phosphodiesterase Activity During Acute Ethionine Intoxication
K.H. Wong and R. Kisilevsky
Exp. & Molec. Path. 40: 122, 1984

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Ribosome Conformational Changes Associated With Protein S6 Phosphorylation
Robert Kisilevsky, Margaret A. Treloar, Larry Weiler
J. Biol. Chem. 259(2): 1351, 1984

Development of Factor VIII: C Antibodies in Dogs With Hemophilia A (Factor VIII:C Deficiency)
Alan Giles, Shawn Tinlin, Hugh Hoogendoorn, Penny Greenwood, Ronald Greenwood
Blood 63(2): 451, 1984

5-Azacytidine Induction of Thymidine Kinase in a Spontaneously Enzyme-Deficient Murine Tumor Line
Robert Liteplo, Philip Frost, Robert Kerbel
Exp. Cell Res. 150: 499, 1984

On a Possible Epigenetic Mechanism(s) of Tumor Cell Heterogeneity. The Role of DNA Methylation
Philip Frost and Robert Kerbel
Can. Met. Rev. 2: 375, 1983

A Model of Human Cancer Metastasis: Extensive Spontaneous and Artificial Metastasis of a Human Pigmented Melanoma and Derived Variant Sublines in Nude Mice
R.S. Kerbel, M.A. Man, D. Dexter
J.N.C.I. 72(1): 93, 1984

Ganglioneuroma Arising in the Pituitary Fossa: A Twenty Year Follow-Up
Raold Serebrin, David M. Robertson
J. Neurol., Neurosurg, & Psych. 47: 97, 1984

Pigmented Schwannoma
D.M. Robertson, F.N. Ghadially
Ultrastructural Pathology 5: 369, 1983

Psychological Disturbances and Folic Acid in Chronic Epileptic Outpatients
T. del Ser Quijano, F. Bermejo Pareja, D. Munoz-Garcia, A. Portera Sanchez
Epilepsia 24: 588, 1983

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(continued)

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Aicardi's Syndrome: A Clinicopathologic Study
Robert McMahon, Raymond Bell, G.R. Wayne Moore, Samuel K. Ludwin
Arch. Ophthalmol. 102: 250, 1984

Sympathetic Ophthalmia: Histopathologic and Fluorescein Angiographic Correlation
Daniel Sharp, Raymond Bell, Edward Patterson, Ronald Pinkerton
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The Function of Perineuronal Satellite Oligodendrocytes: An Immunohistochemical Study
S.K. Ludwin
Neuropath. & Applied Neurobiol. 10: 143, 1984

Proliferation of Mature Oligodendrocytes After Trauma to the CNS
Samuel K. Ludwin
Nature 308 (5956): 274, 1984