DEPARTMENT OF PATHOLOGY

QUEEN'S UNIVERSITY

ANNUAL REPORT

JULY 1, 1984 - JUNE 30, 1985

DEPARTMENT OF PATHOLOGY

ANNUAL REPORT

JULY 1, 1984 - JUNE 30, 1985

REPORT COMPILED BY:

ANNA NORTHCOTT, DEPARTMENTAL ASSISTANT

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FACULTY, ADMINISTRATION AND HEAD TECHNOLOGISTS

FACULTY
1984-1985

EMERITUS

Dr. Nathan Kaufman
Dr. G.F. Kipkie

PROFESSOR AND HEAD OF THE DEPARTMENT

Dr. David M. Robertson

PROFESSORS

Dr. A.F. Clark
Dr. W.E.N. Corbett
Dr. R. Kisilevsky
Dr. S.K. Ludwin
Dr. T.F. McElligott
Dr. H.D. Steele

ASSOCIATE PROFESSORS

Dr. A.J. de Bold
Dr. A.R. Giles
Dr. R. Kerbel
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
Dr. F.B. Swaine

CLINICAL ASSISTANT

Dr. S.E. Ford

JOINT APPOINTMENT

Dr. R. Bell

FACULTY, ADMINISTRATION AND HEAD TECHNOLOGISTS (continued)

CROSS APPOINTMENT

Dr. P.M. Ford

HOSPITAL APPOINTMENTS

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

SESSIONAL APPOINTMENTS

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

ADMINISTRATION

N.A. Meyers	Administrative Assistant
A.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 program, 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, Rideau Regional Hospital School and Prince Edward County Memorial Hospital. The combined laboratory statistics for 1984 for the Department of Pathology at Kingston General Hospital and Hotel Dieu Hospital are as follows: autopsies - 429, surgical specimens - 18,737, cytology - 37,816. The DBS units done in clinical pathology are 18,938,392.

PERSONNEL, AWARDS AND SIGNIFICANT EVENTS

PERSONNEL

Dr. F.B. Swaine was appointed Assistant Professor in the Department of Pathology and appointed to the Attending Staff at Kingston General Hospital effective January 1, 1985. Dr. Swaine is a graduate in Medicine from Queen's University, and completed his training program in Pathology at Queen's University and affiliated teaching hospitals. In addition, Dr. Swaine was appointed Director of Laboratories at the Prince Edward County Hospital in Picton.

Dr. S.K. Ludwin was promoted to Professor in the department effective July 1, 1985.

Dr. Sally E. Ford resigned from the department effective September 20, 1984, for health reasons. Dr. Ford joined the department on July 1, 1982, and during her time in the department made a significant contribution to cardiovascular pathology.

AWARDS

DONALD W. PENNER PRIZE

Dr. A. Shah, a Resident in the Department of Pathology, was awarded the Donald W. Penner Prize for the best proffered paper presented by a resident, at the Canadian Congress of Laboratory Medicine annual meeting in Halifax in June 1984. Dr. Shah's paper (with Dr. J.J. Holden and Dr. S.E. Ford) was entitled, "Hypoplastic Left Heart - A New Look at the Chromosomes". The Donald W. Penner Prize was established by the Canadian Association of Pathologists in 1977 to commemorate Dr. Penner's twenty-five years of service on the C.A.P. executive.

DUTKEVICH TRUST FUND

Once again Queen's University was awarded a portion of the funds from the Dutkevich Trust Fund, which was established by Dr. E. Dutkevich for the support of individuals in their first year of training in Pathology. The Departmental Postgraduate Committee recommended three of the current resident staff as being eligible for financial support under the guidelines of the Trust Fund. Three awards were made to trainees in Pathology for 1984-1985.

BEST PAPER AWARD BIO '84

Lloyd Kennedy, Pathologist Assistant, was one of three individuals receiving Best Paper Award at BIO '84 held in Atlanta, Georgia, in July 1984. Mr. Kennedy's paper was entitled, "Some Experience with Immersed Specimen Photography".

SIGNIFICANT EVENTS

The International Academy of Pathology (United States - Canadian Dvision) held its 74th annual meeting in Toronto in March 1985.

Former Chairman of the Department of Pathology, Dr. Robert H. More (1951-1967) was awarded the prestigious F.K. Mostofi Distinguished Service Award in recognition of his long and dedicated service to the Academy.

Dr. David M. Robertson, President of the I.A.P. (U.S. - Canadian Division) welcomed the 1,700 delegates from all over North America and presided over the educational and executive functions of the week long meeting.

Dr. W.E.N. Corbett co-chaired the proffered paper session on "Hematopathology"; Dr. P. Manley presided at the Specialty Conference on Gastrointestinal Pathology; and several residents from the department acted as monitors for the Short Courses held during the scientific sessions. Dr. R. Kisilevsky's Poster entitled, "Regulation of Hepatic Protein Synthesis: The Role of Insulin and Glucagon During Acute Ethionine Intoxication" was presented, as well as Dr. P. Manley's Poster, "Familial Neonatal Colitis".

NEW FACILITIES

The official opening of the newly renovated Kingston General Hospital Department of Pathology laboratories took place on November 22, 1984. This renovation provided needed space for expansion of the Chemistry Division and the Anatomical Division on Douglas 1. Additional expansion was provided for the Cytology Division with its move from Douglas V to Douglas II. The Neuropathology Division was expanded from Richardson IV to Douglas IV, and the Microbiology Division was extended into Douglas IV South from its former exclusive location on Douglas IV North. The Blood Bank Division and Immunology were expanded to Douglas III, thus providing increased working area for these facilities.

HEMOPHILIA PROGRAM

A comprehensive Hemophilia Program for the Kingston/Belleville area has been established at Kingston General Hospital, directed by Dr. A.R. Giles, Associate Professor of Pathology, and administered by the Department of Pathology. The program will provide medical and ancillary care for all hemophiliacs in the Eastern Ontario referral area served by Kingston General Hospital, and will also provide extensive outreach in relationship to education and management for hemophiliacs and their medical attendants in other areas of the region.

FUTURE PLANS

An application has been made to the Provincial Ministry of Health, together with Pediatrics, for the establishment of a DNA Diagnostics Laboratory. This laboratory will begin operation in September 1985. Space will be renovated within the next year in the Doran-Angada area to house the laboratory and its associated equipment.

The appointment of Dr. David Lillicrap, effective September 1985, will permit expansion of the hemophilia program and of the coagulation component of Hematopathology. As well, Dr. Lillicrap will be involved in the detection of hemophilia carriers using DNA technology.

Planning is underway for minor renovations to Douglas V to utilize effectively the space for Histology and Hematology, since it appears that some time may elapse before extensive renovations to Douglas II and Douglas V can be undertaken.

DEPARTMENT OF PATHOLOGY RETREAT

DEPARTMENT OF PATHOLOGY RETREAT 1985

CAIGER'S LODGE, JANUARY 18-19, 1985

The list of attendees is included as Appendix 1

FRIDAY JANUARY 18, 1985

INTRODUCTION: Dr. David M. Robertson welcomed the participants and the guest speakers to the Retreat, noting that 1985 marks the 90th year that the Department of Pathology has existed, and this event marks the first departmental retreat. The University and the Hospital have asked all departments to develop a five year plan, which must be renewed and updated annually. The administration has given the department a mandate to 1) set up a strategic plan; 2) try to implement it; and 3) evaluate annually what has been accomplished. The department must address the current range of demanding problems with a formula which will be realistic and have long range implications.

PURPOSE: The purpose of the Retreat was to begin development of a Five Year Planning strategy for the department, encompassing its commitments to service, research, and teaching - undergraduate, graduate and postgraduate education.

PROGRAM: With a view to addressing the resolution of contemporary concerns in the department, three keynote speakers were invited to analyze the issues and provide parameters by which the department could plan its future goals. They were invited to identify the physical and economic resources which could promote or limit development during the next five years.

The keynote speakers were as follows:

Dr. Duncan Sinclair
Vice-Principal, Institutional Relations
Queen's University

Dr. D.L. Wilson
Dean, Faculty of Medicine
Queen's University

Mr. Guy Legros
Vice-President (Finance)
Kingston General Hospital

Departmental Retreat (continued)

PROGRAM (continued):

SATURDAY JANUARY 19, 1985

A series of Group Discussions were initiated on Friday evening, January 18, and continued on Saturday morning, January 19. The participants in the Retreat were divided into three Discussion Groups, each with a Co-ordinator. These discussions covered the following areas:

Research and Graduate Studies
Co-ordinator: Dr. R. Kisilevsky

Postgraduate & Undergraduate Studies
Co-ordinator: Dr. W.E.N. Corbett

Diagnostic Services
Co-ordinator: Dr. H.D. Steele

On Saturday morning a report of each Discussion Group was presented by the Co-ordinator and a general discussion was held representing the suggestions brought forward. There was a discussion of specific and practical issues, with identification of perceived positive and negative aspects, and a series of recommendations developed.

CONCLUDING REMARKS: Dr. David M. Robertson focussed on initiative and enthusiasm for change in his concluding remarks. The contribution of the keynote speakers was warmly acknowledged.

APPENDIX 1

DEPARTMENT OF PATHOLOGY RETREAT

ATTENDEES

Dr. A.W. Clark
Dr. W.E.N. Corbett
Dr. A.J. deBold
Dr. G.J. Delisle
Dr. D.F. Dexter
Dr. B.E. Elliott
Dr. J.T. Feltis
Dr. W.A. Fletcher
Dr. P.M. Ford
Dr. A. Giles
Dr. J.A. Holden
Dr. R. S. Kerbel
Dr. R. Kisilevsky
Dr. S.K. Ludwin
Dr. P. Manley
Dr. T.F. McElligott
Dr. S. Nag
Dr. R.S. Prentice
Dr. M.J. Raymond
Dr. H.D. Steele
Dr. S.M. Wasan
Mrs. A. Northcott
Dr. I. Young
Mr. N. Meyers
Dr. David M. Robertson
Dr. D.L.Wilson
Mr. R.K. McGeorge
Mr. Guy Legros
Dr. Duncan Sinclair

APPENDIX II

DEPARTMENT OF PATHOLOGY RETREAT

CASUAL PHOTOGRAPHS OF RETREAT

DEPARTMENTAL RETREAT

ILLUSTRATIONS

ILLUS. 1

LEFT TO RIGHT: Dr. P. Manley; A. Northcott; Dr. D.M. Robertson

ILLUS. 2

LEFT TO RIGHT: Dr. G. Delisle; Dr. D.L. Wilson

(In Background: Dr. D. Dexter; Dr. B. Elliott; Dr. D.M. Robertson)

ILLUS. 3

LEFT TO RIGHT: Dr. S. Nag; Dr. R. Prentice

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 1984-1985 consisted of General Pathology and Special Pathology. The teaching format in General and Special Pathology remained essentially the same. The number of lecture hours remained unchanged, as did the seminar hours, with the only significant change being a marked decrease in the laboratory periods. There were no firm constraints on the format of either lectures or labs, and innovation was encouraged. 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 textbook continued to be Pathologic Basis of Disease, Fourth Edition, by Robbins and Cotran. An outline for General Pathology; Special Pathology and an Illustrated Case Manual was prepared by senior staff for distribution to the the students. Students were also provided with self-learning aids, and access to the student laboratory on a 24-hour basis in order that they could avail themselves of the slide carousels. During the academic year regular staff-student liaison meetings were held, where student representatives could review with staff any concerns they had concerning the Pathology course. Seventy-five students were registered in second year medicine during the 1984-1985 academic year, with one withdrawal by a student in May 1985. Eight medical undergraduates were in the Department of Pathology during the summer of 1984, engaged in either service or research. Two medical undergraduates took electives in the department during 1984-1985.

GRADUATE: Six Master of Science candidates were registered as graduate students in the department (D. Renwick; O. Tadross; E. Alvarez; P. Vandervelden; A. Rodricks and F. Abboud). Two Ph.D. students were registered in the graduate program (D. Carlow; A. Snow). In addition, one candidate was registered in the Department of Biochemistry, but working under the supervision of Dr. R. Kisilevsky (A. Lyon). There was also one Special Student registered part-time in the graduate program (Dr. I. Young).

POSTGRADUATE: Nineteen housestaff were registered in the postgraduate training program in the Department of Pathology for 1984-1985. In addition, two residents from the Department of Obstetrics-Gynecology were on rotation in the department. Two residents from the Department of Medicine were on rotation in the department also, one in Hematological Pathology, and one in Neuropathology.

UNDERGRADUATE, GRADUATE AND POSTGRADUATE PROGRAMS (continued)

POSTDOCTORAL FELLOWS: Dr. Debra Bakker, Medical Research Council Postdoctoral Fellow, working under the supervision of Dr. S. Ludwin, joined the department June 1, 1984. In addition, two Postdoctoral Fellows continued their appointments in the Cancer Research Group during 1984-85. Dr. Robert G. Liteplo was a Medical Research Council Postdoctoral Fellow under the supervision of Dr. R. Kerbel, and Dr. S. Laferte was a Postdoctoral Fellow under the supervision of Dr. B. Elliott.

ELECTIVES: The Elective program in the department is arranged in such a way that 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 the interests of the student. Assignment to specific supervisors is made according to field of interest.

Donna Goldman, a medical student in the Faculty of Health Sciences, McMaster University, did a two week Elective in the department under the supervision of Dr. P. Manley.

Richard Camicioli, a medical student in the Faculty of Medicine, McGill University, performed a three week Elective in the department under the supervision of Dr. P. Manley.

MEDICAL RESEARCH PROGRAMS

RESEARCH PROGRAMS

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 cerebrovascular 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.

DR. J.W. DENNIS: Tumor cell interaction with the host environment is thought to be the critical factor in determining whether tumor cells spread from the primary to distal organs. Host factors which interact with the tumor cell surface and have been shown to influence tumor cell growth and metastases include hormones, growth factors, angiogenic factors, proteases and extracellular matrix proteins. The carbohydrate portion of glycoprotein receptors on the tumor cell surface that mediate these interactions often change qualitatively as the tumor cells progress from benign to malignant. The aim of this research program is to assess the importance of specific carbohydrate structures on the tumor cell surface in the metastatic process.

DR. D.F. DEXTER: Dr. Dexter has continued collaborative research with Dr. J.C. Roder in a) analyzing spontaneous and primary oncogenesis in natural killer cell deficient mice; b) with Dr. Cole and Dr. Roder the establishment and metastasis of a human large cell lung tumour cell line and c) with Dr. Shtromas and Dr. Roder analysis of metastatic potential, associated markers, and cytogenetic makeup of a metastasizing human melanoma cell line.

RESEARCH (continued)

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. Dr. de Bold has been a guest at several international symposia on cardionatrins.

DR. B.E. ELLIOTT: Dr. Elliott's program is entitled "Self-nonself discrimination and the role of tumor-associated and major histocompatibility antigens in anti-tumor immunity". The general objective of the current research program is to identify tumor cells 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. Three approaches to this study are currently in progress: a) examination of cell surface properties associated with the immunogenic phenotype of a spontaneous murine mammary carcinoma; b) study of the effect on tumor growth in vivo by introducing class 1 or class 11 MHC genes into a non-immunogenic murine carcinoma and c) study of altered MHC regulation in normal and malignant cells.

DR. A.W. FLETCHER: The cytopathology of tracheal aspirates of three groups of infants receiving Continuous Airway Pressure, Conventional Mechanical Ventilation, and High Frequency Oscillatory Ventilation is being assessed. A clinical trial is being conducted at Kingston General Hospital to determine whether the cytopathology of these three groups is different with respect to the time course.

DR. P. FORD: Dr. Peter Ford is conducting a study of the interaction of rheumatoid factor with immune complexes in the in vivo systems. Dr. Ford is also conducting a comparison of Flurbioprofen and Piroxicam in the treatment of osteoarthritis.

DR. A.R. 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.

RESEARCH (continued)

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 of the spontaneous cell fusion in vivo 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 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 (immunoloogic 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 the program is to study the multiple changes involved in the conversion of normal cells into benign and malignant (metastatic) tumor cells. Our primary interest is focused on alterations contributing to abnormal controls of cell divison. From a normal fibroblast cell line which requires several growth factors (insulin, EGF, FGF, PDGF, α-Thrombin) in order to proliferate in vitro, and which does not grow in agarose, several variants were isolated after applying differential selections designed to favor cell proliferation under growth

RESEARCH (continued)

DR. A.E. LAGARDE (continued): factor limitations. Among the mutants that were characterized, several were found to generate rapidly growing neoplasms when implanted into newborn, adult and old athymic nude mice. In addition, those that became highly autonomous were also forming lung metastases. From these observations, we conclude that genetic lesions conferring to cells a better responsiveness to mitogenic signals, are sufficient to promote tumoral and invasive properties in vivo. A similar study was initiated using variants of a human melanoma cell line (MeWo). Some of them were found to secrete and respond to growth-promoting substances that were partially characterized.

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 immunohistochemistry, 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's collaborative studies with the Division of Gastroenterology are progressing in developing an experimental model for chronic inflammatory bowel disease.

DR. S. NAG: Dr. Nag's research program deals with morphologic and permeability studies of cerebral vessels in acute and chronic hypertension. Specific experiments underway include ultrastructural studies of 1) the distribution of lectin receptors on normal cerebral endothelium and arterioles which develop increased permeability to horseradish peroxidase in acute hypertension; 2) the effect of cytochalasin B (an actin inhibitor) on cerebrovascular permeability; and 3) the distribution of Ca++ dependant ATP-ase in cerebral endothelium.

DR. M.J. RAYMOND: Dr. Raymond has continued the development and improvement of the methodologies employed in the Clinical Chemistry laboratory. His research interest is in the investigation of the potential applications for computers within the clinical laboratories.

RESEARCH (continued)

DR. M.J. RAYMOND (continued): 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.

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 immunogenesis.

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.

RESEARCH GRANTS IN PROGRESS

DEPARTMENT OF PATHOLOGY

APRIL 1, 1984 - MARCH 31, 1985

NAME	GRANTING BODY	AMOUNT OF GRANT	TITLE
Dr. A. Clark	Medical Research Council	77,000	Steroid metabolism and actions
Dr. A.J. de Bold	Ontario Heart Foundation	55,665	Studies on a Natriuretic factor Isolated from Heart Atria
Dr. A.J. de Bold	NSERC	61,050	The application of biotechnology to the commercialization of cardionatrin I
Dr. A.J. de Bold	Medical Research Council	47,935	Isolation and characterization of cardionatrin
Dr. A.J. de Bold	IDEA	151,244	Cardionatrin I
Dr. J. Dennis	Medical Research Council	39,010	Identification of tumor cell oligosaccharides involved in cell attachment and metastasis
Dr. J. Dennis	National Cancer Institute	37,786	Cancer Metastasis
Dr. B. Elliott	Medical Research Council	51,580	Clonal Analysis of cytolytic lympho-reticular cells in host defense: Physiology, serology and biochemistry of effector and target interactions

Dr. J.T. Feltis	Medical Research Council	30,000	Ultrastructural studies in murine AA Renal Amyloidosis
Dr. A.R. Giles	National Institute of Health	40,302	Canine model of hemophilia with antibodies to F VIII:C
Dr. A.R. Giles	Spankie Fund	3,092	Devt. of frozen canine sperm bank
Dr. A.R. Giles	Medical Research Council	77,213	Role of phospholipid in bypassing Factor VIII in vivo
Dr. A.R. Giles	Ontario Heart Foundation	46,915	The regulation of fibrinolysis in vivo
Dr. R. Kerbel	Medical Research Council	57,065	Studies on the membrane biology of activated tumoricidal macrophages and lymphocytes
Dr. R. Kerbel (with Drs. Elliott, Lagarde, Dennis)	National Cancer Institute	372,793	A program of tumor biology
Dr. R. Kisilevsky	Medical Research Council	61,110	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	88,190	Amyloidogenesis: An analysis of the causative factors in an experimental murine model
Dr. S.K. Ludwin	Medical Research Council	55,412	Remyelination and Oligodendrocyte Proliferation in the CNS

Dr. S. Nag	Ontario Heart Foundation	40,986	Mechanisms of cerebral damage in hypertension
Dr. D. Robertson	Medical Research Council	19,474	Maintenance grant for fluorescence activated cell sorter
Dr. D. Robertson	Medical Research Council	29,342	Maintenance cost of electron microscope unit
Dr. D. Robertson	NSERC	3,689	Departmental share of Principal's NSERC grant
Dr. D. Robertson	Medical Research Council	34,240	Toward the purchase of ultracentrifuge rotors

COMMITTEES AND EDITORIAL BOARDS

REGIONAL, PROVINCIAL AND NATIONAL COMMITTEE MEMBERSHIPS

DR. A.F. CLARK: Scientific Officer, Medical Research Council Major Equipment Grants Panel and Maintenance Grants Panel;Member, Ontario Cancer Treatment and Research Foundation Advisory Research Committee; Chairman, Queen's University Animal Care Committee; Member of Principal's Advisory Committee on Review of Office of Research Services; Member of Principal's Advisory Research Committee; Member of Faculty of Medicine Promotions Committee.

DR. W.E.N. CORBETT: Residency Training Committee, Canadian Association of Pathologists; Consultant Pathologist, Ontario Cancer Treatment and Research Foundation, Kingston Clinic; Reference Pathologist, NCIC Clinical Trials (Malignant Lymphoma); Examining Board for Hematological Pathology, Royal College of Physicians and Surgeons of Canada; Member of LPTP Committee on Hematological Morphology, Ontario Medical Association; Curriculum Committee, Faculty of Medicine, Queen's University; Hematology Subcommittee, School of Medical Technology, St. Lawrence College of Applied Arts and Technology; Member, Kingston General Hospital Quality Assurance Co-ordinating Committee.

DR. P. CHADWICK: Chairman, Infection Control Committee, Kingston General Hospital.

DR. D. DEXTER: Member of Canadian Tumour Reference Centre, Soft Tissue Panel; Member, Board of Management, Finance and Audit, Medical Advisory Committee of Hotel Dieu Hospital; Member of Curriculum Committee, Rehabilitation Therapy, Queen's University.

DR. A.J. DEBOLD: Member, Study Panel, Atrial Natriuretic Factor, National Institutes of Health, Washington, D.C.; Member of Hypertension SCOR, Cornell University; Member of Advisory Panel, Stroke and Heart Foundation of Ontario.

DR. B.E. ELLIOTT: Member, National Cancer Institute of Canada Grants Panel A (Immunology); External Referee of Medical Research Council Grants Panel; Genetics Supervisor, Mouse Barrier Breeding Unit, Queen's University.

DR. W.A. FLETCHER: Vice-Chairman, Cytotechnology Advisory Council, Toronto Institute of Medical Technology (provincial Training Program); Secretary-Treasurer, Canadian Society of Cytology; Member, Canadian Association of Pathologists, Commission on Continuing Education; Chairman, Tissue Committee, Kingston General Hospital; Chairman of Infection Control Committee and Tissue Committee, L&A County Hospital; Infection Control and Tissue Committee, Moose Factory Hospital.

COMMITTEE MEMBERSHIPS (continued)

DR. P.M. FORD: Chairman, Protocol Study Group of the Plasma Exchange Study Group - Ottawa Red Cross and Health & Welfare, Canada; Member, Canadian Apheresis Study Group; Member, Arthritis Society Medical Advisory Committee.

DR. A.R. GILES: Chairman, Ontario Factor VIII Study Group; Chairman, Subcommittee on Animal Models - International Society of Thrombosis and Hemostasis; Member, Medical Advisory Committee, Canadian Hemophilia Society (Ontario Chapter); Member, Canadian Plasma Exchange Study Group; Member, Canadian Standards Association Committee on Extracorporeal Circulation; Member, Subcommittee for Factor IX - International Society of Thrombosis and Hemostasis; Co-ordinator, Therapeutic Pheresis Committee, Kingston General Hospital.

DR. R. KERBEL: Member, Pathology B Study Section, National Institutes of Health, U.S.A.; Reviewer, Ad Hoc Site Visit Alberta National Cancer Institute, Terry Fox Programs; Executive, 6th International Congress of Immunology, Toronto, 1986.

DR. R. KISILEVSKY: Membership Committee, International Academy of Pathology (United States - Canadian Division).

DR. A.E. LAGARDE: External Referee, Molecular and Cell Biology.

DR. S.K. LUDWIN: Chairman, Special Committee on Neuropathology, Royal College of Physicians and Surgeons of Canada; Chairman, Medical Research Council, Pathology and Morphology Grants Committee; Executive, International Society of Neuropathology; Member, Special Committee in Laboratory Medicine, Royal College of Physicians and Surgeons of Canada; Examiner, Royal College of Physicians and Surgeons of Canada.

DR. P. MANLEY: Member, Canadian Tumour Reference Centre Panel on Gastrointestinal and Peritoneal Tumours; Member, Royal College of Physicians and Surgeons of Canada Board of Examiners in Anatomic Pathology; Member, International Academy of Pathology Gastrointestinal Pathology Slide Seminar Panel.

DR. T.F. MCELLIGOTT: Examiner in Pathology for General Surgery, Royal College of Physicians & Surgeons; Representative of Canadian Association of Pathologists at International Council of Societies of Pathology; Member, Standing Committee on Records and Statistics of the Ontario Cancer Treatment and Research Foundation; Vice-President of the Canadian Association of Pathologists; Representative of the Canadian Association of Pathologists to the Canadian Blood Committee; Member, Standing Committee on

COMMITTEE MEMBERSHIPS (continued)

DR. T.F. MCELLIGOTT (continued): Record and Statistics of the Ontario Cancer Treatment and Research Foundation; Chairman, Infection Control Committee, Hotel Dieu Hospital; Chairman, Quality Assurance Committee, Hotel Dieu Hospital.

DR. R.S. PRENTICE: Reference Pathologist, Canadian Tumour Reference Centre 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.

DR. M.J. RAYMOND: Member of Isotope Committee, Kingston General Hospital and Member of Kingston General Hospital Patient Information System Subcommittee.

DR. DAVID M. ROBERTSON: Member, Major Equipment Committee, Medical Research Council; Test Committee in Neuropathology, American Board of Pathology; Consultant in Pathology, Ontario Cancer Foundation, Kingston Clinic; President, International Academy of Pathology (United States-Canadian Division); Member of Council, I.A.P.; Consultant Neuropathologist, Canadian Tumour Reference Centre; Chairman, Ontario Cancer Treatment and Research Foundation Research Personnel Committee; Member, Ad Hoc Cancer Research Advisory Committee, Ontario Cancer Treatment and Research Foundation; Royal College of Physicians & Surgeons of Canada, Subcommittee on Manpower; Scientific Advisor, Management Board, Canadian Brain Tissue Bank; Chairman, Medical Advisory Committee, Kingston General Hospital; Chairman, Faculty Postgraduate Education Committee, Queen's University.

DR. H.D. STEELE: Member, Test Committee, Anatomical Pathology, Royal College of Physicians & Surgeons; Member, Ambulatory Clinics Committee, Clare Nelson Committee, Quality Assurance Committee and Medical Advisory Committee of Kingston General Hospital; Member, Medical Advisory Committee and Infection Control Committee of St. Mary's of the Lake Hospital; Chairman, Medical Laboratory Technology Advisory Committee, St. Lawrence College of Applied Arts & Technology.

DR. S. WASAN: Secretary-Treasurer, Medical Advisory Committee, Hotel Dieu Hospital.

EDITORIAL BOARDS

DR. A.J. DEBOLD:	Hypertension Journal
	Editorial Board
DR. R.S. KERBEL:	Clinical and Experimental Metastasis
	Editorial Board
	Invasion and Metastasis
	Editorial Board
	Cancer and Metastasis Review
	Editorial Board
DR. R. KISILEVSKY:	Laboratory Investigation
	Editorial Board
DR. S.K. LUDWIN:	Journal of Neuropathology and Applied Neurobiology
	Editorial Advisory Board
DR. DAVID ROBERTSON:	Clinical Neuropathology - An International Journal
	Editorial Advisory Board
	Laboratory Investigation
	Editorial Board

SENIOR STAFF

INVITED LECTURES OUTSIDE OF KINGSTON

INVITED LECTURES OUTSIDE OF KINGSTON

DR. A. CLARK: Androgens and the Rat Prostate: Studies With Cell Cultures Seminar presented to Department of Endocrinology, Cancer Control Agency, Vancouver, B.C. May 1985.

Workshop on Molecular Regulation, International Symposium on Regulation of Androgen Action, Montreal, Quebec, Dr. Clark - Chairman, June, 1985.

DR. J. DENNIS: Asparagine-linked Oligosaccharides in Murine Tumor Cells: Comparison of a WGA-resistant (WGA) Nonmetastatic Mutant and a Related WGA-sensitive (WGA) Metastatic Line, La Jolla Cancer Research Foundation, La Jolla, California, November, 1984

DR. A.J. DEBOLD: Diuretic Peptides from the Heart. Joint Scientific Sessions of the Councils on Circulation and Basic Science, American Heart Association, Snowmass, Colorado, August, 1984.

Atrial Natriuretic Factor - An Overview, Schering-Plough Corporation, Kenilworth, New Jersey, October, 1984.

Atrial Natriuretic Factor - An Overview. International Medical Directors Meeting. Merck, Sharp & Dohme, Princeton Forrestal Center, Princeton, Pennsylvania, October, 1984.

Atrial Natriuretic Factor. Mini-Symposium, Kyoto University, Tokyo, Japan, November 1984.

Atrial Natriuretic Factor, Ajinomoto Co. Inc., Yokohama, Japan, November, 1984.

Atrial Natriuretic Factor. Department Innere Medizin Kantonsspital, Basel, Switzerland, November, 1984.

Atrial Natriuretic Factor. Physiologisches Institut, Universitat Munchen, Germany, November, 1984.

Atrial Natriuretic Factor. Technical Meeting, Boehringer Ingleheim, Ingleheim, Germany, November, 1984.

Cardionatrins: a 15 year Trek from Morphology to Molecular Biology. 9th Electron Microscope Research Week, San Juan, Puerto Rico, March, 1985.

Endocrine Function of Cardiac Muscle: ANF from Inception to Present. Cardiac Muscle Society, Anaheim, California, April, 1985.

INVITED LECTURES OUTSIDE OF KINGSTON
(continued)

DR. B.E. ELLIOTT: Role of self-major Histocompatibility Antigens in Spontaneous Malignancy. National Cancer Institute, National Institutes of Health, Bethesda, May, 1985.

DR. P. FORD: Plasmapheresis (PL) Therapy in Rheumatoid Arthritis (RA): A Controlled, Double-Blind, Cross-Over Trial. 18th Congress of the International Society of Blood Transfusion, Munich, Germany, July, 1984.

DR. A. GILES: In Vivo Testing of Factor VIII Therapies - The Genetics Institute, Boston, February 1985.

The Use of DNA Probes in the Diagnosis of the Hemophilias - The Hospital for Sick Children, Toronto, May, 1985.

The Development of Factor VIII Bypassing Therapy. Toronto Hematology Society, May, 1985.

Hemophilia A and Other Factor VIII Related Deficiency States. Mohawk College for Medical Technology, Hamilton, May, 1985.

DR. R.S. KERBEL: Recent Progress in Cancer Research, Mount Sinai Hospital Women's Auxillary, Toronto, October, 1984.

Genetic and Epigenetic Aspects of Tumor Progression and Metastasis. Montreal Cancer Institute, November, 1984.

Problems and Pitfalls in the Use of Animal Models to Study Aspects of Cancer, Especially Tumor Immunology. Terry Fox Graduate Course in Tumor Biology, Ontario Cancer Institute, Toronto, December, 1984.

Prototypes of Cancer Therapy Which May Circumvent the Problem of Tumor Cell Heterogeneity: Anti-Angrogenesis. Grand Rounds Ontario Cancer Institute, Princess Margaret Hospital, Toronto, December, 1984.

Genetic and Epigenetic Considerations of the Metastatic Phenotype. Ontario Cancer Institute, January, 1985.

Genetic and Epigenetic Considerations of the Metastatic Phenotype. Department of Radiobiology and Oncology, University of Rochester, Rochester, New York, March, 1985.

INVITED LECTURES OUTSIDE OF KINGSTON
(continued)

DR. R.S. KERBEL (continued): Genetic, Epigenetic and Immunologic Aspects of the Metastatic Phenotype. Wayne State University, April, 1985.

Genetic and Epigenetic Aspects of the Metastatic Phenotype Studied Using Transplantable Mouse Tumors and Human Tumor Xenograts. National Cancer Institute, Tokyo, Japan, June, 1985. Same lecture presented at the Institute of Tuberculosis and Cancer, Tohoku University, Sendai, Japan, June, 1985.

DR. R. KISILEVSKY: Hepatotoxins and Fatty Liver. Department of Gastroenterology, Sunnybrook Hospital, Toronto, October, 1984.

Visiting Research Scientist, Department of Rheumatology, Institute of Clinical Medicine, University of Tromso, Tromso, Norway, August, 1985.

DR. A. LAGARDE: Control of Cell Division and Neoplasia. National Institutes of Health, Research Triangle Park, Durham, North Carolina, Sept., 1984.

Control of Cell Division and Neoplasia. Ontario Cancer Institute, Toronto, November, 1984.

Experimental Studies on Metastasis. Department of Biochemistry, University of Nice, France, April, 1985.

DR. S. LUDWIN: Remyelination and Demyelination in the Cuprizone Model. Alberta Heritage Foundation Visiting Professor, University of Alberta, October, 1984.

3M of Canada Symposium on Excellence in Clinical Teaching. Queen's University Selected Participant. London, Ontario, October, 1984.

Effects of Toxic Agents on Oligodendrocytes and Myelin. Multiple Sclerosis Society Workshop on Mechanisms of Myelin Breakdown, Airlie, Virginia, November, 1984.

CNS Remyelination and Oligodendrocyte Behaviour. Visiting Professor, National Institutes of Health, Washington, November, 1984.

INVITED LECTURES OUTSIDE OF KINGSTON
(continued)

DR. M. RAYMOND: Diagnosis of Hepatic Dysfunction. Ontario Society of Medical Technologists, Brockville, Ontario, October, 1984.

DR. S. NAG: Electron Microscopy in the Diagnosis of Tumors. G.S.V.M. Medical College, Kanpur, India, December, 1984.

Neuropathology Slide Seminar. All India Institute of Medical Sciences, New Delhi, India, November, 1984.

Neuropathology Slide Seminar. King George Medical College, Lucknow, India, December, 1984.

GUEST LECTURERS

VISITING LECTURERS

DEPARTMENT OF PATHOLOGY

1984 - 1985

The department has continued to provide seminars and lectures for continuing education of the staff and residents. During 1984-1985 we have hosted the following lecturers:

"Structure and Tissue-Specific Expression of Mammalian Crystallin Genes"
Dr. Martin Breitman, Hospital for Sick Children, Toronto

"Amplification of the Gene for Asparagine Synthetase"
Dr. Irene Andrulis, Department of Medical Genetics, Hospital for Sick Children

"Role of Sex Steroids in the Progression of Liver Nodules to Cancer"
Dr. W. Racz, Depaartment of Pharmacology, Queen's University

"Model Systems of Alzheimer's Disease"
Dr. Umberto de Boni, Department of Physiology, University of Toronto

"New Developments in the Treatment of Parkinson's Disease"
Dr. Donald B. Calne, Head, Division of Neurology, Department of Medicine, University of British Columbia

"Morphology of the Human Hemostatic Plug"
Professor Jan Sixma, Professor and Head, Hematology, University of Utrecht, The Netherlands

"Heparin - Structure, Function and Mechanism"
Dr. J. Barrowcliffe, National Institute for Biological Standards and Control, London, U.K.

"Sensory Feedback during Mastication - Its Consequences and Its Control"
Dr. James P. Lund, Neurological Sciences Research Centre, University of Montreal

"Monoclonal Antibodies and Cerebellar Development"
Dr. R. Hawkes, Department of Neurosciences, Laval University

VISITING LECTURERS (continued)

"Modulation of Differentiation and Tumor Antigen Expression by Recombinant Human Interferon"
Dr. Paul Fisher, Dept. of Microbiology, Columbia University, New York
"Induction of Ia on Murine Renal Epithelial Cells in Immune Reactions"
Dr. Phil Halloran, Mount Sinai Hospital, Toronto
Two keynoite speakers at a Symposium on Immune Interferon sponsored by the Cancer Research Group

"Temporal Lobes in the Human Memory Process"
Dr. B. Milner, Professor of Neurology and Neurosurgery, McGill University

"Possible Role of Contractile Proteins and Calmodulin in the Secretory Process of the Chromaffin Cell"
Dr. J.M. Trifaro, Department of Pharmacology, McGill University

"The Subfornical Organ and Neuroendocrine Autonomic Function"
Dr. A.V. Ferguson, Department of Physiology, Queen's University

"Targets of Amine Modulation of Motor Systems in the Lobster"
Dr. R.M. Harris-Warrich, Section of Neurobiology and Behaviour, Cornell University, Ithaca, New York

"Skin and Lymphocytes in Neurometabolic Disease"
Dr. Clarisse Dolman, Neuropathologist, Department of Pathology, Vancouver General Hospital
Dr. Dolman was a Visiting Lecturer in the department, and she participated in the Neuropathology Conference and Neurology Rounds, and also presented a Neuropathology Slide Seminar in the departmental library. Dr. Dolman presided over an informal meeting with the Pathology residents and also was the Pathology Discussant at the Clinicopathological Conference.

"Immunohistochemistry - Practical Uses in Diagnostic Surgical Pathology"
"Brain - Gut Peptides"
"Diagnostic Slide Seminar"
Dr. Juan Lechago, Associate Professor of Pathology, University of California, Los Angeles
Dr. Lechago was a Visiting Professor in the department and in addition to the three seminars listed above he participated in several conferences at Kingston General Hospital and Hotel Dieu Hospital.

"Design of Anticonvulsant Drugs"
Dr. Donald F. Weaver, Department of Chemistry, Queen's University

VISITING LECTURERS (continued)

"Selective Fascicular Involvement in Lesions of Peripheral Nerves"
Dr. John Stewart, Dept. of Medicine (Neurology), Montreal General Hospital and McGill University

"Specific Effects of Ethanol on Developing Neurons"
Dr. Kimberly E. Dow, Department of Pediatrics, Queen's University

"The Application of Recombinant DNA in Neuro-degenerative Disorders"
Dr. Michael Hayden, Assistant Professor of Medical Genetics and Medicine, University of British Columbia Clinical Genetics Unit, and Grace Hospital, Vancouver

"The Role of the Cytoskeleton in the Maintenance of Endothelial Integrity"
Dr. A. Gotlieb, Dept. of Pathology, University of Toronto

"Retinoblastoma: Model for Unique Class of Oncogenes"
Dr. R.A. Phillips, Ontario Cancer Institute, Toronto

"Control of Nerve Fibre Growth by Components of the Extracellular Matrix of the Nervous System"
Dr. Salvatore Carbonetto, Associate Professor of Medicine, McGill University

"Recent Advances in Eicosanoid Research, Particularly in Relation to Brain Injury and Ischemia"
Dr. L.S. Wolfe,, Director, Donner Laboratory of Experimental Neurochemistry, Montreal Neurological Institute

PRESENTATIONS

PRESENTATIONS

DR. A. CLARK: Orlowski, J., Marsden, J., Bird, C.E. and Clark, A.F.Effects of Diabetes on Androgen Metabolism as Related to the Rat Prostate. Oral presentation at the Southern Ontario Reproductive Biology Conference, Waterloo, Ontario, 1984.

DR. A.F. CLARK: Orlowski, J., Downey, J., Bird, C.E., and Clark, A.F. Androgens and Rat Ventral Prostate Growth and Differentiation. Presented as a Poster at the International Symposium on Regulation of Androgen Action, Montreal, 1984.

DR. A.F. CLARK: Downey, J., Bird, C.E. and Clark, A.F. Sex differences in Rat Liver Acid Phosphatase (AP). Presented as a Poster at 7th International Congress of Endocrinology, Quebec City, 1984.

DR. A.F. CLARK: McDonald, G.,. Clark, A.F., Flynn, T.G. Aldehyde Reductases of Rat Muscle. Presented at the 27th Annual Meeting of the Canadian Federation of Biological Societies, Saskatchewan, 1984.

DR. A.F. CLARK: Clark, A.F., Orlowski, J., Marsden, J., Bird, C.E. Androgen Metabolism in the Wistar BB Diabetic Rat. Presented at the Laurentian Hormone Conference, Virginia, U.S.A., 1984.

DR. A.J. DEBOLD: Purification and Characterization of Rat Atrial Cardionatrins - Potential Diuretic, Natriuretic and Vasoactive Hormones, Flynn, T.G., deBold, M.L. and deBold, A.J., 7th International Congress of Endocrinology, Quebec City, July 1984.

DR. A.J. DEBOLD: Potencial de la Cardionatrina para el Uso clinico. Encuentro con Argentinos Endocrinologos del Exterior, Buenos Aiares, Argentina, August, 1984.

DR. A.J. DEBOLD: Aspectos Morfologicos y Bioquimicos de Ias Cardionatrinas. Buenos Aires, Argentina, August, 1984.,

DR. A.J. DEBOLD: Atrial Granules-Peptide Isolation. Canadian Society for Clinical Investigation, Montreal, September, 1984.

DR. A.J. DEBOLD: Morphological and Biochemical Aspects of Atrial Natriuretic Factor (Cardionatrins). NAITO Foundation International Symposium, Japan, November, 1984

PRESENTATIONS (continued)

DR. A.J. DEBOLD (continued): Atrial Natriuretic Factor (Cardionatrins) - Current Status. INSERM Conference, Seillac, France, November, 1984.

DR. A.J. DEBOLD: Atrial Natriuretic Factor - An Overview. 17th Annual Meeting of the American Society of Nephrology, Washington, D.C., December, 1984.

DR. A.J. DEBOLD: Atrial Natriuretic Factor - An Overview. Federation of American Societies for Experimental Biology, Anaheim, California, April, 1985.

DR. B. ELLIOTT: Poster on Increased Surface Major Histocompatibility Antigen (H-2D) Expression on Immunogenic Variants of a Spontaneous Murine Carcinoma. Terry Fox Cancer Meeting, Epigenetic Regulation of Cancer, UBC, August, 1984.

DR. B. ELLIOTT: Poster on Increased Surface Major Histocompatibility Antigen Correlates with the Immunogenic Phenotype of a Murine Mammary Adenocarcinoma. 4th Annual Symposium on Gene Regulation, Queen's University, August, 1984.

DR. B. ELLIOTT: Poster presented on Increased Surface Major Histocompatibility Antigen Correlates with the Immunogenic Phenotype of a Murine Mammary Adenocarcinoma. 38th Annual Symposium on Fundamental Cancer Research, Houston, Texas, February, 1985.

DR. P. FORD: Plasmapheresis (PL) Therapy in Rheumatoid Arthritis (RA): A Controlled, Double-Blind, Cross-Over Trial. 18th Congress of International Society of Blood Transfusion, Munich, Germany, July, 1984.

DR. A. GILES: Standardization of an Experimental Approach to Venous Thromboembolism. International Society of Thrombosis and Hemostasis, Miami, November, 1984.

DR. A. GILES: In Vivo Evaluation of Experimental Factor VIII Therapies. Gordon Conference on Hemostasis, Andover, June, 1985.

DR. R.S. KERBEL: Epigenetic Mechanisms in the Development of Tumor Cell Heterogeneity. Terry Fox Cancer Meeting, Cancer and Epigenetics, Vancouver, August, 1984.

PRESENTATIONS (continued)

DR. R.S. KERBEL (continued): Alterations of Tumor Cell Immunogenicity Induced by Mutagens. Biological Response Modifiers and Cancer, Hakone, Japan, September, 1984.

DR. R.S. KERBEL: Genetic and Epigenetic aspects of the Metastatic Phenotype. Chiba Cancer Center, Chiba, Japan, September, 1984.

DR. R.S. KERBEL: Prototypes of Cancer Therapies Which may Circumvent the Problem of Tumor Cell Heterogeneity and Resistance to Therapy. Cancer Therapy Meeting, Jackson Hole, Wyoming, September, 1984.

DR. R.S. KERBEL: DNA Methylation and Malignancy. DNA Methylation and Cancer Meeting, Philadelphia, October, 1984.

DR. R.S. KERBEL: Impact of Tumor Cell Heterogeneity on Therapeutic Failures in the Treatment of Cancer. Canadian Cancer Society meeting, Toronto, November, 1984.

DR. R.S. KERBEL: Epigenetic Aspects of Metastasis. Fogarty Symposium on Biochemistry and Molecular Genetics of Cancer Metastasis, Washington, D.C., March, 1985.

DR. R.S. KERBEL: An Approach to the Study of the Contribution of the Plasma Membrane to Metastasis. Canadian Cell Biology meeting, Banff, Alberta, March, 1985.

DR. R.S. KERBEL: Genetic and Epigenetic Considerations of Metastataic Cancer Cells. International Meeting on Differentiation of Normal and Neoplastic Cells, Heidelberg, Germany, May, 1985.

DR. R.S. KERBEL: Generation of Cellular Diversity. Major Symposium Lecture of the American Association for Cancer Research, Houston, Texas, May, 1985.

DR. R. KISILEVSKY: The Temporal Relationship Between Glycosaminoglycen Accumulation and Amyloid Deposition During Experimental Amyloidosis. Abstract with A. Snow. International Academy of Pathology, San Francisco, 1984.

DR. R. KISILEVSKY: The Time Relationship Between Amyloid Deposition and Glycosaminoglycan Accumulation During Experimental Amyloidosis. With A. Snow. IVth International Symposium on Amyloidosis, Harriman, New York, 1984.

PRESENTATIONS (continued)

DR. R. KISILEVSKY (continued): Regulation of Hepatic Protein Synthesis: The Role of Insulin and Glycagon During Acute Ethionine Intoxication. Abstract with A. Lyon. International Academy of Pathology, Toronto, March, 1985.

DR. S.K. LUDWIN: Idiopathic Granuloma of the Hypothalmus and Pituitary (Gagel's Granuloma). With Dr. D. Munoz-Garcia. Canadian Association of Neuropathologists, Ottawa, 1984.

DR. S.K. LUDWIN: Gliogenesis and Myelination in Organotypic Tissue Culture. Immunocytochemical, ultrastructural and autoradiographic studies. With Dr. D. Munoz-Garcia. Canadian Association of Neuropathologists, Ottawa, 1984.

DR. S. NAG: Distribution of Lectin Receptors on Cerebral Endothelium. 6th International Symposium on Brain Edema. Tokyo, Japan, November, 1984.

DR. S. NAG: Effect of Cytochalasin B on Cerebral Endothelium. XII International Symposium on Cerebral Blood Flow and Metabolism. Lund/Ronnenby, Sweden, June, 1985.

DR. S. NAG: Oligosaccharide Residues on Cerebral Endothelium in Hypertension. Symposium on Blood-Brain Barrier, Copenhagen, June, 1985.

DR. R. PRENTICE: Rheumatoid Nodules - What Do They Mean? With Dr. Sen Gupta, and Dr. Anastassiades. Ontario Association of Pathologists meeting 1984.

PUBLICATIONS

PUBLICATIONS

A Platelet Release Defect Induced by Aspirin or Penicillin G Does Not Increase Gastrointestinal Blood Loss in Thrombocytopenic Rabbits
Allan R. Giles, Penny Greenwood and Shawn Tinlin
British Journal of Hematology 57:17, 1984

The Thrombogenicity of Prothrombin Complex Concentrates. IV. The Source of Coagulant-Active Phospholipid
Alan R. Giles, Hugh Hoogendorn and Shawn Tinlin
Thrombosis Research 34:567, 1984

An Immunohistochemical Study of Myelin Proteins During Remyelination in the CNS
S.K. Ludwin, N.H. Sternberger
Acta Neuropathol (Berl.) 63:240, 1984

Long-Term Remyelination Fails to Reconstitute Normal Thickness of Central Myelin Sheaths
Samuel K. Ludwin, Marion Maitland
J. Neurol. Sci. 64:193, 1984

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

Characterization of In Vitro Immunoselected Variants from a Highly Metastatic Murine Tumor for Alterations in Malignant Behaviour In Vivo
R.G. Liteplo, P. Frost, T.P. Donaghue, and R.S. Kerbel
Int. J. Cancer 33:669, 1984

Spontaneous Fusion In Vivo Between Normal Host and Tumor Cells: Possible Contribution to Tumor Progression and Metastasis Studied with a Lectin-Resistant Mutant Tumor
Robert S. Kerbel, Alain E. Lagarde, James W. Dennis
Terrance P. Donaghue
Mol. Cell Biol. 3(4):523, 1984

Selection of Strongly Immunogenic "Tum-" Variants From Tumors at High Frequency Using 5-Azacytidine
Philip Frost, Robert G. Liteplo, Terrance P. Donaghue,
Robert S. Kerbel
J. Exp. Med. 159:1491, 1984

PUBLICATIONS (continued)

Relevance of Spontaneous In Vivo Tumor-Host Cell Fusion to Tumor Progression and Metastasis Evaluated Using a Series of Lectin-Resistant Mutant Tumor Sublines

Robert S. Kerbel, Alain E. Lagarde, James W. Dennis, Fred P. Nestel, Terrance P. Donaghue, Louis Siminovitch, Marie Claude Fulchignoni-Lataud
IN: Cancer Invasion and Metastasis: Biologic and Therapeutic Aspects. Edited by Garth L. Nicolson and Luka Milas, Raven Press NY 1984

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.S. Man, D. Dexter
JNCI 72(1):93, 1984

Cyclic AMP Binding Activity in Liver Supernatants During Acute Ethionine Intoxication

K.H. Wong, R. Kisilevsky
Exp. & Molec. Path. 40:349, 1984

Polyneuropathy with Vagus and Phrenic Nerve Involvement in Breast Cancer: Report of a Case With Spontaneous Remission

Adrian Handforth, Sukriti Nag, David M. Robertson
Arch. Neurol. 41:666, 1984

Use of an Animal Model to Evaluate Hemophilia Therapies

Alan R. Giles
IN: Factor VIII Inhibitors, Alan R. Liss Inc. NY
p. 265, 1984

Amiodarone Hepatotoxicity Simulating Alcoholic Liver Disease

Jerome B. Simon, Paul N. Manley, James F. Brien, Paul W. Armstrong
N. Eng. J. Med. 311:167, 1984

Dehydropiandrosterone Sulfate: Kinetics of Metabolism in Normal Young Men and Women

Charles E. Bird, Valerie Masters, Albert Clark
Cl. & Investig. Med. 7(2):119, 1984

Cerebral Endothelial Surface Charge in Hypertension

S. Nag
Acta Neuropathol (Berl) 63:276, 1984

A Controlled Trial of Plasma Exchange in Rheumatoid Arthritis

Alan Giles, Isaac Dwosh, Peter Ford, Joseph Pater, Tassos Anastassiades
J. Clin. Apheresis 2:119, 1984

Brain Malformations: The Problems

Margaret G. Norman, Samuel K. Ludwin
IN: The Developing Brain and Its Disorders, Edited by Masataka Arima, Yoshiyuki Suzuki, Hyakuji Yabuuchi University of Tokyo Press, 1984, p. 15

PUBLICATIONS (continued)

Classic and Generalized Variants of Pick's Disease: A Clinicopathological, Ultrastructural and Immunocytochemical Study
D. Munoz-Garcia, S.K. Ludwin
Annals of Neurology 16(4):467, 1984

Primary Care and the Pattern of Disease in a Rural Area of the Argentine Chaco
Mary T. Brett
Bull. Pan Am Health Organ 18(2):115, 1984

Pharmacological Modification of Blood-Brain Barrier Permeability Following a Cold Lesion
Jennifer J. Raymond, David M. Robertson, Henry B. Dinsdale, Sukriti Nag
Can. J. Neurol. Sc. 11 #4, 447, 1984

Studies of Factors V and VIII:C in an Animal Model of Disseminated Intravascular Coagulation
Alan R. Giles, Michael E. Nesheim, Kenneth G. Mann
J. Clin. Invest. 74:2219, 1984

Regulation of Hepatic Protein Synthesis: The Role of Insulin and Glucagon during Acute Ethionine Intoxication
A.W. Lyon and R. Kisilevsky
Lab. Invest. 52:40A(1), 1985 (ABSTRACT)

Familial Neonatal Colitis
P.N. Manley anbd M.W. Partington
Lab. Invest. 52:41A(1), 1985 (ABSTRACT)

Rhabdoneuoglial Heterotopias of the Pontine Leptomeninges in Trisomy 13
Edward S. Johnson, Samuel K. Ludwin
Arch. Pathol. Lab. Med. 108:906, 1984

Reaction of Oligodendrocytes and Astrocytes to Trauma and Implantation: A Combined Autoradiographic and Immunohistochemical Study
Samuel K. Ludwin
Lab Invest. 52:20, 1985

Neurotoxicity of Adriamycin and Misonidazole in the Mouse
R.J. Boegman, B. Scarth, L. Dragovic, D.M. Robertson
Exp. Neurology 87:1, 1985

The Cytologic History of 245 Patients Developing Invasive Cervical Carcinoma
J.A. Carmichael, J.F. Jeffrey, H.D. Steele, I.D. Ohlke
Am. J. Obstet. Gynecol. 148:686, 1984

PUBLICATIONS (continued)

Ultrastructural Localization of Lectin Receptors on Cerebral Endothelium
S. Nag
Acta Neuropathol. (Berl) 66:105, 1985

Spontaneous and Induced Primary Oncogenesis in Natural Killer (NK)- Cell Deficient Beige Mutant Mice
Tina Haliotis, Judith Ball, David Dexter, John C. Roder
Int. J. Cancer 35:505, 1985

General Neuropathology
Editors: David M. Robertson and Richard L. Davis
Published by Williams & Wilkins Company, Baltimore, 1985