



Volume: 95 : No.2  
Summer



*This issue*

## Stage is set for Annual Meetings with 64th RCPSC Session in Montréal on September 13-17, 1995

Scientific Sessions include Symposium, CAS-Sandoz Lecture, Oral and Poster Presentations. CAS also Co-sponsoring Symposia with CAP and CSCI

From September 13th to 17th, 1995, a large number of physicians, medical scientists, and teachers from medical colleges in Canada will gather in Montréal for an opportunity to share ideas and discuss results of the latest research findings. The occasion is 64th annual session of the Royal College of Physicians and Surgeons of Canada and its affiliated Societies.

The Canadian Atherosclerosis Society has planned its scientific programme which will include a symposium on 'Prevention and Treatment of Atherosclerosis in the Elderly', the CAS-Sandoz lecture, oral papers, posters and cosponsored symposia. These sessions will take place in the Radisson Gouverneurs Montréal Hotel.

The CAS symposium will be on Friday, the 15th September 1995 at 2:00 PM. The symposium will be chaired jointly by Drs McManus and Golberg and will have five talks by Drs. LaRosa, Moore, Ameli, Frohlich and Schifferin

followed by a panel discussion by all speakers. Saturday, morning (8:00-10:15 AM), there will be an 'Oral Paper' session chaired by Drs. Brekenridge and Cianflone. This session will have nine papers by Drs Perk, Wolfe, Goldberg, Pace-Asciak, Adler, Wesolowska, Chan, Christensen and McPhail. This session will be followed by the CAS-Sandoz Lecture of Dr. Sniderman. Saturday, afternoon (4:30-6:00 PM) will have a 'Poster' session. The posters will be displayed by Drs. Spence, Lacaille, Reiner, Zhang, Vu, Kalant, Wang, Bolli and Dipehand.

In addition, CAS will be joining other societies to cosponsor a special symposium on 'Susceptibility to Common Diseases' organized jointly by the Canadian Society for Clinical Investigation and the Royal College of Physicians and Surgeons of Canada on Thursday, the 14th September, 1995 at 1400 hr. The special symposium will have a lecture on the role of lipids in cardiovascular

disease by Dr. Robert Hegele at 2:40 PM. On Friday, the 16th September, 1995, CAS will be joining the Canadian Association of Pathologists to sponsor two concurrent symposia, the one on 'Aging Gracefully: A cellular and molecular Odyssey', Co-chaired by Dr. Avrum Gotlieb and the other on 'Medical Implications of Biochemical Changes with Aging', latter will have a lecture on Apo E Polymorphism, Atherosclerosis and the Elderly by Dr. Jean Davignon.

The Annual Business Meeting has been scheduled for Saturday, September 16, 1:00 PM in St Laurent Room. There is also a Wine and Cheese reception planned on Saturday evening (6:00-8:00 PM).

There will also be a joint meeting of the Executive, Education and Long Term Planning Committees on Friday from 9:00 AM-1200 PM in the Cartier Room.

## Golberg in France on Sabbatical

Professor David Goldberg, CAS Education Committee Chair, is on a year sabbatical leave from the Department of Clinical Biochemistry, University of Toronto to work at the Centre de Biochimie (UMR 134), Centre National de la Recherche Scientifique, Université de Nice, France. Dr. Goldberg, will be in Montréal for CAS Annual meetings in September.

## Efficacy of Hypercholesterolemic Diets Examined

A scientific Conference on the Efficacy of Hypercholesterolemic Dietary interventions, sponsored by the American Heart Association's Committee on Nutrition and the Councils on Atherosclerosis and Epidemiology and Prevention was held at the Wyndham Hotel, San Antonio, Texas, on May 3rd-5th, 1995.

Concerns have expressed

about the effectiveness of the AHA Step I and Step II diets in lowering serum cholesterol levels and the objective of the Conference was to examine the evidence that dietary components other than cholesterol and dietary fat can influence the efficacy of these diets.

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*Misbahuddin Zafar Alavi*

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## **Eleventh Season of 'Vessel Wall' Seminars at McMaster CAS-President elect and members Alavi, Buchanan, and Ofosu among speakers in a recent session Sheffield named new group Coordinator**

### **Mark Hatton**

The 'Vessel Wall' seminars are a weekly series of talks given largely by graduate students and members of faculty to the McMaster Community. The series started in 1984, to foster lines of communication between seemingly far-flung researchers who all had a common interest --- the vascular endothelium.

The 'Vessel Wall' group have just completed its eleventh season; a total of 30 speakers have had an opportunity to present research findings, convey their ideas, stimulate questions and new thoughts in their audience. As always, the presentations have ranged from

molecules to the patient's bedside; 'mutagenesis in heparin cofactor II', 'organ specific metastasis', activated protein C resistance, 'structure and function resistance vessels in hypertension', 'lipoprotein-proteoglycan interactions', and many more cutting-edge topics in a vibrant research fields. CAS-President elect Dr. Jack Hirsh, and members Drs. Alavi, Buchanan and Ofosu were among the speakers of eleventh season.

Next season, 'Vessel Wall' group will see a change, as Dr. Sheffield replaces Dr. Hatton as Coordinator.

## **Canadian Musculoskeletal Conference : An Initiative to Assemble Scientists Interested in Connective Tissue Research**

The Inaugural of Canadian Musculoskeletal (Connective Tissue) Conference, organized by Dr. Robin Poole, was held at Montréal Neurological Institute, McGill University, on June 27th-28th, 1995. Scientifically, the conference was of the highest order, 66 scientists have presented their research findings. The audience participation provided a lively discussion following presentations.

The objective was to instill an 'awareness' of Canadian researchers,

who are interested in 'Connective Tissue Pathobiology'. The initiative is largely welcomed and enthusiastically endorsed by all 120 participants of the Inaugural Conference'. It was unanimously decided to make this Conference a regular yearly event. Drs Pritzker and Sodek will host the next Conference in Toronto in June, 1996. All interested investigators are encouraged to contact Dr. Robin Poole, Director, Joint Disease Laboratory, Shriners' Hospital for Crippled Children, Montreal

(Telephone: (514) 849-6208; E-Mail: @MDPO.MUSICA.MCGILL.CA).

## **Two Young Investigator Awards Annually for Outstanding Research Presentations**

On the recommendation of the Education Committee, it is decided that Society will award two 'Young Investigator Awards'. One for the best 'paper' and the other for the best 'Poster' submitted for presentation at annual Meeting by a young researcher working with a CAS member. Three finalist will be selected from all competing posters and the investigators will be asked to give a brief presentation in front

of Judges.

The Awardees will get a certificate and an honorarium of \$500.00 each.

*Get involved!  
Participate in Society's Affairs!  
Write for Newsletter!*

## **Haust at Queen's**

Founding President Dr. M Daria Haust is currently a Visiting Scholar in the Department of Pathology at Queen's University, Kingston. She is on sabbatical leaves from the University of Western Ontario.

## **Carroll Invited to Tyumen Russian Siberia**

Dr. K. K. Carroll, former CAS president and interim Chair of LTPC, was invited to speak at an International Symposium on 'New Biologically Active Nutritional Supplements - Nutraceuticals - in Prevention and Treatment of the Most Widely Spread Diseases' organized jointly by the Nutrition Institute (Russian academy of Science), the Tyumen Medical Institute and the Tyumen Centre of Nutrition, and held at Tyumen, Russian Siberia, on June 7th-8th, 1995. Dr. Carroll's presentation was entitled 'Anti-Cancer and Hypocholesterolemic Activities of Some Minor Food Components'.

Dr. Carroll is the Director of the Centre for Human Nutrition at the University of Western Ontario, London, Ontario.

## **Galis at Emory**

Dr. Zorina Galis, recipient of 1992 Young Investigator Award, has joined the Faculty at Emory University, Atlanta, after successful completion of her AHA Fellowship at Brigham and Women's Hospital, Boston, MA

*Continued from Page 1: Dietary Efficacy....*

Effects of components such as protein, fibre, plant sterols and calcium were considered, as well as, the possible role of structured triglycerides, fat substitutes and very low fat diets. The influence of genetic factors and diseases such as diabetes were discussed and concerns were expressed over the apparent increase in obesity in spite of decreasing fat intake by the population.

Drs. K. K. Carroll and B. M. Wolfe of CAS presented data on effects of dietary protein on serum cholesterol levels. The oral presentation by Dr. Carroll was co-authored by Dr. E. M. Kurowska and the poster by Dr. Wolfe was co-authored by Dr. L. Piche.

# 1995 CAS Annual Meeting Programme

Radisson Gouverneurs Montréal Hotel

Thursday, September 14, 1995

1400 to 1700

CSCI/RCPSC Special Symposium  
**Susceptibility to Common Diseases**

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Friday, September 15, 1995

1400 to 1700

CAS Symposium  
**Prevention and Treatment of  
Atherosclerosis in the Elderly**

Co-Chairpersons

**Drs. McManus and Goldberg**

Speakers

*Drs. LaRosa, Moore, Ameli, Frohlich, and Schiffrin*

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Saturday, September 16, 1995

8:00 to 10:15

**Oral Paper Session**

Chairpersons

**Drs. Breckenridge and Cianflone**

Speakers

**Drs. Perk, Wolfe, Goldberg,  
Pace-Asciak, Adler, Wesolwska, Chan,  
Christensen and McPhail**

10:15 to 11:15

**CAS-Sandoz Lecture**

1300-1400

Don't Forget to attend  
**Annual Business Meeting**  
in St. Laurent Room

14:00 to 18:00

**Poster Session**

Chairpersons

**Drs. Julien and Frohlich**

Presenters

**Drs. Spence, Lacaille, Renier, Zhang,  
Vu, Kalant, Wang, Bolli and Diphand**

1800-2000

CAP-CAS Concurrent Symposia  
#4 Aging Gracefully  
#5 Medical Implications of Biochemical Changes

Members are cordially  
invited to a

**Wine and Cheese Reception**

1995 QAS-Sandoz Lecture

**THE ADIPSIN-ASP PATHWAY:  
A MODEL OF MICROENVIRONMENT  
METABOLIC REGULATION**



**Allan D. Sniderman**

Edward Professor of Cardiology  
McGill University

**A**llan Sniderman obtained his MD from the University of Toronto in 1965. After internship in Toronto General Hospital, he underwent training in Internal Medicine and then Cardiology at the Royal Victoria Hospital, Montreal, this being completed in 1971. Between 1971-73, he began his studies of lipoprotein metabolism with Dr. Steinberg at the University of California San Diego. In 1973, he returned to the Royal Victoria Hospital where he has remained since.

**C**urrently, he is Edward Professor of Cardiology,

Director of the McGill Unit for the Prevention of Cardiovascular Diseases, and a Professor of Medicine at McGill University.

**H**is principal research interests are the further description of the causes and clinical significance of HyperapoB, one of the commonest dyslipoproteinemias associated with premature coronary artery disease, and the elucidation of the clinical and physiological significance of Adipsin-ASP pathway for the regulation of intracellular triglyceride synthesis

*Saturday, September 16, 1995,*

*Radisson Gouverneurs Montreal Hotel*

## King's to Queen's An Academic Odyssey through Darkrooms

*Professor Mary Richardson, Ph D*

*Professor Mary Richardson is one of the foremost Canadian morphologist, who has a passion for scientific investigation. She spends long hours in solitudes of darkrooms focusing on tiny sections under electron microscope, not only to refreshing the understanding what she is familiar with but in search of ways to provide a clear meaning to the unfamiliar.*

**M**ary Richardson (*née Redford*) educated at King's College, Newcastle-upon-Tyne. Upon graduation with a B.Sc. Honours in Physiology, she spent five years studying stimulating and inhibiting influences on gastric secretion acting through the *gastric antrum* with Brian Schofield, who first described the release of gastrin by vagal stimulation and she earned her Ph D from the University of Newcastle-upon-Tyne, England in 1964. She married to former class mate *Hari Richardson*. Ensuing nine years, she alternated between homemaking and working as Luckock Fellow with Professor John Thompson on pharmacology of human vas deferens. In 1971, Mary came to Canada with her husband and three children, *Andrew* (b. 1965), *Louise* (b. 1967) and *Anne* (b. 1971). She returned to academic life in September 1973, as a Research Fellow for the Ontario Heart Foundation to work with Colir. Schwartz on cardiovascular related research at McMaster University.

**S**ince her introduction to electron microscope by Ross Gerrity in 1973 at McMaster University, Mary Richardson is committed to promoting the understanding of cellular ultrastructure in health and disease. She was appointed Staff Electron Microscopist in 1977. Mary has been involved in the ultrastructural components of the research of many of the faculty at McMaster. As a Co-ordinator of the electron microscopy Unit, she was responsible for obtaining a grant from *Lotto Canada* which was used to purchase the Phillips 501 Scanning electron microscope. Presently, she is the Director of the Electron Microscope Facility in the Department of Pathology, at Queen's University.

**H**er careful observations of arterial wall have helped the American Heart Association significantly to define 'normal' intima. Now Mary Richardson has acquired greater prominence in



morphologists in both Canada and abroad.

**H**er formulation owed much to Sean Moore, with whom, she has been associated for almost ten years as Professional Assistant at McMaster University, while Sean was pursuing his studies on responses of rabbit arterial wall to balloon catheter deendothelialization following his landmark observations on the importance of endothelial injury in the development of lipid containing lesions. Fraser Mustard, then Dean of Medicine, whose inspiring leadership created an stimulating research environment has also influenced her.

**W**hen Sean Moore was appointed to the Chair of the Department of Pathology at McGill in 1984, she successfully applied for a Medical Research Scholarship of the Ontario Heart and Stroke Foundation, enabling her to develop her own programme and got the faculty appointment at McMaster. Since 1990, she has held a joint appointment at both McMaster and Queen's Universities.

*Mary Richardson  
has helped  
AHA significantly  
to define  
'normal' intima*

**A**mong her early contributions, was the observation of distinct ruthenium red staining patterns of aortic intima associated with the presence or absence of regenerating endothelium following a selective endothelial removal by a balloon catheter. This observation in part, led to the studies developed by Zafar Alavi which resulted in the identification of the proteoglycan production and accumulation and its role in lipid deposition. The role of proteoglycan in atherosclerosis has been a major focus of her research ever since. Observations include the parallel appearance and disappearance of proteoglycans during progression and regression of lesions induced in rabbit aortas damaged by an indwelling catheter. Recently, in collaboration with Mark Hat-

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# Starting Photos and Operatic Aria



Rudolf Altschul, Canadian pioneer of atherosclerosis research, has recognized the dynamics and plasticity of cells that composed the various layers of blood vessel walls. He was a man of broad culture, a clinician-scientist, a photographer, a linguist and a connoisseur of arts.

## Sergey Fedoroff

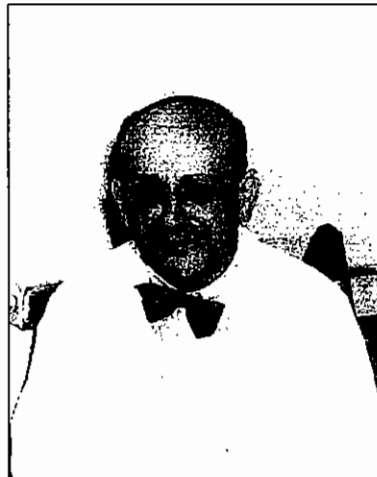
**R**udolf Altschul, "Rudi", as his friends called him, had two careers. After graduation from the University of Prague in Bohemia, as the country was called at that time, he specialized in neurology, neuropathology and neuropsychiatry. He received training in these areas in the Charcot Clinic at the *Hôpital de la Salpêtrière* in Paris and the University of Rome. On his return to Prague, in addition to the clinical work he loved so much, he also engaged in research in the department of Histology at the German University where he studied the normal and pathological morphology of the brain.

**T**his career was interrupted in 1939 when he and his wife, Anni, had to flee Prague because of the Nazi occupation. They started for Canada on *SS Athenia*, the doomed ship which was the first Allied vessel to be torpedoed by German submarines in the Second World War. They miraculously survived but all their possessions, including research papers, precious slides and books, were lost.

**A**fter a trying period in Ellis Island, where they were interned, the Altschuls arrived in Saskatoon and Rudi began his second career as a teacher of histology and neuroanatomy in the Department of

Anatomy. He resumed his research work, starting from scratch. He kept close contact with the clinical neuropathologist and was always elated when he could obtain a human brain, which he could carefully dissect, section and study in great detail.

**I**n one such brain, that of 45-year-old man, he observed severe atheromatous changes in brain vessels. His careful preparations showed clearly defined intermediate cells and he was able to formulate the hypothesis that foam cells in the



intima are not tissue or blood borne macrophages but rather transformed endothelial cells that have migrated into intima.

**T**his led him in a new direction in his research and he became a pioneer in Canada in the study of atherosclerosis. He began to study endothelium in detail and this led eventually to the publication of the now classical monograph, "*Endothelium*". In the preface of the monograph he said, "It has been said that one is as old as one's arteries. In view of supreme importance of endothelium in arterial function I should like to modify or rather simplify the statement by saying that one is as old

as one's endothelium". This statement is still widely quoted.

**T**o induce atherosclerosis in rabbit he used dried powdered egg yolk baked into cakes by ever-helpful Anni, because pure cholesterol was unobtainable at that time. It turned out that the cholesterol in the baked cakes and later heated pure cholesterol greatly potentiated the severity of atherosclerosis in experimental rabbits. One explanation was oxidation of the cholesterol. He summarized his observations and hypotheses about atherosclerosis in "*Selected Studies on Atherosclerosis*", published in 1950.

**T**o try to oxidized cholesterol in animals he used UV irradiation and oxygen therapy but to his surprise the results were opposite to those expected. Blood cholesterol levels dropped. He began to look for substances that might increase oxidative processes thereby influencing cholesterol metabolism. Together with Abram Hoffer, who studied the effect of large doses of nicotinic acid and its amide in schizophrenia, he found that nicotinic acid but not the amide significantly lowered the blood cholesterol in rabbit and in human patients. This led to the proposal of nicotinic acid therapy in atherosclerosis and the publication of book "*Niacin in Vascular Disorders and Hyperlipemia*". He died in November, 1963 at the peak of his career.

**R**udi was unique. He was a devoted scientist who hated holidays and was

He  
was happiest in his  
laboratory, peering  
through a microscope  
whistling  
an operatic aria

"Foam cells in the  
intima are transformed  
endothelial Cells - not  
macrophages"

## "One is as old as one's endothelium"

happiest in his laboratory, behind a microtome or peering through a microscope, whistling an operatic aria. He had many interests and was man of broad culture. He was an enthusiastic photographer, a linguist and connoisseur of the arts. He loved conversation and had a fund of anecdotes gleaned from his wide experience, told with great wit and charm. He always carried in his wallet a few recent pictures of endothelium or foam cells and would startle friends from other disciplines by whipping these pictures out and extolling the beauty and importance of these cells in one's life.

**H**is research was unorthodox, driven by his imaginative mind. Students respected and admired him as a teacher, clinician-scientist and as a person to whom they could go with their problems. He was always helpful and sympathetic but did not tolerate mediocrity or shoddiness.

**R**udolf was a humble person, genuinely surprised to be single out by his colleagues for special praise. He was a fellow of the Gerontological Society and in 1961 he was elected Fellow of the Royal Society of Canada.

**I**n retrospect, Rudolf Altschul was ahead of his time. He already recognized the dynamics and plasticity of cells that composed the various layers of blood vessel walls. The first Altschul Symposium, now a biennial event held in his memory, was held 27 years after his death. Participants from all around the world had warm recollections of Altschul and recognized his forward vision. His work, and in particularly his feel for cellular plasticity, have influenced many scientists.

**Rudolf Altschul  
1901-1963**

1925 Born in Prague, Bohemia  
1925 Graduated with degree of Universal Medicine of Prague University.

1925-29 Postgraduate training in Paris and Rome

1928 Married Anni Fischer in Rome  
1929 Entered private practice and started research in Histology at Prag University

1939 Emigrated to Canada  
Instructor of Anatomy Saskatchewan Univ.

1950 'Selected studies on Atherosclerosis' - published

1954 Monograph on 'Endothelium' published

1955 Head of Anatomy, Saks. Univ.  
1961 Elected FRS (Canada)  
1963 Died, Nov. 4.  
1964 His book, 'Niacin and Vascular Disorder and Hypertipemia' - published.

Dr. Sergey Fedoroff, is an Emeritus Professor of Anatomy at the University of Saskatchewan, Saskatoon.

ton, she has studied the degradation of Proteoglycans by thrombin and plasmin. More recently, Mary has examined the proteoglycan in the alloxan-diabetic rabbit. At Queen's, Mary Richardson and Allan Giles have examined the release of von Willibrand Factor (vWF) in response to a pro-coagulant stimulus. They observed that the mechanism of vWF release which is different from the one generally accepted.

Mary Richardson was CAS secretary during the presidency of three presidents

**A**lthough Mary remains busy with her research commitments, she still finds time for other pursuits. She has been active in the affairs of CAS for many years. In 1987, she became secretary of the Society. She remained CAS secretary during the presidency of Drs. Little, Horlick and Carroll and very much enjoyed since she once said, "It was a pleasure to work with all these outstanding Canadian scientist".

**M**ary Richardson is really an academic at heart, who enjoys teaching very much. She has been a tutor at McMaster in both MD and Pharmacology programmes. She supervises research projects leading to Masters' and Doctoral dissertations. Recently Steven Haddock has completed a diabetes related project and presently, Jose Ribau is about to complete his project in her laboratory.

**I**n near future, Mary plans to examine experimental diabetes and atherosclerosis in 'Fat rats' of Jim Russell, a former CAS councillor, whose laboratory she visited this spring. She thinks that 'Fat rats' are extraordinary and provide an exciting setting for cardiovascular research.

## In Memoriam

### **Shlomo Eisenberg**

Professor Shlomo Eisenberg passed away suddenly on February 17, 1995., while attending a scientific meeting in France. The news of his premature death came as a shock to his friends and colleagues in the lipoprotein and atherosclerosis field. Only a few months before, he was participating with his customary enthusiasm to the Xth International Symposium on Atherosclerosis in Montréal, making plans for the future as he was looking forward to moving to his new house in Tel-Hashomer where he had recently settled. We mourn the loss of an outstanding clinical scientist who led a brilliant career. He was a major contributor to the foundations of lipoprotein metabolism as it is known today. His work had also provided invaluable insight to the pathophysiology of dyslipoproteinemias and into the mechanism of the effect of diet and drugs on lipoprotein metabolism.

Born in Israel, a graduate of the Hebrew University-Hadassah Medical School in Jerusalem in 1965, he became Chief Physician of the Hadassah University Hospital, Department of Medicine in 1975, where he eventually headed the unit for Diagnosis and Treatment of Hyperlipidemia. He rapidly climbed the academic ladder, achieving the position of full professor in 1979 and serving as Vice-Dean from 1988 to 1992. He was introduced to basic research by Professors Yechezkiel and Olga Stein in Jerusalem, did postdoctoral work with Dr. Donald S. Fredrickson at NIH, and established many fruitful international collaborations during sabbatical visits at the University of Umea in Sweden, the Methodist Hospital at Baylor College in Houston, the University of Washington in Seattle and the Rockefeller University in New York City, where he has served on the Faculty as Adjunct Professor since 1988. We have all learned from his many seminal contributions and his long-standing leadership which earned him the prestigious Morgagni Medal in 1993. It is nearly impossible to publish on lipoprotein metabolism today without citing the work of Professor Eisenberg who has been at the cutting edge of research in this field throughout his career.

His colleagues will sorely miss his warmth, enthusiasm, creativity, constructive criticisms, and dedication. We extend our deepest regrets and sorrow to his beloved wife Aviva, to his four children and to his grandchild

Jean Davignon