Bundaberg Hospital Commission of Inquiry

STATEMENT OF BRIAN LESLIE THIELE

Brian Leslie THIELE of the Friendly Society Hospital Medical Centre Bingera Street Bundaberg in the State of Queensland makes oath and says as follows:

- I am a legally qualified medical practitioner duly registered in the State of 1. Queensland. I am a Fellow of the Royal Australasian College of Surgeons (FRACS 1973). I am a Fellow of the American College of Surgeons (FACS I am also a Clinical Professor of Surgery at the University of Queensland. At the present time I am in Private Practice in the Speciality of Vascular Surgery with my surgery in Bundaberg. I am also a visiting specialist at the Friendly Society Hospital in Bundaberg.
- 2. Attached and marked BT1 is a copy of my curriculum vitae.
- 3. In about 1976, I went to work in the USA for one year. I ended up staying there for 18 years with my wife and family. In 1994, after practicing as a surgeon in the USA, I decided to return to Australia. At the time, I was head vascular surgeon at Pennsylvania State University Hospital. responsible for a large team of doctors. I had an academic role as well as a clinical and managerial role. This is normal within the USA system. I also was heavily involved in the USA national surgical association.
- 4. I rang up Queensland Health to enquire about the availability of positions suitable for my qualifications and experience. I learned of the availability of the position of Director of Medical Services ("DMS") at the Bundaberg Base Hospital ("the BBH"). It was the last day for applications. I had not intended to return to a position in a hospital in Australia. However, I was born in Bundaberg. I went to school in Bundaberg. My father had worked at the

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Commissioner for Declarations

BBH. My grandfather was member of the BBH board. Indeed, when I was a boy, I did some work at the BBH.

- 5. I became DMS at the BBH in June 1994. I remained in that position until March 1999.
- 6. Soon after I arrived at BBH, it became apparent that, whilst some excellent staff were at the hospital, staff morale was very low. With the assistance of my wife I worked very hard to improve the level of morale by building up camaraderie, self respect and professionalism.
- 7. During my five year term, with the assistance of my wife, I had a large degree of success in improving morale and professionalism at the BBH. We introduced regular staff BBQs, regular residents dinners, an annual Christmas pageant, an annual staff concert, a fete and an auxiliary, amongst others things.
- 8. I spend considerable effort also improving the quality of clinical services through the establishment of regular activities such as teaching ward rounds, regular educational presentations, regular clinical review conferences and regular visitation from specialists from the metropolitan area. None of these practices were in place prior to my arrival at the hospital.
- 9. During my term as DMS, the surgical department was built up into a highly successful department within of the BBH. The appointment of Dr. Pitre ANDERSON, the Director of Surgery, was in place upon my arrival. We recruited Dr. NANKIVELL and, subsequently, Dr. BAKER, both general surgeons to come and work at the BBH as part of the surgical team.
- 10. We secured the grant of the Royal Australasian College of Surgeons training status for the institution. This provided us with quality resident staff on rotation from Royal Brisbane Hospital and was an important part in improving the quality of surgical services at the hospital.

- 11. Over 50% of the BBH resident doctors were Australian during this time. I take this as a good indicator that we had instilled good training and education at the hospital and that it was well regarded.
- 12. I did have a number of overseas trained doctors work under my supervision at the BBH. I also arranged for some doctors from North America to work on contract at the base hospital. All of the individuals attracted to the hospital were of very high quality and provided excellent services.
- 13. It was not contemplated that I would engage in clinical work when I initially took up my duties as DMS. However, this quickly changed. Within about a week of my arrival, a patient came in with a ruptured aneurysm. No one was able to treat him. It struck me that this was exactly the kind of work I specialised in and that I should operate. I operated and the patient had a good outcome.
- 14. After that time, I took an active role in the provision of clinical services. I operated from time to time and regularly did outpatient clinics.
- 15. I made it a point of doing a round within the hospital every Friday with the Director of Nursing. We did not cover the whole hospital every week. We would do particular areas. We would even look at the buildings and the gardens. I had an open door policy within my office. But most of all, I was conscious that you needed to be out there amongst the staff so that they could raise issues easily.
- 16. Through these measures, I kept in touch with clinical issues happening in the hospital.
- 17. I firmly believe that it is essential to the running of a regional hospital and provision of health services in a regional centre like Bundaberg that the heads of the hospital be clinicians who are involved in or in regular touch with the provision clinical services.

- 18. The culture within Queensland Health is for the administration to be run by bureaucrats who have become increasingly remote from the clinicians. I accept that there are numerous issues that have to be managed. No doubt a good manager can find good staff to report to him or her on clinical issues. However, in my opinion, hospitals, particularly in regional centres like Bundaberg, are best run by practising clinicians with the support of an administrative services arm.
- 19. In my opinion, country hospitals should be treated differently to large city hospitals where there possibly is a need in this modern day for managers who are not clinicians. However, in regional hospitals there is no justification for this. Regional hospitals like BBH are small enough that you can "wrap your arms around it".
- 20. Bureaucratic administrators do not like to hear bad news. They do not like to be to be exposed to criticism. Many present problems are symptomatic of a culture of avoiding or burying criticism. This extends up through all levels of administration within Queensland Health and even to Government. The Government has the view that health cannot win you an election but can lose you one. Against this background, it has not been keen to hear anything bad about health.
- 21. In my opinion, criticism is essential in order for healthy education and development to occur. In my opinion, heads of regional hospitals are more likely to be appropriately responsive to criticism if they are clinicians whose primary focus is care. It is essential the primary focus of every hospital be the provision of quality clinical services.
- 22. During my term as DMS, the administration of health services by Queensland Health was budget driven. Moreover, the funding base for the BBH was historical. It did not take into account the provision of new and upgraded services. Where there had been a hospital that previously had not provided a wide range of specialist activities, it now did so in keeping with the population of the area. Our efforts to expand and upgrade services were

seen as unreasonable. But all we were doing was keeping up with the demand of the local population. Our needs and requirements became increasingly poorly funded by Queensland Health.

- 23. An example of this was the establishment of CAT scan facilities at the BBH. For most of my term as DMS, no CAT scan facilities existed at the hospital despite the hospital doing a large amount of trauma work. The use of a CAT scan is critical for early diagnosis and treatment of trauma patients. We could not do that at BBH. We had to put patients in an ambulance and send them across town to the Mater hospital for a CAT scan and then have them sent back. Despite the essential need for the facility, there was great reluctance on the part of Queensland Health to resource it.
- 24. Queensland Health sought to exert more and more control over the BBH from Brisbane. There was little understanding about the difficulties encountered by regional Hospitals in providing specialist services and the necessity to have the local community involved in their local hospital. The emphasis was on process and budgetary compliance. A narrow minded attitude of filling in or ticking boxes and attending to process was emphasised over and above the provision of services and results. This attitude generated increasing frustration for me and other staff at the BBH who were attempting to improve the quality of services to the local population of Bundaberg.
- 25. The attitude of Queensland Health was that BBH was primarily a Queensland Health Hospital functioning in Bundaberg. The appointed District Health Council had no authority over the running of the BBH. The central model that Queensland Health seemed to propagate was that everything came from Brisbane and that what worked in Brisbane was supposed to work in provincial towns. This was just not the case in my view and experience.
- 26. Coincident with clinical management, I believe that there needs to be some regional autonomy within the administration of regional hospitals. I believe local communities should have a degree of governance over the activities of regional hospitals similar to the historical board system.

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- In my experience, the centralised administration of health services has not 27. been the best way to deliver quality services in provincial Queensland. A centralised system thinks in terms of funding and providing public health services through out the State. In my opinion, the thinking needs to be in terms of the Bundaberg community having a hospital which Queensland Health funds. Management should be by the community for the community. The community should tell Queensland Health what they need and it should set about funding it.
- 28. The preference for the utilising of full-time specialist staff over VMOs is a significant manifestation of the central model of Queensland Health. In my opinion, such a preference simply is not tenable in the long term in regional areas.
- 29. During my term as DMS at BBH, I had numerous conversations with Queensland Health over the need to maximise the services of VMO's and seize upon the stability and quality of service which would come from such action.
- 30. In my opinion, the use of full time staff specialists reduces the quality and quantity of health services in a regional centre like Bundaberg. Full-time staff historically are itinerant and result in the stop start provision of services and extreme difficulty in long term planning for the provision of services. It is hard attracting quality people to country towns. The position is often isolating and lacking of interaction. Full time staff specialists, in my experience, also are likely to be brought down, if care was not taken, by the public system ethos.
- 31. VMO's on the other hand are part of the community. They have made longterm commitments to reside in the community and, as such, are ideally suited to provide services to the public hospital.
- 32. In my opinion, it was and remains critical to the optimisation and maximisation of proper public health services in regional centres like

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Bundaberg for Queensland Health to utilise the services of VMO's and take full advantage of the resources available in both the private and public health sectors.

- 33. Country hospitals like BBH are capable of doing sophisticated procedures and providing sophisticated care. However, this is dependant upon the hospital being properly structured, equipped and resourced (including by the use of VMOs) within the region. If the right people are available, you need to find room for them.
- 34. In addition to budgetary restriction, during my term as DMS at the BBH, I also found the provision of clinical services was often hampered by politics.
- 35. An early example of this related to the establishment of the renal dialysis unit at the BBH. BBH was an obvious place to establish such a unit. Bundaberg had a physician with renal dialysis experience and a vascular surgeon to provide surgical procedures to enable dialysis. BBH also had the hardware. Queensland Health wanted to locate the unit at Hervey Bay or Maryborough. Despite there being inadequate infrastructure to deliver such a service at those centres, Queensland Health insisted for over a year that the unit be situated there. The only conceivable reason I believe was political. Each of the areas was in a marginal electorate. Only after much lobbying, and the involvement of the press, was the renal unit eventually established in Bundaberg.
- 36. Another example was when I attempted to set up a foundation with a view to obtaining finance privately to provide discretionary expenditure for special projects within the hospital. A family with local connections had a large estate and wanted to leave it to the Hospital. They were not interested in leaving it to general revenue. I spoke to several very successful businessmen around Bundaberg. They also were interested in contributing or assisting in the raising of funds for the foundation. I worked up a list of community members who I thought would be most appropriate as board members. Queensland Health took two years to approve the establishment of the

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foundation. Moreover, when it did, it insisted on its own nominations for the board membership. In my opinion, these persons were not the best qualified for the position and were political nominations.

- 37. By 1999, the attitude of Queensland Health was impacting so badly upon the performance and growth of health services at the BBH that I made the decision to resign from my position as DMS and to move from the BBH to full time private practice. The decision was not without some sadness. But I had become frustrated. I had to make a decision as to how I believed I could best serve the people of and contribute to the provision of health services in the Bundaberg Health District. I decided this was in private practice.
- 38. I am aware that after I left the BBH two of my former colleagues Drs. Baker and Nankivell also resigned for similar reasons. They too became frustrated by the working conditions and atmosphere at the BBH. They both remain employed in the public system at other locations. What disappoints me is that they could have been still providing an excellent quality of service at BBH but for their frustrations.
- 39. I am aware that there were some issues relating to the resignation of Dr. Anderson other than his frustrations. I was aware that the major reason for his resignation was Queensland Health's reluctance to provide him with VMO sessions in general surgery. In my opinion, that was a big mistake.
- 40. A couple of years or about 18 months or so after I started at the BBH there was pressure from the local community for more private surgical services. In discussing this issue with the then Regional Manager, Mr. Paul Kelly, he approved the concept of staff providing such services at locations other then the base hospital provided that they did not interfere with the provision of public services. As a result of this Dr. Anderson then worked at some private time away from the BBH with the approval of management and me on the basis of the agreement with Mr. Kelly. However, just prior to my resignation, it was necessary for me to speak with Dr. Anderson about a conflict with his private practice and the provision of public services.

- 41. After I left in 1999, I visited the BBH for four years as a VMO. I did two sessions a week.
- 42. I no longer work as a VMO. I ceased visiting the BBH because of poor leadership, poor training, low morale and an inefficient working environment. I no longer felt comfortable that I could provide satisfactory care at the hospital.
- 43. There are many doctors in Bundaberg who would be prepared to work as VMOs if the BBH was properly structured, resourced and managed. They like the idea of public service, they like meeting people and they like teaching.
- 44. I know of an orthopaedic surgeon who offered himself as a VMO but was initially refused. I know of an ENT surgeon who offered to work as a VMO. He was refused and he still does not work there. I know of a radiologist who offered to set up his practice within the BBH. This would have been fantastic. But he too was refused. I know of another doctor who was working as a VMO but resigned when penny pinching pettiness became too much for him.
- 45. The provision of good health services at public hospitals has been fundamentally based on the existence of goodwill between doctors and Queensland Health. This has been eroded over the years. It is now virtually non-existent.
- 46. I hardly saw Mr Leck or Dr Keating during that time I worked as a VMO.
- 47. I struck Dr Patel in the corridors from time to time but did not work with him. My impression was that he was a "slippery" customer. I cannot take it further than that.
- 48. I recall after I left as a VMO and had heard that Dr Patel was going to do vascular access surgery, I asked Dr Keating whether Dr Patel's credentials

had been checked. I asked for no particular reason or knowledge of any incompetence on Dr Patel's part. Dr Keating replied that his credentials had been checked. Subsequently, I became involved in the establishment of Baxter access program concerning the insertion of peri-catheters in Bundaberg. I understood that this arrangement was reached because Dr Patel was not competent to do the work. No other reason was ever suggested.

- 49. I understand generally that Dr Patel was not picked up by the Hospital statistics. However, this should not be taken to mean that Dr Patel therefore was competent. Statistics are only as good as the relevance and accuracy of information gathered.
- 50. Too much reliance upon such indicators again is a manifestation of the problem with having non-clinical administrators who are isolated and unable to see or understand what is clinically happening in outpatients and in the wards of the hospital. I remember a conversation once with Peter Leck where he relayed to me that the key performance indicators for the Hospital looked really good. I frankly told him these did not necessarily properly represent clinical performance and that a person in his position did not have the clinical experience to know otherwise. This is the problem
- 51. The credentialing and privileging system, and its application to Dr Patel, affords another example of the Queensland Health mindset. I am told that Dr Patel was not credentialed and or privileged because, it is said, the College of Surgeons did not nominate an assessor. Credentialing and privileging is common throughout all the hospitals in Bundaberg, and hospitals in which I worked in the USA. It is not a Queensland Health invention or a difficult process to undertake. It need not be contingent on the College of Surgeons.
- 52. It would have been very easy for the BBH to have asked me in 2003 (when I was working as a VMO at the BBH) to assess Dr Patel. Indeed, they could have asked a number of surgeons working in the Fraser Coast area. I could have assessed him very easily, especially with my knowledge of the level of

training in certain US hospitals. I knew, for instance, that if he trained at Rochester, New York State, that he would not have learnt thoracic work, if he was trained after a certain year.

- Finally, I have been asked about the complaints process and whether there is 53. a need for a centralised complaints system. Frankly, I do not necessarily believe in an over formalised complaints process within small regional hospitals like BBH. Complaints processes tend to be symptom rather than cause focused, cumbersome and encouraging of a whinging culture rather than open, honest and critical interaction within the organisation. As I have stated above, criticism is essential to a healthy educative environment.
- Undoubtedly, there is a need for a formal process for serious complaints. 54. However, in my opinion, the critical focus needs to be, not upon addressing symptoms, but eliminating the causes for poor service within regional hospitals such as the BBH.

Affidavit sworn on

at

1/2/08-

in the presence of:

Deponent

Solicitor/Justice of the Peace

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Signed:		Taken by:
Deponent		Solicitor/Barrister/Justice of the Peace

CURRICULUM VITAE

NAME:

Brian L. Thiele, M.D.

DATE OF BIRTH:

PLACE OF BIRTH:

Queensland, Australia

FAMILY:

Wife: Children:

SOCIAL SECURITY NUMBER:

HOME ADDRESS:

.OFFICE ADDRESS:

Department of Surgery

Division of General Surgery

The Pennsylvania State University

College of Medicine

The Milton S. Hershey Medical Center

Hershey, Pennsylvania 17033

PRESENT POSITION:

Professor of Surgery

Division of General Surgery

1983 - Present

Chief, Vascular Surgery Section

Department of Surgery

1983 - Present

Vice Chairman

Department of Surgery

1987 - Present

EDUCATION:

University of Queensland Medical Faculty

Queensland, Australia (1961 - 1966)

Graduated M.B., B.S., 1966

RESIDENCY:

General Surgery

Townsville General Hospital

Australia

1967 - 1968

General Surgery Toursday Island

Torres Straits, Australia

1968 - 1969

RESIDENCY (continued)

Surgical Registrar and Advanced Surgical Trainee Preston and Northcote Hospital University of Melbourne Melbourne, Australia 1970 - 1973

Department of Surgery Austin Hospital, University of Melbourne Heidelberg, Victoria, Australia 1974 - 1976

FELLOWSHIP:

Vascular Surgery Austin Hospital, University of Melbourne Heidelberg, Victoria, Australia 1973 - 1974

Peripheral Vascular Surgery St. Vincent's Hospital University of Oregon Portland, Oregon 1976 - 1977

MEDICAL ORGANIZATIONS:

Henry N. Harkins Surgical Society Fellow, Royal Australasian College of Surgeons Member, Vascular Surgery Section Royal Australasian College of Surgeons Fellow, American College of Surgeons Association for Academic Surgery American Institute of Ultrasound in Medicine Society of University Surgeons The International Society for Cardiovascular The Society for Vascular Surgery American Medical Association American Surgical Association American Heart Association Stroke Council Societe Internationale de Chirurgie American Association for the Advancement of Pennsylvania Medical Society Dauphin County Medical Society Delaware Valley Vascular Society Eastern Vascular Society

OFFICES HELD:

Delaware Valley Vascular Society
Treasurer, 1985 - 1991
President-Elect, 1991 - 1992
President - 1992 - 1993
Eastern Vascular Society
Treasurer, 1990 - Present
Intersocietal Commission for the Accreditation of Vascular Laboratories
Interim Chair, 1989 - 1991

OFFICES HELD (continued):

Chairperson, 1991 - 1992
Board of Directors, 1989 - present
Healthpass
Board of Directors
Capital Region Physician Council
1991 - 1992
American Institute of Ultrasound in Medicine
Board of Governors
1993 - present
The Society for Vascular Surgery
Secretary
1992 - present

ACADEMIC AND HOSPITAL APPOINTMENTS:

Fellow in Peripheral Vascular Surgery Department of Surgery, Austin Hospital University of Melbourne Melbourne, Australia 1974

Surgical Superintendent
Lecturer in Surgical Anatomy,
Surgical Tutor
Department of Surgery
Austin Hospital
University of Melbourne
Melbourne, Australia
1975 - 1976

Assistant Professor of Surgery University of Washington School of Medicine Seattle, Washington 1977 - 1981

Assistant Chief, Surgical Service V.A. Medical Center Seattle, Washington 1978 - 1983

Staff Surgeon and Chief Peripheral Vascular Laboratory V.A. Medical Center Seattle, Washington 1977 - 1983

Associate Professor of Surgery University of Washington School of Medicine Seattle, Washington 1981 - 1983

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ACADEMIC AND HOSPITAL APPOINTMENTS (Continued)

Co-Director Amputation Service V.A. Medical Center Seattle, Washington 1981 - 1983

Professor of Surgery Vice Chairman, Department of Surgery The Milton S. Hershey Medical Center Penn State College of Medicine Hershey, Pennsylvania 1983 - Present

Staff Surgeon and Chief Vascular Surgery The Milton S. Hershey Medical Center Penn State College of Medicine Hershey, Pennsylvania 1983 - Present

CERTIFICATION:

Fellow of the Royal Australasian College of Surgeons (F.R.A.C.S.) October, 1973

Flex Certification

LICENSURE:

State of Oregon, #MD10834 State of Washington State of Pennsylvania, #MD-029728-E

AWARDS AND HONORS:

Thomas Naughton Fitzgerald Scholarship, 1976 (Awarded by the Royal Australasian College of Surgeons) Alpha Omega Alpha (Eta Chapter), 1992 Honorary Fellow, Royal Australasian College of Surgeons

EDITORIAL BOARDS:

Editorial Consultant
The Western Journal of Medicine

Journal of Vascular Technology 1987 - Present

International Vascular Surgery 1991 - Present

International Angiology 1992 - Present

Journal of Vascular Surgery 1992 - Present

EXTERNAL COMMITTEES:

Association for Academic Surgery Nominating Committee, 1983 Council, 1984

Society for Vascular Surgery/ International Society for Cardiovascular Surgery

Ad Hoc Committee on Reporting of Lower Extremity Ischemia, 1985 Chairman, Committee on Standards for Vascular Laboratories, 1985

Delaware Valley Vascular Society Program Committee, 1985

American Medical Association
Director, Joint Review Committee on
Education of Cardiovascular Technologists,
1985 - 1993

The International Society for Cardiovascular Surgery
Research Committee, 1986 - Present

The National Institutes of Health Committee for Revision of Classification of Cerebrovascular Diseases, 1987 - 1989

American College of Surgeons SESAP VII Committee, 1989 - 1990 SESAP 94-95 Committee, 1991 - 1992 SESAP 96-97 Committee, 1993-present

Committee on Continuing Education, 1992 - present

Pennsylvania-East District #3 Committee on Applicants, 1991 Chairman, 1992 - present

Eastern Vascular Society Chairman, Program Committee, 1990

INTERNAL COMMITTEES:

Search Committee for Chairman
Department of Radiology, 1987
Department of Orthopaedic Surgery, 1991

Search Committee for Director Center for Emergency Medical Services, 1993

Search Committee for Chief Information Officer, 1993

INVITED PROFESSORSHIPS AND LECTURES:

"Splenic Arteriovenous Fistula -- A Report of Two Cases Following Splenectomy" Annual Meeting - Royal Australasian College of Surgeons Perth, Australia
1975

Bovine Heterografts for Hemodialysis Access
Annual Meeting - Australian Society of Nephrologists
August, 1975

"Operating Theater Management"
Summer School for Hospital Administrators
Published in Proceedings of Summer School for Hospital Administrators,
pp. 127-131, 1976

"The Current Status of Carotid Imaging Techniques" Annual Meeting - Royal Australasian College of Surgeons Kuala Lumpur, Malaysia May, 1978

"Possible Mechanical Factors in the Genesis of False Aneurysms" Annual Meeting - Royal Australasian College of Surgeons Kuala Lumpur, Malaysia May, 1978

"Carotid Artery Velocity Patterns in Normal and Stenotic Vessels"
Delivered (in part) at Fourth International Joint Meeting on Stroke and
Cerebral Circulation, sponsored by the Stroke Council, American Heart
Association
Phoenix, Arizona
February, 1979

"Current Status of Ultrasonic Duplex Scanning of the Carotid Bifurcation" International Cardiovascular Congress II Scottsdale, Arizona February, 1979

"Incidence of Flow-Reducing Lesions of the Carotid Bifurcation in Patients with Cerebral Ischemia"
Fourth International Joint Meeting on Stroke and Cerebral Circulation, sponsored by the Stroke Council, American Heart Association Phoenix, Arizona February, 1979

"Relationship Between Location of Disease and Symptom in Patients With Carotid Artery Disease"
Vascular Conference, Grand Rounds, Multidisciplinary Conference
Continuing Medical Education, University of Washington
Seattle, Washington
February 20, 1979

INVITED PROFESSORSHIPS AND LECTURES (continued):

"Mesenteric Ischemia"
Vascular Conference, Grand Rounds, Multidisciplinary Conference
Continuing Medical Education, University of Washington
Seattle, Washington
February 20, 1979

Ultrasonic Evaluation of Aneurysms" Thiele, B.L. Virginia Mason Hospital Seattle, Washington March, 1979

"Surgical Treatment of Occlusive Vascular Disease" Continuing Medical Education University Tower Hotel Seattle, Washington April, 1979

"The Application of Spectral Analysis of Velocity Signals for the Detection of Arterial Stenosis"
International Symposium of Hemodynamics of the <u>Limbs</u>
Toulouse, France
May, 1979

"Current Status of Ultrasonic Imaging and Spectral Analysis in the Detection of Arterial Stenosis"
International Symposium on Smoking and Arterial Disease
Charing Cross Hospital
London, England
June 6-8, 1979

"Strain Gauge Plethysmography in Patients With Venous Disease" 1979 Joint Annual Meeting, North American Chapter of the International Cardiovascular Society and the Society for Vascular Surgery June 28-30, 1979

"An Analysis of Above and Below the Knee Femoro-Popliteal Grafts" Vascular Conference, Grand Rounds, Multidisciplinary Conference, Continuing Medical Education University of Washington Seattle, Washington September, 1979

"Causes and Prevention of Deep Venous Thrombosis" Symposium on Critically Ill Surgical Patient Continuing Medical Education University of Washington Seattle, Washington September, 1979

INVITED PROFESSORSHIPS AND LECTURES (continued):

"Vascular Physiology of Veins" Continuing Medical Education Harborview Medical Center Seattle, Washington September 25, 1979

"Peripheral Vascular Disease"
Continuing Medical Education
Seattle Veterans Administration Medical Center
Seattle, Washington
October 22, 1979

"Peripheral Vascular Disease" Waldo Fall Seminar Washington Plaza Hotel Seattle, Washington October 27, 1979

"Diagnosis and Management of Peripheral Vascular Disease"
Annual Symposium on Heart Disease, Update '79 -- Physicians' Symposium
Swedish Hospital
Seattle, Washington
October 27, 1979

"Pulmonary Embolism: Diagnosis and Management" Continuing Education Seminar Seattle, Washington December, 1979

"Anastomotic Aneurysms"
Seattle Surgical Society
Seattle, Washington
December, 1979

"Venous Disease of the Lower Extremities"
Surgical Grand Rounds, Multidisciplinary Conference
Continuing Medical Education
University of Washington
Seattle, Washington
December 11, 1979

"Aneurysms"
Continuing Medical Education
Seattle Veterans Administration Medical Center
Seattle, Washington
January 2-3, 1980

"Diagnosis and Management of Deep Venous Thrombosis" Medical/Surgical Conference Seattle Veterans Administration Medical Center January 5, 1980

"Physiological Analysis of Above Knee and Below Knee Femoropopliteal Grafts" Combined Meeting of Royal Australasian College of Surgeons and Physicians and the Royal Canadian College of Surgeons and Physicians Sydney, Australia
February 24-29, 1980

"Duplex Scanning in the Detection of Carotid Artery Atherosclerosis"
Combined Meeting of Royal Australasian College of Surgeons and Physicians and
the Royal Canadian College of Surgeons and Physicians
Sydney, Australia
February 24-29, 1980

"Peripheral Vascular Disease"

Continuing Medical Education, coordinated through the Division of Occupational Therapy as part of a course Rehabilitation Medicine University of Washington

Seattle, Washington

March 10, 1980

"Pulmonary Embolus and Deep Vein Thrombosis"
Continuing Medical Education
Review Course in Physical Medicine and Rehabilitation
University Tower Hotel
Seattle, Washington
March 24, 1980

"Ultrasonic Arteriography: Implications of Patient Management"
Annual Meeting, Washington State Chapter of American College of Surgeons
Union, Washington
June 22-25, 1980

"Common Clinical Problems"
Presented at Noninvasive Diagnostic Methods: Arterial, Venous, Cerebrovascular, for Physician and Technologist Continuing Medical Education
University of Washington
Seattle, Washington
September 9, 1980

"Anatomy of the Venous System"
Presented at Noninvasive Diagnostic Methods: Arterial, Venous, Cerebrovascular, for Physician and Technologist Continuing Medical Education
University of Washington
Seattle, Washington
September 10, 1980

"Angiography Versus Noninvasive Methods -- Is There a Gold Standard?"
Presented at Noninvasive Diagnostic Methods: Arterial, Venous,
Cerebrovascular, for Physician and Technologist
Continuing Medical Education
University of Washington
Seattle, Washington
September 11, 1980

INVITED PROFESSORSHIPS AND LECTURES (continued):

"Aortoiliac Versus Aortofemoral Bypass Grafts" Wenatchee Valley Clinic Wenatchee, Washington January 2, 1981

"Arteriography -- The Gold Standard?"
International Cardiovascular Congress III
Scottsdale, Arizona
February 16-18, 1981

"Vascular Disease for the Internist" Presented at Noon Conference Providence Hospital Seattle, Washington February 26, 1981

"Clinical Evaluation of Lower Limb Occlusive Disease" Brazilian Congress of Angiology Rio de Janeiro, Brazil August 25, 1981

"Evaluation and Diagnosis of Extracranial Carotid Arterial Disease, Part II" Brazilian Congress of Angiology Rio de Janeiro, Brazil August 25, 1981

"The Role of Pressure Measurements in the Evaluation of Lower Limb Occlusive Disease"
Brazilian Congress of Angiology
Rio de Janeiro, Brazil
August 26, 1981

"The Classification and Natural History of Limb Ischemia" Modern Amputation Surgery and Prosthetic Rehabilitation Seattle, Washington September 10, 1981

"Temporary Plastic Vascular Shunts: Resolution of a Management Dilemma in Complex Vascular Injuries"
American Association for the Surgery of Trauma
Hot Springs, Virginia
September 16, 1981

"Evaluation of the High-Risk, Asymptomatic Patient: Physicial Findings"
"Evaluation of the Symptomatic Patient"
"Cerebrovascular Disease"
"How to Pick a Vascular Surgeon"
"How to Follow Patients After Vascular Surgery"
Prevention and Management of Arteriosclerosis: A Symposium for the Primary Care Physician
Longview, Washington
October 9, 1981

"Role of Pressure Measurements: Direct and Indirect"
Continuing Medical Education Course, Noninvasive Diagnostic Methods
University of Washington
Seattle, Washington
November 30, 1981

"Physiology and Evaluation of the Post Thrombotic Syndrome"
"When is Phlebography Indicated?"
"Pathophysiology of TIA's and Stroke"
Continuing Medical Education Course, Noninvasive Diagnostic Methods University of Washington
Seattle, Washington
December 1, 1981

"Identification of Flow Disturbances Produced by Artificially Created Stenoses Using Spectral Analysis. Neurosonology -- Including Cerebrovascular Evaluation with Doppler Ultrasound" Erice Trapani, Sicily, Italy March 3, 1982

"Clinical Roles of Spectrum Analysis in the Assessment of Patients With Vascular Disease. Neurosonology -- Including Cerebrovascular Evaluation with Doppler Ultrasound" Erice Trapani, Sicily, Italy March 10, 1982

"The Role of Flow Disturbances in the Diagnosis of Carotid Disease. Stroke Prevention: Modern Concepts in the Diagnosis of Extracranial Cerebrovascular Disease"
Phoenix Baptist Hospital and Medical Center
Phoenix, Arizona
March 20, 1982

"Pulmonary Embolus and Deep Venous Thrombosis"
Review Course in Physical Medicine and Rehabilitation
Bellevue, Washington
April 6, 1982

"Evaluation of Peripheral Vascular Disease: Clinical Signs, Diagnostic Tests, and Surgical Treatment"
Review Course in Physical Medicine and Rehabilitation
Bellevue, Washington
April 9, 1982

"Deep Venous Thrombosis and Pulmonary Embolism"
Delivered at Panel Discussion: Clots and Ulcers in Venous Disease, at Vascular Disease: A Comprehensive Review for Primary Physicians Seattle, Washington
April 23, 1982

"Stasis Ulcers: Chronic Venous Insufficiency"
Vascular Disease: A Comprehensive Review for Primary Physicians
Seattle, Washington
April 23, 1982

"A Systematic Approach to the Assessment of Aortoiliac Disease" Association of V.A. Surgeons, Sixth Annual Surgical Symposium Atlanta, Georgia
May 15, 1982

"Assessment of Femorodistal Grafts Using Velocity Waveform Analysis"
San Diego Symposium on Noninvasive Diagnostic Techniques in Vascular Disease
San Diego, California
October 19, 1982

"Intraoperative Pulsed Doppler Assessment of Carotid Endarterectomy"
San Diego Symposium on Noninvasive Diagnostic Techniques in Vascular Disease
San Diego, California
October 22, 1982

"Medical and Surgical State of the Art"
Cerebrovascular Symposium, American Heart Association
Annual Membership Meeting and Scientific Sessions
Seattle, Washington
October 28, 1982

"Identifying Stroke Warning Signs"
American Heart Association
Annual Membership Meeting and Scientific Sessions
Seattle, Washington
October 29, 1982

"Is Siphon Disease Important in Predicting Outcome of Carotid Endarterectomy?" American Heart Association Eighth International Joint Conference on Stroke and Cerebral Circulation San Diego, California February 11, 1983

"Platelet Deposition on Prosthetic Surfaces in Man: Quantitation with Indium-111 Platelet Imaging and Assessment of Sulfinpyrazone Effects" International Cardiovascular Congress IV Scottsdale, Arizona February 14, 1983

"Treatment of Acute Arterial Occlusion With Low Dose Streptokinase" International Cardiovascular Congress IV Scottsdale, Arizona February 14, 1983

"Comparison of Arteriography and Intra-Arterial Pressure Measurement in Assessment of Aortoiliac Disease"
International Cardiovascular Congress IV
Scottsdale, Arizona
February 15, 1983

"Peripheral Vascular Doppler I"
Regional Meeting of Society of Diagnostic Medical Sonographers
Wenatchee, Washington
Harch 4, 1983

"Peripheral Vascular Doppler II Regional Meeting of Society of Diagnostic Medical Sonographers Wenatchee, Washington March 5, 1983

"Anatomy and Physiology of the Arterial Tree" Vascular Diseases 1983: CME 1082 University of Washington School of Medicine Lahaina, Maui, Hawaii March 27, 1983

"Pathophysiology and Natural History of Cerebrovascular Disease" Vascular Diseases 1983: CME 1082
University of Washington School of Medicine
Lahaina, Maui, Hawaii
March 30, 1983

"Deep Venous Thrombosis and Pulmonary Embolism -- Diagnosis and Management" Vascular Diseases 1983: CME 1082
University of Washington School of Medicine
Lahaina, Maui, Hawaii
March 31, 1983

"Acute and Chronic Arterial Disease -- The Role of Arteriography and Interventional Radiology"
Vascular Diseases 1983: CME 1082
University of Washington School of Medicine
Lahaina, Maui, Hawaii
March 29, 1983

"Smoking and Blood Vessels"
Vascular Diseases 1983: CME 1082
University of Washington School of Medicine
Lahaina, Maui, Hawaii
April 1, 1983

"Reconstructive Principles and Procedures in the Dysvascular Leg"
Symposium on Care of the Amputee
Veterans Administration North Central Regional Medical Education Center
VA Medical Center
Minneapolis, Minnesota
September 8-9, 1983

INVITED PROFESSORSHIPS AND LECTURES (continued):

"Evaluation of Patients With Extracranial Vascular Disease" Family Medicine Noon Conference The Milton S. Hershey Medical Center Hershey, Pennsylvania September 20, 1983

"Deep Vein Thrombosis - Diagnosis and Treatment" Medical Grand Rounds The Milton S. Hershey Medical Center Hershey, Pennsylvania September 22, 1983

"Evaluation of Aortoiliac Disease"
Visiting Professor Lecture Series
University of Medicine and Dentistry of New Jersey
Newark, New Jersey
January 18, 1984

"Subclavian Steal Syndrome - Effect of Reconstructive Surgery on Cerebral Symptoms"
Annual Meeting of the Delaware Valley Vascular Society
Atlantic City, New Jersey
April 7, 1984

"Arteriography, Applications and Pitfalls; and the Asymptomatic Bruit" ATL Symposium on Extracranial Arterial Disease Hilton Head, South Carolina April 26-27, 1984

"Noninvasive Diagnosis of Carotid Disease: Theory and Practice" Seminar, Ultrasound Society of Central Pennsylvania Harrisburg, Pennsylvania May 19, 1984

"Flow Disturbance Distal to Stenoses in the Canine Thoracic Aorta" Canadian Physiological Society
Saskatoon, Saskatchewan, Canada
June 22, 1984

"Physiology of Blood Flow"

"A Review of Noninvasive Cerebrovascular Evaluation - Methods and Results"
"Noninvasive Methods in Peripheral Arterial Diagnosis"
Noninvasive Vascular Technology Conference
Lancaster, Pennsylvania
August 22-24, 1984

"Clinical Presentations of Peripheral Arterial Occlusive Disease"
"Diagnostic Evaluation of Arterial Occlusive Disease"
"Venous Diseases - Diagnosis and Management"
Vascular and Pulmonary Diseases Seminar
Medical Education Resources
Chicago, Illinois
December 7-9, 1984

"Anatomy and Physiology of the Arterial System"

"Acute and Chronic Arterial Disease"

"Deep Venous Thrombosis and Pulmonary Embolism - Diagnosis and Management"

Multi-Institutional Teaching Phone Conference,
sponsored by Coordinating Council for Continuing Education

The Pennsylvania State University
University Park, Pennsylvania

March 13, 1985

"Detection and Measurement of Flow Patterns Distal to Stemosis in the Camine Thoracic Aorta"
Bioengineering Seminar
The Pennsylvania State University
University Park, Pennsylvania
April 29, 1985

"Thrombo-embolic Problems - Pathophysiology of Deep Venous Thrombosis" Vascular Symposium Union Memorial Hospital Baltimore, Maryland May 3, 1985

"Interaction of Duplex Scanning With Other Imaging Techniques" Vascular Symposium Philadelphia, Pennsylvania May 4, 1985

"Venous Disease - Diagnosis and Management"

"Venous Thromboembolism"

Medical Education Resources Vascular and Pulmonary Diseases Seminar
Hilton Head, South Carolina
July 19, 1985

"Cerebrovascular and Vertebrobasilar Insufficiency"
Medical Education Resources Vascular and Pulmonary Diseases Seminar
Hilton Head, South Carolina
July 20, 1985

"Decision Making in Carotid Surgery"
Advanced Technology LaboratoriesVascular Seminar
Meadowlands, New Jersey
July 29, 1985

"Complementary Role of Arteriography and Ultrasound Technique in the Evaluation of Peripheral Vascular Disease"
Chesapeake Valley Vascular Society
Annapolis, Maryland
September 19, 1985

INVITED PROFESSORSHIPS AND LECTURES (continued):

"The Role of Prescreening in Symptomatic and Asymptomatic Patients" Advanced Technology Laboratories Symposium on Duplex Scanning San Francisco, California October 7, 1985

"Radiological Evaluation of Lower Extremity Occlusive Disease"
Advanced Technology Laboratories
Symposium on Duplex Scanning
San Francisco, California
October 8, 1985

"Pathophysiology and Clinical Features of Venous Thrombosis" Advanced Technology Laboratories Symposium on Duplex Scanning San Francisco, California October 9, 1985

"Peripheral Anatomy, Physiology and Pathophysiology"
"Principles of Spectral Analysis"
The Institute for Medical Studies
Seminar on Noninvasive Diagnosis of Vascular Disease
Houston, Texas
November 21, 1985

"Spectral Analysis in the Carotid Arteries"
"The Use of Real Time Imaging in Cerebrovascular Diagnosis"
The Institute for Medical Studies
Seminar on Noninvasive Diagnosis of Vascular Disease
Houston, Texas
November 22, 1985

"Peripheral Arterial and Venous Testing: An Overview of Current Techniques"
"Intraoperative Assessment of Carotid Endarterectomy"
"Noninvasive Diagnosis of Intestinal Angina"
The Institute for Medical Studies
Seminar on Noninvasive Diagnosis of Vascular Disease
Houston, Texas
November 23, 1985

"Duplex Scanning and Interaction With Arteriography"
South Central Pennsylvania Area Wide Radiology Conference
Carlisle, Pennsylvania
December 5, 1985

"Long-Term Effects of Deep Venous Thrombosis" Symposium on Venous Thromboembolism Palm Springs, California December 15, 1985

INVITED PROFESSORSHIPS AND LECTURES (continued):

"Noninvasive Detection of Carotid Disease"
"Spectral Analysis in Detection of Carotid Disease"
"Interaction of Noninvasive Testing and Radiological Techniques"
Area Health Education Center
Wilmington, North Carolina
January 3, 1986

"Evaluation of Lower Extremity Occlusive Disease"
"Evaluation of Acure and Chronic Venous Disease"
Area Health Education Center
Wilmington, North Carolina
January 4, 1986

"Noninvasive Evaluation of Extracranial Carotid Disease" Annual Meeting Pan-Pacific Surgical Association Honolulu, Hawaii January 16, 1986

"Postoperative Venous Thrombosis and Pulmonary Embolism - The Role of Prophylaxis"
Surgery Grand Rounds
The Milton S. Hershey Medical Center
Hershey, Pennsylvania
January 22, 1986

"Diagnosis of Deep Venous Thrombosis"
"Assessment of Renal Artery Reconstruction"
Annual Vascular Surgery Conference
West Virginia University
Snowshoe, West Virginia
February 10, 1986

"Prosthetic Graft Infections" Surgery Grand Rounds The Milton S. Hershey Medical Center Hershey, Pennsylvania February 26, 1986

"Mesenteric Ischemia" Medicine Grand Rounds The Milton S. Hershey Medical Center Hershey, Pennsylvania February 27, 1986

"Assessment of Carotid and Renal Artery Reconstructions" Reading Hospital Reading, Pennsylvania March 6, 1986

"The Diagnosis and Management of Carotid Artery Disease - Current Status" Centre Community Hospital State College, Pennsylvania March 18, 1986

INVITED PROFESSORSHIPS AND LECTURES (continued):

"Long-Term Complications of Thromboembolism" Vascular Seminar Harrisburg, Pennsylvania April 3, 1986

"Prevention, Diagnosis and Prophylaxis of Deep Vein Thrombosis" Gynecologic Oncology Lecture Series
The Johns Hopkins Medical Institutions
Baltimore, Maryland
April 28, 1986

"Update on Transient Ischemic Attacks and Cerebrovascular Accidents - Current Treatment"
Postgraduate Seminar for Physicians
Altoona Hospital
Altoona, Pennsylvania
May 15, 1986

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"Pediatric Vascular Trauma"
Pediatric Grand Rounds
The Milton S. Hershey Medical Center
Hershey, Pennsylvania
June 26, 1986

"Duplex Scanning of Carotid Disease" Visiting Professor Lecture University Hospital Bern, Geneva, Switzerland September 6, 1986

"Assessment of Renal Artery Reconstruction" Second International Vascular Symposium London, England September 11, 1986

"Clinical Implications of Plaque Mortality" Peripheral Vascular Symposium Saint Anthony Medical Center Columbus, Ohio September 24, 1986

"Diagnosis, Natural History, and Treatment of Deep Venvous Thrombosis" General Surgery Conference Geisinger Medical Center Danville, Pennsylvania October 1, 1986

"Venous Thrombosis and Pulmonary Embolism - Diagnosis, Treatment, and Prevention"
Postgraduate Seminar for Physicians
Altoona Hospital
Altoona, Pennsylvania
October 16, 1986

INVITED PROFESSORSHIPS AND LECTURES (continued):

"Plaque Morphology"
"Intraoperative Uses of Ultrasound Scanning"
"Peripheral Arterial Patient Work-Up"
"Clinical Applications of Ultrasound in Transplantation Surgery"
Institute for Medical Studies Symposium on the Assessment of Arteries and Veins by Duplex Ultrasound Scanning
New Orleans, Louisiana
October 18-19, 1986

"Peripheral Vascular Anatomy, Physiology, and Pathophysiology"
"Treatment Modalities and Outcomes in Vascular Disease"
"Plethysmography as a Diagnostic Aid in Peripheral Arterial Disease"
"Venous Anatomy, Physiology, and Pathophysiology"
"Indirect Techniques in the Diagnosis of Venous Thrombosis"
"Doppler Evaluation of the Abdominal Aorta and its Branches"
"Doppler Evaluation of Renal Blood Flow, Including Transplantation"
Institute for Medical Studies Symposium in Doppler Ultrasound
Bethesda, Maryland
October 31 - November 1-2, 1986

"Role of Noninvasive Testing in Therapeutic Decision Making"
"Detection of Significant Aortoiliac Occlusive Disease - Current Approaches"
Advanced Technology Laboratories
Symposium in Ultrasound Techniques in Vascular Disease
Boston, Massachusetts
November 10-11, 1986

"Axillo-Subclavian Thrombosis" Surgery Grand Rounds The Milton S. Hershey Medical Center Hershey, Pennsylvania November 26, 1986

"Thromboembolism"
Surgical Education Conference
Crozer-Chester Medical Center
Upland, Pennsylvania
December 9, 1986

"Vascular Trauma" York Hospital York, Pennsylvania January 5, 1987

"Peripheral Vascular Disease"
"Carotid Endarterectomy"
Visiting Professor Lecture Series
The Williamsport Hospital
Williamsport, Pennsylvania
January 16-17, 1987

INVITED PROFESSORSHIPS AND LECTURES (continued):

"Intraoperative Assessment of Arterial Reconstructions" Visiting Professor Lecture Series University of Maryland Baltimore, Maryland February 4, 1987

"Indications for Noninvasive Cerebrovascular Testing" Noninvasive Vascular Course Thomas Jefferson University Hospital Philadelphia, Pennsylvania February 9, 1987

"Fem-Faraway Bypass Grafting - Changing Trends" Surgery Grand Rounds The Milton S. Hershey Medical Center Hershey, Pennsylvania February 11, 1987

"Long-Term Effects of Deep Venous Thrombosis"
"Treatment of Chronic Venous Insufficiency"
Symposium on Venous Thromboembolism
Orlando, Florida
March 15, 1987

"Long-Term Effects of Deep Venous Thrombosis"
"Treatment of Chronic Venous Insufficiency"
Symposium on Venous Thromboembolism
Tampa, Florida
April 5, 1987

"Fibrodysplastic Renal Artery Disease" Surgery Grand Rounds The Milton S. Hershey Medical Center Hershey, Pennsylvania April 22, 1987

- "Clinical Features and Natural History of Lower Extremity Occlusive Disease"
- "Duplex Scanning in Renal Transplantation"
- "Pathophysiology and Natural History of DVT"
- "Interaction of Noninvasive Studies and Phlebography Case Studies"
- "Pathophysiology of Stroke"
- "Indirect Tests in the Diagnosis of Carotid Disease"
- "Plaque Morphology Role in Symptomatic Carotid Disease"
- "Interaction of Noninvasive Tests and Arteriography"

Center for Continuing Medical Education Symposium on Vascular Doppler & Duplex Scanning

Los Angeles, California

May 14-15, 1987, and

San Diego, Californía

May 28-29, 1987

INVITED PROFESSORSHIPS AND LECTURES (continued):

"Extracranial Duplex Exam: Importance and Criteria"
Seminar on the Total Cerebrovascular Exam: Extracranial and Intracranial
Techniques
Toronto, Canada
June 7, 1987

"Effect of Stenosis Morphology on Propagation of Flow Disturbance" Vascular Surgery Biology Club Meeting Toronto, Canada
June 9, 1987

"Surgical Approaches to Venous Disease. The Role of the Vascular Lab in Clinical Practice"

Vascular Update Symposium

Hershey Hotel

Hershey, Pennsylvania

August 21, 1987

"The Evolution of Doppler and Its Current Uses Today"
Meeting of Houston Society of Noninvasive Vascular Technology
Texas Heart Institute/St. Luke's Episcopal Hospital Peripheral Vascular
Conference
Houston, Texas
August 31, 1987

"Peripheral Vascular Anatomy, Physiology, and Pathophysiology"
"Treatment Modalities and Outcomes in Vascular Disease"
"Plethysmography as a Diagnostic Aid in Peripheral Arterial Disease"
"Doppler Evaluation of the Abdominal Aorta and Celiac and Mesenteric Arteries"
"Doppler Evaluation of Renal Blood Flow, Including Transplantation Evaluation"
Institute for Medical Studies Vascular Symposium
Houston, Texas
October 29-31, 1987

"Extended Use of Duplex Scanning" Union Memorial Hospital Baltimore, Maryland November 12, 1987

Renovascular Hypertension"
Urology Resident Conference
The Milton S. Hershey Medical Center
Hershey, Pennsylvania
November 30, 1987

"Evaluation and Treatment of Abdominal Aortic Aneurysms"
"Peripheral Vascular Disease"
Visiting Professor Lecture Series
Williamsport Hospital
Williamsport, Pennsylvania
January 29-30, 1988

INVITED PROFESSORSHIPS AND LECTURES (continued):

"Standardization of Diagnostic Criteria and Terminology" "Use of High Frequency (20 MHz) Dopplers" San Diego Symposium on Noninvasive Diagnostic Techniques in Vascular Disease San Diego, California February 22-23, 1988

"Detection of Visceral Artery Disease with Duplex Ultrasonography" "Postop Evaluation of Leg Grafts" 2nd Annual Noninvasive Educational Symposium North Carolina Vascular Technologists Greensboro, North Carolina March 25, 1988

"Factors Which Prohibit Elective Surgery for Patients with Abdominal Aortic Aneurysms" "Management of Acute Thrombosis of Femoropopliteal and Femorotibial Bypasses" Society for Clinical Vascular Surgery Maui, Hawaii April 7-8, 1988

"Hemodynamics of Arterial Disease"

"Duplex Scanning of the Postoperative Patient - Lower Extremity Vein Grafts"

"Plaque Morphology - Clinico-pathological Correlates"

"Evolution of Duplex Scanning"

"Duplex Scanning of the Mesenteric Vessels"

"Duplex Scanning in Renal Transplantation"

Advanced Technology Laboratories Vascular Symposium

St. Thomas, U.S. Virgin Islands

April 13-15, 1988

"Cerebrovascular Hemodynamics" "Interpretation of the Cerebrovascular Examination" Leading Edge in Diagnostic Ultrasound Vascular Symposium Sponsor - Thomas Jefferson University Atlantic City, New Jersey May 4, 1988

"Abdominal Aortic Aneurysms" "Extended Application of Duplex Scanning in Peripheral Vascular Disease" Visiting Professor Lecture Series Mercy Hospital Pittsburgh, Pennsylvania June 17-18, 1988

"Natural History of Carotid Disease - The Need for Noninvasive Testing" Vascular Symposium - Thomas Jefferson University Philadelphia, Pennsylvania June 22, 1988

"Adequate Assessment of Vascular Disorders"
"New Areas Explored Using Colour Coding"
"Clinical Application of New Technology"
The Third Australian Conference for Vascular Ultrasonography
Queensland, Australia
July 21-23, 1988

"Treatment of the Diabetic Foot" Temple University Philadelphia, Pennsylvania August 18, 1988

"Venous Disease: Evaluation and Diagnosis"

"The Use of the Noninvasive Lab in Clinical Diagnosis"
Madigan Army Medical Center
Tacoma, Washington
September 8, 1988

"Intraoperative Use of the Vascular Lab"
Madigan Army Medical Center and Northwest Vascular Technologists
3rd Annual Noninvasive Vascular Conference
Tacoma, Washington
September 10, 1988

"Mesenteric Circulation"
GI Physiology Conference
The Milton S. Hershey Medical Center
Hershey, Pennsylvania
September 14, 1988

"Coronary/Carotid Disease" Cardiothoracic Surgery Conference The Milton S. Hershey Medical Center Hershey, Pennsylvania October 5, 1988

"Effect of Stenosis Morphology on Propagation of Flow Disturbances" Surgical Research Forum The Milton S. Hershey Medical Center Hershey, Pennsylvania October 5, 1988

"Applications of Color Flow in the Carotid"
"Color Flow Applications in Peripheral Arteries and Veins"
Advanced Technology Laboratories Color Flow Imaging Symposium
New York, New York
October 15, 1988

"Salvage of Occluded Grafts - Indications for Surgery and Thrombolysis" Symposium - The Role of Thrombolysis in Vascular Surgery Chicago, Illinois October 2, 1988

INVITED PROFESSORSHIPS AND LECTURES (continued):

"Unusual Presentations of Vascular Graft Infections" Surgery Grand Rounds The Milton S. Hershey Medical Center Hershey, Pennsylvania October 26, 1988

"The Diabetic Foot"
Surgery Grand Rounds
The Milton S. Hershey Medical Center
Hershey, Pennsylvania
December 14, 1988

"Current Strategies in Aortic Surgery"

*Minimizing Blood Transfusion in Aortic Surgery with Hemodilution and Autotransfusion"

"Intraoperative Evaluation of Arterial Reconstruction"
General Surgery Postgraduate Course
The Oregon Health Sciences University
Portland, Oregon
March 4, 1989

"Pathophysiology and Anatomy of Acute and Chronic Arterial Occlusive Disease"
"Use of High Frequency Doppler"
"How to Establish, Standardize and Certify a Vascular Laboratory"
The Sixth National Noninvasive Diagnosis of Vascular Disease Symposium
St. John's Mercy Medical Center
St. Louis, Missouri
March 8-10, 1989

"Cerebrovascular Anatomy and Hemodynamics"

"Arterial Techniques, Including Color Doppler"

Symposium - Dx Vascular Ultrasound '89

Orlando, Florida

March 11-12, 1989

"Abdominal Aneurysm Surgery - Current Strategies of Operative Management"
Union Memorial Hospital
Baltimore, Maryland
March 14, 1989

"Duplex Carotid Sonography - Clinical Utility"
"Arterial Peripheral Duplex"
Educational Meeting - American Institute of Ultrasound in Medicine Phoenix, Arizona
April 7, 1989

"The Future of the Vascular Laboratory" Annual Meeting - North Carolina Vascular Technologists Greensboro, North Carolina May 6, 1989

"Natural History of Carotid Disease: The Need for Noninvasive Testing" Symposium - Doppler Ultrasound in Vascular Diagnosis Thomas Jefferson University Hospital Philadelphia, Pennsylvania May 31, 1989

Experience in Saphenous Vein Bypass Grafts
Symposium - The Role of Thrombolysis in Vascular Surgery
New York, New York
June 16, 1989

"What the Cardiologist Should Know about Peripheral Vascular Disease" Cardiology Teaching Conference
The Milton S. Hershey Medical Center
Hershey, Pennsylvania
August 16, 1989

"Extended Applications of Duplex Scanning in Peripheral Vascular Disease" International Vascular Symposium Rome, Italy
September 14, 1989

"Current Noninvasive Vascular Diagnosis of Mesenteric and Renal Arteries" Visiting Professor
West Virginia University
Charleston, West Virginia
September 23, 1989

"Aortic Aneurysms"
Surgery Review Course, Osler Institute
Chicago, Illinois
October 9, 1989

"Applications of Color Flow in the Carotid"
"Applications of Color Flow in the Peripheral Veins and Arteries"
Advanced Technology Laboratories Color Flow Update Symposium
October 21, 1989

"Infrainguinal Grafts and Peripheral Arterial Occlusions" Visiting Professor Jewish Memorial Hospital Cincinnati, Ohio October 28, 1989

"Techniques in Aortic Aneurysm Surgery" Pacific Northwest Vascular Society Vancouver, British Columbia November 9, 1989

"Venous Disease - Evaluation and Management, Surgical and Nonsurgical"
"Current Management of Carotid Artery Disease"
Visiting Professor, Williamsport Hospital
Williamsport, Pennsylvania
December 1-2, 1989

INVITED PROFESSORSHIPS AND LECTURES (continued):

"Treatment of Diabetic Foot Infections" Visiting Professor, St. Joseph's Hospital Reading, Pennsylvania February 7, 1990

"Treatment of Diabetic Foot Infections"
Visiting Professor, Temple University Hospital
Philadelphia, Pennsylvania
March 16, 1990

"Thrombolytic Therapy for Arterial Occlusion and in the Management of Deep Venous Thrombosis"
Visiting Professor, R.H.D. Memorial Medical Center
Dallas, Texas
March 20, 1990

"Cerebrovascular Disease - A Surgeon's Perspective"

"Venous Anatomy, Physiology, and Hemodynamics"

Joint Sponsors - University of North Carolina and University of Arkansas for Medical Sciences

Chapel Hill, North Carolina

April 19-20, 1990

"Evolution of Duplex Ultrasonography in Vascular Surgery"
Hershey Surgical Society
The Milton S. Hershey Medical Center
Hershey, Pennsylvania
April 26, 1990

"Pathophysiology and Clinical Features of Carotid Disease - Symptomatic, Asymptomatic and Plaque Morphology"

"Pathophysiology and Clinical Features of Deep Vein Thrombosis - Anatomy, Physiology and Natural History"

Current Treatment Options for Acute Deep Vein Thrombosis"

"Role of Indirect Tests in Lower Extremity Ischemia'

"Anatomy and Physiology of Visceral Blood Flow"

"Vascular Laboratory Accreditation - Current Status"

Advanced Technology Laboratories Symposium on Vascular Duplex and Color Ultrasonography

St. Thomas, U.S. Virgin Islands

May 3-5, 1990

"Update: Intersocietal Commission for the Voluntary Accreditation of Vascular Laboratories"
Thirteenth Annual Conference, Society of Vascular Technology
Los Angeles, California
June 1, 1990

"Anatomy and Physiology of Lower Extremity Arterial System"
"Hemodynamics of Arterial Stenoses"
"Anatomy and Physiology of Lower Extremity Venous System"
Noninvasive Doppler Ultrasound Course
Hotel Hershey
July 12-13, 1990

INVITED PROFESSORSHIPS AND LECTURES (continued):

"Clinical Features of Renal Artery Occlusive Disease"
"Hemodynamics and Clinical Features of Aortoiliac Occlusive Disease"
Noninvasive Doppler Ultrasound Course
Hotel Hershey
Hershey, Pennsylvania
September 27-28, 1990

"The Role of Color Doppler in Cerebrovascular Diagnosis"
"Color Doppler in Abdominal and Lower Extremity Diagnosis"
Advanced Technology Laboratories Color Doppler
Update Symposium
Hilton Head, North Carolina
September 29, 1990

"Surgical Treatment for Ischemic Stroke" Regional Symposium on Stroke Treatment Neuroscience Regional Resource Center Reading, Pennsylvania October 5, 1990

"Peripheral Vascular Surgery"
Moderator, Postgraduate Course
Clinical Congress, American College of Surgeons
San Francisco, California
October 9, 1990

"Vascular Sonography" Moderator, American Heart Association Scientific Sessions Dallas, Texas November 14, 1990

"Duplex and Color in the Abdomen"

Symposium - New Advances in the Noninvasive Evaluation of Peripheral Vascular Disease

Waldorf-Astoria Hotel

New York, New York

November 15, 1990

"Accreditation of Vascular Laboratories: What It Means for All of Us"
Seventeenth Annual Symposium on Current Critical Problems and New Horizons in
Vascular Surgery
Montefiore Medical Center/Albert Einstein College of Medicine
New York, New York
November 18, 1990

"Experience with Thrombolysis in Occluded Saphenous Vein Bypass Grafts" Symposium - Discovery International Miami, Florida
November 30, 1990

"Advances and Applications of Ultrasound Technology" Surgery Grand Rounds The Milton S. Hershey Medical Center Hershey, Pennsylvania January 9, 1991

"Renal Transplant Duplex Evaluation"
"Vascular Laboratory Certification: Current Direction - Future Impact"
The Third International Symposium on Diagnostic Approaches to Vascular
Disease: Duplex and Color Ultrasonography, and Introduction to Noninvasive
Vascular Technology

Kauai, Hawaii

January 30 - February 1991

"Hemodynamic Considerations"
"Signal Processing and Spectrum Analysis"
Noninvasive Doppler Ultrasound Course
Hotel Hershey
Hershey, Pennsylvania
February 28, 1991

"Management of Diabetic Foot Infections"
Visiting Professor, The Reading Hospital and Medical Center
Reading, Pennsylvania
March 13, 1991

"Venous Physiology and Techniques of Testing"
"Anatomy, Physiology and Clinical Features of Carotid Disease"
"Accreditation of Vascular Labs"
Regional Vascular Education Course
Society of Vascular Technology/North Carolina Vascular Technologists
Chapel Hill, North Carolina
March 16-17, 1991

"What Comprises a Complete Noninvasive Peripheral Arterial Exam-1991"
"Evaluation of Thoracic Outlet Syndrome"
"Update on National Vascular Laboratory Accreditation"
The Seventh National Symposium on Noninvasive Diagnosis of Vascular Disease St. John's Mercy Medical Center
St. Louis, Missouri
April 17-19, 1991

"Status of Vascular Lab Accreditation"
"Blood Preservation in Aortic Surgery"
St. Louis Vascular Society
St. Louis, Missouri
April 19, 1991

"Physiologic Evaluation of Lower Extremity Surgery" Visiting Professor, St. Johns Hospital St. Louis, Missouri April 20, 1991

INVITED PROFESSORSHIPS AND LECTURES (continued):

"Long-term Evaluation of Peripheral Vascular Reconstruction"
"Current Diagnosis & Management of Venous Thrombosis"
Sixth Annual Vascular Conference on Advances in Vascular Surgery University of Tennessee College of Medicine
Knoxville, Tennessee
April 26, 1991

"The Use and Abuse of the Vascular Lab"
Panel Discussion, Annual Meeting, Eastern Vascular Society
Pittsburgh, Pennsylvania
May 3, 1991

"Flow Disturbances - Downstream Propagation Distance and Sensitivity to the Degree of Disease - Results from In Vivo Models"
Symposium on Diagnostic Vascular Ultrasound
Working Group - Vascular Ultrasound
Bad Schauenburg, Switzerland
May 7-9, 1991

"Intraoperative Hemodilution in Aortic Surgery" Visiting Professor, Lehigh Valley Hospital Center Allentown, Pennsylvania June 11, 1991

"The Expanded Applications of Duplex Ultrasonography in the Diagnosis of Peripheral Vascular Disease"
University of South Carolina School of Medicine
Richland Memorial Hospital
Columbia, South Carolina
June 29, 1991

"Vascular Laboratory Accreditation"
"Surgical Treatment of Renal Artery Stenosis"
Pacific Northwest Vascular Symposium
Seattle, Washington
September 12-13, 1991

"The Management of the Diabetic Foot" Visiting Professor, Mercy Hospital Pittsburgh, Pennsylvania September 28, 1991

"Duplex Scanning of the Extracranial Cardiovascular System"
"Hemodynamic Considerations"
"Signal Processing and Spectrum Analysis"
Noninvasive Doppler Ultrasound Course
Harrisburg Marriott
Harrisburg, Pennsylvania
November 7, 1991

INVITED PROFESSORSHIPS AND LECTURES (continued):

"Pre-op Assessment of Cardiac Risk" Combined Surgery/Anesthesia Grand Rounds The Milton S. Hershey Medical Center Hershey, Pennsylvania November 20, 1991

"Duplex Evaluation of Abdominal Vasculature"

Panel - "Current Status of Vascular Lab Accreditation"

Symposium on New Advances in the Noninvasive Evaluation of Peripheral Vascular Disease

Montefiore Medical Center and Albert Einstein College of Medicine

New York, New York

November 21, 1991

*Optimal Management Strategies to Prevent and Treat Wound Complications after Infrainguinal Bypasses"

Symposium on Current Critical Problems and New Horizons in Vascular Surgery Montafiore Medical Center and Albert Einstein College of Medicine

New York, New York

November 22, 1991

"Hemodilution for Aortic Surgery" Cleveland Vascular Society Cleveland, Ohio January 29, 1992

"Extended Applications of Duplex Ultrasonography" Cardiology Update '92 Texas Tech University Health Sciences Center El Paso, Texas February 7, 1992

*The Extended Use of Color Duplex Ultrasonography in the Diagnosis of Peripheral Vascular Disease"
"Current Approaches to Surgical Management of Renal Artery Disease"
Visiting Professor, West Virginia University
Morgantown, West Virginia
February 14-15, 1992

"Accreditation of the Vascular Lab"
"Pitfalls in Renal Arterial Studies"
"Intraoperative Assessment of Visceral Artery Reconstruction"
San Diego Symposium on Vascular Diagnosis
San Diego, California
February 17-19, 1992

"Thrombolytic Therapy is a Viable Option for Management of Some Patients With Threatened Limbs"
Panel on Current Controversies - Role of Thrombolysis in Vascular Surgery Abbott Labs Symposium
San Diego, California
February 19, 1992

INVITED PROFESSORSHIPS AND LECTURES (continued):

"Noninvasive Vascular Diagnostic Procedures - Parts I and II" 1992 Big Sky General Surgery Conference Big Sky, Montana February 24, 1992

"Duplex Scanning of the Extracranial Cerebrovascular System"
"Hemodynamic Considerations"
"Signal Processing and Spectrum Analysis"
Noninvasive Doppler Ultrasound Course
The Milton S. Hershey Medical Center
Hershey, Pennsylvania
March 12, 1992

"Management of the Diabetic Foot" Invited Speaker, SmithKline Beecham Wayne, Pennsylvania April 20, 1992

"Minimization of Wound Complications with Infrarenal Bypass Grafting"
"Impact of Distal Bypass Grafting on Patterns of Amputation"
"Strategies and Technical Features of Combined Aortic and Visceral Artery Reconstruction Including Renal Arteries"
Annual Meeting - Royal Australasian College of Surgeons
Canberra, Australia
May 13-14, 1992

"Ruptured Abdominal Aortic Aneurysms"

Panel Discussion, Annual Meeting - Royal Australasian College of Surgeons
Canberra, Australia
May 15, 1992

"Duplex Ultrasound of Mesenteric Vascular Disease"
"Evaluation of Lower Extremity Vascular Disease"
"Intraoperative Ultrasound"
Visiting Professor, Yale University
New Haven, Connecticut
June 18, 1992

"Diabetes Mellitus and Its Complications in The Lower Extremity" Visiting Professor, University of California at Irvine Irvine, California
July 14, 1992

"Infrainguinal Operative Options for the Treatment of Claudication"
"Surgical Management of Acute and Chronic Deep Vein Thrombosis"
Southern New England Symposium on Peripheral Vascular Disease
Goat Island, Rhode Island
August 21-23, 1992

Cerebral Ischemia: Pathophysiology and Current Treatment lith Amnual Lion-Hearted Lecture Series Penn State College of Medicine Earrisburg, Pennsylvania September 10, 1992

INVITED PROFESSORSHIPS AND LECTURES (continued):

"Venous History and Physical"
"Clinical Manifestations of Venous Disease"
Vascular Physics and Technology Review, University of Vermont
Burlington, Vermont
September 19, 1992

Clinical Features of Carotid Artery Disease

"Clinical Features and Diagnosis of Mesenteric Arterial Insufficiency"

"Clinical Features and Diagnosis of Renovascular Hypertension"

"Clinical Features of Deep Vein Thrombosis"

"Postoperative Surveillance of Leg Bypass Grafts" Advanced Technology Laboratories Color Doppler Course Napa, California October 9-11, 1992

"Duplex of Carotid Stenosis: Have the NASCET trials Changed the Diagnostic Criteria?"

"Current Diagnosis Techniques and Results of Renal Artery Stenosis"
"Diagnostic Criteria in Arterial Diagnosis: Using Duplex to Guide the Selection of Patients for Intervention Procedures"
Symposium - Color Doppler Update
Advanced Technology Laboratories
Hunt Valley, Maryland
October 31, 1992

"Suprarenal Aneurysms"
Annual Meeting, Society of Clinical Surgery
The Milton S. Hershey Medical Center
November 13, 1992

"Duplex Evaluation of Renal and Mesenteric Arteries"

Symposium on New Advances in the Noninvasive Evaluation of Peripheral Vascular Disease

Montefiore Medical Center/Albert Einstein College of Medicine

New York, New York

November 19, 1992

"Ischemic Gastroparesis: A Newly Recognized Manifestation of Visceral Ischemia"
Nineteenth Annual Symposium on Current Critical Problems and New Techniques in Vascular Surgery
Montefiore Medical Center/Albert Einstein College of Medicine
New York, New York
November 22, 1992

Thrombolytic Therapy in Peripheral Vascular Disease Surgery Grand Rounds The Milton S. Hershey Medical Center Hershey, Pennsylvania December 16, 1992

INVITED PROFESSORSHIPS AND LECTURES (continued):

"Peripheral Arterial Disease"

"Monitoring of Therapeutic Outcome: Renal, Mesenteric"

"Accreditation of Vascular Laboratories"

Fourth International Symposium on Diagnostic Approaches to Vascular Disease:

Duplex and Color Ultrasonography

Palm Springs, California

January 24-29, 1993

The Diabetic Foot*
Surgery Grand Rounds
The Milton S. Hershey Medical Center
Hershey, Pennsylvania
February 17, 1993

- "Anatomy, Pathophysiology and Clinical Presentation of Mesenteric Arterial Disease"
- "Clinical Features of Renal Artery Occlusive Disease"
- "Pathophysiology and Clinical Features of Deep Venous Thrombosis"
- "Indications for Duplex and Color Flow Imaging for the Evaluation of the Lower Extremity Arterial System"

Vascular Seminar

San Juan, Puerto Rico

February 21, 1993

- "1993 Evaluation of the Carotid Bifurcation Indications and Appropriate Equipment"
- "Peripheral Arterial Evaluation in 1993 Indications for Limited vs. Complete Examination"
- "The Place of Vascular Laboratory in our Present Cost Restrained Environment Uses and Abuses of the Vascular Laboratory"

Eighth National Symposium on Noninvasive Diagnosis of Vascular Disease St. John's Mercy Medical Center

St. Louis, Missouri

March 31-April 2, 1993

- "Carotid Artery Disease"
- "Evaluation of Chronic Venous Thrombosis"
- "Accreditation for the Vascular Lab"

Symposium on Advances in Vascular Ultrasound: Future Directions

Tucson, Arizona

April 3-4, 1993

- "Strategies Involved in Surgery of the Suprarenal Aorta"
 "The Role of Isovolemic Hemodilution in Aortic Surgery"
 Visiting Professor, University of Cincinnati
 April 6-7, 1993
- "The Patient has a Diabetic Foot Infection What Do I Do?"
 "Noninvasive Evaluation of the Patient With Peripheral Vascular Disease"
 Symposium on Vascular Disease: Current Diagnosis and Treatment
 Philadelphia, Pennsylvania
 April 16, 1993

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INVITED PROFESSORSHIPS AND LECTURES (continued):

"Vascular Laboratory Testing: New Standards, New Methods" Postgraduate Course, Annual Spring Meeting American College of Surgeons Montreal, Canada April 27, 1993

"The Role of Carotid Testing"
"Noninvasive Diagnosis of DVT: Impact on Decision Making"
"Duplex Sonography of the Mesenteric Vessels"
"Evaluation of Suspected Renovascular Hypertension"
18th Annual Spring Diagnostic Ultrasound Conference
Los Angeles Radiological Society
Los Angeles, California
May 14-16, 1993

"The Evolution and Application of Noninvasive Testing Methods to the Diagnosis of Arterial and Venous Disease"
Visiting Professor - Altoona Hospital
Altoona, Pennsylvania
May 20, 1993

"Duplex Ultrasonography of the Visceral Branches of the Abdominal Aorta: Current Status"
Invited Speaker - Australasian Society for Ultrasound in Medicine Melbourne, Australia
September 3, 1993

"Clinical Features of Renal Artery Occlusive Disease" Ultrasound Course The Milton S. Hershey Medical Center Hershey, Pennsylvania September 23, 1993

"Feripheral Vascular Disease - Medical and Surgical Management" Medicine Grand Rounds The Milton S. Hershey Medical Center Hershey, Pennsylvania October 21, 1993

"Color Flow Doppler"

American Heart Association Cardiovascular Conference - New Diagnostic Techniques in Vascular Disease

Atlanta, Georgia

November 8, 1993

"Management of Carotid Artery Disease - 1993"
Current Concepts Lecture Series - Family Medicine
The Milton S. Hershey Medical Center
Hershey, Pennsylvania
November 30, 1993

INVITED PROFESSORSHIPS AND LECTURES (continued):

"Cerebrovascular Disease: Current Status"
Symposium on Current Management of Aortic and Peripheral Vascular Disease
Shadyside Hospital
Pittsburgh, Pennsylvania
December 4, 1993

"Treatment of Diabetic Foot Infections"
Mercy Hospital
Baltimore, Maryland
December 9, 1993

"Vascular Disorders" University of Maryland Baltimore, Maryland December 9, 1993

"Evaluation and Results of Renovascular Revascularization"
"Vascular Laboratory Accreditation and Reaccreditation"
"Carotid Duplex Scanning"
Symposium on Advances in Diagnosis and Treatment: Renals, Aortic and Mesenteric Vascular Disorders
Sewickley Valley Hospital
Pittsburgh, Pennsylvania
March 9, 1994

"Venous Thrombosis - The Case for Anticoagulant Therapy"
"Carotid Disease - Current Role of Surgical Treatment"
Symposium on Current Management Strategies for Peripheral Vascular Disease
The Pennsylvania State University and Abbott Laboratories
Toftrees Resort
State College, Pennsylvania
April 30, 1994

"Issues and Controversies in the Treatment of Carotid Artery Disease" Continuing Education Lecture Series
Division of Neurosurgery
The Milton S. Hershey Medical Center
Hershey, Pennsylvania
May 20, 1994

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RESEARCH FUNDING:

"Applied Dynamics of Atherosclerosis" V.A. Merit Review VA Hospital Seattle, Washington 1977-1983

"Evaluation of Prostaglandin E, in the Treatment of Ischemic Ulceration" Grant, The UpJohn Company University of Washington 1979-1981

Asymptomatic Carotid Artery Stenosis Study -Multicenter - NIH Grant The Milton S. Hershey Medical Center Hershey, Pennsylvania 1987-1992

COLLABORATIVE RESEARCH PROGRAMS:

"The Natural History of Acute Venous Thrombosis" NIH Grant Principal Investigator: D. Eugene Strandness, M.D. University of Washington

"Noninvasive Evaluation of Carotid Disease" NIH Grant Principal Investigator: D. Eugene Strandness, M.D. University of Washington

Smooth Muscle Cell Activity in Human Atherosclerosis* NIH Grant Principal Investigator: Russell Ross, M.D. University of Washington