CHRISTOPHER ARMSTRONG LUDLAM

Current Appointments

Professor of Haematology and Coagulation Medicine, University of Edinburgh (from 1999)

Head of Department, Department of Haematology, Royal Infirmary, Edinburgh (1990 -)

Consultant Haematologist, Royal Infirmary, Edinburgh (from 1980)

Director, Edinburgh Comprehensive Care Haemophilia and Thrombosis Centre (from 1980)

Honorary Consultant, Scottish National Blood Transfusion Service.

Age:	64
Date of Birth:	GRO-C 1946

University Education

1965 - 71	University of Edinburgh

Undergraduate Awards

1965 - 1966	Mackenzie Bursary in Anatomy Merit Certificate in Anatomy
1967	Carnegie Trust Vacation Scholarship
1967 - 1968	Undergraduate Scholarship
1968 - 1969	Keasbey Memorial Foundation Bursary Merit Certificate in Pathology
1969 - 1970	Merit Certificate in Clinical Chemistry Class Medal in Venereal Diseases Keasbey Memorial Foundation Bursary
1970 - 1971	Lawson Gifford Prize in Gynaecology and Obstetrics

Degrees and Qualifications

B.Sc (Hons) Biochemistry Class 1 (Edinburgh) 1968

MB ChB (Edinburgh) 1971

MRCP 1973

PhD (Edinburgh) 1977

MRCPath 1977

FRCP (Edinburgh) 1982

FRCPath 1989

MRCPCH 1997

Previous Appointments

1971 - 72	House Officer to Professor R.H. Girdwood, Professor Sir Michael Woodruff Royal Infirmary, Edinburgh.
1972 - 75	MRC Junior Research Fellow, Department of Therapeutics, Royal Infirmary, Edinburgh. Honorary Registrar in Medicine, Lothian Health Board.
1975 - 78	Senior Registrar in Haematology, University Hospital of Wales, Cardiff.
1979	Lecturer in Haematology, University of Wales Medical College, Cardiff.

MAJOR RESEARCH INTERESTS

Haemophilia Research

Blood Product Safety and Virological Studies in Haemophiliacs

Since 1980 I have initiated a series of major laboratory and clinical studies to investigate the effect of viruses transmitted by clotting factor concentrates to haemophiliacs. These studies have examined the infectivity of factor VIII and IX concentrates, the efficacy of currently available viral inactivation procedures used in their manufacture and the clinical consequences of infection in recipients.

Hepatitis B Virus

My studies have demonstrated that despite the HBsAg testing of individual blood donors, plasma derived concentrates were still infectious for hepatitis B virus (HBV). Following infection and the development of anti-HBs, my studies revealed that the virus could become latent and subsequently reactivated in HIV induced immune decline. This is clinically important because it causes progression of liver disease and poses a risk to family members and health care workers. The studies also found that HBV replication caused the suppression of hepatitis C virus in co-infected patients, making it difficult to diagnose infection with this latter virus.

Human Immunodeficiency Virus and Immune Status

When HIV was first reported in 1982 in haemophiliacs, I initiated studies to examine immune function in Edinburgh patients. At that time I believed (and this was subsequently confirmed) that they were likely to be free of the putative AIDS virus. This was because Scottish patients were treated with factor VIII concentrate prepared from local Scottish donors who were from an apparently AIDS-free population. Nevertheless, the results demonstrated immunological abnormalities as severe as those in patients in North America who were thought to be infected with the putative virus. Our findings suggested that the immune modulation may have been due to non-factor VIII constituents of the concentrate or non-A non-B hepatitis. These, and other studies, were influential in promoting the manufacture of higher purity factor VIII concentrates. These were considered to be particularly appropriate for use in HIV infected haemophiliacs to prevent further reduction in their immunity.

In late 1984 it became apparent that 18 of our haemophiliacs had become HIV infected from a single batch of factor VIII concentrate manufactured by the Scottish National Blood Transfusion Service. This unique cohort has been the subject of intense study for the past 10 years. This has required the help and close co-operation of virologists (Dr. J.F. Peutherer and Dr P Simmonds, University of Edinburgh), an immunologist (Professor. C.M. Steel, previously of the MRC Genetics Unit, Edinburgh), and a geneticist (Dr. A. Leigh Brown, University of Edinburgh). This major project has given unique data and insight into the molecular biology of HIV from a point source

of infection. Our group was the first to detect HIV by PCR in factor VIII concentrates which were used clinically in the early 1980's. The sequence variation in virus of individual patients was studied over prolonged periods of time and the resultant data have had important implications for HIV vaccine development.

The changes in circulating lymphocyte sub-populations were serially quantitated, as were other markers of immune status, e.g. $ß_2$-microglobulin, soluble IL2 receptor and immunoglobulins, and their prognostic potential was demonstrated

We were the first group to report that the HLA haplotype A1B8DR3 was associated with rapid clinical progression of HIV. This was an important observation because, apart from age, it was the first host factor which affected HIV progression to be reported. This observation has subsequently been confirmed by other investigators studying patients from different and much larger HIV positive cohorts of other risk groups. These studies have allowed conclusions to be drawn about the biology of the immune response to HIV and the assessment of which parameters are good predictors of clinical decline. These results have provided further insight into factors regulating the natural history of HIV infection and provide a basis for future investigation of the mechanism by which the virus causes immune decline. They will also prove valuable for designing new therapeutic drug trials by identifying individuals at high risk of disease progression. Study of these individuals would be likely to give clinically useful end points sooner in a smaller number of patients. I am continuing these studies in larger cohorts of other patients using PCR based methods for HLA and TNF allele assessment.

These HIV and immunological studies attracted support initially from the Chief Scientist Organisation, Scottish Home and Health Department and subsequently the Medical Research Council who have contributed to the University over £1 million to the project. I have personally received two sequential MRC Project Grants for a medically qualified Clinical Lecturer and three research assistants. I have also supervised two PhD students in receipt of MRC Fellowships. Our Clinical Lecturers have been awarded MDs for their studies.

Hepatitis C Virus

With the identification of the HCV we have set up several projects funded by the MRC and in conjunction with Dr Peter Simmonds, to examine both specific antibody response and virus detection by PCR. In addition, from HCV nucleotide sequence data, we have examined the heterogeneity of the virus between individuals infected by HCV at different time points and compared the results with local intravenous drug abusers. The virus was also identified by PCR in non-virucidally treated factor VIII concentrates available in 1985. Our studies have revealed that using second generation RIBAs all haemophiliacs treated with non-virus inactivated concentrates have been infected with HCV. We also demonstrated an interaction between HBV and HCV.

With the identification of six major genotypes of HCV we have assessed their distribution in haemophiliacs and demonstrated that they reflect, on a world wide basis, the source plasma from which the therapeutic concentrates are derived. We

demonstrated that the predominant circulating genotype could change over time particularly in HIV positive individuals.
We set up a study, in conjunction with Professor Peter Hayes, to assess objectively the degree of liver disease (by laparoscopy and liver biopsy) and the patients' response to α-interferon. These studies found that 25% of patients had cirrhosis and they have provided some of the best data on the extent of liver disease in haemophiliacs due to HCV. When published in 1996, it was the largest and most detailed study of the effects of alpha interferon on patients with haemophilia.

Hepatitis G Virus

My studies on flavirivurses have been extended to the so-called hepatitis G virus (HGV). We reported the ubiquity of this virus in all non-virally attenuated plasma-derived coagulation factor concentrates. The studies demonstrated that, although it is likely that all recipients of concentrates became infected, about 15% continue to be PCR positive after 15 years. By computer modelling, we have estimated that the time from infection to presumed seroconversion and loss of circulating virus is about two years. In this currently funded on-going study we are attempting to assess the pathogenicity of HGV as our initial endeavours have not supported the presumption that it is hepatotropic. The project has been externally funded to support a post-doctoral scientist, Dr Lisa Jarvis.

Transfusion Transmitted virus

The recent report from Japan of a new transfusion transmitted virus (TTV) prompted a study of Edinburgh patients. This small DNA parvo-like virus is particularly intriguing, because its genome can be detected in factor VIII concentrates which have been virally attenuated by the solvent/detergent technique, yet these appear to be non-infectious. It is noteworthy that despite infection probably ceasing in the mid 1980s, 20% of haemophiliacs continue to be PCR positive after more than 10 years. The pathogenicity of this virus remains uncertain, but our studies do not support the original proposition from Japan that it causes progressive liver disease.

Clinical Efficacy and Safety Trials of New Therapeutic Concentrates

As part of my long-term commitment to the improvement in the quality of therapeutic clotting factor concentrates, I have worked in close collaboration with the Scottish National Blood Transfusion Service Protein Fractionation Centre. This has involved detailed discussions on product development and the testing of new concentrates in patients. I have acted as the national co-ordinator of a 'previously untransfused patient' (PUP) virus safety study for the SNBTS intermediate purity concentrate.

Currently I am the principal investigator for national studies (under CTX) of a high purity factor VIII concentrate manufactured by SNBTS. In total about 500 patients are recruited to these detailed studies which are to assess the safety and efficacy of the

new concentrate. I also co-ordinate similar studies on a high purity factor IX concentrate.

I am the principal investigator for a UK study on the use of recombinant factor VIIa by continuous infusion in haemophiliacs undergoing major surgery.

As one of a small number of UK Haemophilia Centres I am participating in international clinical trials of a new, second generation recombinant factor VIII and a recombinant factor IX concentrate.

I am also collaborating in a European study to investigate the cost-effectiveness of haemophilia treatment. This is an important project because of the increasing cost of providing for haemophiliacs.

Thrombosis Research

My research has been directed towards the measurement of platelet and coagulation activation particularly in patients at high risk of thrombotic events. The assays I developed for the platelet specific proteins β-thromboglobulin (βTG) and platelet factor 4 (PF4) opened up a new approach to the assessment of platelet activation in vivo which was previously not possible. The assays were taken up by many other laboratories and their investigations, along with my clinical studies, demonstrated the value, and limitations, of measuring these platelet proteins.
Using patients with prosthetic heart valves as a model, platelet kinetic studies were undertaken to examine the relationship between platelet kinetic parameters and βTG levels. Using the multiple hit model an inverse correlation was demonstrated between platelet mean life-span and βTG. This was important because it established that βTG levels could be used as a surrogate marker for identifying patients with increased platelet turnover. The platelet studies were extended to assess their mechanism of ageing in vivo by preparing ex vivo density separations on Percoll gradients of ^{111}In-labelled platelets in both healthy subjects and splenectomised patients. These studies provided further evidence that platelets do not become less dense as they age in the circulation. These, and many studies carried out at other centres, have allowed βTG and PF4 to become part of the accepted repertoire of investigations for quantitating platelet activation.

The following are a selection of projects which I have been instrumental in promoting. They have attempted to identify patients at particular risk of a clinical thrombotic event from amongst a broader group of prothrombotic individuals.

1. In conjunction with colleagues in London, Cardiff and Paris, I helped with an international study to assess the potential benefit of aspirin and dipyridamole in patients with diabetes. Although it failed to demonstrate clinical benefit of the drugs, it provided an invaluable model for examining inter and intra-patient variability of plasma platelet protein concentrations.

2. Under my supervision, Dr Iwona Wieczorek undertook studies in patients with

myeloproliferative disorders to assess their fibrinolytic status. The results demonstrated that patients with polycythaemia rubra vera have an increased basal level of fibrinolysis, but those with a history of thrombosis had a decreased fibrinolytic reserve. This reduced lysis may have contributed to their thrombotic predisposition. The studies were extended to examine the relationship between circulating anticoagulants and thrombosis. These studies were financially supported by the Stefan Batory Trust.

3. A grant was received from the Chest, Heart and Stroke Association to support a study into the effects of testosterone on the haemostatic system. This was part of a larger WHO study, in collaboration with Dr. F. Wu, (recently of the MRC Centre for Reproductive Biology in Edinburgh) to examine the efficacy and safety of testosterone as a contraceptive. The results gave reassurance that even at high doses of testosterone there was not long-term activation of coagulation. This work is continuing with colleagues in Edinburgh as a contribution to a large international study supported by the MRC and WHO.

4. Over the past five years I have undertaken a series of studies in conjunction with Professor K.A.A. Fox to examine changes in fibrinolysis, procoagulants and platelets in patients with unstable angina and myocardial infarction. The aim has been to help characterise the pathophysiology of infarction and identify further predictive risk factors. The results have indicated that characteristic fibrinolytic changes may be associated with infarction. Our data, however, questions the orthodox view that platelet size is an independent predictor for myocardial infarction particularly in those with unstable angina.. Furthermore the study indentified sICAM1 as a possible independent risk factor for the acute coronary syndrome.

5. In collaboration with Mr James Christie, Orthopaedic Surgeon, we have investigated the relationship between embolism following surgery from fractured lower limb bones, activation of the coagulation system and respiratory function. The initial studies have been accepted for publication and further ones are underway to examine which of the cytokines may be intermediaries in the causing activation of the coagulation system.

Regulation of haemostasis

Factor VIII

My initial studies on the factor VIII and von Willebrand factor response to desmopressin stimulated my further interest in the regulation of their control. My original observation that patients with severe vWD did not release tissue plasminogen

activator after desmopressin was a further incentive to investigate the cellular mechanisms.
During the past three years, in conjunction with Dr. David Stirling, I have initiated studies to assess the molecular mechanisms regulating the control of factor VIII expression and to identify its sites of synthesis. This has been achieved by developing a competitive PCR to quantitate specific factor VIII in mRNA. We have demonstrated that its expression in a hepatoma cell line is stimulated by IL6 which is probably the mechanism by which the plasma concentration increases in inflammatory conditions. Our further studies have revealed that factor VIII is synthesised in many organs, other than the liver and spleen, which is contrary to the popular perception. We have demonstrated high levels of factor VIII in RMA in endothelial cells. We are taking forward these studies to assess factors VIII protein synthesis along with its regulation by cytokines and other intermediaries.

These studies, on the regulation of factor VIII synthesis in vitro, are complemented by studies in human subjects including healthy individuals, those with atherosclerosis and patients with haemophilia and Von Willebrand disease. In these studies, in collaboration with Dr David Newby and Professor Keith Fox, we have examined the endothelial response to infusions of substance P, bradykinnin and desmopressin. As well as the factor VIII response, we have assessed the changes in VWF, tPA, PAI and IL6. The results demonstrate a reduced response in those with atherosclerosis due to impaired endothelial cell function. These data have confirmed my previous discovery of dissociate responses in VIII, VWF, tPA in Von Willebrand disease and extended the observations to show IL6 release. These studies are important for trying to understand the mechanisms by which endothelial cells contribute to normal haemostatsis, atherosclerosis and bleeding (and its prevention) in Von Willebrand disease and haemophilia. The studies are supported by the British Heart Foundation and the Peter Palmer Trust.

Fulminant Hepatic Failure

I have initiated a series of investigations, along with colleagues in the Scottish Liver Transplant Unit, into the haemostatic changes in acute fulminant hepatic failure. Using the sequelae arising following acute paracetamol overdose the coagulation abnormalities are being characterised. The studies have demonstrated that the abnormalities may be related to selective consumption rather than synthetic failure. These have important implications for treatment. We are planning to extend these studies to an experimental animal model of paracetamol induced hepatic injury.

Principal Research Grants

Medical Research Council

Clinical, immune and virological investigation of haemophiliacs with particular reference to HIV infection. C.A. Ludlam, J.F. Peutherer, C.M. Steel.
1st August 1989 - 31st December 1992 £203,038

Virological and immunological determinants of liver disease in haemophiliacs infected with hepatitis C virus. C.A. Ludlam, P. Simmonds, J.F. Peutherer.
1st October 1992 - 30th September 1995. £117,349

Scottish Office Home And Health Department

Study of immune function and HTLVIII infection on haemophiliacs treated exclusively with NHS factor VIII/IX concentrate. C. A. Ludlam, J. F. Peutherer.
1st April 1996 - 31st March 1989 £46,342

The contribution of immunogenetic factors to variation in rates of disease progression among HIV infected subjects. C.A. Ludlam, J.F. Peutherer, R.J. Prescott.
1st January 1994 - 1st January 1996 £111,031

Treatment of Haemophilia in Scotland: Does Clincial Outcome Relate to Usage of Coagulation Factor Concentrate Therapy. C. A. Ludlam, G D O Lowe, R J Prescott and Haemophilia Directors for Scotland.
1st January 1995 - 30th June 1996 £112,141

Regulation of coagulation factor VIII synthesis in different tissues. C A Ludlam, D Stirling.
1st October 1995 - 30th September 1998 £118.448

The contribution of a novel flavivirus, hepatitis G virus/GBV-C in the aetiology of acute and chronic hepatitis. C. A. Ludlam, P. Simmonds, Dr. P. Hayes.
1st October 1996 - 30th September 1999 £90,000

Wellcome Trust

A study of the immune response to HIV: Analysis of susceptivility, pertaining to the major histocomptibility complex and t cell receptor repertoire. C.A. Ludlam, A.G. Dalgleish,
1st January 1993 - 1st January 1994 £29,465

British Heart Foundation

Platelet Volume and Haemostatic Markers in Unstable Angina. K.A.A. Fox, C.A. Ludlam, T. O'Malley.
1st September 1993 - 31st August 1995 £100,846

Cell Adhesioon Molecules, Chronic Infection and Cardiovascular Disease. G.S. Hillis, C.A. Ludlam, K.A.A. Fox and others.
(1999-2000) £48,000

Endothelial Function and Endogenous fibrinolysis in the coronary and peripheral vascular beds, D.E. Newby, C.A. Ludlam and K.A.A. Fox and others

(1998-1999) £78,104

Effects of inflammatory cytokines on endothelial vasomotor and fibrinolytic function: role of interleukin-1β and interluken-6 and tumour necrosis factor α C.A.Ludlam, D.E. Newby, K.A.A.Fox (2000-2001).

£81,935

British Heart Foundation Project PG99025. Hyperhomocysteinamaeia in patients with recent myocardial infarction: role of endothelial function end endogenous fibrinolysis. May 1999 for 2 years. Dr D B Northridge, Dr A D Flapan, Professor C A Ludlam, Professor D J Webb.

£49,290

British Heart Foundation project grant PG2000044. The Scottish aortic and stenosis and lipid lowering trial, impact on regression (SALTIRE) study, August 2000 for 3 years. Dr D E Newby, Dr D B Northridge, Dr N A Boon, Professor C A Ludlam.

£185,6463

Haemophilia Society

Regulation of expression of coagulation factor VIII gene. C. A. Ludlam, D. Stirling. 1st December 1993 - 31st November 1994

£17,400

Chest, Heart and Stroke Association

The influence of prolonges testosterone administation on the haemostati system. C.A. Ludlam, F.C.W. Wu, R.A. Anderson.
1st January 1991 - 31st December 1992 £29,894

Subacute stent thrombosis: influence of fibrinolysis, haemostasis and platelet function. Dr D E Newby, Dr I L Megson, Dr D Stirling, Professor C A Ludlam, Dr N A Boon.

£25,932

Scottish National Blood Transfusion Service

Clinical studies on new coagulation factor concentrates. C.A.Ludlam

£135,000

Peter Palmer Liferent Trust.

The role of the IL-6 group of cytokines in haemostatis. Professor C A Ludlam 2001 – 2004.

£60,000

Undergraduate and Postgraduate Teaching

I have regular commitments to both undergraduate and postgraduate medical education. These include clinical tuition in internal medicine and haematology as well as formal lectures on many aspects of haematology.

I was Advisor in Haematology for the South East Scotland Committee for Postgraduate Medical Education (1990-93) and therefore a member of the Pathology Training Subcommittee. Recently I helped establish a Lothian Haematology Training Programme which enables registrars to rotate to all Departments of Haematology in Lothian.

I am a member of the Specialty Advisory Committee in Haematology of the Joint Committee on Higher Medical Training (1995 to date). This has been a particularly interesting and challenging time to undertake this task because of the introduction of the Calman proposals for training.

Theses

I have supervised the following post graduate students resulting in the award of the following degrees:

MD	1988-91	Robert J Cuthbert -	Viral infections in haemophilia
PhD	1991-94	Alison Batchelor -	Immunological abnormalities in patients with haemophilia; role of factor VIII concentrate
MD	1990-94	Iwona Wieczorek -	Studies on von Willebrand factor
MD	1993-96	Henry Watson -	Hepatitis A and B in haemophilia
PhD	1992-96	Helen Speirs -	Investigation of contaminants with immunomodulatory activity in coagulation factor concentrates
MD	1994-96	Tom O'Malley	(In preparation)
MD	1994-97	John Hanley	Hepatitis C Infection in Haemophilia

MD	1997-99 Andrew Stewart	Studies on haemochromatosis (in preparation)
PhD	1996-99 Justine McIlroy	Regulation of Tissue Factor Expression
MD	2001-2003 Ron Kerr	Regulations of factor VIII synthesis.

Administrative Experience

Laboratory Responsibilities

In April 1990 I became Head of the Department of Haematology. The Department provides a comprehensive service for a population of 600,000 serving all hospitals and general practitioners in South Lothian. The resulting workload is one of the largest in the UK amounting to approximately 250,000 samples per annum. The staff include 5 medical staff, 30 MLSO's and 5 secretarial/clerical officers.

The Department was awarded unconditional accreditation by Clinical Pathology Accreditation (UK) Ltd in 1993.

The Haemostasis Laboratory offers a service for patients with haemorrhagic or thrombotic disorders within South Lothian. The laboratory also provides a reference service for haemostatic disorders for South-East Scotland as well as acting as a referral centre for patients from elsewhere in Scotland and North of England.

Molecular biochemical techniques for gene tracking have been successfully established for carrier assignment and antenatal diagnosis of haemophilia by chorion villus sampling using both linked and genomic probes to detect polymorphic sites. Our Molecular Biologist, Dr. David Stirling, has recently been awarded a grant (with Professor I. Mason and Dr J. Bartlett) for £350,000 by SHEFC for a DNA gene sequencer which allow detection of family-specific mutations in the genes coding for coagulation factors. This allows direct carrier identification and antenatal diagnosis without the necessity to perform gene tracking studies.

In the past five years I have helped with planning the laboratory arrangements for the New Royal Infirmary. The new arrangements have provided an unprecedented challenge to pathology laboratory Service in Edinburgh and are requiring radical changes to the way haematology services will be provided in future.

Haemophilia and Thrombosis Service

As Director of the Edinburgh Haemophilia and Haemostasis Centre I have direct responsibility for providing a service for individuals in South East Scotland, and in addition I see referrals from other Scottish Centres with which I work closely.

The Haemophilia Centre has over 200 patients in its Register - most have haemophilia

A and B, but there are an increasing number with rarer congenital coagulation (including thrombotic) and platelet disorders.

There is a close liaison with the South East of Scotland Blood Transfusion Centre at the Royal Infirmary over the provision of coagulation factor concentrates.

Under my direction the clinical service is provided by Dr Angela Thomas (Paediatric Haematologist), an Associate Specialist, Speciality Registrar and Lecturer along with a Nursing Sister, Staff Nurses, Social Worker, Physiotherapist and Secretary. There is close liaison with a dentist and orthopaedic surgeon. We work closely with schools and the School Medical Service.

As a result of HIV infection the service has had to accommodate new needs; viz provision of intensive clinical investigation of those infected; and of an extensive counselling service to patients and their families.With the indentification of HCV we have developed a service for its management in conjunction with the hepatologists (Professor Peter Hayes) and Scottish Liver Transplant Centre.

Recently Professor Lowe (Glasgow) and I have negotiated with Scottish Office Department of Health and Health Boards the provision of recombinant factor VIII and IX. This has been a five year plan which has now achived funding for all patients in Scotland to be treated. In the current financal year this amounts to a budget of £11 million. This is a major therapeutic advance for patients in Scotland.

Membership of Societies

Professional Societies

President (1992 - 1993) British Society for Haemostasis and Thrombosis.

Elected Member of Executive Committee of British Society for Haemostasis and Thrombosis (1988 - 1994).

Member, U.K. Haemophilia Society Medical Advisory Panel (1988 to 1996).

Vice Chairman, Medical Advisory Board, World Federation for Haemophilia (1991 - 1996).

Member, Royal College of Pathologist Working Party on Training for Clinical Scientists (1993)

Member, Factor VIII/IX Subcommittee of the Scientific and Standards Committee of the International Society for Thrombosis and Haemostasis (1993 - to date).

Member, von Willebrand Factor Subcommittee of the Scientific and Standards Committee of the International Society for Thrombosis and Haemostasis (1998-todate)

Scientific Journals

Editor, Thrombosis Research (1998-to date)

Assistant Editor, British Journal of Haematology (1981 to 1991)

Annotations Editor, British Journal of Haematology (1993 to 1996)

Member, Editorial Board, British Journal of Haematology (1981-1996)

Member, Editorial Board, Thrombosis and Haemostasis (1986 to 1988)

Member, Editorial Board, Haemophilia (1994 - to date)

Member, Editorial Board, Haemophilia forum (an educational Web site)

Organisation of National and International Meetings

I have organised the following National scientific meetings in Edinburgh:

1. UK Haemophilia Centre Directors Annual Scientific and Business Meeting 1986. This included four scientific sessions with speakers from Europe and North America.

2. British Society for Haemostasis and Thrombosis Scientific Meeting in 1990. At this two day meeting there were invited speakers, free communications, posters and a trade exhibition.

3. British Society for Haemostasis and Thrombosis Annual Business and Scientific Meeting, March 1993. At this 2½ day meeting of over 200 registrants there were invited eminent speakers from Europe and the United States, free communications, poster presentations and trade exhibition.

4. International Symposium on Parvovirus infection and its transmission by blood products, March 1995, Royal College of Physicians, Edinburgh

5. International Society for Thrombosis and Haemostasis. I am a member of a small Organising Committee for the meeting of the International Society for Thrombosis and Haemostasis in Birmingham, UK in 2003.

I have worked on organising and advisory committees for many national and international haemostasis and thrombosis conferences, e.g. International Society for Thrombosis and Haemostasis, Washington, 1999

American Society for Haematology
Association of Physicians of Great Britain and Ireland
Association of Professors and Heads of Academic Departments of Haematology.
British Blood Transfusion Society
British Society for Haematology
British Society for Haemostasis and Thrombosis
European Haematology Association
International Society for Haematology
International Society for Thrombosis and Haemostasis
Scottish Society of Physicians

National Committees

Chairman: UK Haemophilia Centre Directors Organisation (UKHCDO) (1996-1999) This organisation oversees the provision of care in the UK for people with haemophilia and their families.

Chairman: UKHCDO Genetics Working Party (2000-2003). This committee is making recommendations for provision of clinical and laboratory genetic services for people with haemophilia. It has defined quality standards for a Haemophilia Laboratory Genetic Service. I have negotiated on behalf of UKHCDO with the London Specilaity Commissioning Group and the recently established Genetics Advisory Commissiong Group (Chairman Sir John Pattison) to secure funding for Haemophilia Genetics Services. Under my Chairmanship the Working Party has published as series of other guidelines:

Chairman: Factor VIII Working Party of Scottish Home and Health Department/Scottish National Blood Transfusion Service/Haemophilia Directors Scotland and Northern Ireland (1988 - to date). This is an important committee providing liaison between SNBTS and users of coagulation factor concentrates. It has been instrumental in helping to develop policies for new factor concentrate manufacture in Scotland and ensuring that appropriate laboratory and clinical trials are undertaken.

Chairman, Task Force UKHCDO to revise Therapeutic Guidelines for Treating Haemophilia. This was a major responsibility to produce the UK recommendations for treating haemophilia (1996).

Vice Chairman, UK Haemophilia Directors Organisation (1992 - 1996)

Co-Chairman, Haemophilia Directors Committee for Scotland and Northern Ireland.

Member, Executive of UK Haemophilia Centre Directors Organisation (1980 to date)

Member, UK Haemophilia Directors Organisation (1980 to date)

Member, UK Haemophilia Reference Centre Directors AIDS Committee (1984 - 1991 when it ceased to be a separate committee)

Member, UKHCDO Working Parties
1. Platelets (1987 - 1990)
2. HIV (1991 to 1997)
3. Chronic Liver Disease (1993 to date)
4. Genetics Working Party (1993 to date)
5. Factor VIII Inhibitors (1995 to 1997)

These are influential national committees of UKHCDO which undertake research and publish guidelines for the treatment of haemophilia and related disorders.

Member, Haemostasis and Thrombosis Task Force of the British Committee for Standards in Haematology. I had a particular responsibility for drawing up published National guidelines on the use of fibrinolytic therapy (1993 to date).

Member, Working Party on Prophylaxis for Thromboembolism and Antithrombotic Therapy of the Scottish Royal Colleges (Scottish Intercollegiate Guideline Network SIGN) (1993 to date) This committee has produced national guidelines for prevention and treatment of venous thromboembolism.

Member, National Panel of Specialists in Haematology 1986 - 1989 and 1997-2001.

Member, National Panel of UK Assessors for Biochemists, Physicists and other Scientists employed by Health Boards (1991 to date)

Member, SAC in Haematology of the JCHMT (1995 to 2001)

Inspector for Haematology for Clinical Pathology Accreditation Ltd. (1996 to date)

Member, Executive Scotland and Newcastle Lymphoma Group (1981 to 1999)

External Examiner

I have acted on many occasions as an external examiner to many UK Universities - currently University of Cambridge for final MBchB.

I regularly act as a examiner for the following:

University of Edinburgh
Royal College of Physicians (Edinburgh)
Royal College of Pathologists

Other Relevant Information

Clinical Responsibilities

My clinical responsibilities require me to manage in-patients and out-patients within the Royal Infirmary.

I have two general haematology out-patient clinics each week; one is primarily for new patients, many of whom are referred for haemostatic or thrombotic opinion and investigation.

At the Haemophilia and Haemostasis Centre I have a weekly clinic for new referrals and follow up patients.

Audit

I have helped manage in the following audit activities:

1. Haemophilia Centre Directors in Scotland and Northern Ireland in 1991 set up a pilot external Audit of Haemophilia Centres; because of its success it has been extended to England and Wales. The Edinburgh Centre has been audited by an external assessor on three occasions and I have audited four Centres elsewhere.

2. The Haemophilia Centre holds regular internal audit meetings to review and quantitate the functioning of the service and the use of blood products.

3. In conjunction with Professor Lowe I have set up a large review of haemophilia treatment and outcome in Scotland during 1980-1994. This project is funded by the SOHHD for £113,000.

4. I instituted an audit (along with Dr. Charles Swainson) of the treatment of DVT and pulmonary embolism in the Royal Infirmary. The results have led to major changes in the way these patients are managed.

5. The haematology clinical service holds audits regularly to review the use of drugs, investigative procedures and clinical records.