

Connective Issues

BSMB Newsletter

British Society for Matrix Biology

Committee: Prof. Bruce Caterson (Chairman), Prof. Anthony Hollander (Secretary), Dr. Jay Dudhia (Treasurer), Dr. Malcolm Lyon, Dr. Robert Lauder, Dr. Graham Riley, Dr. Drew Rowan, Dr. John Tarlton, Dr. Anne Vaughan-Thomas

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Contents

- 2 Editorial *by Anthony Hollander*
- 2 Current BSMB Committee *Contact Information*
- 2 Publication of meeting abstracts *Details*
- 2 Web site *A call for contributions*
- 2 Obituary: Michael Barnes *by Richard Farndale and Allen Bailey*
- 3 Forthcoming meetings *Meeting details for 2003 and 2004*
- 4 BSMB bursaries for the autumn 2003 meeting *Application details*
- 4 BSMB spring 2003 meeting report *by Theresa Momberger and Alison Reith*
- 9 Minutes of AGM *Detailed report from the Spring 2003 Annual General Meeting*
- 12 Annual report and accounts *Detailed treasurer's report for 2002*
- 21 Details and registration form for Autumn 2003 meeting *Please register NOW*

Editorial

By Anthony Hollander

Welcome to the 62nd edition of Connective Issues and my first Newsletter since taking over from Rose Maciewicz as Honorary secretary. I want to pay tribute to the huge contribution Rose has made to the Society, first as a committee member (1995-1997) then as Secretary (1997-2003). I also want to thank the outgoing committee members, Tony Day and Alison Reith, for their hard work right up to the last minute! Tony organized an excellent meeting in Oxford in Spring 2003 and Alison (together with Theresa Momberger) has written a meeting report for those of you who could not be there.

Please can I urge all of you to register early and submit your abstracts for the Autumn meeting in London (details elsewhere in the Newsletter).

If you have any ideas for changes to the Newsletter format or would like to make a contribution to future editions then please let me know (A.Hollander@Bristol.ac.uk).

Current BSMB Committee

Officers:

Chairman, Prof. Bruce Caterson (University of Cardiff, Caterson@Cardiff.ac.uk)

Honorary Secretary, Prof. Anthony Hollander (University of Bristol; A.Hollander@Bristol.ac.uk)

Treasurer, Dr. Jay Dudhia The Royal veterinary College, London; jdudhia@rvc.ac.uk)

Elected Members:

Dr. Malcolm Lyon (University of Manchester; MLyon@PICR.man.ac.uk)

Dr. Robert Lauder (Lancaster University; r.lauder@lancaster.ac.uk)

Dr. Graham Riley (Addenbrookes Hospital, Cambridge; gpr1003@cus.cam.ac.uk)

Dr. Drew Rowan (University of Newcastle; A.D.Rowan@newcastle.ac.uk)

Dr. John Tarlton (University of Bristol; John.Tarlton@bristol.ac.uk)

Dr. Anne Vaughan-Thomas (University of Liverpool; avt4460@liverpool.ac.uk)

Publication of Meeting

Abstracts

The abstracts for the Spring 2003 meeting held at the University of Oxford on the 31st March and 1st April 2003 on "Extracellular matrix: from structure to function" will be published in the International Journal of Experimental Pathology (IJEP) in October 2003.

Web site

The web site continues to be a popular source of information on the Society's activities, as judged by the large number of visitors to the site. We welcome any suggestions for improving the website - for example, you may like to contribute an article on the latest work in your lab, or activities outside of the lab! So get writing and submit!

Obituary

Michael Barnes

By Richard Farndale and Allen Bailey

It is with great regret that we announce that Michael Barnes died on 4th May 2003 after a long period of illness with emphysema.

Michael carried out research for his PhD at Cambridge under the supervision of Miles Partridge FRS, which resulted in the isolation and characterisation of a new glycoprotein from aortic elastin, but its importance was unknown. It is

interesting that as techniques advanced it was first shown to be part of the microfibrils crucial to the laying down of elastin in a specific orientation, the major component of which, now known as fibrillin, was shown to be important in Marfan's Syndrome, where a single amino acid change could lead to aortic rupture.

On completing his PhD Michael moved to the Dunn Nutritional Laboratory where he worked on the role of vitamin C, the identification of type III collagen during wound healing and lysyl-hydroxylation of collagen. He was the first to provide evidence that different lysyl hydroxylases might be involved in the hydroxylation of the helical and telopeptide lysines. Five different lysyl hydroxylases have now been identified, but their specific roles remain to be elucidated. In 1974 Michael moved to the Department of Pathology, where he was appointed to the MRC External Staff and developed an interest in blood vessel wall collagens and their interaction with platelets.

Michael moved to the Strangeways Research Laboratory in 1979 and expanded his interest on haemostasis, studying the interaction of collagen with platelets and demonstrating the importance of the triple helical conformation in the interaction. Subsequent work led to the realisation that the primary sequence was also important and he demonstrated the existence of both adhesive and activatory stretches which implied the presence of distinct receptor populations and formed the basis of the two-step, two site model for platelet activation. Employing monoclonal antibodies allowed a precise sequence, GFOGER, to be located which was a high affinity site for interaction with the integrin $\alpha 2\beta 1$. A triple helical peptide of this sequence provided the first ligand-integrin co-crystal (2000), already highly cited, and widespread acknowledgement of Michael's pre-eminence within the field. At the same time control peptides comprising repeated GPO sequences within the triple helix were discovered to be potent platelet activators that were not cognised by $\alpha 2\beta 1$. Such peptides, now known as collagen related peptides or CRP, were found to bind to the platelet surface protein, GpV. CRP revolutionised the field immediately providing a specific tool to manipulate collagen signalling pathways and has provided the basis from which a new generation of anti-platelet therapy may be

developed. If this outcome is reached, it will be due in no small part to the work of Michael Barnes.

Michael continued his work in the Biochemistry Department for the last two years of his career, retiring in 1999 on the demise of the Strangeways. Michael was a quiet and modest man but understood his science in great depth. He was also a quiet but devoted Christian. Our sympathy goes out to his wife Irene, his two sons Tristram, and Andrew, and his daughter Emma

Forthcoming Meetings

The **autumn 2003 meeting** of the BSMB will be held at Imperial College, London, on the 18th and 19th September. This special meeting is being held to mark the retirement of Professor Roger Mason, and is being organised by Professor John Couchman (j.couchman@ic.ac.uk) and Dr Graham Riley (gpr1003@cus.cam.ac.uk). The meeting will focus on the molecular basis of fibrotic disease, with a particular emphasis on the kidney. Further details of the meeting, abstract submission and a registration form can be found at the end of this Newsletter as well as on our website.

The **spring 2004 meeting** will take place on 5th/6th April at Hulme Hall, University of Manchester, and is being organised by Dr Malcolm Lyon (University of Manchester) and Dr Robert Lauder (University of Lancaster). The topic of the meeting is "Grappling with the Glycome" and sessions will cover various aspects of structural and functional glycomics, including new technical developments and glycosaminoglycans. Provisional speakers include Dr Robert Haltiwanger (New York), Prof. Ulf Lindahl (Uppsala), Prof. Anne Dell (London) and Prof. John Gallagher (Manchester). There will be a number of short oral presentations during the meeting, selected from submitted poster abstracts, as well as a poster competition with prizes. Further information will appear in the next Newsletter, or can be obtained by contacting mlyon@picr.man.ac.uk

The **autumn 2004 Meeting** is to be held at the University of Bristol on September 13th/14th and

will be run jointly with the UK Cell and Tissue Engineering Society. The theme will be “Cell Based Therapies” and the meeting organizers are Professor Anthony Hollander and Dr. John Tarlton. Invited speakers will include Bob Nerhem (Atlanta GA), Anders Lindahl (Gothenburg), Alessandra Pavesio (Abano Terme), Ivan Martin (Basel), Ranieri Cancedda (Genoa) and John Wozney (Cambridge MA) as well as several UK experts in the field.

BSMB Bursaries for the Autumn 2003 Meeting

Members of BSMB may apply for bursaries to assist in travelling to the Autumn BSMB meeting in London. Young members of the Society are encouraged to apply for bursaries (up to a maximum of £100 for BSMB). Eligibility criteria are stated below.

Bursaries will only be considered if they are submitted on a current BSMB Bursary application form. **Applications should be sent to the Society Secretary (Anthony Hollander)** and not to the meeting organiser. The application should be accompanied by a copy of the abstract to be presented at the meeting and a one page curriculum vitae.

The deadline for receipt of bursaries applications to attend this meeting is 31st July 2003. The applications will be reviewed rapidly by the Committee and applicants will be informed of the outcome as soon as possible.

Criteria for Bursaries

Applicants should have been members of the Society for at least 1 full calendar year prior to the Meeting start date.

Applicants should be submitting an abstract and presenting a poster for the meeting to be attended.

Applicants should be at an early stage of their career (i.e. <5 years from award of PhD) and unlikely to have access to travel funds. Emphasis is always given to young researchers who are generally in short term contract positions, i.e.

mainly graduate students and occasionally early post-docs.

The work described in the abstract must be novel and likely to be of a quality that would reflect well as a BSMB supported contribution.

The Bursary Application form can be found on our web site:

<http://www.BSMB.AC.uk/FRAMES/GENERAL/Bursaries.htm>

BSMB Spring 2003 Meeting Report, Oxford

“Extracellular matrix: from structure to function”

By Theresa Momberger and Alison Reith

The spring meeting of the BSMB was held at St. Catherine’s College, University of Oxford on the 31st March and 1st April and had as its theme Extracellular matrix: from structure to function. The meeting was organised by Drs. Tony Day, Penny Handford and Helen Mardon and attracted 192 participants. Financial support was provided by the sponsors The Wellcome Trust, Specta, Seikagaku Corporation, MicroCal and Improvisation. An exhibition was displayed by Amersham Biosciences, Blackwell Publishing, R&D Systems, Quidel, Igen International Inc. and Merck Biosciences Ltd.

Ian Campbell (University of Oxford) opened the meeting with an informative overview of the structure, assembly and binding of modular proteins. Networks that connect the intracellular actin filaments, focal adhesions and integrins on the cell surface were discussed as well as the extracellular proteins function when the modular system is properly connected. He described how inter-module orientation and module reorientation can play

a significant role in the control of matrix protein shape and activity.

Daniel B. Rifkin (New York School of Medicine, USA) showed that TGF β binding proteins were required for TGF β presentation. The biochemical mechanisms and pathological consequences of this were described. TGF β 's are secreted as latent complexes composed of a free dimeric cytokine, which is associated non-covalently with its propeptide dimer (LAP) and the latent TGF β -binding protein (LTBP). TGF β latency is conferred exclusively by the interaction with the propeptide. He showed that a null mutation of LTBP-3, indicated impaired TGF β secretion, activation, or both, and that integrin activation of latent TGF β required LTBP. Here one region binds LAP and is necessary for secretion of the complex, while another may focus the complex to integrin binding. Impairing LTBP to TGF β -LAP in mice showed the same phenotype as TGF β null mice and thus showed that TGF β binding to LTBP was required for normal embryo development and appropriate TGF β function.

Gillian Murphy (University of Cambridge) discussed that one of the main ways cells can modulate their environment is by pericellular proteolysis. This process involved both extracellular matrix turnover as well as the regulation of growth factors and their receptors. The TIMPs are established endogenous inhibitors of matrix metalloproteinases, some of which associate with the pericellular environment. It was shown that TIMP-2 binds to the cell surface MT-1 MMP, to act as a receptor for pro-MMP-2, such that the latter can be efficiently activated in a localised fashion. The key structural features responsible for this unique function were established. TIMP-3 is sequestered at the surface, by association with proteoglycans. The N-terminal of TIMP-3 was shown to inhibit soluble forms of ADAMs, with the C-domain being required for efficient matrix binding and inhibition of proteolysis of substrate TNF α . The regulation of MMPs by TIMPs was good for

the metzincins subgroup and some ADAMs but there were unique associations with individual proteinases that reflected important specific biological processes.

Edward Bastow (Royal Veterinary College, London) showed that in embryonic chick articular surface cells, ERK activation augments HA-dependant pericellular matrix formation. Pericellular coat formation and ERK activation were diminished using the MEK inhibitor PD 98059. Exogenous HA administration could activate ERK. Dominant negative transfections of MEK were shown to diminish coat formation and constitutively active MEK lead to an increase. He concluded by showing results that indicated that basal, induced and exogenous-HA-induced ERK activation may play a role in coat formation.

John Sheehan (University of North Carolina, USA) described that HA, which is present in virtually all tissue with vital structural roles in gel formation and molecular structures, such as proteoglycans, is related to yet very different the cellulose. HA's ability to form a gel is due to its very large and highly soluble nature. Cellulose is very insoluble. The role of water had been studied in the emergence of the dynamic structure of these and other polysaccharides, using the important beta (1-->4) linkage as an example. He explained that results from this very novel, work indicate that cellulose, mannan, and chitin favour relatively static intra-molecular hydrogen bonds, xylan prefers dynamic water bridges and predicts also multiple water configurations at hyaluronan linkages. This was not due to linkage stabilisation by intramolecular hydrogen bonds, proposed due to favoured molecular configurations, which are consistent with maximum rotamer and water degrees of freedom. This was supported by previous observations made by X-ray diffraction. Thus HA is a very dynamic molecule. An interesting correlation between chemical composition, water organisation, polymer properties and biological function was proposed.

Barbara Mulloy (National Institute for Biological Standards and Control, UK) used molecular modelling techniques (predictive

docking calculations) to aid experimental design and data interpretation for heparin protein interactions in the extracellular matrix. Heparin interacts with many proteins of the extracellular matrix, including the established interactions with cytokines, growth factors and chemokines as well as with fibronectin, tenascin, collagen, MMP's, TIMP's and TSG-6. Heparin-binding proteins were shown to display many different folds and functions. There is no single structure or binding motif that is known to be responsible for heparin binding. Any secondary structural element and sequences distant from each other can make up such a site. Sequence clusters of basic residues are often associated with these heparin-binding sites.

Jeremy Turnbull (University of Birmingham) has developed a novel strategy for engineering libraries of heparin sulphate saccharide analogues by selective chemical modifications of heparin. These libraries have proved valuable in a variety of assays including FGF signalling, angiogenesis and anticoagulation. This has been coupled with a complementary microarray approach. These data can be used to determine the specificity and structural diversity of heparan sulphate.

Dick Heingård (Lund University, Sweden) summarised findings on extracellular matrix as a complex assembly of molecules with a wide variety of functional domains. He introduced the topic by describing that the assembly of the major extracellular networks of collagen II and VI occurs in a highly charged environment that restricts network assembly of molecules. These are important in tissue function. Collagen provides the basic fiber scaffolding amongst many other molecular entities. Other molecules regulate or modify this process by binding to the fiber surface and thus facilitating interaction with the immediate environment. COMP is such a molecule. It appears to catalyse early events in collagen fibrillogenesis by bringing together collagen molecules that are associated into fibers. COMP is a member of the thrombospondin family, which consists of five subunits which each bind to collagen.

Collagen VI network assembly is assisted by biglycan and decorin. Here the core protein interacts with Collagen VI and the glycosaminoglycan chain(s). Biglycan is retained the collagen VI beaded filament and appears to bind matrillin family members. These in turn bind collagen II and aggrecan.

Jennifer Potts (University of Manchester) reported work on integrin mediated host tissue invasion of staphylococcus aureus and streptococcus pyogenes. They target fibronectin (FN) via fibronectin-binding-protein (FnBP) in their cell wall. The bacterial binding site at the N-term includes five sequential FN type 1 modules (F1). A new tandem \square -zipper model for interaction between staphylococci and streptococci and fibronectin was proposed. The extended tandem zipper model predicts the specificity of motifs from FnBPs SfbI and FnBPA for F1 modules in the N-terminal domain of FN. NMR and ITC determined the affinity peptides for F1 module pairs and to identify binding sites on the module pairs. During the process of FN-mediated invasion of host cells, the bacterial proteins appear to exploit the modular structure of FN by forming long tandem \square zippers along the F1 in a novel mechanism of protein:protein interaction. Each FnBP contains several binding sites for the N-terminal domain of FN. The role of this redundancy remains to be elucidated.

Sian Hancock (Cardiff University) described how the network forming type X collagen interacts with the small, leucine rich, proteoglycan decorin. The 59kDa collagen X is expressed in the epiphyseal growth plate predominantly by hypertrophic chondrocytes in restricted distribution that suggests its role in ossification. It may form a hexagonal lattice like matrix, permissive to vascular invasion and mineralisation. Decorin is a small leucine rich proteoglycan which is usually substituted with one dermatan sulphate or chondroitin sulfate chain. Interaction between decorin and collagen type I and II is aided by a proposed horse shoe conformation. Hancock summarised the finding that collagen X and decorin interaction, which was initially confirmed by

solid phase assays and surface plasmon resonance. The interaction with decorin occurs primarily at the NC1 domain of type X collagen as shown by enzyme digestions. It is not dependent on the GAG chain on decorin. Both proteins have been localised in the growth plate by immunohistochemistry and their mRNA expression in this region was confirmed by RT-PCR.

Cay Kielty (University of Manchester) described microfibril assembly and function in extracellular matrices. Fibrillin microfibrils are templates for tropoelastin deposition during elastic fibre formation and are components of mature elastic fibres and thus are important for tissue elasticity. Microfibril assembly and elastic functions were structurally investigated. Molecular interactions of fibrillin-1 sequences with elastic fibre molecules have been determined. These may be important for assembly. New and critical insights were provided into the elastic properties of isolated microfibrils and ciliary zonules. These results indicate that the interactions between fibrillin-1 N-terminal sequences and fibrillin-1 and elastic fibre formation have been determined. Tropoelastin and decorin compete for fibrillin-1 binding. This suggests that it is key to the fate of microfibrils. The molecular interactions also suggest a potential mechanism of bead formation. Tissue elasticity appears to be due to reversible alterations in sub-microfibril arrangements rather than due to intrinsic elastic properties of the microfibrils. Elastic fibres may have their property due to modulation of elastin by microfibrils. Changes in peptide bond confirmation and fibrillin-1 interdomain rearrangements in Zonular structure provides clues about how microfibrils extend.

Penny Handford (University of Oxford) described how fibrillin-1 is the major structural protein of 10-12nm microfibrils which are involved in cell-matrix interactions. Fibrillin-1 structure is dominated by 43 calcium binding epidermal growth factor-like (TB) domains. The crystal structure of the cbEGF22-TB4-cbEGF23 integrin-binding fragment from human fibrillin-1 was reported

and a calcium-stabilised tetragonal pyramidal conformation identified. This gives new insights into the organisation of fibrillin-1 within microfibrils and structure of related proteins. A flexible RGD integrin-binding loop is located at the surface of TB4. Modelling of cbEGF22-TB4-cbEGF23 with $\alpha_v\beta_3$ integrin suggests that cbEGF22 may interact with the α subunit to modulate integrin binding. Results from functional studies (quantitative attachment and cell spreading of BHK21 cells, immunocytochemistry of stromal endometrial fibroblasts, surface plasmon resonance) indicate that while both TB4-cbEGF23 and cbEGF22-TB4 have cell attachment activity, adhesion events leading to cell spreading are induced only by cbEGF22-TB4. The synergistic action of cbEGF22 and TB4 is required for integrin-mediated changes in cell morphology,

Catherine Moali (Institut de Biologie et Chimie des Protéines, Lyon, France) gave an overview of the structure and specificity of procollagen C-proteinase enhancer 1 (PCPE1). PCPE1 stimulates the action of procollagenase C proteinases and has the ability to bind both cleavage products of collagen I. It comprises two CUB domains and an N-terminal netrin-like domain which form a rod-like molecule. The role of PCPE1 appears to be restricted to fibrillar collagens.

Raymond Boot-Handford (University of Manchester) described the excitement of finding and characterizing the novel vertebrate type XXVII fibrillar collagen. Expressed in a wide range of tissues such as the epithelium of skin, lung and stomach, developing cartilage and the mucosal layers of the stomach, this is a classical fibrillar collagen. It has a shortened triple helix, two interruptions in the major triple helix structure and this triple helix fuses with the amino terminus as well as a non-collagenous domain. The functional role of this protein and how it is synthesised and processed are the subject of further study.

Erhard Hohenester (Imperial College London) gave us interesting insight into genetic diseases from structural analysis of

matrix proteins with two recent examples: 1. Mutations in the C-terminal non-collagenous(NC) domain of collagen X cause Schmid metaphyseal chondrodysplasia (SMCD), an autosomal dominant skeletal disorder. The crystal structure of the collagen X, NC1 domain reveals a very tight trimeric assembly strengthened by an internal calcium cluster. Most SMCD mutations appear to be incompatible with the native structure. Some missense mutations also occur. The role of calcium clusters in collagen X is suggested to play a stabilising role and is absent from the closely related collagen VIII. 2. Missense mutations in the FAS1 domain of the adhesive matrix protein α 1g-h3 cause corneal dystrophy due to the deposition of insoluble amyloid deposits. Hohenester's group has recently determined FAS-1 structure by investigating the insect facillin1. This revealed the β fold of the FAS-1 domain. The two most common α 1g-h3 mutations are predicted to change the surface structure of the molecule are consistent with the idea that deposition of α 1g-h3 aggregates causes corneal dystrophy. Other minor mutations affect the core residues, which are highly conserved. It appears unlikely, however, that these α 1g-h3 mutants are secreted and deposited extracellularly, leading to the corneal dystrophy.

Martin Humphries (University of Manchester) lead us through the conformational changes that take place within an integrin during activation. Leu 358, in the α 7 helix, activates fibronectin binding. L358A mutation mimics the ligand occupied conformation but there is decreased binding to the α propeller and the α A domain while binding to the hybrid domain was increased. Mapping of 15/7 and HUTS-4 epitopes, which lie in the α 1 subunit hybrid domain, result in conformational changes in the α -propeller while activation involves a shift of the α 7 helix and movement of the hybrid domain away from the α subunit and α propeller. Scattering data has been used to generate molecular envelopes and to visualise truncated α 5 α 1. While there has been no

atomic resolution of the α 5 α 1 – fibronectin complex, ligand binding takes place across the top head region and the synergy site binds on the side of the propeller.

Harri Altroff (University of Oxford) talked about the structural requirements for the biological function of the FIII9-10 domain pair of human fibronectin. More than half the domains of fibronectin have been identified by x-ray diffraction or NMR. The CCBD surface loops orchestrate cell adhesion while the RGD site is essential for activity. Restraining of the RGD loop leads to formation of a disulphide bridge and Cys mutations disrupt the RGD function and effect the biological activity. The FIII9-10 domain tilt angle can result in increased flexibility and changes in domain-domain interactions. Increased flexibility in these structures can result in a loss of function.

Martin Stacey (University of Oxford) reported how human myeloid cell-restricted EMR2 receptor mediates cell attachment through the binding of cell surface dermatan sulphate glycosaminoglycan. A cellular ligand for EMR2 has been detected on a number of adherent cell lines, and in tissue this co-localises with connective tissue. Using mutant CHO cells, deficient in the cellular glycosaminoglycans (GAGs), it was shown that the molecular identity of the EMR2 ligand was dermatan sulphate. The EMR2-DS interaction was calcium dependant and resulted in cell attachment. This interaction of EMR2 and DS may be a potential mechanism for the recruitment of myeloid cells during inflammation. DS, present in tissue damage, is a potential ligand for macrophages in wound repair and tissue remodelling.

Christian Termeer (University of Freiburg, Germany) described how oligosaccharides of hyaluronan activate dendritic cells via the toll-like receptor 4. TLR4 is involved in sHA mediated dermal cell maturation and acts as an endogenous ligand. sHA is involved in the upregulation of co-stimulatory molecules. It plays a role in the stimulation of dermal cells and induces p38 and p42/44 MAP kinase.

There are 9 TLR's in vertebrates. These link innate and adaptive immunity.

David Stuart (University of Oxford) gave the final presentation of the meeting on new structural approaches to integrins. He took us through a range of different techniques that can be utilised to determine integrin structure. Cryo-electron microscopy of isolated particles allows interactions between integrin and matrix proteins to be elucidated. Simulated single molecule x-ray diffraction patterns, single crystal x-ray diffraction, single particle EM reconstruction, isolated particle EM tomography, cellular EM tomography and cellular x-ray tomography are some of the technologies that were described. While many of these processes are still in their infancy they provide a portfolio of new methods which will be valuable in determining integrin structure.

MINUTES OF THE ANNUAL GENERAL MEETING 31st March 2003 17:00 St Catherine's College, Oxford

The Chairman, Professor Bruce Caterson, called the Annual General Meeting of the British Society for Matrix Biology (BSMB) to order at 17:18. 31 members were in attendance, plus the BSMB Committee members - Anthony Day, Jay Dudhia (Treasurer), Anthony Hollander (Secretary-elect), Rose Maciewicz (Secretary), Alison Reith, Graham Riley, John Tarlton, Malcolm Lyon.

1. Minutes

The draft Minutes of the AGM 2002 held on 29th July 2002 at Brighton Centre, Brighton, were sent out to all membership in December 2002. These were taken as a true and accurate record of that meeting and were accepted.

2. Matters Arising:

All matters arising have been discussed at the

Committee Meetings held in 2001/2002 except the following, which is still outstanding.

- **Treasurer's report: Amount of surplus money.** Secretary to ensure that this is revisited after FECTS accounts are completed.

3. Secretary's report

Membership: As of today's AGM meeting, the Society has 510 members on its mailing list. 18 new memberships were received in the last period (AGM 2002- AGM 2003, 8 months inclusive). The low numbers of new members was possibly due to lack of UK meetings. It was anticipated that we would have 50+ new members from the Oxford 2003 meeting. 1 member formally left the Society and the Society has 107 student members. It was noted that only 95 members updated details last year.

Communications: The Secretary reported that since the last AGM one BSMB Newsletter was sent out: Connective Issue 61 (Dec 2002). It was noted that email delivery of the Newsletter was working well. However, 25 Newsletters were returned via an email notification of 'delivery failure recipient name not known'. Upon inspection of the delivery failure notices it became apparent that the majority of these failed deliveries were due to problems with the servers at certain Universities (Manchester, Leeds, Sheffield, Cardiff, Bristol, Lancaster, Imperial, Cambridge, York) rather than incorrect addresses.

Action: Secretary to ensure a solution to this issue is found.

She reported that in the interim, additional information was available from the BSMB website (<http://www.BSMB.AC.uk/>).

Meetings: The Society had organised the XVIIth FECTS in Brighton, UK on July 28th – 30th 2003. The meeting was well received and well attended by all except the UK community. Bursary recipients were: Elizabeth Bowe (Clinical Veterinary

Medicine, University Cambridge); Philippa Callender (CTBL, Cardiff University); Sally Dickinson (University of Bristol Academic Rheumatology); Sian Hancock (CTBL, Cardiff University); Kerry Elliot (Dept Pathology, University of Edinburgh); Nicola Hartigan (Wellcome Trust Centre for Cell Matrix Research, University of Manchester; and Paula Muir (RVC, London). Thanks to Dr. Sally Dickinson who wrote the meeting notes.

The Secretary informed the membership about current/future BSMB meetings.

Current Meeting:

- Spring BSMB 2003 is to be held on 31st March / 1st April 2003 at St. Catherine's College, Oxford. The topic will be "Extracellular matrix: from structure to function". It is being organised by Drs. Anthony J. Day, Penny Handford and Helen Mardon. Bursary recipient was Theresa Momberger (Imperial College). The Annual General Meeting of the BSMB (2003) will be held on Monday 31st March.

Future Meetings:

- Autumn BSMB 2003 will be held on 18th/19th September 2003 at Imperial College of Science, Technology & Medicine, London. The topic is "The Molecular Basis of Fibrotic Disease in the Kidney. This meeting is being organised by: Professor John Couchman (Imperial College), and Dr. Graham Riley (Rheumatology Research Unit, Box 194 Addenbrooke's Hospital).
- Spring 2004 BSMB Meeting is to be held at the University of Manchester. The date has not yet been confirmed but is most likely to be April 5th/6th. The topic will be carbohydrate biology / glycomics. It is to be organized by Drs. Malcolm Lyon and Robert Lauder.
- Autumn 2004 BSMB Meeting is to be held at the University of Bristol in conjunction with the UK Tissue Repair Society. The topic is "Cell Based Therapies for Connective Tissue Diseases" and is being organized by: Professor Anthony Hollander and Dr. John Tarlton.

4. Treasurer's report

The Treasurer's report of 2002 is attached and was accepted as a true record of the financial state of the Society.

During 2002, the Society had £39K to hand. Two national savings bonds were redeemed on June 28th 2002 of a total of £31,900.50. This money was re-invested into a reserve Account (1.5% Interest) because of need to have ready cash for FECTS. The Society is now moving £30,000 of this to a high interest rate Building Society Account due to the given current state of Stock Market. This will leave approximately £10,000 in our reserve account.

Subscriptions income for 2002 was £3309. This is down from 2001 where income received was £3591

FECTS Meeting 2002

The final figures are not yet complete. The current finances are summarised thus:

Registration	£93,310
Sponsorship	£7,351
Total Income	£100,661
Current Expenditure	£105,738
Current Deficit	£5,077

The Treasurer noted that during 2002 we registered for VAT even though as a Charity we are allowed exemption. We were required to undertake this as our acquisition threshold / turnover was greater than £55K, the limit. However, the Society was able to apply for partial exemption from VAT on activities relating to educational supply, which meant that we did not have to charge VAT on our income from Registrations and sponsorships. This also allowed the Society to use the 'De minimis Limit' to claim back VAT charged to us on educational supplies, which enabled us to recover a total of £6,965 from Customs and Excise during the year." This figure is incorporated in the figures shown above.

As our income for 2003 will be below this level, we have de-registered for VAT as of October 2002.

Tim Hardingham thanked Jay for his contribution to the financial success of FECTS.

5. Election of Chairman and New Committee Members

The Secretary reported that the current BSMB Committee was as follows:

Officers:

- Chairman: Prof. Bruce Caterson (Connective Tissue Biology Lab, Cardiff School of Biosciences, Caterson@cardiff.ac.uk)
- Honorary Treasurer: Dr. Jay Dudhia (The Royal Veterinary College, London; jdudhia@rvc.ac.uk)
- Honorary Secretary: Dr. Rose Maciewicz (AstraZeneca Pharmaceuticals; rose.maciewicz@astrazeneca.com)

Elected Members:

- Dr. Anthony Day (University of Oxford; ajday@bioch.ox.ac.uk)
- Dr. Alison Reith (Dept of Dermatology, University of Glasgow; ar113r@clinmed.gla.ac.uk)
- Prof. Anthony Hollander (University of Bristol Medical School; a.hollander@bristol.ac.uk)
- Dr. Graham Riley (Soft Tissue Injury and Repair Group, Addenbrookes Hospital; gpr1003@cus.cam.ac.uk)
- Dr. John Tarlton (Department of Clinical Veterinary Science, University of Bristol; john.tarlton@bris.ac.uk)
- Dr. Malcolm Lyon (Department of Medical Oncology, Christie Hospital, Manchester; mlyon@picr.man.ac.uk)

At the last AGM meeting it was noted that the Secretary (Dr. Rose Maciewicz) and three Committee members (Professor Anthony Hollander, Dr. Anthony Day and Dr. Alison Reith) were due to retire at the AGM 2003 meeting.

At the AGM 2002, the Committee proposed that the Secretary Elect be Professor Anthony Hollander. This was accepted.

The Secretary put out a call for nomination for the three Committee posts. The Committee received three nominations for this Committee

member position:

- Dr. Anne Vaughan-Thomas, Liverpool University
- Nominators: Professor Vic Duance and Dr. Sophie Gilbert
- Dr. Drew Rowan, Newcastle-upon-Tyne
- Nominators: Professor Tim Cawston and Dr. Ian Clark
- Dr. Robert Lauder, Lancaster University
- Nominators: Professor Ian Nieduszynski and Dr. Malcom Lyon

A postal ballot was not undertaken, as the vacancies on the Committee posts equaled the number of nominations. It was accepted that the new Committee members would be Drs. Anne Vaughn-Thomas, Drew Rowan, Robert Lauder. The Secretary thus welcomed our new Secretary and the three new Committee members. Thanks was also given to the retiring Secretary, Dr. Rose Maciewicz, and the three Committee members, Professor Anthony Hollander, Dr. Anthony Day and Dr. Alison Reith, for all their work on behalf of the BSMB

The Secretary noted that one Committee Member (**Dr. Graham Riley**) was to retire at the AGM in 2004. A call for nominations for the one Committee member would be undertaken prior to the AGM in 2004.

Action: Anthony Hollander & Committee to look at how to re-established the retirement of two committee members per year.

Bruce Caterson proposed the idea of having *ex officio* membership to the Committee. This would be the previous Chairman and Secretary. They would act as advisors to the BSMB for 2 years post the end of their tenure. They would be non-voting members. This was accepted by the membership.

7. Any other business

There was no other business. The meeting was concluded at 17:47.

BRITISH SOCIETY FOR MATRIX BIOLOGY
ANNUAL REPORT AND ACCOUNTS
FOR THE YEAR ENDED 31ST DECEMBER 2002

n.g.lachman & co
Chartered Accountants
14 Meadow Road Pinner Middx. HA5 1EB

BRITISH SOCIETY FOR MATRIX BIOLOGY
ANNUAL REPORT FOR THE YEAR ENDED 31ST DECEMBER 2002

Legal and Administrative Information

The British Society for Matrix Biology is governed by its constitution adopted on 19th September 1980 and is a registered charity, No 281399. Its address is at the Royal Veterinary College, Department of Veterinary Basic Sciences, Royal College Street, London NW1 0TU. The charity's trustees during the year to 31st December 2002 were:

Professor Timothy E. Hardingham	(Honorary Chairman)
Professor Bruce Caterson	(Chairman - elect)
Dr. Rose Maciewicz	(Honorary Secretary)
Dr. Jayesh Dudhia	(Honorary Treasurer)
Professor Anthony Hollander	(Elected Member)
Dr. Anthony J. Day	(Elected Member)
Dr. Alison Reith	(Elected Member)
Dr. Graham Riley	(Elected Member)
Dr. Malcolm Lyon	(Elected Member)
Dr. John Tarlton	(Elected Member)

The object of the charity is to advance the science of connective tissue and related subjects; to further public education therein; to promote study and research work on connective tissues and related areas and to publish the results of such study and research.

The trustees' policy is to act as necessary on behalf of the Society; and report on such actions, as indicated, to the next meeting of the Society.

The charity is dependent on an annual subscription from Ordinary Members engaged in or directing work of the nature indicated above, and on sponsorship money obtained as donations for holding Scientific Meetings and Symposia.

Review of Financial Activities

There was a significant increase in financial activity this year largely due to the hosting of the XVIIIth FECTS conference in Brighton, and the redemption of our National Savings Deposit Bonds. The Society's assets at the end of 2001 totalled ££45,697, represented by our Bonds, current and deposit accounts, and by payments in advance.

BRITISH SOCIETY FOR MATRIX BIOLOGY

ANNUAL REPORT FOR THE YEAR ENDED 31ST DECEMBER 2002

I reported last year that the Treasury had redeemed National Savings Deposit Bonds, therefore our 2 Bonds that were held since 1984 were cashed in on the 28th June 2002, resulting in £31,900.50 being deposited into our bank account. This sum will remain invested in the reserve account until the final outcome of the finances resulting from the FECTS meeting is realised. A high interest account will be considered for future investment of our surplus funds.

The XVIIIth FECTS meeting in Brighton, hosted by the BSBM, was the only meeting held in 2002. A total of 447 delegates were registered for the meeting. Registration income including advance hotel deposits and conference dinner payments was £93,310. Income from various sponsorship and trade exhibitors totalled £7,351.

As our income was above the current registration threshold of £55,000 as specified by HM Customs and Excise, I registered the society for VAT from the 1st January 2002. At the same time, I applied for partial exemption from VAT as most of our activity related to the supply of education, which allowed us not to have to charge VAT on registration or sponsorship donations. VAT was payable however, on the trade exhibition income, the conference dinner and on supplies made to the Society.

Some of the major expenditure was towards the provision of the audio-visual set up for the main auditorium and the four workshop halls, amounting to £20,167, and the conference organisers (Index Communications) costs of £19,362.

The total income for the FECTS meeting was £100,661, while expenditure was £105,738 (£103,507 in 2002 and £2,231 in 2001), resulting in a net deficit of £5,077. As a result of the society's partial VAT exemption status, I was able to recover some of the VAT charged to the Society by suppliers. The sum of £6,965 was therefore recovered from HM Customs and Excise, and assisted in reducing the actual deficit for the FECTS meeting to the amount shown above.

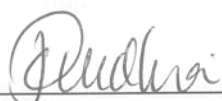
Two bursaries totalling £600 to aid Eastern European delegates, and eight FECTS poster prizes totalling £450 were awarded, all funded from FECTS related income. In addition to this, seven bursaries funded from the Society's main funds were awarded totalling £1,750.

BRITISH SOCIETY FOR MATRIX BIOLOGY
ANNUAL REPORT FOR THE YEAR ENDED 31ST DECEMBER 2002

Finally, I would like to thank the many sponsors and trade exhibitors who generously provided financial support for the XVIIIth FECTS meeting and to Index Communications for their part in the organisation of this meeting.

This concludes my financial report for 2002.

On behalf of the Board of Trustees



.....
J. Dudhia (Honorary Treasurer)

Dated: 26 March 2003

BRITISH SOCIETY FOR MATRIX BIOLOGY
INDEPENDENT EXAMINER'S REPORT TO THE TRUSTEES OF THE
BRITISH SOCIETY FOR MATRIX BIOLOGY

We have carried out an independent examination of the accounts set out on pages 4 to 7 for the year ended 31st December 2002.

Respective responsibilities of trustees and examiner

As the charity's trustees, you are responsible for the preparation of the accounts; you consider that the audit requirement of Section 43(2) of the Charities Act 1993 (the Act) does not apply. It is our responsibility to state, on the basis of procedures specified in the General Directions given by the Charity Commissioners under Section 43(7) of the Act, whether particular matters have come to our attention.

Basis of independent examiner's report

Our examination was carried out in accordance with the General Directions given by the Charity Commissioners. An examination includes a review of the accounting records kept by the charity and a comparison of the accounts presented with those records, It also includes consideration of any unusual items or disclosures in the accounts, and seeking explanations from you as trustees concerning any such matters. The procedures undertaken do not provide all the evidence that would be required in an audit, and consequently, we do not express an audit opinion on the view given by the accounts.

Independent examiner's statement

In connection with our examination, no matter has come to our attention

1. which gives us reasonable cause to believe that in any material respect the requirements,
 - to keep accounting records in accordance with Section 41 of the Act; and
 - to prepare accounts which accord with the accounting records and to comply with the accounting requirements of the Act.

have not been met; or

- 2 to which, in our opinion, attention should be drawn in order to enable a proper understanding of the accounts to be reached.

n. g. lachman & co.
Chartered Accountants,
14 Meadow Road,
Pinner,
Middlesex HA5 1EB

Dated: 26 March 2003

BRITISH SOCIETY FOR MATRIX BIOLOGY

Statement of Financial Activities
For the year ended 31st December 2002

	Notes	£	2002 £	£	2001 £
Incoming Resources					
Subscriptions and donations		3,309		3,601	
Income from meetings	2	10,061		18,437	
Interest receivable		779		1,642	
Sundry income		-		104	
			<u>104,749</u>	<u>23,784</u>	
Total incoming resources			104,749	23,784	
Resources expended					
FECTS Meeting expenses	2	105,738		-	
Other Meetings expenses		380		14,457	
Bursaries and grants		1,750		425	
Committee travelling expenses		-		754	
General Expenses		220		330	
Printing postage and stationery		-		118	
Insurance		-		189	
Subscription refunds		112		-	
Bank charges / secretarial fees		265		100	
Accountancy fees		747		411	
			<u>(109,212)</u>	<u>(16,784)</u>	
Net (outgoing) / incoming resources for the year			(4,463)	7,000	
Fund balances as at 1 st January 2002			45,697	38,697	
Fund balances as at 31st December 2002			<u>£41,234</u>	<u>£45,697</u>	

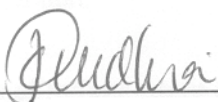
BRITISH SOCIETY FOR MATRIX BIOLOGY

Balance Sheet

as at 31st December 2002

			2002		2001
	Notes	£	£	£	£
Investments	3				30,705
Current assets					
Debtors	4	3,275		3,195	
Bank deposit accounts		35,909		8,293	
Bank current account		<u>10,792</u>		<u>4,015</u>	
		49,976		15,503	
Liabilities					
Creditors	5	(8,742)		(511)	
			<u>41,234</u>	<u>14,992</u>	
Total assets less liabilities			<u>41,234</u>	<u>45,697</u>	
Funds					
Unrestricted funds at 31 st December 2002			<u>£41,234</u>	<u>£45,697</u>	

The accounts were approved by the trustees on 26 March 2003 and signed on its behalf by:



Trustee: Dr. J. Dudhia

Dated: 26 March 2003

**Notes to the accounts
for the year ended 31st December 2002**

1. Accounting policies

The accounts have been prepared under the historical cost convention, on the accruals basis, and in accordance with the Statement of Recommended Practice "Accounting by Charities".

2. FECTS Meeting	£
Income from meeting	
Registration	93,310
Sponsorship and Advertising	7,351
	100,661
Meeting expenses	
Speakers Travel	4,647
Hall hire, lunches and dinner	30,117
Audiovisual costs	20,167
Medical centre and stewards	2,008
Conference organisers costs	19,362
Accommodation deposits	21,154
Postage printing and website costs	6,159
Bursaries and grants	1,050
Committee travel expenses	763
Refunds	311
	105,738
Deficit on the FECTS meeting	£(5,077)

**Notes to the accounts
for the year ended 31st December 2002**

3. Investments

The investments by the society, in two National Savings Bonds, were redeemed on 28th June 2002 at a value of £31,900.

4. Debtors	2002	2001
	£	£
Index Communications	2,765	-
Oxford Meeting (payment in advance)	510	-
Interest receivable	-	619
FECTS Meeting expenses (in advance)	-	2,181
FECTS postage and committee expenses	-	395
	<hr/> 3,275	<hr/> 3,195

5. Creditors	2002	2001
	£	£
Oxford Meeting (receipts in advance)	2,243	-
Imperial Meeting (receipts in advance)	500	-
Accruals:		
Index Communications	4,863	-
Accountancy fees	600	411
Secretarial fees	250	100
Due to HM Customs and Excise	284	-
Brighton Dome	29	-
	<hr/> 8,742	<hr/> 511

British Society for Matrix Biology Autumn Meeting
18th-19th September 2003
Imperial College, London
‘The Molecular Basis of Fibrotic Disease’

The autumn meeting of the BSMB will be held at Imperial College, London, on the 18th and 19th September, 2003. This special meeting is being held to mark the retirement of Professor Roger Mason, and is being organised by Professor John Couchman (j.couchman@ic.ac.uk) and Dr Graham Riley (gpr1003@cus.cam.ac.uk). For further details contact the above, or Linda Readings, secretary for the meeting (l.readings@imperial.ac.uk).

The meeting will focus on the molecular basis of fibrotic disease, with a particular emphasis on the kidney. Topics include extracellular matrix assembly, regulation of matrix synthesis, inflammatory regulation of fibrosis, transdifferentiation, transgenics and knockout models of fibrosis. There will be key-note speakers from Europe and the USA, including J Schwarzbauer (Princeton), K Kadler (Manchester), L Schaefer (Münster), K Flanders (NIH), C Pusey (Imperial), K Sharma (Philadelphia), A Chantry (UEA), F Strutz (Göttingen) and M Ryan (Dublin).

The meeting will take place in the Sir Alexander Fleming building at the South Kensington Campus of Imperial. Registration will begin at 8.00 am on the 18th in the foyer of the Sir Alexander Fleming Building. The scientific sessions, posters, trade exhibition and tea/coffee will all take place close together in impressive modern facilities. Accommodation for delegates is available in college rooms nearby, and will include breakfast.

There will be a special evening of entertainment on Thursday 18th September. We would like to give Roger an evening to remember, and are holding the conference dinner on a Thames cruise-boat. We have booked our own room on the boat, which will leave the Embankment at 7.15 pm, cruising past all the famous London landmarks. We hope that as many delegates as possible will take this opportunity to celebrate Roger's achievements over the years. The dinner has been heavily subsidised by sponsors of the meeting, includes a bottle of wine and live MOR (middle of river?!) entertainment, and represents great value at £35 per head. We are sure that you will enjoy the special magic of the Thames in Roger's company!

The deadline for registration, submission of abstracts, and applications for BSMB bursaries will be 31st July 2003. Please register as early as possible to allow us to organise poster boards, accommodation, catering etc. We would especially like to receive applications for bursaries from graduate students and younger members. As usual, abstracts will be published in the International Journal of Experimental Pathology.

THE MEETING ENDS AT 12.30PM ON FRIDAY 19TH SEPTEMBER. PLEASE NOTE THAT NO LUNCH WILL BE PROVIDED ON THE FRIDAY, BUT THERE ARE SANDWICH SHOPS AND RESTAURANTS ON CAMPUS OR WITHIN WALKING DISTANCE.

Travel to and from Imperial College

South Kensington Campus

Imperial College of Science, Technology and Medicine
London SW7 2AZ
Tel +44 (0)171 589 5111

From Heathrow airport

Take the Underground train (Piccadilly Line) to South Kensington station (50 minutes travelling time).

From Gatwick airport

Take a British Rail train to Victoria station (journey time 40 minutes) and then by Underground train (Circle or District Line; westbound) to South Kensington.

Both airports are some distance from central London and a taxi is not recommended for the whole journey. However, if you have to do so, establish the cost before you get in.

By sea

Take a British Rail train from the port of entry to London (Harwich to London journey time 1hr 30 mins; Dover to London journey time 2hrs) and then travel by Underground train to South Kensington station.

On foot

From South Kensington station, the campus is only five minutes' walk. Either follow the subway signposted to the museums or walk north up Exhibition Road. The College is next to the Science Museum.

By bus

- 9,10 or 52 - Royal Albert Hall
- 74 or 14 - Victoria and Albert Museum
- 49 - Gloucester Road
- 45A or C1 - South Kensington
- 70 - Queen's Gate
- 9A - Prince Consort Road
-

By car

[Car parking](#) at the South Kensington campus is severely restricted and you are advised NOT to bring a car unless permission has been given. After 6pm, at weekends and during vacations the car park is open to the paying public. Parking in the streets surrounding the College is at pay and display or parking meters for limited periods only.

**British Society for Matrix Biology, Autumn Meeting
Imperial College of Science, Technology and Medicine
18th-19th September 2003
'The Molecular Basis of Fibrotic Disease'**

Program

Thursday, 18th September 2003

Registration from 08.00

Extracellular Matrix and its Assembly

- 09.00 - 09.30 **Jean Schwarzbauer** (Princeton University, New Jersey, USA)
Function follows form: How fibronectin matrix architecture controls cell behaviour
- 09.30 - 10.00 **Karl Kadler** (University of Manchester, UK)
The ins then outs of extracellular matrix assembly
- 10.00 - 10.30 **John Couchman** (Imperial College, London, UK)
Basement membranes and tubular epithelial cell behaviour
- 10.30 - 11.00 Coffee and poster viewing

Regulation of Matrix Synthesis

- 11.00 - 11.30 **Andrew Chantry** (University of East Anglia, Norwich, UK)
Smads proteins as positive and negative regulators of TGF β signalling
- 11.30 - 12.00 **Nadia Wahab** (Imperial College, London, UK)
The role of CTGF in fibrosis
- 12.00 - 12.30 **Liliana Schaefer** (Westfälische University, Münster, Germany)
Antifibrotic properties of decorin in renal disease - more than modulation of
TGF β activity
- 12.30 - 14.00 Lunch

Inflammatory Regulation of Fibrosis

- 14.00 - 14.30 **Josef Pfeilschifter** (J.W. Goethe-Universität, Frankfurt, Germany)
Matrix-metabolizing enzymes as prime targets of redox regulation by nitric
oxide
- 14.30 - 15.00 **Detlef Schlöndorff** (University of Munich, Germany)
The role of chemokines in renal fibrosis
- 15.00 - 15.30 **Jill Norman** (University College, London, UK)
The role of hypoxia in fibrosis
- 15.30 - 16.00 Tea and poster viewing

Transdifferentiation

- 16.00 - 16.30 **Michael Ryan** (University College Dublin, Ireland)
The molecular basis of fibrotic disease in the kidney
- 16.30 - 17.00 **Frank Strutz** (University of Göttingen, Germany)
Regulation of epithelial-mesenchymal transformation *in vitro*
- 17.00 - 17.30 **Aled Phillips** (University of Wales College of Medicine, Cardiff)
Regulation of renal proximal tubular cell phenotype and function
- Evening Reception and Dinner

Friday, 19th September 2003

Transgenics, Knock-outs and Fibrosis

- 09.00 - 09.30 BSMB committee meeting
- 09.30 - 10.00 **Kathy Flanders** (National Institutes of Health, Bethesda, MD, USA)
Smad3 as a mediator of the fibrotic response
- 10.00 - 10.30 **Christos Chatziantoniou** (Paris, France)
Mechanisms of progression and regression of renal fibrosis
- 10.30 - 11.00 Coffee and poster viewing

Animal Models of Renal Disease

- 11.00 - 11.30 **Charles Pusey** (Imperial College, London, UK)
Regulation of inflammation and scarring in glomerulonephritis
- 11.30 - 12.00 **Meguid El-Nahas** (University of Sheffield, UK)
Renal fibrosis: lessons from experimental models
- 12.00 - 12.30 **Kumar Sharma** (Thomas Jefferson University, Philadelphia, PA, USA)
To be announced
- END OF MEETING

**British Society for Matrix Biology, Autumn Meeting
Imperial College of Science, Technology and Medicine
18th-19th September 2003
'The Molecular Basis of Fibrotic Disease'**

Submission of abstracts

Abstracts should be submitted by email and structured according to the format below, using **12-point Times New Roman font**. The text should fit within a box of **16 cm x 26cm (1 page A4 with 2.5 cm margins)**. Abstracts not conforming to these specifications or with incomplete information may NOT be published.

Title in bold

Author(s) in bold

Affiliation(s)

Introduction

Materials and Methods

Results

Discussion

References:

Author(s) (Date) Title *Journal Name* vol:xx-xx

Abstract deadline

The abstract deadline is Thursday 31st July, 2003. Submit abstracts as an email attachment to the following email address: gpr1003@cus.cam.ac.uk

When you submit your abstract, please indicate the name of **Corresponding Author, with fax and telephone numbers**. Please ensure that you also complete the Registration form and return it with your payment in UK pounds (cheque or banker's draft).

Information for poster presenters

The poster boards will be **1m high by 1m wide**. We suggest using A1 paper size. Posters must be fixed with Velcro. Some Velcro will be available at the meeting, but please try and bring your own!

Registration Form

British Society for Matrix Biology, Autumn 2003 Meeting

18th September/19th September, Imperial College, London

The Molecular Basis of Fibrosis

Please type or write in **BLOCK CAPITALS**.

Closing date: 31st July 2003

Title: **Family name:** **First name:**

Correspondence address:

.....
.....
.....

Postcode:
Tel: **Fax:** **Email:**

Special dietary requirements: (please specify e.g. vegetarian)

.....

Registration fees:

Conference dinner 18th September:

Full BSMB members £35

Thames cruise with live music and wine £35

Student BSMB members £25

Non-members £45

Student non-members £35

Accommodation fees:

Rooms are available at a local residence for £43 per night including breakfast.

There are a limited number of en-suite rooms available for a supplement of £16.50 per night.

There are a limited number of twin rooms available for a supplement of £35 per night.

Please tick requested nights: 17th (Wed) 18th (Thurs) 19th (Fri)

Ensuite facilities required (limited number available) £16.50 supplement per night.

Twin facilities required (limited number available) £35 supplement per night.

TOTAL ENCLOSED

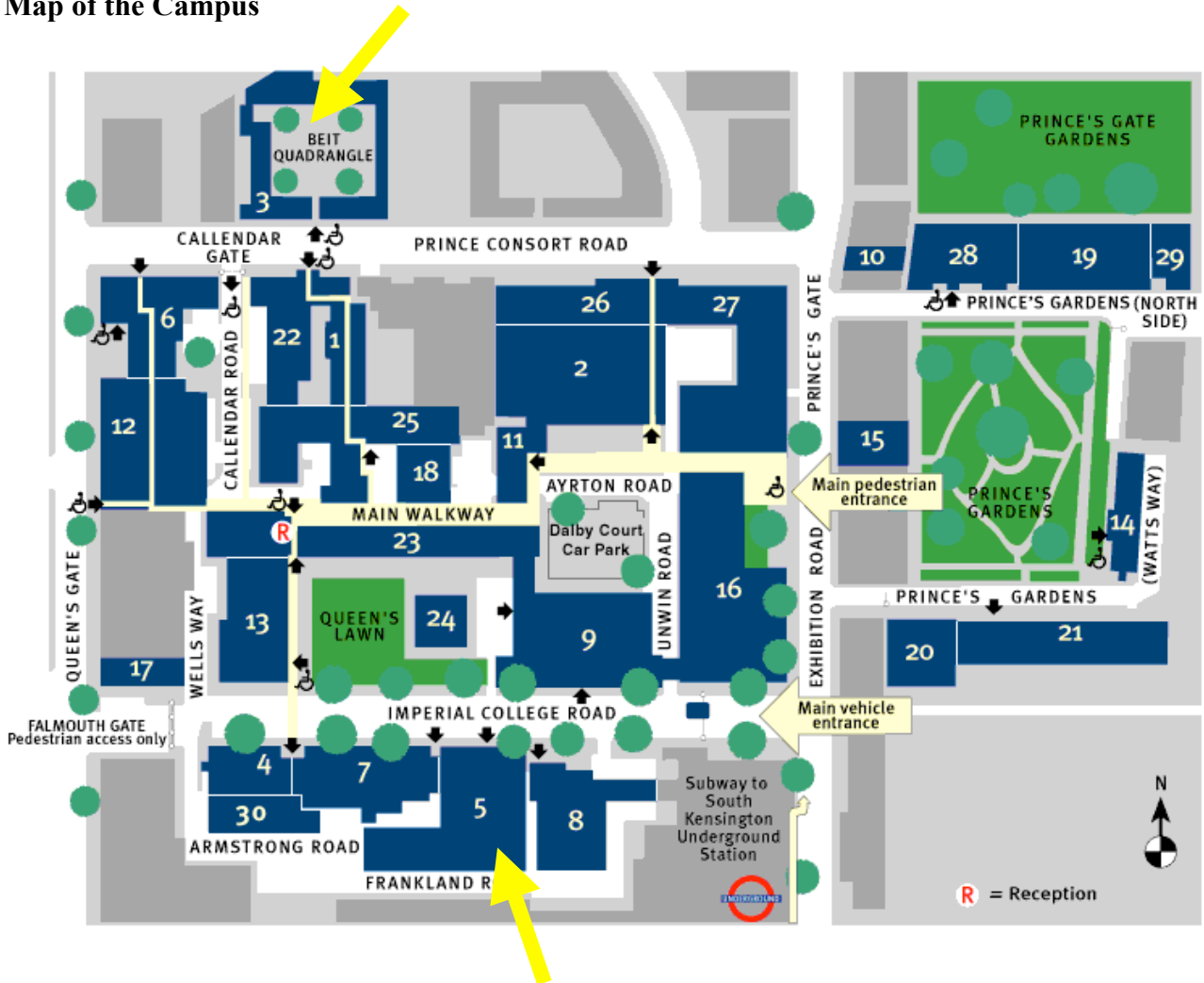
All cheques should be made payable to: **'British Society for Matrix Biology'**

Please return completed form with payment to:

Mrs Linda Readings
Cell and Molecular Biology Section,
Division of Biomedical Sciences, Faculty of Medicine,
Sir Alexander Fleming Building, Imperial College London,
Exhibition Road, London, SW7 2AZ

For further information, call Linda Readings on: +44 (0)207 594 3020 or e-mail: l.readings@ic.ac.uk

Map of the Campus



The meeting will be held in the the Sir Alexander Fleming Building, marked number 5 on the map.

Accommodation will be in the Beit Hall of Residence, Prince Consort Road, marked number 3. Delegates arriving on the 17th should report directly to Beit Hall, and register on the 18th from 8.00am at the Sir Alexander Fleming Building