

# CONNECTIVE ISSUES

## NUMBER 51

### JANUARY 1998

#### The Newsletter of the British Connective Tissue Society

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### BRITISH CONNECTIVE TISSUE SOCIETY

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## 1. Editorial

Happy New Year Members! You will note that this newsletter contains the referendum for the proposed name change of the Society from the 'British Connective Tissue Society' to British Society for Matrix Biology please ensure that your voice is heard by returning the ballot.

You should also note that this is the last newsletter before the spring BCTS meeting in Cardiff, so please take note of the information below regarding Registration, Bursary Application, and Poster Competition sponsored by the International Journal of Experimental Pathology. Also note that Bursary Applications are also available for the XVth FECTS meeting.

Many thanks to Dr. Cay Kielty for organising the Autumn 1997 BCTS meeting in York. A report of this meeting is enclosed. The Committee also would like to thank all BCTS members who participated in the IJEP poster competition at this meeting and congratulate them on the high standard of posters presented. Unfortunately not everyone could win but we were pleased to announce at that meeting that Jo Day and Audrey McAlinden won the competition. The BCTS committee extends their sincerest congratulations to them.

The Internet home page of the Society is currently being up-dated and may no longer be accessible at <http://www.wellcome.man.ac.uk/BCTS>. Apologies to members who are trying to browse this site and cannot access it or the information is not up to date. We are in the midst of trying to rectify this, so please be patient.

If anyone has items for inclusion in the next newsletter or website, these should be e-mailed or posted to Dr. Rose Maciewicz at the address on the cover page. Please contribute if you can!

## 2. Current BCTS Committee

The current membership of the Committee is:

### Officers:

Chairman	Prof. Tim Hardingham (University of Manchester; <a href="mailto:tharding@fs1.scg.man.ac.uk">tharding@fs1.scg.man.ac.uk</a> )
Honorary Treasurer	Prof. John Gallagher (Patterson Institute, Manchester; <a href="mailto:monjtg@picr.cr.man.ac.uk">monjtg@picr.cr.man.ac.uk</a> )
Honorary Secretary	Dr. Rose Maciewicz (Zeneca Pharmaceuticals; <a href="mailto:rose.maciewicz@alderley.zeneca.com">rose.maciewicz@alderley.zeneca.com</a> )

### Elected Members:

Dr. Alvin Kwan (University of Wales, Cardiff; [kwanap@cardiff.ac.uk](mailto:kwanap@cardiff.ac.uk))  
Prof. Bruce Caterson (University of Wales, Cardiff; [caterson@cardiff.ac.uk](mailto:caterson@cardiff.ac.uk))  
Dr. Cay Kielty (University of Manchester; [ckielty@fs1.scg.man.ac.uk](mailto:ckielty@fs1.scg.man.ac.uk))  
Dr. Malcolm Davies (University of Wales, Cardiff; [daviesm6@cf.ac.uk](mailto:daviesm6@cf.ac.uk))  
Dr. Gary Rucklidge (Rowett Research Institute, Aberdeen; [gjr@rri.sari.ac.uk](mailto:gjr@rri.sari.ac.uk))  
Prof. Jo Edwards (University College Hospital Medical School, London; [jo.edwards@ucl.ac.uk](mailto:jo.edwards@ucl.ac.uk))

### ex officio Member:

Dr. Louise McKenna (The Royal Veterinary College, London; [lmckenna@rvc.ac.uk](mailto:lmckenna@rvc.ac.uk))

## 3. Referendum - Proposal to change the Society's name

The Committee of the BRITISH CONNECTIVE TISSUE SOCIETY proposes that the Society should change its name to: **British Society for Matrix Biology**. A presentation and discussion of this proposal was held at the last Society Meeting at the University of York in September 1997. The proposal will now be decided by a ballot of the membership. It will be approved if two thirds of the votes cast are in favour of the change. If approved it will be ratified at the AGM in Cardiff on March 30<sup>th</sup> 1998.

The Committee feels that this proposal is in the long term interests of the Society and therefore urge the members of the Society to vote YES in the ballot. The numbered ballot forms must be returned to the Secretary by **27<sup>th</sup> February 1998**. Please see the last page of the newsletter for the ballot.

#### **4. Election of New BCTS Committee Members**

As the Chairman (TH) and four committee members (AK, BC, CK, MD) are due to retire in Spring 1999, the Committee has decided that they would attempt to space out the recruitment of new members by shortening the length of service of two current members from 3 to 2 years. Bruce Caterson and Cay Kiely have agreed to be these two members. Therefore the next election of Committee members will be held at the 1998 Spring BCTS AGM, Cardiff. Therefore we are looking for nominations for these positions. If you know of anyone who would like to be considered please nominate them and if possible get a second person to support your nomination.

#### **Nominations for Committee Members should be sent to:**

BRITISH CONNECTIVE TISSUE SOCIETY

Dr Rose Maciewicz

Cardiovascular, Metabolism & Musculoskeletal Research Department

Zeneca Pharmaceuticals

Alderley Park, Macclesfield

Cheshire, SK10 4TG UK

**These nominations should be received no later than February 27<sup>th</sup>, 1998. If required, a postal ballot will be held in March, 1998.**

#### **5. Spring BCTS Meeting in Cardiff, 1998**

Included with this newsletter is the final programme and registration information for the Spring 1998 BCTS meeting to be held in University of Wales Cardiff 30<sup>th</sup> and 31<sup>st</sup> March 1998. This meeting entitled *MOLECULAR INTERACTION AND MATRIX ASSEMBLY* is an international meeting with many speakers coming in from overseas. The contact person for this meeting is Dr A.P.L. Kwan, School of Molecular & Medical Biosciences, University of Wales Cardiff, PO Box 911, Museum Avenue, Cardiff, CF1 3US (Email: Kwanap@cardiff.ac.uk). **Note that the registration deadline is February 27<sup>th</sup>, 1998.**

People attending this meeting are encouraged to submit abstracts for inclusion in the abstract booklet and, if wished, for publication in the International Journal of Experimental Pathology. Those abstracts for publication in IJEP should be marked in pencil on the reverse side 'for publication'. Both types of abstracts (2 copies of adequate quality to permit photocopying) should be included with a completed registration form and sent to A.P.L. Kwan (address above). Those of you interested in publication in IJEP please send plus a copy of your abstract on a 3.5" floppy disc.

To standardise the format of the abstracts, the BCTS Committee is requesting that abstracts should be of a single side of A4, 12 or 14 point and structured with separate sections as follows:

Title; Authors; Address; Introduction; Materials & Methods; Results; Discussion; Acknowledgement and References (names and initials of all authors, year of publication, full title, journal name, volume and page numbers).

Contributors are requested to take care to proof-read their abstracts and to supply a complete list of references. The funding organisation should be clearly indicated. Please follow instruction carefully, **abstracts will not be considered for publication if all requested information is not provided.**

## 6. Call for BCTS Bursaries

The BCTS awarded 5 bursaries to attend the Autumn 1998 meeting in York and these were to **Robert Bielby, Mark Bolton, Sophie Gilbert, Carl Gregory and Sarah Howatt**. We are offering BCTS bursaries to attend the Spring 1998 BCTS meeting in Cardiff as well as the 1998 FECTS meeting in Sweden. Young members of the Society are encouraged to apply for bursaries (up to a maximum of £75 for BCTS and £250 for FECTS) to assist with attending these meetings. An application form is included with this newsletter. Bursaries will only be considered if they are submitted on a current BCTS Bursary application form. Applications should be sent to the Secretary 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 to attend the Cardiff meeting is February 27<sup>th</sup>, 1998.** The applications will be reviewed rapidly by the Committee and applicants will be informed of the outcome on or around March 13<sup>th</sup>, 1998.
- **The deadline for receipt of bursaries to attend the FECTS meeting is April 17<sup>th</sup>, 1998.** The applications will be reviewed rapidly by the Committee and applicants will be informed of the outcome in early May.

### Criteria for Bursaries

- I. Applicants should have been members of the Society for at least 1 full year.
- II. Applicants should be submitting an abstract and presenting a poster for the meeting to be attended.
- III. Applicants should be at an early stage of their career and unlikely to have access to travel funds. Most often where support for an overseas meeting is given this is the first such meeting they attend. For this reason 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.
- IV. The work described in the abstract must be novel and likely to be of a quality that would reflect well as a BCTS supported contribution.

## 7. IJEP Poster Competition

The Committee has agreed to run another IJEP Poster competition at the Spring 1998 BCTS meeting in Cardiff and as the name implies the International Journal of Experimental Pathology (IJEP) again have agreed to sponsor this poster competition for young BCTS members. Competition rules:

1. It will be held once per year and at a BCTS meeting selected by the Committee.
2. The competition will be publicised well in advance.
3. The competition is opened to PhD students and recently qualified post-docs (up to 2 years), who must indicate prior to the meeting their intention to enter the competition.
4. Up to 3 scholarships of £100 each will be awarded, dependent on the quality of the presentations. If the quality is low, no awards will be made.
5. The posters will be judged by at least 3 Committee members who will view the posters as well as discuss the work with the poster presenter. Criteria for judging the posters will be: clarity of the presented poster; scientific content; and scientific understanding of the work.
6. The award to be used by the recipient as they choose.
7. The recipients of the award to be notified at the meeting and also to be listed in the next newsletter issue.

**In order to enter the competition you must let the organisers of the Cardiff meeting know your intention to be entered in the competition, and this must be prior to the meeting and no later than February 27<sup>th</sup>, 1998.** To do this please write in pencil on the back of your abstract 'for IJEP poster competition'.

## 8. Annual General Meeting, Cardiff 1998

Please note that the annual general meeting of the BCTS will be held on Monday March 30<sup>th</sup> starting at 17:10 University Hall, University of Wales, Cardiff. Any items for this meeting should be forwarded to the BCTS Chairman, Prof. Tim Hardingham (e-mail: tharding@fs1.scg.man.ac.uk)

## 9. Preliminary Programme for Autumn 1998 BCTS - The Biology of Hyaluronan

The Autumn 1998 meeting of the Society will be held conjointly with the Glycoconjugate Group of the Biochemical Society at the University of Leicester 21<sup>st</sup> - 22<sup>nd</sup> September 1998 and is being organised by Tim Hardingham and John Sheehan, (University of Manchester). A strong international group of speakers have agreed to participate in the meeting, which will focus on a range of new discoveries in hyaluronan related research.

### 21<sup>st</sup> September

Paul Weigel (Oklahoma, USA) *Bacterial HA-synthases*  
Andrew Spicer (Davis, USA) *Mammalian HA-synthases and knockout mice*  
Koji Kimata (Aichi, Japan) *Mammalian HA-synthases and functions*  
Vincent Hascall (Cleveland, USA) *HA Metabolism*  
Tony Day (Oxford) *Structural regulation of HA-binding*  
John Sheehan (Manchester) *Molecular conformations of HA*  
Tim Hardingham (Manchester) *Molecular networks of HA*  
Endre Balazs (New Jersey, USA) *Biomedical applications of HA*

### 22<sup>nd</sup> September

Charles Archer (Cardiff) *Hyaluronan receptors in limb development*  
Andrew Pitsillides (London) *Hyaluronan in Joint cavitation*  
Cheryl Knudson (Chicago, USA) *Retention of pericellular HA matrices*  
Eva Turley (Toronto, Canada) *HA cell receptors, regulation of cytoskeleton and wound healing*  
Helmut Ponta (Karlsruhe, Germany) *Roles of Cellular HA receptors*  
Hans-Georg Wisniewski, (New York, USA) *TSG-6 HA binding protein involved in inflammation*

## 10. Preliminary Programme for Spring 1999 BCTS

It is intended to hold a joint meeting with European Tissue Repair Society (ETRS) in the Spring of 1999 on the theme "The Molecular and Cell Biology of Wound healing". The meeting will be held at St. Anne's College, Oxford from Monday March 29<sup>th</sup> to Wednesday March 31<sup>st</sup>. The meeting is being organised by Dr Malcolm Davies and Professor Keith Harding. The contact person is Malcolm Davies (daviesm6@cf.ac.uk; Tel 01222 492233 Extn 5292). It is hoped to include the following speakers on the programme. The names in bold have already indicated an interest to speak.

### Monday March 29<sup>th</sup>

**Keith Harding** (UWCM, Cardiff) *Overview; The Clinical problem*  
**Richard Clark** (Stony Brook, New York) *Overview; The Scientific Bases of Wound Healing*  
To be decided *Inflammatory Cells in Wound healing*  
Alexis Desmouilliere (Lyon, France) *Myofibroblasts*  
**Jim McCarthy** (Minneapolis, Minnesota) *Re-Epithelization*  
**Andrew Newby** (Bristol) *Response to Vascular Injury; Role of the Smooth Muscle Cell*

### Tuesday March 30<sup>th</sup>

**Thomas Kreig** (Koln, Germany) *Collagen*  
P Heldin (Sweden) *Hyaluronan*  
**M. Bernfield** (Boston) *Proteoglycans*  
Judith Capisi (San Francisco) *Senescent fibroblasts*  
**John Savil** (Nottingham) *Apoptosis*  
William C. Parkes (St. Louis) *Metalloproteinases*  
To be decided *Growth factors*  
**Alan Hall** (London)  
**Paul Martin** (London) *Epidermal movement in embryonic wound healing*  
Jill Helms (San Francisco) *Hedgehog genes in skeletogenesis and wound repair*  
**Charlie Archer** (Cardiff) *Repair of ligaments*

### Wednesday 30th March

Cell biology/biochemistry in dressings used in wound therapeutics  
Use of animal models  
Clinical applications/studies  
Speakers to include: P Sherratt (Oxford) *Mathematical modelling in wound repair*; **K Kadler** (Manchester) *Decorin knock out in wound healing*; **JD Williams** (Cardiff) *Wound repair in peritoneal dialysis*

## 11. Membership Information

At the last Annual General Meeting it was agreed that the membership fee for 1998 would be £10.00 for full members and £2.00 for student members. As in the past no subscription is payable by Honorary Members. If you normally pay by direct debit you need do no more as the amount has been debited from your UK bank account on Jan. 1<sup>st</sup> of this year. **However, if you pay by annual cheque could you please send your subscription immediately.** Additionally it would greatly assist the administration of membership and subscription renewal if you could pay by direct debit. To do this please complete and return the direct debit form (found on the bottom of the attached BCTS membership application form) and send to the Treasurer.

Prof. John Gallagher  
Christie Hospital  
Dept of Medical Oncology  
Wilmslow Road, Withington  
Manchester, M20 4BX

### Student Members

Student Members must sign the appropriate declaration form and also obtain the countersignature of you Head of Department, to receive the reduced membership fee. The student membership fee applies for 2 years after graduation, either first degree, masters or PhD.

Under the provision of the Data Protection Act 1994 s.33(3) we are required to inform our members that we are holding a mailing list on computer disc. The information is only for the purpose of distributing or recording the distribution of articles of information to members and consists only of their names; addresses and other particular necessary for such distribution. A member objecting to the information being held as mentioned should notify the current BCTS Secretary.

### Does any member know the address for any of the following people? If so please inform the Secretary.

Hillier	Dawson S
Karwatowski WS	Donovan K
Solomon E	Jasani MK
Franklin M	Morris WP
Plastow SR	Plested JS
Eckley DJ	Reed FB
Bionella TR	Abbott & Karran
Sear CHJ	Hampson I
Rice AE	Lis ZS
Thomas JT	James MF
Huckey TH	

### Could these members please increase their direct debits from £5 to £10 ASAP.

Rayan V	Hall AC
Birch HL	Ratcliffe A
Levene CU	Trivedi P
O'Hare D	Johnston-Banks F
Holmes D & KM	Worrall JG
Oni OOA	Woodrow DF
Poulsom R	Clarke E
David Lamb	Price Mrs FM
Winterburn PJ	Mangan FR
Barrett MC	Edwards JCW
Dyson M	Egan JM
Smith J & Watt F	Davies JD
Powell J	Hopkinson I
Ali MBA	Chambers Mr & MRs
Brown Dr	

## 12. XVIth FECTS meeting

The XVIth FECTS meeting will be held in Uppsala Sweden on August 2<sup>nd</sup> - 6<sup>th</sup> 1998. The 2<sup>nd</sup> for FECTS -98 will be available soon and a copy of the Scientific programme follows. For further information, including abstracts and registration forms please access the Internet site (<http://www.bmc.uu.se/symposia/fects.html>). Additionally further information can be received from:

“FECTS”, Uppsala Turist & Kongress

Fyris torg 8 S-753 10 Uppsala, Sweden

Tel:+46-18-27 48 07

Fax:+46-18-69 24 77

E-mail: [kongress@utkab.se](mailto:kongress@utkab.se)

## XVIth FECTS Scientific Programme - Plenary Lectures

### Sunday, August 2<sup>nd</sup> Glycobiology

**C Hughes**, London, UK, *The Galectin Family: Carbohydrate - Binding Proteins Involved in Cell Differentiation*

**H Clausen**, Copenhagen, Denmark, *Control of Mucin-Type O-linked Protein Glycosylation*

**M Jalkanen**, Turku, Finland, *From Cellular Homeostasis to Signal Induction with Syndecans*

**A Lander**, Irvine, USA, *Proteoglycans and their Roles in the Developing Nervous System*

### Monday, August 3<sup>rd</sup> Developmental Biology

**L Fessler**, Los Angeles, USA, *The Functions of Extracellular Matrix Proteins in Drosophila Development*

**C Streuli**, Manchester, UK, *ECM-Directed Signalling Pathways that Regulate Differentiation and Apoptosis in Breast Epithelial Development*

**U. Mayer**, Martinsried, Germany, *Mutational Analysis of Basement Membrane Proteins and Receptors*

**D Wedlich**, Ulm, Germany, *Cell Adhesion and Signalling in Xenopus Development*

### Tuesday, August 4<sup>th</sup> Matrix Receptors

**K Campbell**, Iowa City, USA, *Dystroglycan: A Critical Mediator of Cell-Matrix Interactions in Development and Disease*

**T. Pihlajaniemi**, Oulu, Finland, *Type XIII Collagen, a Transmembrane Protein Implicated in Cell-Matrix Association*

**G Tarone**, Turin, Italy, *Functional Properties of  $\beta 1$  Integrin Splicing Variants*

**A Sonnenberg**, Amsterdam, The Netherlands, *Role of the Integrin  $\alpha 6 \beta 4$  in the Assembly of Hemidesmosomes and Epidermal Cell Adhesion*

### Wednesday, August 5<sup>th</sup> Genetic Disorders

**J. Bonaventure**, Paris, France, *Skeletal disorders caused by mutations in FGFR genes*

**E Engvall**, La Jolla, USA, *Animal and in Vitro Models for Muscular Dystrophy*

**K Tryggvason**, Stockholm, Sweden, *Genetic Disorders and Targeted Mutations Lessons About Function of Basal Lamina Proteins*

Workshops on extracellular matrix components within the general areas

*structure and function*

*development*

*biosynthesis and catabolism*

*angiogenesis*

*gene expression*

*tissue regeneration and repair*

*cell-cell and cell-matrix interaction*

*microbial adhesion*

*receptors*

*autoimmune diseases*

*signal transduction*

*genetic diseases*

*growth factors*

*cancer*

## 13. Why Not Organise A BCTS Workshop or Meeting?

The most recent meeting of the BCTS was *Folding, Processing, and Assembly of Matrix Molecules* organised by Dr. Cay Kielty in York, September 1997. All agreed it was a great success. The format for BCTS events can range from a one day meeting to a full meeting as above. Please discuss your ideas with the BCTS Secretary Dr. Rose Maciewicz in the first instance (01625-513231). A meetings information pack is available to help with the organisation.

## 14. Encourage Your Colleagues To Join The BCTS:

The BCTS can only exist with the support of its members. Please encourage your students, and colleagues, both clinical and non-clinical, to join us. Membership offers reduced registration to all BCTS Meetings, the opportunity to apply for student bursaries and free subscription to our newsletter *Connective Issues*. A copy of the application form is included.

## **15. Postdoctoral Position**

A postdoctoral position is available for studies of Bone Morphogenetic Protein-1/Mammalian Tolloid (also known as procollagen C-proteinase) and its role in fibrosis. Successful applicants should have a background and practical experience in molecular biology, site directed mutagenesis and recombinant protein expression in eukaryotic cells. The project represents a new collaboration between Zeneca Pharmaceuticals at Alderley Park and the Wellcome Trust Centre for Cell-Matrix Research, within the School of Biological Sciences at the University of Manchester. Successful applicants will benefit from both the academic and industrial environments. They will be expected to interact on a regular basis with scientists at both sites and will have access to research facilities of both partners. We are looking for a talented and highly motivated person who is enthusiastic about developing a career in research. Interests and abilities in collaboration and working as a research team are particularly important. The post is available for 2 years, in the first instance. The salary for this position, which is available immediately, is £16,927 per annum.

Informal enquiries may be made to:

Dr David Tuffin - Fax: 01625-516667 at Zeneca Pharmaceuticals (e-mail:

David.Tuffin@alderley.zeneca.com)

Dr Karl Kadler - Fax: 0161 275 5082 at the University of Manchester (e-mail: Karl.Kadler@man.ac.uk)

Application forms are available from the Office of the Director of Personnel, The University of Manchester, Oxford Road, Manchester, M13 9PL, UK (Tel: 0161 275 2028; Fax: 0161 275 2221; Minicom: 0161 275 7889 (for the hearing impaired); e-mail: Personnel@man.ac.uk), please quote ref 727/97.

**Closing date: 5th February 1998**

As an Equal Opportunities Employer, the University of Manchester welcomes applications from suitably qualified people from all sections of the community regardless of race, religion, gender or disability.

## REPORT ON BRITISH CONNECTIVE TISSUE SOCIETY MEETING

University of York, 18<sup>th</sup> and 19<sup>th</sup> September, 1997.

The autumn meeting of the BCTS was held at Alcuin College, University of York on 18-19<sup>th</sup> September, and had as its theme the folding, processing and assembly of matrix molecules. About 175 scientists attended from all round the UK, and there were a number of visitors from the USA and Europe. The meeting was organised by Dr Cay Kielty (Wellcome Trust Centre for Cell-Matrix Research, Manchester), and financial support for obtaining international speakers was obtained from the Arthritis and Rheumatism Council, Wellcome Trust, Chugai Pharmaceuticals Ltd., Pfizer Ltd., Roche Products Ltd., Smith and Nephew Group, Unilever Research and Zeneca Pharmaceuticals. Additional donations were received from Affiniti Research Products Ltd., Calbiochem-Novabiochem (UK) Ltd. and Sigma Chemical Company.

The scientific sessions were divided into 'Biosynthesis, folding and secretion' and 'Extracellular matrix assembly and processing'. The first session examined the post-translational modifications and folding of different classes of matrix molecules, and the second session highlighted new advances in understanding how matrix polymers are assembled and degraded in health and disease.

**Steve High** described quality control processes that influence newly-synthesised proteins in the ER, especially chaperone-mediated maturation of newly-synthesised translocated proteins to produce correctly folded, functional molecules. Using a cross-linking approach, Steve described how N-glycosylated proteins within the endoplasmic reticulum bind to the lectins calnexin and calreticulin, and the PDI-related protein ERp57.

**Alan Murdoch** presented studies on intracellular processing, secretion and role of the G3 domain of the large aggregating proteoglycan aggrecan. He examined the possibility that G3 may be involved in intracellular translocation and secretion of aggrecan. Recombinant data showed that a lectin-like domain or a CRP-like domain are sufficient for efficient secretion of the translated product.

**Bob Mecham** described how tropoelastin interacts within the endoplasmic reticulum with BiP and FKBP65 (a peptidyl-prolyl *cis-trans* isomerase), and how these molecules act to prevent intracellular aggregation, to assist in folding, and to facilitate correct targeting of newly-synthesised tropoelastin to assembly sites on the plasma membrane.

**Michael Raghunath** presented recombinant protein data demonstrating how profibrillin undergoes pericellular C-terminal processing to fibrillin molecules by the furin/PACE family of calcium-dependent serine proteinases. Profibrillin-1 is the first ECM protein shown to be a substrate for these enzymes, and the biological significance of the conversion is the direct control of microfibrillogenesis through exclusion of uncleaved profibrillin.

**Neil Bulleid** examined the role played by the C-propeptide in the assembly of collagen using a semi-permeabilised cell system which reproduces the initial stages in synthesis, modification, folding and assembly. In particular, he described the identification of a sequence within the  $\alpha 1(\text{III})$  C-propeptide that is involved in selective recognition of procollagen chains required for trimerisation.

**Marlene Mazzorana** focused on the intracellular assembly of the FACIT collagens which have a modular architecture composed of short triple-helical domains separated by non triple helical domains. *In vitro* reassociation studies of the three different chains of purified collagen IX highlighted chain specificity in trimerisation, and recombinant studies demonstrated key roles for cellular factors and prolyl hydroxylation in formation of stable triple-helical trimers.

**Deane Mosher** described the role of the  $\alpha_v\beta_3$  receptor in assembly of fibronectin by  $\beta_1$  integrin knock-out cells. He demonstrated that intact vitronectin binding of  $\alpha_v\beta_3$  down-regulates fibronectin assembly but that adhesion via other mechanisms results in cells that are able to assemble fibronectin, whilst the presence of active  $\beta 1A$  integrins opposes the down-regulatory effect of ligation of  $\alpha_v\beta_3$  by vitronectin.

**Dan Greenspan** talked about the BMP-1 class of procollagen C-proteinases that process procollagen types I-III and may mediate biosynthetic processing of lysyl oxidase and laminin 5. Both BMP-1 and mammalian Tolloid (mTld), which are upregulated by TGF- $\beta$ , play a key role in collagen fibrillogenesis. cDNA encoding a novel

genetically distinct gene product, mammalian tolloid-like (mTll), was described, together with a knock-out mouse for the mTll gene which is embryonic lethal in homozygous nulls and shows gross derangement of skeletal and cardiovascular development.

**Leena Bruckner-Tuderman** discussed collagen VII which polymerises to form the anchoring fibrils that attach the epidermal basement membrane to the underlying dermal connective tissue in skin. A range of mutations was described in collagen VII which cause dystrophic epidermolysis bullosa (DEB), a genetic skin blistering disease, together with biochemical analyses of genotype-phenotype relationships which lay the basis for development of gene therapy strategies for this disorder.

**Sarah Dallas** described the latent transforming growth factor- $\beta$  binding proteins (LTBPs), a new class of structural ECM proteins which are intimately involved in the regulation of the potent multifunctional growth factor TGF $\beta$ . Recent studies were presented demonstrating LTBP1 expression and TGF $\beta$  activation in a bone cell system, which highlighted the significance of these proteins as regulators of TGF $\beta$  action in skeletal tissues.

**Gillian Murphy** presented data on the membrane bound matrix metalloproteinases, a subfamily of MMPs involved in the pericellular activation of progelatinase A and procollagenase 3, in the potential interaction with other activation cascades, and in pericellular matrix turnover.

**Norman McKie** gave a spirited talk about gene expression and regulation in cells of connective tissue origin of a subfamily of metalloproteinases, the ADAM. These proteinases have a complex organisation contain several domains including: a metalloproteinase; disintegrin; fusogenic cysteine rich; EGF-like; trans-membrane; and a cytotail with SH2/WW domains. They are postulated to degrade a variety of extracellular matrices, such as fibronectin and collagen. In the pre-osteoblast cell line, U937, ADAM 10 and 12 are expressed. Interestingly their expression pattern is differentially responsive to IL-10 and IL-4. Articular chondrocytes express ADAM 10, 12 and 15. ADAM10 appears to be localised to the Golgi by immuno-staining. ADAM 15 appears to be localised to chromosome 1 (1q21.4).

**Kevin Bottomley** summarised what is known about the cytokine convertases, members of the ADAM family, concentrating on the best characterised convertase, the putative pro TNF converting enzymes, ADAM 10 and ADAM 15 (also known as TACE). Controversy still exists around which one is the physiologically important TNF sheddase, as both proteinases can cleave proTNF correctly and selectively. In addition, they both can be purified from relevant cells (i.e. cells that produce soluble TNF). Although cells derived from the embryonically lethal KO of ADAM 17 no longer process proTNF, gene addition of ADAM 10 can restore proTNF processing. Inhibitors of these two compounds have good structural activity relationships between isolated enzyme and cell based assay. It has been found that inhibitors of these enzymes are anti-inflammatory in a number of animal models of inflammation.

**Dave Buttle** presented data about the proteinase cascade involved in cartilage proteoglycan breakdown. Proteoglycan loss from cartilage can be induced by IL-1, TNF and retinoic acid. The enzyme responsible for cleaving the aggregating proteoglycan, aggrecan has been called aggrecanase and appears to be an unknown cleaving between a glutamic acid and alanine. Interestingly inhibitors of both metalloproteinases and the cysteine proteinases cathepsin B can inhibit the loss of aggrecan from cartilage in his experiments. Thus his data suggests that cathepsin B might be an activator of either uPA which in turn activates aggrecanase or cathepsin B activates pro-aggrecanase.

**Clare Hughes** presented further data about mechanisms of aggrecan catabolism. Their group have developed neo-epitope antibodies to both the carboxy and amino terminals of aggrecan that has been degraded either at the aggrecanase (E<sup>373</sup>-A<sup>374</sup>) or the MMP (N<sup>341</sup>-F<sup>342</sup>) site. Using these immuno-tools they studied the activity of 'aggrecanase' and MMPs in rat chondrosarcoma chondrocytes grown in agarose. Treatment of these cells with IL-1 only induces generation of the aggrecanase cleavage site. Characterisation of this cleavage site has shown that it is a metallo-dependent enzyme but not inhibitable by classic metalloproteinase inhibitors TIMP 1 (0.18  $\mu$ M), phosphoramidon, actinonin. They suggest that aggrecanase is a soluble, diffusible metalloproteinase with a pH optimum of 7.5-8.0.

Cay Kielty and Rose Maciewicz

BRITISH CONNECTIVE TISSUE SOCIETY

APPLICATION FOR MEMBERSHIP

To be completed in BLOCK CAPITALS and returned to the Secretary. Please include appropriate membership fee.

Secretary: Dr Rose Maciewicz, Cardiovascular, Metabolism & Musculoskeletal Research Department, Zeneca Pharmaceuticals, Alderley Park, Macclesfield, Cheshire, SK10 4TG UK. email: rose.maciewicz@alderley.zeneca.com

Name.....

ADDRESS.....

TEL..... FAX.....

EMAIL.....

SPONSORING MEMBERS

Name..... Name.....

Signature..... Signature.....

Should you not know any member of the Society personally, please write to the Secretary.

SIGNATURE OF APPLICANT.....

MEMBERSHIP FEES: Full membership £10 p.a..... Student membership £2 p.a..... Please indicate ✓

STUDENT MEMBERSHIP (To be signed by the student's supervisor)

I certify that..... is a non-salaried research student.

NAME.....

SIGNATURE.....

The application should be accompanied by a cheque, made payable to the BRITISH CONNECTIVE TISSUE SOCIETY, for the subscription for the current year January to December.

Please complete the banker's order for future subscriptions. Should your application be unsuccessful your cheque and banker's order will be returned.

DO NOT DETACH

BANKER'S ORDER

To: (name and address of your bank)

Please pay on the 1st January to National Westminster Bank plc, City of London Office, P.O. Box 12258, 1 Princess St., London, WC2R 8PA

Code No. 60-00-01T, the sum of £.....(..... POUNDS) for credit to the account of (in words)

the BRITISH CONNECTIVE TISSUE SOCIETY, Account No. 09670343 quoting reference no. .... (leave blank, for BCTS records only)

and make similar payments annually on the 1st January until this order is cancelled in writing, charging such payments to:

my/our.....account numbered.....

Name (please print).....

Signature..... Date.....

**BRITISH CONNECTIVE TISSUE SOCIETY MEETING  
30-31 MARCH 1998**

**Venue: University Hall, University of Wales, Cardiff**

**Molecular Interaction And Matrix Assembly**

*PRELIMINARY PROGRAMME*

**Monday 30 March**

- 12.00-13.30 Registration and Lunch
- 13.30-15.30 **SESSION 1: Extracellular Matrix Assembly and Remodelling**  
**CHAIRPERSON: Professor Gill Murphy**
- 13.30-14.10 Dale Abrahamson, University of Alabama at Birmingham  
*Assembly of the Glomerular Basement Membrane During Kidney Development*
- 14.10-14.50 Neera Borkakoti, Roche, UK  
*Zinc Metalloproteases: Variations on a Structural Theme*
- 14.50-15.30 P Carmeliet, Leuven  
*Genetic Analysis of The Plasmin and Metalloproteinase Systems in Matrix Remodelling*
- 15.30-15.50 TEA
- 15.50-17.10 **SESSION 2: Cell Signalling**  
**CHAIRPERSON: Dr Anne Woods**
- 15.50-16.30 John Couchman, University of Alabama at Birmingham  
*Regulation of Matrix Assembly at the Cell Surface by Syndecan-2 Proteoglycan*
- 16.30-17.10 Guido David, University of Leuven, Belgium  
*Syndecan-assisted Signalling*
- 17.10-17.40 **AGM**
- 17.40-19.30 Posters, Wine and Cheese
- 19.30 Conference Dinner

## **Tuesday 31 March**

- 09.30-12.20**            **SESSION 3:            Collagens**  
**CHAIRPERSON:    Dr Vic Duance**
- 09.10-09.50*            Peter Bruckner, University of Münster, Germany  
*Molecular Organisation and Interaction in Cartilage Collagen Fibrils*
- 09.50-10.50*            4 x 15 minutes Junior Faculty Presentations  
(presenters to be selected by BCTS committee)
- 10.50-11.10*            COFFEE
- 11.10-11.40*            2 x 15 minutes Junior Faculty Presentations  
(presenters to be selected by BCTS committee)
- 11.40-12.20*            John Bateman, Royal Children's Hospital, University of Melbourne, Australia  
*The Molecular Pathology of Collagens*
- 12.30-14.00*            LUNCH and Poster Viewing
- 14.00-15.40**            **SESSION 4:            Matrix organisation and turnover**  
**CHAIRPERSON:    Professor Tim Hardingham**
- 14.00-14.30*            2 x 15 minutes Junior Faculty Presentations  
(presenters to be selected by BCTS committee)
- 114.30-15.10*            Mats Paulsson, University of Cologne, Germany  
*The Matrilins - An Emerging Family of Extracellular Matrix Proteins*
- 15.10-15.40*            Dick Heinegård, University of Lund, Sweden  
*Characteristics of Cartilage Matrix Proteins Showing Altered Synthesis in Osteoarthritis*

**END OF MEETING**

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<b>Registration Form</b> <b>British Connective Tissue Society      Spring Meeting 1998</b>
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*MOLECULAR INTERACTION AND MATRIX ASSEMBLY*

UNIVERSITY OF WALES CARDIFF      30<sup>th</sup> and 31<sup>st</sup> March 1998

Please complete 1 booking form per person and return it with full payment to Dr A.P.L. Kwan, School of Molecular & Medical Biosciences, University of Wales Cardiff, PO Box 911, Museum Avenue, Cardiff, CF1 3US, **no later than Friday 27<sup>th</sup> February 1998.**      Email : kwanap@cardiff.ac.uk

Name (block capitals) .....

Affiliation .....

Address .....

.....

.....

.....

Telephone..... Fax..... Email.....

**Sunday 29th March 1998**

Bed & Breakfast	Standard single room	£22	_____
	En-suite single room	£36	_____

**Monday 30th March 1998**

Bed & Breakfast	Standard single room	£22	_____
	En-suite single room	£36	_____

Lunch (two course buffet plus coffee)	£8	_____
---------------------------------------	----	-------

Tea & coffee	£3	_____
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Conference Dinner (including wines)	£26	_____
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Choice of main course :	Wye Salmon	<input type="checkbox"/>
please tick one box	Welsh Lamb	<input type="checkbox"/>
	Vegetarian	<input type="checkbox"/>

Other dietary requirements (please specify)\_\_\_\_\_

**Tuesday 31st March 1998**

Bed & Breakfast	Standard single room	£22	_____
	En-suite single room	£36	_____

Lunch	£8	_____
-------	----	-------

<b><u>Registration</u></b>	BCTS Members	£10	_____
	Non-BCTS members	£15	_____
	<b>Total</b>		=====

Are you submitting a poster abstract? ..... Would you like to give a short presentation? .....

Poster/Short presentation title .....

## NOTES FOR REGISTRATION AND POSTER PRESENTATIONS

1. Registration forms with full payment, and abstracts must be returned by **27<sup>th</sup> February 1998** to:

Dr. Alvin P.L. Kwan,  
Anatomy Unit,  
School of Molecular and Medical Biosciences,  
University of Wales Cardiff,  
Museum Avenue,  
Cardiff.  
CF1 3US

Telephone: 01222 874654  
Fax: 01222 874486  
email: Kwanap@cardiff.ac.uk

2. The conference venue is University Hall, Cardiff at Birchwood Road, Penylan, Cardiff. Registration, accommodation, posters, exhibitions and lectures are in University Hall.

**PLEASE NOTE:** The capacity of the lecture theatre is 180 people. Therefore, please return your registration forms as soon as possible to ensure a place in the lecture theatre. Closed circuit TV facilities will be available in the adjacent room.

3. The conference reception and dinner will also be held at University Hall.

4. Directions on how to find University Hall Cardiff are enclosed. Car parking is available on campus. Parking permits are not required.

5. People attending the meeting are encouraged to submit abstracts for inclusion in the abstract booklet. Abstracts should be printed on a single side of A4 at 12 or 14 point, and be suitable for photocopy reproduction. These should be marked in pencil on the reverse side "for abstract booklet". Abstracts can be forwarded for publication in the Journal of Experimental Pathology. These abstracts should be marked in pencil on the reverse side "for publication". Both types of abstract should be included with the completed registration form and sent to Alvin Kwan. Abstracts should be structured with separate Introduction, Materials and Methods, Results, Discussion and Reference sections. The funding organisation should be clearly indicated. Complete references should be provided including full name and initials of each author, year of publication, journal name, volume number, and full page details.

6. The programme allows opportunities for 8 short podium presentations (10 minutes + 5 minutes discussion). These will be selected by members of the BCTS executive committee and the meeting organisers from delegates submitting abstracts. These sessions are designed to provide opportunities for younger members of the BCTS (final year postgraduates, junior post-docs and junior academics) to present their recent data to a critical audience. Please indicate your wish to give presentation on the registration form. Those selected for oral presentations will be notified week of March 2<sup>nd</sup>, 1998.

7. Poster boards (4 ft wide by 4 ft high) and fixings will be supplied.

8. Bursaries are available to assist young investigators to attend this meeting. Those requesting a bursary should complete the enclosed form and mail it, together with a copy of their abstract, to the BCTS Secretary.

9. The registration desk will be in the entrance foyer of University hall and will be open from 11 a.m. on Monday, 30<sup>th</sup> March.

**BRITISH CONNECTIVE TISSUE SOCIETY MEETING  
30-31 MARCH 1998**

**Venue: University Hall, University of Wales, Cardiff**

**Molecular Interaction And Matrix Assembly**

University Hall is situated at Birchwood Road, Penylan which is approximately 2 miles from the University's main campus - see maps.

**How to get there?**

**1. By Road**

Cardiff is served by the M4 and easily accessible from all parts of Britain.

Travelling **EAST** on the M4 (from Swansea and West Wales) - Leave the motorway at junction **32** (Map 3 grid A5) and follow the A470 towards the City Centre. Turn left into **Eastern Avenue (A48)** at the **Gabalfa Interchange** (Map 3 grid B4) and travel east towards the Llanedeyrn Interchange (Map 3 grid D4)

Travelling **WEST** on the M4 - Leave the motorway at junction **29**, follow the **A48(M)/A48**.

**On the A48** - Leave the A48 at the **Llanedeyrn Interchange** (Map 3 grid D4), signposted to **Docks** and **Cardiff East, A4161**. At the roundabout, take the exit signposted **Llanedeyrn** and, at the next roundabout take the first exit signposted **Cyncoed**. Follow the road up the hill to a set of traffic lights. Turn right at the lights into **Cyncoed Road**. Take the third turning left into **Ty Gwyn Road** and approximately 100 yards on the right hand side, turn into **Birchwood Lane** and enter the main gate.

**2. From Cardiff International Airport**

Cardiff International Airport is 12 miles from University Hall. Taxi fare from the airport to the conference centre is approximately £15.

**3. From Cardiff Central Railway Station**

Taxi fare from the railway station to University Hall is approximately £5.

Alternatively, the number 57,58,52, 52C and 107 buses depart regularly from Cardiff Central.

**BRITISH CONNECTIVE TISSUE SOCIETY**  
**BURSARY APPLICATION FORM**

**Application form to be completed and returned with a copy of the completed Conference application form, a copy of the abstract to be presented at the meeting and a one page *curriculum vitae*, to:**

BCTS Secretary  
Dr Rose Maciewicz  
Cardiovascular, Metabolism & Musculoskeletal Research Department  
Zeneca Pharmaceuticals  
Alderley Park, Macclesfield  
Cheshire, SK10 4TG UK

The applicant should have been a member of the British Connective Tissue Society for 12 months prior to this application. Applicants will be informed as soon as possible and should not await such notification before submitting their Conference application.

Name.....Date.....

Address.....  
.....  
.....

e-mail:.....tel:.....fax:.....

Conference Name.....

Venus and Date.....

Costs (accommodation, registration, travel).....

Additional sources of support (Indicate other sources to which you will apply for financial assistance to attend the Conference and the amount you might expect to receive.)

Support statement (A brief supporting recommendation by the applicant's Head of Department or Supervisor.)

Date.....Name (HOD).....Signature.....

Date.....Signature of Applicant.....

**BRITISH CONNECTIVE TISSUE SOCIETY**  
**EXTRAORDINARY GENERAL MEETING**  
**18<sup>th</sup> September 1997      York University**

The extraordinary general meeting was called to order at 15:25 by the BCTS Chairman, Prof. Tim Hardingham. Fifty-six members were in attendance. The purpose of the meeting was to discuss the BCTS Committee proposal to change the name of the Society to '**British Society for Matrix Biology**'. TH introduced the topic. The proposed name change was to enable attraction of new members from a broader range of research areas; to increase membership; to increase our potential to raise money from industry; and finally to better fulfil the aims of the Society as laid out in our Constitution.

The Society began in 1980's as a fusion of the Collagen and the Mucopolysaccharide Clubs and while the name has served the Society admirably times have moved on. The name change is not for current Society members, as they are fully aware of the broad scope of the Society, but rather to make us more attractive to a wider range of scientists. Matrix implies a broader biology, encompassing cells as well as the extracellular structural proteins and thus the name change may attract new members such as cell biologists. New Zealand and Australian Connective Tissue Societies recently have altered their name and while the ISMB (International Society for Matrix Biology) have noticed a trend towards recruitment of cell biology members.

TH then opened the proposal up for debate. In answer to query of our future affiliation with FECTS, TH reassured the audience that we are best organised as members of FECTS and the Committee had no intention of dropping our affiliation. TH responded to an alternative name suggestion, British Society for Extracellular Matrix Biology that he preferred Matrix Biology as it was more succinct.

Roger Mason supported the name change because there has been a gradual change in the interest in connective tissues and that our horizons have extended beyond the traditional. The term Matrix Biology was 'crisp', and associated with a Journal and International Society. In addition the FECTS constitution which was rewritten last summer, has nothing in it about the names of its associated Societies.

There was some debate as to whether the name change would bring in additional funding and a mixed response from no to some difference was noted from the Industrial representatives.

Doreen Ashurst voiced her concern that 'Matrix' confines itself to cells not cells and matrix and thus not as broad as connective tissue. TH replied that the definition of the words are correct but Matrix is commonly accepted to mean cells and matrix. The discussion moved on to 'what is in a name' debate. Kevin Bottomley suggested that we shouldn't be concentrating on the name but the content of the meetings. Garry Rucklidge agreed but noted that there is a 'chicken and egg' argument. Better meetings get more members but Society name draws in the membership and hence the meetings that get organised. TH reiterated the Committee wish to have meetings with broader appeal and that we welcome ideas for future meetings.

Mike Grant asked for clarification of the mechanism for the name change. TH noted that this meeting was for debate and discussion and that the Society as a whole would be polled by Postal Ballot in the future. If the ballot carried ratification would be sought at the next AGM in Cardiff spring BCTS meeting. The Charity Commission would then be notified of the proposed name change. Mike Grant went on to say that the Bone and Tooth Society was also considering a name change and wondered whether the two Societies should merge.

Louise McKenna ended the discussion by suggesting that 'everything to gain with the name change'. You keep the old members but get new ones as well.

The meeting was adjourned at 18:00.

# **British Connective Tissue Society Ballot Form**

The BCTS Committee proposes that the name of the Society should be changed to:

## **British Society for Matrix Biology**

Mark a cross in the YES box to support the proposal

Mark a cross in the NO box to oppose the proposal

**YES**

**NO**

The completed ballot must returned to the Secretary **by 27<sup>th</sup> February 1998**. The address is:

**Dr Rose Maciewicz  
Cardiovascular, Metabolism & Musculoskeletal Research Department  
Zeneca Pharmaceuticals  
Mereseide, Alderley Park, Macclesfield  
Cheshire, SK10 4TG UK**

**Ballot Number.....**