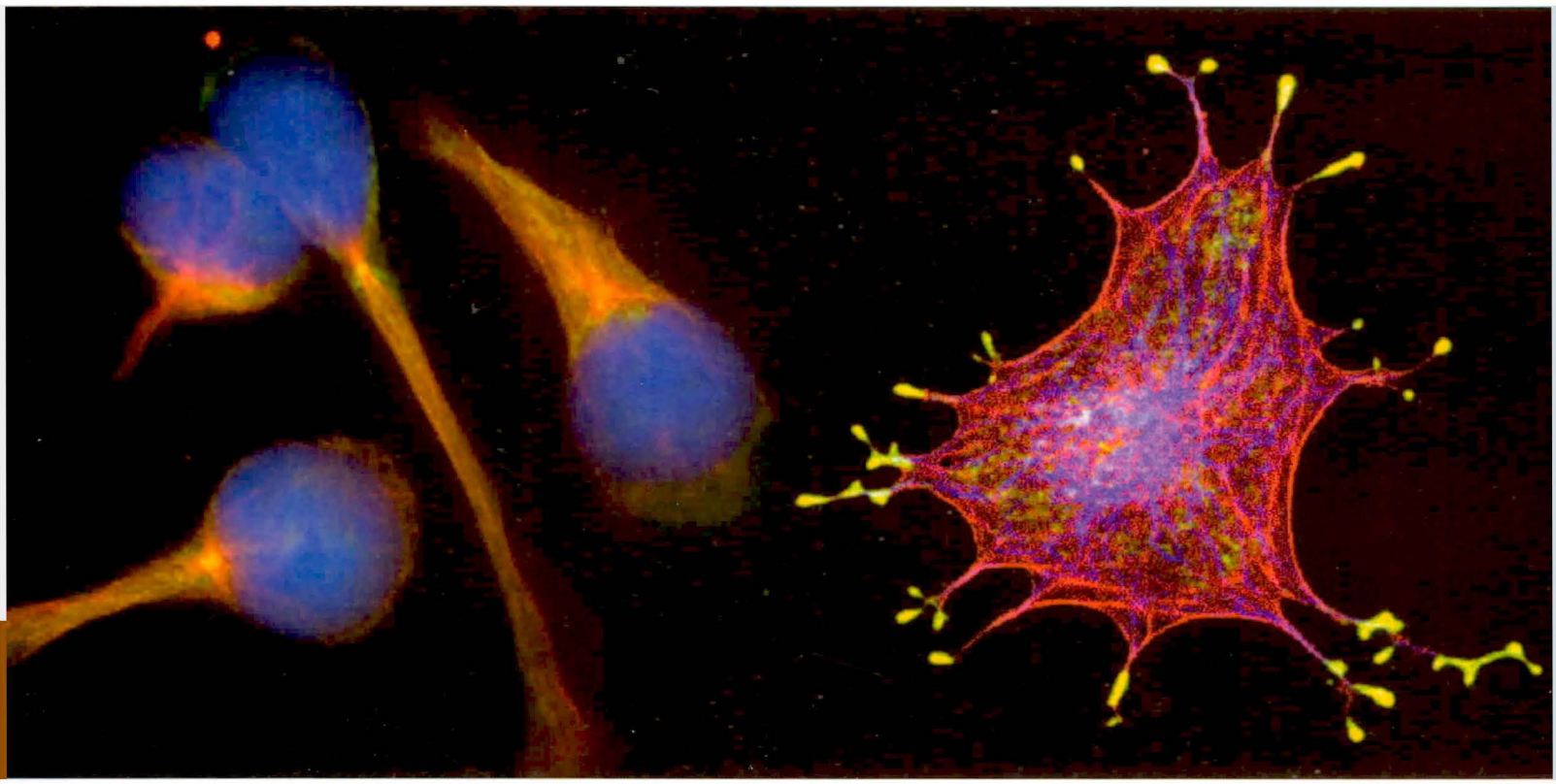

BSCB Newsletter

Summer 2001

British Society for Cell Biology

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Year 2001 Travelling Fellowships

Our three international journals, Development, The Journal of Experimental Biology and Journal of Cell Science, are offering Fellowships of up to $4000 according to needs (including, in certain cases, a cost-of-living allowance).

Graduate and postdoctoral students are invited to apply to the Editors in 2001 for funds to assist travel and expenses involved in collaborative visits to other laboratories. There are no restrictions on nationality and the application form may be downloaded from our www site: www.biologists.com/cob/tf

Applications, which should be accompanied by a curriculum vitae, an account of the work to be done and a full breakdown of the costs involved, should include a letter of recommendation from the head of the laboratory in which the applicant is presently working and from the head of the laboratory in which the work will be done. Only one application per person will be assessed.

The Editors in awarding the Fellowships will be guided by the excellence of the candidates, and the importance and innovative quality of the work to be done.

Development

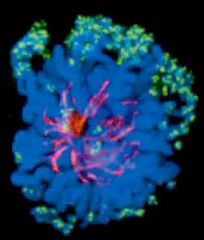
Applications should be sent to:

Professor Chris Wylie (Editor in Chief)
Division of Developmental Biology
Children's Hospital Medical Center
3333 Burnet Ave, Cincinnati, OH45229-3039, USA

Applicants should be studying developmental biology

Deadlines: 31 March, 30 June, 30 September and 31 December 2001

Journal of Cell Science



Applications should be sent to:

Dr Kirsty McCormack (Production Editor)
The Company of Biologists Limited, Bidder Building, 140 Cowley Road,
Cambridge CB4 0DL, UK

Applicants should be working in the field of this Journal.
Visits should be international, i.e. not within a single country.

Deadlines: 31 March, 30 June, 30 September and 31 December 2001

The Journal of Experimental Biology

Applications should be sent to:

Dr R. G. Boutilier (Editor in Chief)
The Journal of Experimental Biology
Department of Zoology, Downing Street, Cambridge CB2 3EJ, UK
E-mail: zoo-jeb01@lists.cam.ac.uk

Applicants should be working in the field of this Journal

Deadlines: 31 March and 30 September 2001

BSCB Newsletter
Summer 2001

Editorial

As those of you who attended the Spring Meeting may have noticed, the previous Editor of this newsletter, Kathryn Ayscough, has plenty on her hands these days. Emma was born in January (see picture on page 3) so Kathryn has resigned as Editor: she remains on the BSCB committee and will henceforth be responsible for handling the Honor Fell Travel Awards.

The Spring Meeting was a great success, selling out in advance with a record attendance of 500. This led to various logistical problems but overall the event went well. A full report appears in this issue. There is also a report by Matt Howard, last year's Young Cell Biologist, on his trip to the ASCB meeting in San Francisco.

Chris Potten has recently retired from the Paterson Institute in Manchester and it was my privilege, for my first task as the new Editor, to interview him about his career. Our other feature article is by Colin Hopkins, who discusses the topical issue of copyright and electronic publishing.

This year's BSCB Autumn meeting is being held in honour of Martin Raff. The programme and registration forms are in this issue. The meeting is almost certain to sell out, so apply early.

Finally, my thanks to all the contributors to this newsletter; many of the reporters seem well qualified for a career in scientific journalism or publishing, should they decide to leave the bench. Thanks also to the BSCB Committee and to all the sponsors of the BSCB.

The Editor

Newsletter editor: Joan Marsh
Publications editor: Simon Hughes
Design/layout: Giles Newton
Printer: Cambridge University Press
Website: maintained by Simon Hughes
http://www.bscb.org

Front cover, left: T lymphocytes activated by PMA migrating on immobilized ICAM-1-Fc . Intracellular signaling *via* LFA-1 integrin receptors induced thereby leads to a dramatic polarization and involves translocation of PKC-β(I) (green) to the microtubules and microtubule-organizing centers (red). Yellow/orange overlay shows co-localization; nuclei are shown in blue. Courtesy of Yuri Volkov, Dublin. Right: The winner of the Wellcome Trust Picture Prize at the BSCB/BSDB spring meeting was Alistair Hume from Imperial College London for his image of a melanocyte.

Contents

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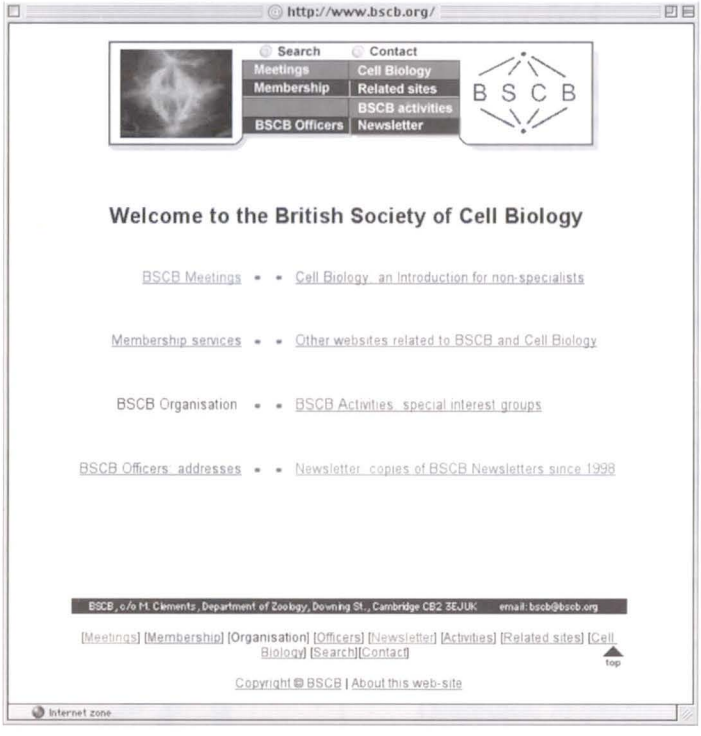
BSCB Young Cell Biologist 2001

The winner of this year's award was Claire Warner from the MRC Laboratory of Molecular Biology/Wellcome Trust Centre for Molecular Mechanisms in Disease in Cambridge. Her prize is a trip to the ASCB meeting in Washington DC in December, where she will present her poster, 'Myosin VI: a molecular motor at the Golgi complex'.

The winner of the TCS Biologicals' award was Sara Ellis from the Department of Biochemistry at the University of Bristol. Her reward is a chance to attend the ELSO meeting next year in Nice. Sara's poster was entitled 'Regulation of co-ordinated actin-based membrane rearrangements by a novel Rho GTPase, Rif'. She is shown on the right, receiving her award from Phil Ingham, President of the BSDB, at the Spring Meeting.



BSCB website – a new look

The website is currently undergoing a major revision. The 'front end' will change somewhat, while investment in the underlying software should mean that it is much more compatible with a variety of browsers, giving members improved access. Once the new site is up and running, we would greatly appreciate contributions from members: any interesting news, links to useful sites, and particularly reviews of websites useful to cell biologists would be very welcome. You could also help to brighten up the site by submitting one of your favourite lab pictures. Although the newsletter text pages are restricted to black and white, the BSCB website will be a great place to display your pictures and make your name known to the cell biology community! Pictures should be submitted together with a one or two sentence description of what they illustrate, explained at undergraduate level.

All contributions should be sent to: Dr Simon Hughes at simon.hughes@kcl.ac.uk

Changes on the BSCB committee

The new Treasurer of the Society is Jo Adams, who took over from Stuart Kellie at the beginning of the year. Alan Hall and Murray Stewart retired from the committee at this year's AGM, having reached the statutory limit of their term of office. We are grateful to all for the work they have done on behalf of the Society, particularly to Alan for running the Honor Fell Travel Awards Scheme. This will now be looked after by Kathryn Ayscough who remains on the committee, although she has relinquished the newsletter. The newsletter will be edited by Joan Marsh (John Wiley & Sons), who was elected onto the committee together with Inke Näthke of the Department of Anatomy and Physiology at the University of Dundee. The only other change was that Simon Hughes has become Publications Editor, which role will now incorporate that of Website coordinator.

Kathryn Ayscough and Steven Winder with baby Emma.

Please note that any BSCB members can nominate themselves or fellow cell biologists for election to the committee. Nominations should be sent to the BSCB Secretary, Michael Whitaker, and are welcome throughout the year. New committee members are then elected at the AGM, which next year will be held during the Spring meeting in York.

Honor Fell Travel Awards

Young BSCB members attending scientific conferences relevant to cell biology are eligible to apply for financial support in the form of an Honor Fell Travel Award. Last year, thanks to a generous donation from the Company of Biologists, the funds available were increased, allowing more members to benefit from this scheme. Full details are on the application form on page 31.

Prize announcement

The Amersham Pharmacia Biotech & Science Prize for Young Scientists

A great opportunity for scientists who completed their PhD in 2000 to receive recognition for their research in the field of molecular biology. The 2001 grand prize winner will receive US $25,000, while the runners-up will receive US $5,000. Go to www.apbscienceprize.org for entry details.

Fancy a good read?

We have several books available for review and are just waiting for some budding literary critics to shed their reticence and step forward. Reviews may be short and sweet, long and effusive or blunt and to the point; they will be published in this newsletter, that of the BSDB or both. The reward? Your name in print and the book on your office shelf or bedside table.

Anyone interested in reviewing any of the following should contact Andy Furley (A.J.Furley@Sheffield.ac.uk).

The Coiled Spring: How life begins
Ethan Bier, Cold Spring Harbor Press

Successful Scientific Writing
Matthews, Bowen & Matthews, Cambridge University Press

Molecular Embryology: Methods & Protocols
Paul Sharpe & Ivor Mason, Humana Press

Pollen Biotechnology for Crop Production & Improvement
Shivana & Sawhney, Cambridge University Press

The Origin of Animal Body Plans: A study in evolutionary developmental biology
Wallace Arthur, Cambridge University Press

Endocrine Cell Culture (Handbooks in Practical Animal Cell Biology)
Ed. Stephen Bidey, Cambridge University Press

Neuronal Growth Cones
Phillip Gordon-Weeks, Cambridge University Press

Molecular Methods in Developmental Biology
Ed. Matthew Guille, Humana Press

Dictyostelium: Evolution, Cell Biology & the Development of Multicellularity
Richard Kessin, Cambridge University Press

Translational Control of Gene Expression
Sonenberg, Hershey & Mathews, Cold Spring Harbor Press

UK Life Sciences Committee update

Michael Whitaker

You'll recall from earlier articles that the UK Life Sciences Committee (UKLSC: http://www.lifesci.org) has as its main remit the coordination of policy responses to Government in the life sciences area and that its constituent societies, including BSCB, attend a twice-yearly committee meeting. Here I report what has been going on.

Biosciences Federation
UKLSC first commissioned a consultant's report on the need for and feasibility of a broad grouping of societies in the life sciences. As a result of this report, a Biosciences Federation Working Group has been set up to recommend what form the alliance should take. It is chaired by Professor Sir John Arbuthnott, who was until recently Vice-Chancellor of Strathclyde University, and Professor David Lewis (Animal & Plant Sciences, University of Sheffield). The Institute of Biology, the UK National Committee for Microbiology, the Linnean Society and the British Ecological Society are also represented and there are several independent members of the Working Party, including Ann McLaren and Brian Follett. Martin Raff represents UKLSC.

There has been one meeting thus far that has identified the clustering and overlapping of interests of the constituent societies. The UKLSC view is that whatever the detail of the structures eventually recommended by the Working Party, individual societies should have direct contact with and participation in any Federation that emerges, rather than through a proxy such as UKLSC. So if and when a Federation is created, UKLSC will cease to exist, its functions being taken over by the Federation. You may remember that BSCB has made no final decision about whether to subcribe to the Federation; the decision will depend on the final form the Federation takes.

UK Life Science Directory
One outcome of the discussions at UKLSC has been the creation of a Life Science Directory that contains contact details of the members of some of the constituent societies. BSCB did not participate in the first issue of this directory. The second issue is now being compiled and BSCB will take part. If you do not wish your contact details to be listed in this publication, then please contact Steve Winder, the membership secretary, whose address can be found at the back of the newsletter.

Biosciences Benchmarking
UKLSC has been an active contributor to the benchmarking documents for Biosciences being drafted by the Quality Assurance Agency. These benchmarking documents are intended to specify the curriculum content in University teaching. I think that it would be fair to say that the UKLSC does not warmly welcome benchmarking, but it does wish to ensure that the document reflects Biosciences as they are now taught. A draft document manages to encompass the breadth of the discipline without being over-prescriptive.

Joint Royal Society of Chemistry/UKLSC meeting
UKLSC has approached the RSC with the aim of putting on a scientific meeting that brings together chemists and biologists to discuss proteomics, genomics and catalytic RNA. It is to be held in November 2001. Details will be available on the UKLSC website.

Access to Life Sciences by teachers and school pupils
The UKLSC has drawn attention to a web site for life sciences in schools: *www.biology4all.com*. You may wish to contribute content to this site or add links to help keep teachers and students up to date with what is going on in research in cell biology.

UKLSC Achievements
To find out more about what UKLSC has done, visit *www.lifesci.org/responses/UKLSCachievements2000.htm*. The list includes Careers Conferences for life scientists; these may be of particular interest to postgrads and postdocs.

Michael Whitaker
michael.whitaker@ncl.ac.uk

Schools news

Wound Healing for Science Teachers

The BSCB-supported lecture at the Centenary Annual Meeting of the Association for Science Education, University of Surrey.

Some of the 74 teachers who attended the BSCB-supported lecture in January may have been hoping for some treatment for wounds they feel have been inflicted by bureaucracy in the school system. They were not to be disappointed: from comments heard after the event, the talk was certainly stimulating and had excellent anti-depressant qualities!

This year Dr Paul Martin (Department of Developmental Biology, UCL) gave the lecture, entitled *Wound Healing – Lessons from Embryos*. The lecture opened with a picture of a wound in an adult. Paul described how wound healing is very complex and starts with the production of a fibrin plug; this is followed by the arrival of macrophages and the release of chemicals, causing inflammation. This scenario is both the 'doing' and 'undoing' of a neat healing process.

The rapid formation of the fibrin plug prevents blood loss and seals and cordons off the wound site from the ingress of bacteria and foreign materials. Useful though this is, the plug, which later forms a scab, prevents the edges of the wound meeting and joining neatly. Stitching, stapling or another method of bringing the two edges together to assist wound closure is desirable, if possible.

Paul then went on to tell us about his own field of research into wound healing using embryos of chick, mouse, fly and zebra fish. A chick embryo, cased in its shell, is easily operated upon and, by creating a 'sellotape window', you can also see what is happening. The chick, however, is not suitable for genetic studies. The mouse is quite a good animal model and has an advantage over chick in that it is better for work on the genetics of would healing.

It was no surprise to biology teachers to hear that *Drosophila* (fruitfly) is especially useful for such genetic studies, particularly, as Paul said, because half of all genes known to be associated with disease in humans are also found in *Drosophila*. Zebra fish, as seen in aquaria in homes, are also used in Paul's lab. They have wonderfully transparent embryos and are also good for genetic studies.

From the work that Paul and others have done, it appears that whereas wound healing in adult tissues may be slow and often accompanied by scarring, in embryos it proceeds rapidly, efficiently and virtually without trace. In chick embryo tissue, for example, the cells at the edge of the wound site employ a 'purse string' or 'draw string' mechanism to pull cells across the wound gap, using an actin/myosin system for assistance. This produces a very neat join.

In adults, wound repair is executed by epidermal cells crawling across the 'great divide' to re-cover it, working under the canopy of the scab formed from the fibrin plug. The presence of white blood cells, together with an inflammatory response, hinders perfect wound repair. In the clinic, the ability to control the inflammatory response and the activity of white blood cells could be useful.

Paul's lab is using transgenic mice that have no inflammatory cells to test how various gene products are involved in wound repair. This work suggests that wound healing in adults is neater when inflammation is absent.

Paul showed many slides and several video-clips, including one illustrating a section of tissue with white blood cells leaving a blood vessel and 'homing-in' on the wound site. He talked the audience through a still picture and then ran the video.

As a parting comment, Paul said that if you had to have a wound, it would be better to have it when you were very young or very old. In the embryo, there is no inflammatory response and when you are old the immune system is not very active.

David Archer

A copy of the lecture leaflet written by Paul Martin follows overleaf. It can be photocopied two-sided and folded down the middle; the BSCB is happy for copies to be distributed copyright-free within educational institutions.

Bioscience Careers Fairs 2001

After the success of the Careers Fairs in 2000, the following three Fairs will be held this year: Bristol, 3 November, Newcastle, 17 November, and London, 1 December.

The Biology4all.com website

This website has now been approved by the main committee of the UKLSC and bears the UKLSC logo. It is proving popular with both biology teachers and technicians. The site has useful links to information about universities and courses, where teachers can place resource material and where technicians can exchange information and share problems.

British Society for Cell Biology
Dispatches from the Frontiers of Cell Biology

Wound Healing

Lessons from embryos

Dr Paul Martin
Department of Anatomy
University College London

Further reading

Martin, P. (1997). Wound healing: aiming for perfect skin regeneration. Science 276, 75-81.

Grose, R. and Martin, P. (1999). Parallels between wound repair and morphogenesis in the embryo. Sem. Cell Dev. Biol. 10, 395-404.

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British Society for Cell Biology
Professor Michael J. Whitaker (Secretary)
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BSCB website: www.bscb.org

Wound healing

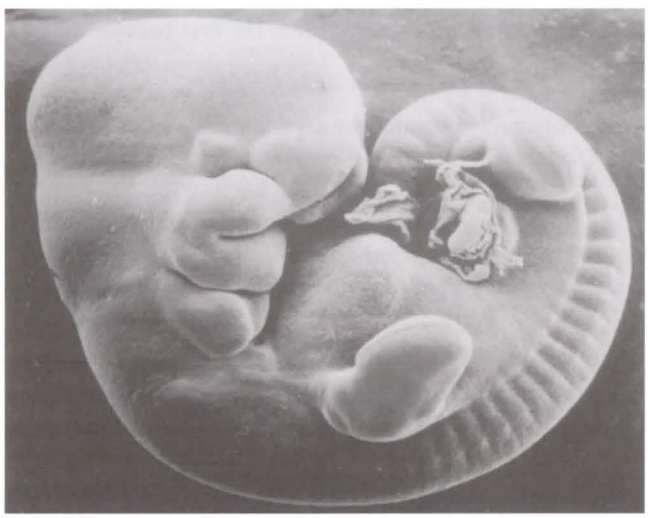
Skin is the largest organ in the body, acting as a barrier to protect our internal organs from the hazards of the outside world. If the barrier is broken and the skin is wounded – whether by an accident or from an operation – a complex repair process begins, sealing up the wound and leaving a scar.

Although this process is extremely efficient, there are always risks of infection and, if the wound is large, the scarring can be severe. So, researchers are searching for ways to make wound healing better and faster in the clinic. One of the best ways will be to look at how embryos do it – remarkably, even though they seldom need to call upon repair machinery, they seem superbly adapted to healing wounds.

In the embryo

Throughout development, the embryo is busy shaping and remodelling its tissues as it converts a single fertilized egg cell into a miniature model of the adult organism – made up of millions of cells. Surprisingly, until relatively late stages of development, all organisms are exceptionally good at healing wounds; they repair any tissue damage rapidly and efficiently and do not leave a scar.

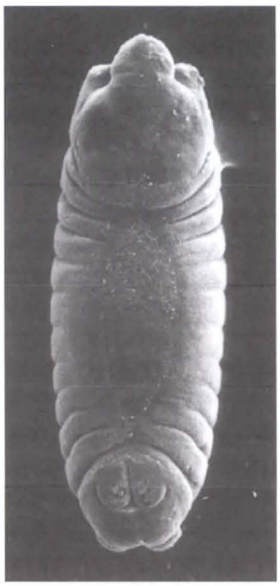
We have analysed the 'start' and 'stop' signals that regulate the cell shape changes and other cell behaviours that underly this 'perfect' repair process, with the hope that these studies will tell us something about how the natural tissue movements of embryogenesis are regulated as well as suggesting ways in which we might make adult tissues repair more efficiently.



Above: This mouse embryo has grown from a single fertilized egg into a miniature model of the adult organism.

Watching cells move in 4D

For the first time, we can watch cell and tissue movements in 4D as they occur in transparent zebrafish embryos or in *Drosophila* (fruitfly) embryos expressing fluorescent proteins. This has allowed us to compare the artificially triggered tissue movements of wound healing with the natural tissue movements of morphogenesis...and we find many similarities. The same genes are switched on, and the same contractile machinery appears to be used to tug and bend the epithelia during normal development as is used to close a wound.



Above: A *Drosophila* embryo

These observations suggest that embryos are so good at healing wounds because they are using the same portfolio of tools they normally use to shape their bodies during development – perhaps repair simply recapitulates embryogenesis.

Inflammation

One major and significant difference between wound healing in the embryo and adult is the inflammatory response. Whenever an adult tissue is injured, a massive inflammatory response is raised, with white blood cells recruited from the bloodstream to the site of the wound. In the embryo no such inflammatory response occurs. Using a transgenic 'knock-out' mouse that has no inflammatory cells, we are able to test the requirement of the inflammatory reponse during adult tissue repair. These studies strongly suggest that repair is better off without inflammation – just as it is in the embryo.

The future

The study of wound healing in the embryo is 'basic research', but it could have far-reaching implications for the clinic. From new dressings and treatments for wounds caused by accidents and those longstanding sores and ulcers suffered by diabetics and the elderly, to therapies that allow plastic surgeons to operate without fear of scarring their patients, the field is immense and the future looks bright for healing.

A distinguished career in **cell biology: Chris Potten**

Chris Potten retired from his position at the Paterson Institute for Cancer Research at the Christie Hospital in Manchester in November 2000, mainly to spend more time for other pursuits and his family. However, his involvement in science persists: he remains an Honorary Professor of Stem Cell Biology at Manchester University and is Chairman of EpiStem Limited, a biotechnology services start-up company. I visited him in his new office in Manchester's Incubator Building to talk about aspects of his distinguished career and some of his hopes for the future.

Chris graduated from the University of London with a degree in Botany and Zoology in 1962. He then went to Guy's Hospital to study for a Master's degree in Radiation Biology and Radiation Physics. At that time there was a worldwide preoccupation with radiation, particularly the Manhattan project with which several of his advisors were involved. It was also shortly after the Windscale accident in the UK, which had demonstrated to the British Government that there was a need for radiation biologists. The government instigated a training programme and Chris was one of the first students. It was also the heyday for radiotherapy and there were many new developments in that area.

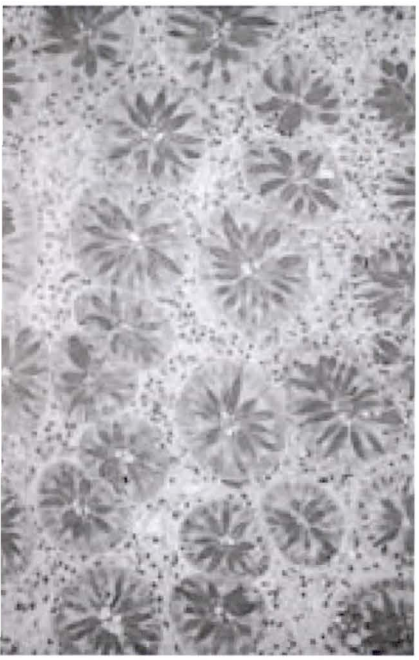
From Guy's, Chris moved north to the Paterson Institute in Manchester to investigate the effects of radiation on the skin and hair follicles under the guidance of Alma Howard. "Alma was the first person to divide the cell cycle into phases: G1, S G2 and M, which was before the discovery of DNA structure by Watson and Crick. The Director of the Paterson was Laszlo Lajtha, a haematologist who was a pioneer in the study of stem cells in the bone marrow and the concept of G0. Laszlo's enthusiasm for these ideas influenced Chris to develop similar concepts in epithelial tissues.

In 1968, Dr Potten went to the US, initially to continue his research on skin under Herman Chase at Brown University in Providence, RI. He then moved to Pittsburgh Hospital, where his interest started to broaden to include the intestine, in collaboration with the Director, Sam Lesher. The Director of the Paterson Institute kept a post open for Chris for three years and in 1971 he returned to found an epithelial biology group. This was built up from three people to twenty-six at its height. "We developed the concept of stem cells in the skin and the epidermal proliferative unit. We also devised models for the organisation and proliferation of cells in the intestine and identified and characterised the stem cells there. This was when the philosophical concept of a stem cell first became widely established."

After that, he says, "I gradually switched from the study of radiobiology to using radiation as a tool. It is very useful because it is a controllable and precise form of insult. Using radiation as a tool enabled one to study how stem cells responded and regenerated the tissue". For his work on radiation biology, Chris was awarded the Marie Curie Medal in 1998.

From cell birth to cell death

Chris was also one of the earliest people to work on apoptosis. The concept arose with Professor John Kerr, a pathologist from Brisbane, and Sir Alastair Currie in Aberdeen. Kerr spent



Above: Goblet cells in intestinal crypts. EpiStem, Chris Potten's new company, is using growth factors and cytokines to modify stem cell behaviour in gut and oral mucosa.

Above right: Epidermis, hair follicles and sebaceous glands

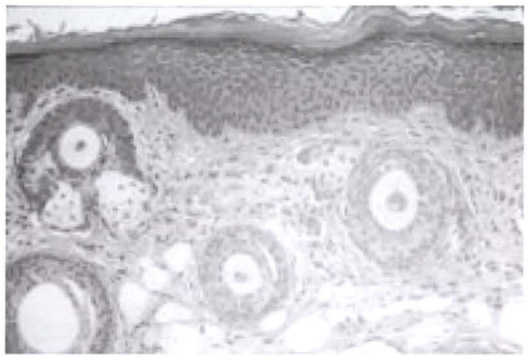
a year with Currie in Aberdeen (later Edinburgh), when Andrew Wylie was a PhD student. They published their pioneering paper in 1972, but there was little worldwide interest at the time.

Two years later Dr Jeffrey Searle from the Pathology Department in Brisbane spent some time in Chris' lab as a visiting scientist and worked on apoptosis in the intestine and skin, introducing Chris's lab to the concept. "During the early 1970s, there were only three groups in the world interested in apoptosis – in Brisbane, Edinburgh and Manchester". Chris's *Nature* paper in 1977 helped keep the field alive. The transatlantic scientists did not really accept the concept until the 1980s; then it took off.

One of Chris's keynote papers in the apoptosis field was published in *Carcinogenesis* in 1992. "The hypothesis was that apoptosis among the stem cells in the small intestine constituted a protective mechanism that partially accounted for the absence of cancer in that large, rapidly proliferating tissue mass. In the large bowel, which has a similar structure but has a high incidence of cancer, the protective mechanism is compromised by the presence of the survival gene *bcl-2*."

Chris has also been continually involved in developing the concept and definition of stem cells and understanding the properties of adult tissue stem cells – a field in which he has an international reputation. A much quoted seminal paper on the topic of intestinal stem cells was published in *Development* in 1990, with a long time collaborator Professor Markus Loeffler. The issue of stem cells and their potential in curing disease is a current rapidly expanding field.

Chris spent at least three sabbaticals abroad, working with Renato Baserga at Temple University, with Howard Maibach, a dermatologist in San Francisco, and in the Pathology Department in Brisbane with John Kerr. "My work spanned several scientific disciplines and



I feel that the strength of my research group was its breadth of interest. However, I had a few run-ins with funding agencies which wanted a more focused approach."

Looking ahead

EpiStem opened its offices in the Incubator Building in January 2001, under the management of Chris and his colleague, Catherine Booth. "During my last few years at the Paterson, I was approached by several pharmaceutical or biotech companies that wanted to establish collaborative projects. The idea was to investigate the possibility of manipulating the sensitivity of epithelial and intestinal cells to protect them during radio- and chemotherapy." The major side effect of such treatments used to be bone marrow damage, but that has now been at least partially alleviated. The current limitations are due to oral and gastrointestinal mucositis.

EpiStem has been doing proof of principle studies, using growth factors and cytokines to modify the stem cell behaviour in gut and oral mucosa. Initially, it will act as a service company for the pharmaceutical and biotech sector, but they also plan to develop a research and development arm. The benefits that Chris Potten has brought to many aspects of biological study look set to continue for some time to come.

Joan Marsh

Publishers to perish?

By Colin Hopkins

Peer-reviewed research reports are the bricks with which the life sciences are built. If life scientists could use the Internet to access the full texts of these reports, the information they contain could flow freely, thereby transforming the researcher's ability to design experiments.

The publishing processes which generate these reports depend upon a complex mixture of organisations that range from large, commercial publishers owning hundreds of journals and with billion dollar turnovers to Learned Societies - not-for-profit operations often founded solely for the purpose of editing and printing the research papers of their members. Researchers can obtain free access to the full texts of published papers only with permission from the organisations that have published them because publishers hold the copyright to this material in perpetuity. This authority, which was acquired originally in order to protect the creativity of the author, now belongs entirely to the publisher because it has become standard practice for authors to sign away their rights in order to get their papers published.

The research community is now asking publishers to give up their indefinite hold on copyright in order for barrier-free electronic libraries to be established. These libraries are needed to accommodate the huge quantities of new data flooding into the life sciences and electronic search techniques have a key role to play cross-correlating this information. The more comprehensive the electronic archive is, the more effective these searches will be. In recent years, we have all seen how searching for abstracts can liberate the literature from the print journals; in moving to the details of full texts, we now need to remove the new barriers, replete with passwords and subscription codes, that are being erected by the commercial publishers.

Most Learned Societies seem ready to accept that the copyright they hold is not so much owned as held in trust for the scientific communities they serve. For most commercial publishers, the proposal to relinquish copyright, even after they have recovered and profited from the initial publication costs, is hard to contemplate. Like the entertainment components of the media industry to which some of them belong, scientific publishers attach a high proprietry value to the creativity they control by copyright. They see the Internet as providing new sources of revenue: scientific publications are even better than Beatles' songs - they have back catalogues which can be sold over and over again, every week a new compilation.

So far the public debate has been one-sided, the commercial publishers have been reluctant to comment and the not-for-profit publishers have allowed themselves to be side tracked into the long grass with topics such as the need for peer review (which does not, of course, need to change just because electrons are replacing ink). Now, however, the real issues are coming into clear focus. With regard to finance, the large Societies (ASMB, ASCB) are showing with publications like the *Journal of Biological Chemistry* and *Molecular Biology of the Cell* that the costs of online publishing can be met and full text made freely available within months of publication. For Societies with smaller memberships and journals with more modest impact factors, the prospects are less certain but, to their enormous credit, these too are accepting the challenge. Many continue to be concerned about the costs of a transition which will require a fundamental restructuring of their business operations just when the

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costs of new electronic technologies have to be taken on board. Nevertheless, the British Physiological and Biochemical Societies, for example, plan to release their full text materials at the end of each calendar year (so that December papers are released almost immediately). From this July, the Company of Biologists, which publishes the *Journal of Cell Science*, *Development* and the *Journal of Experimental Biology*, will release the material after only six months.

Less intrepid are the organisations that wear the badge of a learned society but are really in the business of commercial publishing. Whilst bowing to the inevitability of giving up their copyright, some are expressing serious concerns about the archive their papers will be used to create. This, they suggest, will be government owned and monolithic. They are afraid that by contributing their texts they will lose their ability to control quality and stifle the flair generated by their competitive spirit. However, these objections, if they have any validity, can be raised only against the one scheme that has been promoted to the point of forcing the entire issue out into the open - PubMed Central. In the fast moving current of electronic processing, even this straw man is now sinking fast because it is already clear that PubMed Central is only one of several kinds of development presently underway. The others are in the private (but not-for profit) sector and allow reports to remain on the publishers' sites provided their full texts are barrier free. The best example is the LOCKSS system under development by HighWire Press and Sun Microsystems which is about to begin its second stage trials with 30 major university libraries distributed world wide.

The core issue should not, therefore, be focused on PubMed Central and need not remain bogged down with whether an embargo period of six or twelve months is required for financial viability. It is simply whether commercial publishers should be able to withhold indefinitely the primary research they publish from barrier free, full text electronic libraries.

This issue directly confronts commercial publishers who wish to sell the papers they have sequestered behind the barriers of their own archives. Their resistance will be strong because a huge market is being developed with this material. Elsevier-Reed, for example, has a scheme called Science Direct which in the last twelve months sold 168,000 full text articles online to one London College alone. Nature Publishing Group, basing its costings on student numbers, is currently asking in the region of £4000 per annum for online access to its 'family' of journals from institutions with 10 000 undergraduates. This deal, which is being resisted by some of the best endowed institutions in the world, is particularly difficult to justify on the basis of added journalistic value since it does not include the News and Views sections, only the peer reviewed reports.

Unfortunately, this is only the beginning. Elsevier-Reed, who have absorbed Cell Press and Current Biology and its Trends journals in the last few years, currently have a $4.5 billion bid in for Harcourt who own Academic Press (and run Ideal, the closest competitor to Science Direct in selling full texts). Librarians everywhere are alarmed and although the bid is being examined by the UK Competition Commission to see whether it would be against the public interest, it has already been passed in the USA, Germany and Ireland. Nor can academics rest secure in the belief that all they need to do is support the not-for-profit barrier-free archives. As these build up, they will, of course, be completely open to exploitation by commercial publishers. These entrepreneurs, like their counterparts in the genome sequence business, will just bundle this information in with theirs and sell it too.

It is, then, the big commercial publishers that the current campaign iniated by the Open Letter - now signed by more than 15,000 scientists - needs to impress. It is only when journals like *Nature* and *Cell* begin to see their best reviewers on the list of supporting signatories that they will seriously reconsider the costs of withholding their full text material from barrier-free electronic libraries. These publishers need to be persuaded that when they have had these texts on loan long enough to make a decent profit, they really must behave like good citizens and return them to the public library. The research community can then use them for the purpose for which they were created in the first place.

To inform the debate, all of the recent documentation (including the Open Letter, editorial comments from Journals, articles from librarians and background facts on Publishers and their profits) has been collected together on a website (http://lifescienceconnect.mcbl.ucl.ac.uk). To contribute to the debate, e-mail your comments to lifescience.connect@ucl.ac.uk.

Above: Commercial and not-for-profit publishers – some of the players in the ongoing debate concerning accessibility of the scientific electronic archive.

Sleepless in San Fran
A YCB at the ASCB

One of the attendees at last December's ASCB Meeting in San Francisco was the BSCB Young Cell Biologist of the Year 2000 – Matthew Howard, a PhD student in Clare Isacke's lab in the Department of Biology at Imperial College London. He was awarded his prize at the Spring meeting in Warwick, and took his winning poster, 'ENDO180, a Novel Endocytic Receptor with a Role in ECM Remodelling', to San Francsico.

As the lucky winner of the BSCB young cell Biologist of the Year Award (or YCBOTY as my lab prefer it), I was fortunate enough to be sent to the BSCB counterpart's conference, The American Society for Cell Biology's 40th Annual Meeting in San Francisco. This was doubly exciting for me, as I had never actually been to the States before. Travelling with me were most of the lab (Clare Isacke's at Imperial College) – Lucy East, who works on the same project as me, a novel cell surface receptor known as Endo180, Helen Yarwood and James Legg, who both work on CD44.

On arrival in San Francisco, the first impression is one of size; everything is huge, from the buildings to the cars. Exactly the same can be said for the ASCB conference. It is held in the vast Moscone conference facility: the main hall alone seems to stretch over the horizon and is jammed with exhibitors, posters and delegates. The main Esplanade lecture theatre feels like it is the size of a football pitch and even the smaller rooms for the mini symposia seem huge. The conference days followed a set pattern - exhibitor showcases started first thing (7a.m!) and two lecture sessions followed in the morning, posters over lunch and the first part of the afternoon, then minisymposia for the remainder of the day. With so much going on, often simultaneously, I really had to devise my own timetable to get the most out of the conference.

The morning lectures covered a wide variety of topics, for example, 'Novel dimensions of cell motility' (actin motility, nematode sperm protein and myosin) and 'Chemical approaches to biological problems'. The latter was very interesting, including investigating whether receptor clustering can lead to different cellular responses, using bacterial chemotaxis as a model system. It was nice to see some integrated biochemistry (I'm a biochemist by first degree so I'm biased) in a cell biology context.

The minisymposia topics included membrane rafts, regulation of membrane traffic and signal regulation through proteolysis. I was particularly interested in the talks on the role of lipid rafts in trafficking and the session on molecular mechanisms of endocytosis. F. Nakatsu's talk on dileucine motifs caught my attention, as I work on a similar sequence. 'Perichondrial and periosteal regulation of growth rate cartilage' included a great description of the chondrocyte maturation pathway in the developing cartilage and bone.

Companies such as Life Technologies and BioNavigator gave the exhibitor showcases in the mornings. These were very useful as they provided an opportunity to ask the people

Below: The Golden Gate bridge in San Francisco: for once the fog cleared and visitors to the ASCB meeting last December had a rare glimpse of the city in sunshine. Opposite left: The Moscone Convention Centre: venue for the ASCB meeting, a vast complex in which one could remain all day without ever seeing sunlight - not good for trying to reset body clocks. Opposite right: Matt Howard at the ASCB with other members of Clare Isacke's lab.

behind these technologies direct technical questions not answered anywhere else, and they gave refreshingly direct answers.

You could spend whole days studying posters and exhibitor stands (and as a result many free pens/ID card holders/coffee mugs/notepads, etc, were obtained). Each day about 800-1000 posters were on display. There were many subgroups of interest to me, including endocytosis, chondrogenesis, cell attachment and matrix signalling. During these afternoons I also met a variety of researchers, many of whom gave me direct advice on my project.

Wednesday was the big day - our poster session. It went well; we all generated plenty of interest and various people we had met during the conference found us to check out our work and see our data, as well as to offer constructive advice. I was also interviewed for Biomednet (www.bmn.com) so check out their page for a (slightly simplified) description of my work in the conference reports section.

The conference was both interesting and constructive. Being in San Francisco was an obvious bonus and we wasted no time in getting out into the city when we had the chance. The movie of the 'Adventures of The Isacke lab in San Francisco' is being prepared...

BSCB and BSDB Spring Meeting 2001
Cell and Tissue Morphogenesis

This year, the Society and the British Society for Developmental Biology held a truly Joint Spring Meeting, with a single main session augmented by two Workshops (3–6 April 2001). The gremlins were out in force at the opening sessions, causing meltdown of the powerpoint presentations. These were soon overcome and the record attendance of 500 enjoyed an excellent scientific programme at the University of Sussex. Highlights are featured below, with apologies to those whose presentations we were unable to include owing to space limitations.

Cath Waters and Joan Marsh

Junctions

Tadashi Uemura (Kyoto) stepped into the breach caused by failing computers and delivered a talk on the cadherin Flamingo using good old-fashioned slides. He described how Flamingo is localized to the proximal and distal boundaries of epithelial cells in the *Drosophila* wing and seems to recruit Dishevelled to these regions, thereby establishing planar cell polarity. This, in turn, contributes to the sharp boundary seen along the proximodistal axis of the wing. Konrad Basler (Zurich) later described the role of the Hedgehog signalling pathway in the maintenance of the anterioposterior compartment boundary.

Adherens junctions are host to concentrations of members of several signalling pathways. The septate junctions are more selective: one key protein associated with them is Discs-large, encoded by a gene originally identified in *Drosophila* and subsequently implicated in human tumours. Peter Bryant (Irvine) has dissected the multiple domains of Disc-large, identifying some as responsible for the maintenance of epithelial structure, possibly via subcellular localisation of components of the EGF receptor pathway, while others are involved in the regulation of cell proliferation. Knowledge of these protein domains has led to the design of synthetic peptides that are being tested as drug leads.

In each session, some speakers were selected from those who had submitted poster abstracts. Andrea Knox (Cambridge) gave a confident talk on the way that Rap1, a GTPase, maintains even distribution of adherens junctions in the *Drosophila* wing. She has found that cells mutant for *rap1* do not cluster in a coherent lineage, as do wild-type cells, but break away in pairs to intermingle with cells of a different lineage. In the Rap1 mutant cells, the adherens junctions are clustered along the interface between sister cells, but with some along faces contacting wild-type cells, which favours their migration in amongst these cells. Clone dispersal occurs at the same time as the imaginal disc is undergoing convergent extension to form the wing, during which unusual stresses are placed on cell junctions. Rap1 may regulate adherens junction arrangement by a rubber band-type mechanism or by repelling a putative tendency of the junctions to aggregate.

The nervous system was introduced by Elior Peles (Rehovot) who showed some beautiful images of the myelin surrounding nerves at the node of Ranvier. The cell membrane concertinas into paranodal loops, linked by intracellular adherens junctions. Ion channels are concentrated

Above: integrin staining at the ends of the muscles of a *Drosophila* embryo. Courtesy of Nick Brown

in the nodes, probably 'held' there by Caspr2, a cell adhesion molecule that accumulates in the paranodal loops and blocks the diffusion of the K^+ channels in the axon membrane.

Barry Gumbiner (New York) bridged the sessions on junctions and morphogenesis, both in content and by having to postpone his talk until after lunch. He analysed the role of cadherins and their binding proteins, catenins, in convergent extension during *Xenopus* embryogenesis.

Morphogenesis

Convergent extension had been mentioned a few times but zebrafish made its debut at this meeting in the lecture by Qi Ling Xu (London). She demonstrated that morphogenesis of the notochord involves ephrin ligands and their receptors, particularly Eph4A which is asymmetrically distributed within notochord cells during convergence. In *Caenorhabditis elegans*, the Eph receptors are encoded by the vab genes and the pathway is required for normal gastrulation and epiboly, probably within the nervous system.

Andrew Chisholm (Santa Cruz) used a genome search to identify four worm ephrin genes, which are all linked to the membrane via glycophosphatidyl inositol links. Vab also acts via a kinase-independent pathway that may involve ephrins on the membranes of opposing cells.

Mark Krasnow (Stanford) studies the formation of the tracheal network in *Drosophila* as a model of branching epithelial systems. Tracheal branches grow into the surrounding tissues in response to FGF signals, which are in turn modulated by oxygen-responsive signals. He has found hypoxia-induced factor binding sites in *Drosophila* and shown that they function in the same way as in mammalian cells. Oxygen-starved cells extend filopodia towards tracheal tubules, possibly along an oxygen concentration gradient, which they then grab and in some way draw back into the tissue.

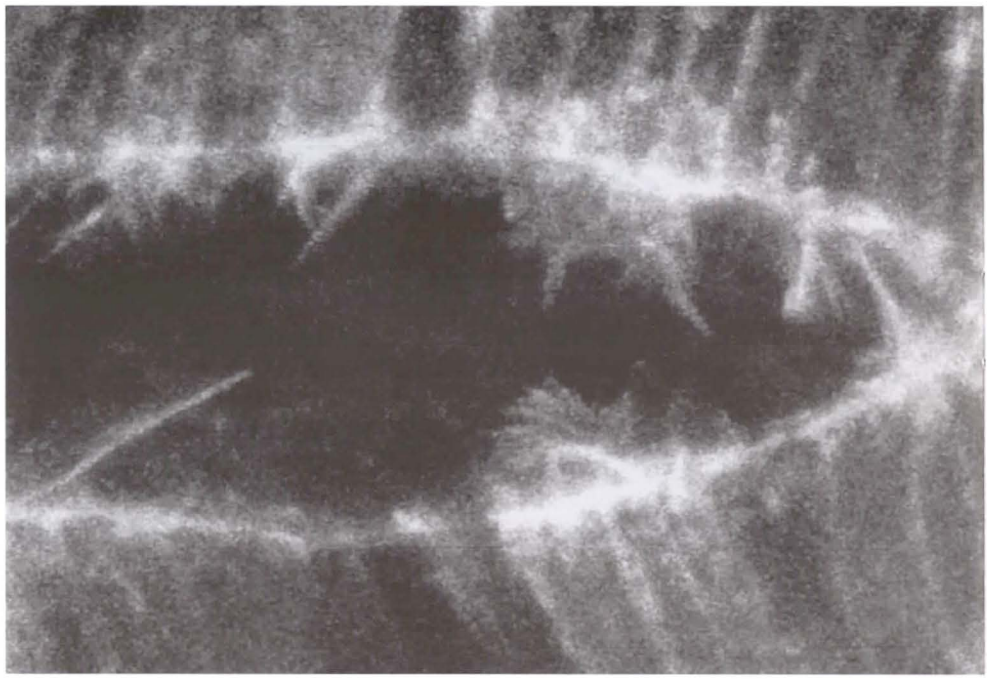
The session was closed by Jeff Hardin (Madison) who showed some excellent videos of epithelial sheet closure in *C. elegans* embryos. He identifies three phases: onset of migration, cessation of migration and sealing of junctional connections. Stopping involves rapid, cadherin-dependent adhesion between filopodia of migra ting cells in a process that Jeff calls 'filopodial priming'; this is regulated by the worm homologue of APC, APR-1. Sealing requires the protein 'previously known as JAM-1', a protein looking for a new name – all suggestions welcome.

Migration and Connection

The session was opened by Nick Brown (Cambridge) who described the genetic dissection of integrin function. He has screened *Drosophila* mutants to detect proteins required for integrin function. Through the selection of mutants with defects in an adhesive process during wing development, 20 genes were identified and their protein products were found to co-localise with integrins in the *Drosophila* embryo. One interesting protein was Rhea, which is homologous to talin and was found to be required for integrin clustering. Another protein pulled out of the screen was integrin-linked kinase (ILK). Progress on the molecular characterisation of these and other proteins was presented.

Genevieve Rougon (Marseille) gave an interesting lecture on the cross talk between Ig-CAM and semaphorin signalling in the formation of neuronal networks. Mutations in the Ig-CAM molecule L1 result in disorders of the corticospinal tract. Investigation of the chemotrophic guidance cues involved in corticospinal tract trajectory revealed that the semaphorin Sema3A repels cortical projections from the spinal cord and that this process requires the presence of L1 on the axons. A complex containing Sema3A, L1 and neuropilin-1 and its role in defining the specificity of cortical projection guidance was discussed and it was postulated that defects in this L1-Sema3 cross talk are implicated in human pathology.

A poster abstract by Elisbeth Georges-Labouse (Illkirch, France) was selected for oral presentation. This described a yeast two-hybrid screen for proteins interacting with the β1A integrin cytoplasmic tail. Nck-interacting kinase (NIK) was pulled out of this screen and was found to be expressed in the brain and spinal cord of mouse embryos and to co-localise with β1 integrins, NIK and actin in cultured fibroblasts. NIK plays a role in cell migration: mice in which the corresponding gene has been knocked out show perturbations of neuronal outgrowth and branching.



Filopodia at the leading edge during *Drosophila* dorsal closure. By Antonio Jacinto in Paul Martin's group

Cytoskeleton

Paul Martin (London) gave a highly entertaining talk on epithelial sealing in morphogenesis and repair which included several fascinating videos of embryonic wound closure. By monitoring GFP-tagged actin in fly embryos, he has shown that the zippering together of the epithelial edges of the wound involves Cdc42-dependent filapodia and lamellipodia which bring the two sheets together then seal the join. This epithelial repair also involves a Rho-dependent actin cable around the leading edge of the wound, which has contractile purse-string activity.

Vic Small (Austria) gave an excellent presentation, beginning with an informative overview of the cytoskeleton and cell motility. He discussed molecules involved in actin reorganisation in leading protrusions in migrating cells, such as Vasp, Arp3 and profilin. The maintenance of focal adhesions and focal complexes by a tense cytoskeleton was also addressed, as was the involvement of microtubules in regulating cell polarity via interactions with focal adhesions at the trailing edge of cells.

Sandrine Etienne-Manneville (London) described signalling to and from Cdc42 during polarised migration of astrocytes into a wound

site. The polarisation of astrocytes is characterised by the orientation of a membrane protrusion and the microtubule organising complex (MTOC) in the direction of migration. Evidence was presented that actin polymerisation was not required for polarisation and both migration and polarity were dependent on microtubule dynamics. It was shown that protrusion formation and MTOC polarity were regulated by two distinct Cdc42 pathways. MTOC polarisation involves a complex containing Cdc42, Par6 and aPKCs.

Signalling

An excellent talk by Mark Ginsberg (La Jolla) described 'The inside story on integrins'. Proteins such as talin and filamin, which provide links from integrins to the actin cytoskeleton, were discussed. Mark showed that different β integrins have different affinities for talin and filamin and that subtle mutations in these integrins can influence the binding of these proteins. He also addressed the importance of paxillin binding to α4 integrins in cell migration and the involvement of FAK signalling in this process.

Filipo Giancotti (New York) gave a talk on the integrin-specific regulation of cell proliferation. He described the matrix-stimulated interaction of integrins with cytoskeletal and signalling molecules and the signalling pathways leading from these interactions to cell cycle control. In addition to activating FAK, some integrins also activate Shc via Fyn and Yes. While ligation of integrins that activate Shc lead to progression through G1 in response to mitogens, ligation of other integrins causes exit from the cell cycle. It was proposed that Shc signalling downstream of integrin engagement may function as a regulatory cell cycle switch. Rac can bypass this requirement for Shc signalling during cell cycle progression.

The final talk of the session was by Richard Hynes (MIT), who discussed genomic approaches to cell adhesion. He described the changes in cell adhesion necessary for invasion and migration of cancer cells. Using a gene array technique, gene expression was compared between a primary tumour cell line and a metastatic variant. The expression levels of 32 genes were found to have changed during this transition. These included genes coding for proteins involved in the extracellular matrix, cytoskeleton and angiogenesis. He suggested that further use of this technique may identify molecules that could lead to improved diagnosis and new therapies for cancer patients.

Overall the meeting showcased a wide range of novel and important research and provided an opportunity to meet scientists with a common interest in cell and tissue morphogenesis. Many thanks to the BSCB and BSDB and especially to the session and workshop conveners for organising such a stimulating event.

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Spring Meeting Workshop
Biogenesis of post-Golgi organelles in health and disease

This workshop highlighted the use of mouse pigmentation mutants in the study of organelle biogenesis in the secretory and endocytic pathways.

Jasber Kaur and Matthew J Hannah

During the workshop an overriding theme that emerged was the commonality of membrane trafficking mechanisms used by diverse cell types to make their own distinct tissue-specific organelles. In most cases, these are formed by subtle rearrangements or enhancements of the general sorting and targeting machinery present in virtually all cells.

The SNARE proteins, which were originally thought to be factors that allowed regulated neurosecretion, are now known to be ubiquitously involved in fusion of biological membranes (Sharon Tooze, London).

Equally ubiquitous are the three classes of adapter molecule that were described: the heterotetrameric adaptor complexes, the GGAs (Scottie Robinson, Cambridge and Juan Bonifacino, Bethesda) and the stonins (Juan Bonifacino). It is generally thought that these adapter molecules are recruited to membrane proteins when required for their sorting, although evidence was presented that the endocytic machinery in synapses is preassembled to make the process faster (Regis Kelly, San Francisco).

Clues to the functions of some components of these protein machines have come from mouse mutants, some of which represent models for human disorders such as Hermansky-Pudlak syndrome (HPS) (Richard Swank, Buffalo). The mouse HPS mutants have defects in melanocytes, platelets and lymphocytes. One such mouse does not express the protein Rab27a, leading to decreased ability of cytotoxic T lymphocytes to kill target cells (Gillian Griffiths, Oxford) and the clustering of melanosomes to the centre of melanocytes (Miguel Seabra, London).

Rab27a and all the proteins associated with HPS mutations characterised so far are ubiquitously expressed. It is therefore interesting that the defects are apparent in only certain cell types. This specificity is thought to reflect the fact that the affected organelles are formed by a specialisation of a biosynthetic pathway which is present but functionally redundant in most cell types: it is also consistent with the fact that melanosomes are formed from an adaptation of of the normal pathways of lysosome biogenesis (Michael Marks, Philadelphia).

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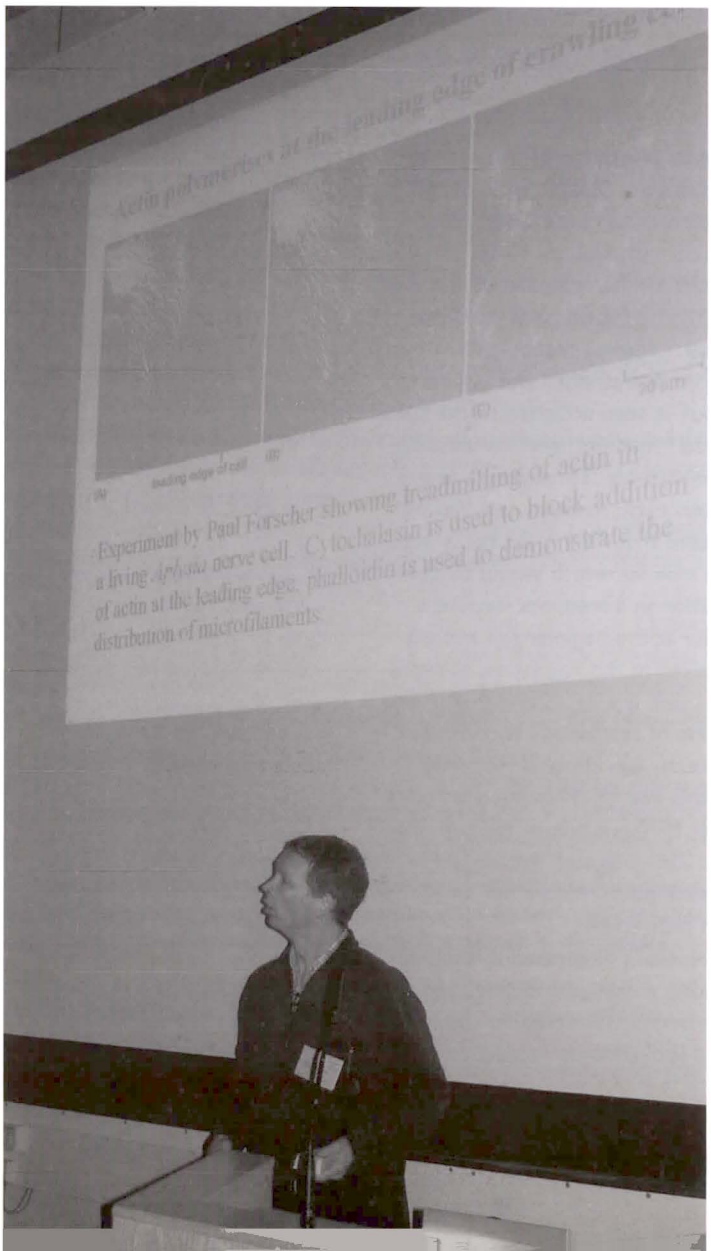
Spring Meeting Workshop
Regulation of Cell Motility

Sophie Launay

The workshop was organised by Laura Machesky and Robert Insall (Birmingham), who selected an excellent combination of presentations on actin-based motility.



An important event in actin dynamics is depolymerisation, which was summarised by Sutherland Maciver (Edinburgh). He presented an overview of the complicated depolymerisation mechanism, particularly the ADF/cofilin proteins. His interesting model clarified the role of cofilin in inhibiting the nucleotide exchange of actin and altering the twist of the actin filament to sever F-actin. Concerning the spatial control of actin assembly, Frank Gertler (Cambridge, USA) proposed an attractive model in which ENA/VASP-family proteins negatively regulate lamellipodia protrusions to slow down fibroblast motility.

Jennifer Zallen (Princeton, USA) examined the involvement of Scar (a WASP-related protein) and the Arp2/3 complex in *Drosophila* morphogenesis. She pointed out that WASP mutants develop normally whereas Scar mutants show disrupted spindle organisation, suggesting a novel role for Scar and the Arp2/3 complex in cell movements during germband extension.

In many cases, there are indications that chemotaxis is a key mechanism in the control of cell movement. David Knecht (Connecticut, USA) addressed diverse issues relating to the novel role of myosin II as a major contributor to the cortical integrity of actin in *Dictyostelium discoideum*. The influence of cAMP on the lifecycle was described by Cornelis Weijer (Dundee). He showed that cAMP waves have a fractal-like appearance and control the movement and the characteristic morphogenesis of *Dictyostelium* slugs. Both talks were illustrated with impressive images.

Harry Mellor (Bristol) presented a novel Rho-GTPase, Rif, whilst Britta Qualmann (Magdeburg, Germany) made connections between syndapins and actin in endocytosis, and Sophie Launay (Birmingham) pointed out the role of Scar and WASP in myeloid cells. The speakers demonstrated the extraordinary range of mechanisms that control actin polymerisation and thus morphogenesis.

Left: Sutherland Maciver describing actin dynamics

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Spring Meeting
Hooke Medal Lecture 2001

This year's recipient of the Hooke Medal was Iain Hagan, currently of the School of Biological Sciences at Manchester University and shortly to move to a joint position between the University and the Patterson Institute. At the BSCB Spring Meeting he described his studies of mitotic mechanisms in Schizosaccharamyces pombe.

Iain Hagan (pictured above) read Biochemistry at University College London then completed a PhD at UCL and the ICRF under the supervision of Jeremy Hyams and Paul Nurse. After a year's post-doc in Paul Nurse's lab in Oxford, he went to Japan, to continue his work on the cell cycle with a four year post-doc with Mitsuhiro Yanagida in Kyoto. Iain was encouraged to return to Britain by the award of a return fellowship from the Cancer Research Campaign designed to attract talented ex-pats to 'come home'.

Iain was presented with his medal at the BSCB Spring Meeting, where he gave an informative and entertaining talk describing his studies of mitotic mechanisms in *Schizosaccharamyces pombe*. He has used *sad* (spindle architecture defective) and *cut* mutants to investigate the function of the spindle pole components and cell cycle control. In *cut12* mutants, one pole operates normally while the other does not. The gene was cloned and found to encode a structural component of the spindle pole body with two coiled coil domains but no strong similarity to any known regulatory proteins. Sequence analysis showed that *cut12* was identical to an enigmatic gene identified some years previously by Paul Young and Jim Hudson in Canada, which they called *stf1*. *stf1* mutants allow strains lacking an othewise essential phosphatase encoded by the *cdc25* gene to divide. Cdc25 regulates MPF activity, which in turn determines when cells enter mitosis.

In *Xenopus*, Cdc25 can be activated by the polo related kinase Plx1. The fission yeast polo-like kinase is called Plo1. During interphase, Plo1 staining is undetectable, but when the cell commits to mitosis, Plo1 is seen attached to the spindle pole body. In *stf1* mutants, this recruitment of Plo1 occurs prematurely. Through the use of different cell division cycle mutants, Iain Hagan's lab has demonstrated that Plo1 is indirectly activated by MPF in a manner which would be consistent with operation in a feedback loop to amplify MPF activity at the beginning of mitosis.

Plo1 is also involved in the regulation of septation. In *S. pombe*, there is a septum-initiating network and the timing of cytokinesis is controlled by a G protein switch. Iain showed that Plo1 acts upstream of this switch. Thus, he concludes that Plo1 acts after MPF but before the septum-initiating network. This suggests that events at the spindle pole body play critical roles in determining when cells divide.

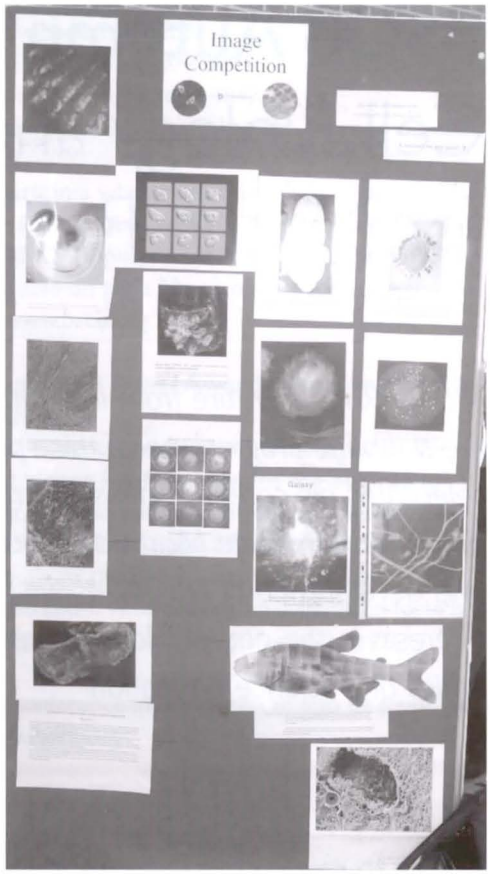
The talk was beautifully illustrated throughout and Iain succeeded in making the complex issue of cell cycle regulation both intelligible and interesting – a worthy Hooke Medal recipient.

The BSCB Hooke Medal

The Hooke medal was first awarded in 2000 and is to honour an emerging leader in cell biology. Usually, it would be expected that the medal would be presented to someone with no more than 10 years of independent research which has been conducted largely within the UK.

The BSCB invites nominations for next year's Hooke Medal from any BSCB member. These should be sent, together with a few lines outlining why the nominee would be a suitable recipient of the Hooke medal, to the Secretary, Michael Whitaker, by 14th July 2001.

The Wellcome Trust Picture prize



The Wellcome Trust Photo Library sponsored a 'Cool Pics' photograph competition at the Spring Meeting. This was a great success, attracting several (32) entries (pictured right). The winner was Alistair Hume from Imperial College London for his image of a melanocyte (shown on the front cover of the newsletter).

The Photo Library provides images to both the academic community and the media: any pictures used commercially will earn royalties. Anyone may contribute images to the Library, but they must be the copyright holder, therefore published images may not be submitted, although similar images may be. They are always on the lookout for exciting new additions to the collection.

For more information, contact Jenny Whiting
j.whiting@wellcome.ac.uk
020 7611 8347.

Biochemical Society Awards 2002
Call for Nominations

The Awards Committee of the Biochemical Society is seeking nominations for Awards for 2002. These prestigious awards recognise excellence in the fields of biochemistry across different stages of science careers. You are invited to nominate leading scientists for the following awards:

NEW - Biochemical Society Award – NEW
For 2002 this new award will recognise Scientific Communication in the Public Domain

Colworth Medal
Sir Frederick Gowland Hopkins Memorial Lecture
Wellcome Trust Award for Research in Biochemistry Related to Medicine
The Novartis Medal and Prize

The closing date for nominations is: Saturday 30 June 2001

Full details of the awards and their criteria are available on the Biochemical Society website at: www.biochemistry.org.uk/meetings. The Awards Committee stress that it is essential that, in nominating an individual, you include the following: a letter from the nominator which summarizes the nominee's principle achievements and clearly describes the context in which these meet the criteria for that award; the individual's current CV and list of relevant publications (the 10 most significant (5 in the case of the Colworth Medal) publications should be highlighted); at least two supporting letters from eminent colleagues describing the area of work undertaken and highlighting the nominees' achievements in relation to the criteria. For awards with age limits the Committee will exercise considerable discretion when considering nominees with significant breaks in their careers.

Nomination should be sent to: Sheila Mills, Director, Society Activities, The Biochemical Society, 59 Portland Place, London W1B 1QW.
sheila.mills@biochemistry.org Tel: 020 7299 4441

BSCB Autumn Meeting 2001
Cell Biology and Neurobiology – A Meeting for Martin Raff

Martin Raff will retire from laboratory science in 2002 and the scientific programme of this special BSCB meeting celebrates his career and his contributions to science. The programme reflects Martin's broad interests in cell biology and developmental biology as well as his current scientific interests in the neurobiology of behaviour, psychiatric disease, ethics and science education.

University College, London
19–21 September 2001

General information

Venue and travel
The conference will be held at University College, London. The presentations will be in Lecture Theatre 1, the Cruciform Building on Gower Street and refreshments, together with the trade exhibition, will be in the North and South Cloisters of the main building.

University College is situated in West London and is easily accessible by air (Heathrow and Gatwick airports), train, underground and bus. Further instructions and information will be sent to registrants approximately four weeks before the conference.

Registration
The number of participants is limited. In the event that the meeting is oversubscribed, priority will be given to BSCB members. The deadline for registration forms is 27th July 2001. Registrations after this date will be subject to a strictly enforced late registration penalty of £35.

The accompanying registration form is also available at www.meetings-secretariat.org/

Registration at the meeting will be held in the Cloisters at University College, London (main entrance on Gower Street) on Tuesday 18th September from 17:00–20:00 and Wednesday 19th September from 08:00.

Depart Friday 21st September.

Posters
For this special event posters are not being invited from delegates: instead the organisers are inviting people who have worked closely with Martin over the last 30 years to submit posters giving an overview of their current research.

Publication
To mark this event, Biomed Central will publish much of the meeting electronically.

Meeting charges

Full delegate	£120
Student delegate	£75
Meeting Dinner	£38
Late registrant – add	£35
Day rate	£50

The fee covers teas/coffees and lunches during the conference. The Meeting Dinner, open to all registrants, will be held on Thursday 20 September at the Hotel Russell in Bloomsbury Square.

Accommodation

There is no University accommodation available and participants are expected to arrange their own hotels. Information about local hotels and booking agencies is available. Expotel Hotel Reservations have been appointed the official hotel and travel agency for this meeting. Expotel provide a free hotel reservation and travel service that gives you access to their discounted rates at hotels convenient to University College London. To make your reservation, or to request a hotel listing, please contact Expotel quoting the event code: BSCB2001.
Tel : + 44 (0) 20 7372 2001
Fax : + 44 (0) 20 7624 4847
E-mail : events@expotel.co.uk

Registrants who are not members of the BSCB can apply to join well in advance of the 27th July deadline Application forms to join the BSCB are available on page 32 or on the society website at www.bscb.org

Honor Fell Travel Awards for young BSCB Members

PhD students and postdocs should remember that Honor Fell Travel Awards are available to contribute to conference costs. An Honor Fell application form (page 31) should be submitted directly to the BSCB independently of registration. Alternatively, an application form is available on the website (www.bscb.org).

All conference information can also be found on www.bscb.org

Speakers

Wednesday 19th September

Wiring the brain

Chair: Genevieve Rougon (Marseille)
Marc Tessier-Lavigne (UCSF)
Tom Jessell (Columbia)
Josh Sanes (Washington University)
Ben Barres (Stanford)

Stem cells and progenitors

Chair: Rhona Mirsky (UCL)
David Anderson (Caltech)
Ruth Lehmann (Skirbell NYU)
Keith Roberts (Norwich)

Retrospective: Martin Raff (UCL)

Thursday 20th September

Immunology

Chair: Av Mitchison (UCL)
Klaus Rajewsky (Essen) (to be confirmed)
Eli Sercarz (La Jolla)

Cell Biology 1

Tim Mitchison (Harvard)
Lew Tilney (Penn)

Cell Biology 2

Chair: Tim Hunt (ICRF)
Alan Hall (LMCB,UCL)
Julian Lewis (ICRF)
Jordan Raff (Wellcome/CRC Cambridge)
Paul Nurse (ICRF)

Friday 21st September

Basic science applied to medicine

Chair: George Radda (MRC)
Charles Weissmann (St Mary's)
David Lane (Dundee)
Ron Laskey (Wellcome/CRC Cambridge)

Behaviour/ Psychiatry

Chair: Lewis Wolpert (UCL)
Simon le Vay (Los Angeles)
Fuller Torrey (Stanley Foundation)
Paul Patterson (Cal Tech)

Science policy/Education/Ethics

Chair: Martin Raff (UCL)
Bruce Alberts (NAS)
Gerry Fischbach (NINDS)

BSCB Autumn Meeting 2001
Registration form

The number of registrations is limited and in the event that the meeting is oversubscribed, priority will be given to those presenting posters.

Registration forms should be sent as detailed below and abstracts by e-mail as described in 'General Information'. Both must be received by 27 July 2001.

Registration, which is being handled by The Biochemical Society, will not be processed without receipt of a cheque or money order in pounds sterling made payable to 'The Biochemical Society', or appropriate credit/debit card details.

Registration checklist:
- registration must be made in writing, fax copies will not be accepted.
- enclose registration form, indicating your name, phone number, fax number, e-mail address and dietary requirements.
- either enclose a Sterling cheque for the relevant amount, payable to 'The Biochemical Society', or enclose credit card details.

This form is also available at www.meetings-secretariat.org

Name .....

Title Prof / Dr / Mr / Ms

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

Telephone .....

Fax .....

E-mail .....

Please indicate details:

Full delegate £120	❑
Student delegate £75	❑
Meeting Dinner £38	❑
Late registrant – add £35	❑
Day rate £5	❑

Payment Method

Cheque or money order made payable to The Biochemical Society ❑

Access ❑ Eurocard ❑ Mastercard ❑ VISA ❑ Switch ❑ American Express ❑

Card number ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐ Expiry date ☐☐☐☐ Switch issue number ☐☐

Signature: Date:

This form should be sent to: The Meetings Office, The Biochemical Society, 59 Portland Place, London W1N 3AJ. (Tel: 0207 580 3481)

Other forthcoming meetings

5th International Workshop on Chromosome Segregation and Aneuploidy
7–11 July 2001
Chatres, France

aneuploidy-2001@cgm.cnrs-gif.fr
http://sbcf.snv.jussieu.fr/annonces/workshop/

Tissue and Cell Engineering Society
4–5 September 2001
Keele University

Prof A.J. El Haj
Centre for Science and Technology in Medicine
Keele University, Hartshill
North Staffordshire Hospital
ST4 7QB
bea17@keele.ac.uk

EMBO Workshop on G2/M progression and associated checkpoints
Salamanca, Spain
6–9 September 2001

EMBL Course and Conference Office
Tel: (49) 6221 387 331 / 106
conferences@embl-heidelberg.de
www.EMBL-Heidelberg.DE/conferences/G2M01

BSDB Autumn Meeting 2001
Boundaries in Development
19-21 September 2001
Magdalen College, Oxford

www.anat.ox.ac.uk/mrc-fgu/autumnBSDB2001

Fourteenth John Innes Symposium
Chromosome dynamics and expression
5–8 September 2001
John Innes Centre, Norwich

Symposium Secretary
John Innes Centre
Norwich Research Park
Colney, Norwich, NR4 7UH
samantha.lingwood@bbsrc.ac.uk
www.jic.bbsrc.ac.uk/events/symposium

Days of Molecular Medicine
Heart and brain: signaling pathways in complex human diseases
3-6 October 2001
La Jolla, California

The University of California,
San Diego, Office of Continuing Medical Education
ocme@ucsd.edu
www.imm.ucsd.edu

The Academy of Medical Sciences
The new biology of stem cells
5 November 2001

The Academy of Medical Sciences
10 Carlton House Terrace
London
SW1Y 5AH
apollo@acmedsci.ac.uk
www.acmedsci.ac.uk

The American Society for Cell Biology
41st Annual Meeting
8-12 December 2001
Washington, DC

ASCB
8120 Woodmont Avenue,
Suite 750
Bethesda, MD 2081-2755
ascbinfo@ascb.org
www.ascb.org

European Tissue Culture Society (ETCS) International Meeting
Granada, Spain
30 September–3 October 2001

Invited speakers include:
M. Bretscher, W. Franke,
I. Freshney, P. Fromherz,
N. Fusenig, J.D. Gearhardt,
A. Pfeifer, A. Vescovi, A. Wobus

Topics include: Embryonic and somatic stem cells, Cell migration and extracellular matrix, Functional competence of immortalised cell lines, Cellular interactions, and Cell line validation. There will also be technology-based tutorials.

Workshops on these and additional topics will include oral presentations selected from submitted abstracts. For further details and to pre-register:
email etcs_esp@gva.es ,
FAX +34 96 3868718.
Or visit the website:
www.san.gva.es/centros/lafe/ETCS/ETCS_ESP-granada-2001-00.htm

BSDB/Genetical Society/ BSCB Spring Meeting 2002
Cell Regulation through Molecular Machines
20-23 March 2002
University of York

Organizer: Michael Whitaker
michael.whitaker@ncl.ac.uk
Parallel sessions:

Nucleus
Nuclear structure and function
Angus Lamond, Dundee
Nuclear pores and transport
Sara Nakielny, ICRF
Proteasomes
Jennifer Rivett, Bristol
Cell cycle
Kevin Hardwick, ICMB
Spindles and cohesins
Frank Uhlmann, ICRF

Cytosol
Cytoskeletal and cytoplasmic transport
Michael Way, ICRF
Lipid rafts
Tony Magee, NIMR
Organelle partitioning during cell division
Michael Whitaker, Newcastle
Interactions between different cytoskeletal elements
Roy Quinlan, Durham
Membrane traffic
Rainer Duden, Cambridge

BSCB Autumn Meeting 2002
Cell behaviour
(5th Abercrombie Meeting)
15-18 September 2002
St Catherine's College, Oxford
Organizers: Peter Clark,
Anne Ridley, Michelle Peckham
Contact: p.clark@ic.ac.uk

The British Society for Cell Biology
Society business

Minutes of the BSCB AGM, Thursday 5 April 2001

Apologies for absence were received from the following committee members: Michael Whitaker, Louise Cramer, Bill Earnshaw, Murray Stewart, Angus Lamond, Roy Quinlan, Jonathan Pines, Paul Luzio and Robert Insall.

The minutes of the last Annual General Meeting were approved.

Two new committee members were elected: Joan Marsh (proposer, Fiona Watt, seconder, Michael Whitaker) and Inke Näthke (proposer, Louise Cramer, seconder, Robert Insall).

The President's report was presented.
The Secretary's report was presented in his absence by the President.
The Treasurer's report was presented.
The Meetings Secretary's report was presented.

Any other business: Questions were raised as to whether or not Sussex University is a suitable venue for future BSCB meetings. The location was considered good but there was insufficient space for the trade exhibition and posters and the queue for the evening meal was far too long. The President stated that the former problems could be overcome by booking the Sports Centre.

President's report

I would like to thank Stuart Kellie for all his hard work as Treasurer of the Society. Jo Adams has now taken over this office. I would also like to thank Alan Hall and Murray Stewart, who will be retiring from the committee after many years of valuable service. Kathryn Ayscough has relinquished her role as Newsletter Editor; she did a fantastic job, turning the newsletter into something we actually look forward to reading. She will not be able to relax, however, as she is taking over from Alan Hall in handling the Honor Fell Travel Awards. Joan Marsh is now handling the newsletter.

I would like to thank the organizers of this year's Spring meeting: David Garrod, Alan Hall, Charles ffrench-Constant, Andy Furley and David Wilkinson, who organized the main symposia, and Laura Machesky, Robert Insall and Dan Cutler, who arranged the workshops. The quality of the speakers was outstanding, the meeting was heavily oversubscribed and the poster sessions were really good. So, all in all, it was a very successful meeting.

I will end with a request for contributions to the Society's activities: nominations for the Hooke medal, nominations for the committee, suggestions for meeting topics and contributions to our newsletter and website. The website is currently under reconstruction and should soon be more informative, up to date and user friendly.

Treasurer's report for 2000

I took over from Stuart Kellie as Treasurer in January 2001 and, in presenting this report for the 2000 year, would like to thank him for arranging preparation of the accounts for 2000 and his helpful guidance in making this a smooth transition.

The BSCB ended 2000 with an operating surplus of £21, 754. Additional income was derived from both an increase in membership numbers and the increase in membership fees.

Subscription revenue was higher, owing to an increase in membership numbers and the increased membership fees: from £5 to £10 for students and from £10 to £25 for full members. This was the first subscription increase since 1994 and BSCB membership continues to offer excellent value in comparison to many other scientific societies. 1440 members are now paying by direct debit.

The major source of income, apart from subscriptions, was the Capitation Grant and Meeting Grant from the Company of Biologists, £22 500 and £16 690, respectively. The BSCB is very grateful to the COB for their continuing support of Cell Biology in the UK. The BSCB also thanks Garland Publishing for their continuing sponsorship of the Borden Lecture and the Yamanouchi Research Institute for their continuing sponsorship of the Yamanouchi Lecture, both lectures being given at the annual Spring meeting.

Major expenses for 2000 were higher than in 1999. A loss was made on the meeting costs. As planned, a major increase was made in the Honor Fell Travel awards, funds of £21 961 being allocated compared with £12 694 in 1999, owing to an increased budget made possible by a generous donation from the Company of Biologists. This increased funding will be sustained in future years. The Society thanks Alan Hall for his work in administering the travel awards. We are very grateful to Margaret Clements for her assistance in managing and updating the membership and direct debit databases.

Other major expenditures included newsletter production (£5031) and subscriptions to other Societies, including ECBO, the Institute of Biologists and the UK Life Sciences committee (total £4412).

Trustees Report for the Year Ended 31 December 2000

The trustees have pleasure in presenting their report for the year ended 31 December 2000.

Trustees
Dr F Watt (President; appointed 28/3/00)
Prof. M. Whitaker (Sec; appointed 28/3/00)
Prof. R. Laskey (resigned 28/3/00)
Prof. E. B. Lane (resigned 28/3/00)
Dr. S. Kellie (Treasurer)
Dr. C. Streuli (Meetings Secretary)
Dr. S. Winder (Membership Sec)
Dr. K. Ayscough (Newsletter Editor)
Dr. V. Allan (resigned 28/3/00)
Dr. L. Cramer
Dr. W. Earnshaw
Prof. A. Hall
Dr. C. Hawes
Dr. S. Hughes
Dr. R. Insall
Dr. P. Luzio
Dr. P. Shaw (resigned 28/3/00)
Dr. M. Stewart
Dr J Adams (appointed 28/3/00)
Prof A Lamond (appointed 28/3/00)
Dr J Pines (appointed 28/3/00)
Dr R Quinlan (appointed 28/3/00)

Contact Address
The contact address of the Society is c/o Margaret Clements, Dept. of Zoology, Downing St., Cambridge, CB2 3DY.

Status
The Society is a registered charity, number 265816.

Objects
The object of the Society is to further the knowledge of cell biology.

Review of Activities
The financial results of the Society are set out on page 28. Reports on the Society's meetings and other activities are to be found in the six-monthly Newsletter.

J. Adams, Trustee
28 February 2001

Independent Examiners Report to the Trustees of the British Society for Cell Biology on the Financial Statements for the Year Ended 31 December 2000

I report on the accounts of the Society for the year ended 31 December 2000, which are set out page 28.

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 my responsibility to state, on the basis of procedures specifies in the General Directions given by the Charity Commissioners under section 43(7)(b) of the Act, whether particular matters have come to my attention.

Basis of the independent examiner's report
My 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 I do not express an audit opinion on the view given by the accounts.

Independent examiner's statement
In connection with my examination, no matter has come to my attention:

1. which gives me 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 my opinion, attention should be drawn in order to enable a proper understanding of the accounts to be reached

David Cooke MA (Oxon) FCA
David Cooke and Co.
Chartered Accountants
6 Seacourt Road, Botley,
Oxford OX2 9LD.

28 March 2001

Statement of Financial Activities for the Year Ended 31 December 2000

	£	2000 £	£	1999 £
Income				
Subscriptions		23,143		20,666
Mailing list		1596		1444
Interest		3048		2658
Advertisements and fliers		1303		1725
Sponsored lectures		2000		2000
Capitation grant (Company of Biologists)		16,690		16,245
Meetings grant (Company of Biologists)		22,500		14,000
Meetings		123,267		8099
Other		–		111
		193,547		66,948
Less: expenses				
Direct Charitable:				
Meetings	132,343		42,855	
Newsletter & leaflet costs	5031		4866	
Sponsorship	–		250	
Honor Fell Travel Awards	21,961		12,694	
	159,335		60,665	
Administration and other expenses				
Secretarial	2612		–	
Committee travel and expenses	3322		1363	
Subscriptions	4412		1250	
Replacement computer	–		965	
Post, stationary, computer consumables	265		2850	
Fax and telephone	71		70	
Bank charges	328		234	
Accountancy and Independent Examiner	352		317	
Miscellaneous	1096		697	
	12,458		7746	
Total expenses		171,793		68,411
Surplus/(Deficit) for the year		21,754		(1463)

Balance sheet as at 31 December 2000

	2000	1999
	£	£
Current assets		
National Savings Bank Investment Account	51,749	49,194
Abbey National Five Star Account	17,490	16,998
Midland Bank Current Account	27,403	8661
	96,642	74,853
Less: Current Liabilities		
Creditors and accruals	352	317
Net Assets	96,290	74,853
Financed by:		
Accumulated Fund brought forward	74,536	75,999
Surplus/(deficit) for the year	21,754	(1463)
	96,290	74,536

Approved:
J Adams, Trustee
F Watt, Trustee
3 April 2001

Notes to the accounts for the year ended 31 December 2000

1. Accounting policies

(a) Basis of accounting
The financial statements are prepared under the historical cost convention, except for the revaluation of investments, and is in accordance with applicable Accounting Standards and the Charities SORP. The Society has taken advantage of the exemption in Financial Reporting Standard 1 from producing a cash flow statement, on the grounds that it would have been a small company had it been a company incorporated under companies legislation.

(b) Incoming resources
Subscriptions represent cash received during the year. Investment income and bank interest are the amounts receivable for the year.

(c) Resources expended
Expenditure represents purchases and expenses incurred during the year including VAT.

2. Grants made
No grants or travel awards exceeded £1000 in the year.

New members from April 2000

Mutsaers, Dr. Steven E.
Leung, Anthony K.
Dayanandan, Rejiue
Flett, Alexander W.
Maglara, Antonia
Collinson, Dr. Lucy
Aricescu, Radu
Gibb, Stuart
Halliday, Deborah
Loweth, Dr. Anne
Hosker, Bill
Nelson, Robert J.
Roberts, Malcolm
Cullen, Dr. Peter J.
Gilmore, Dr. Andrew P.
Cook, Dr. Simon J.
Henzing, Alexander J.
Eskelinen, Dr. Eeva-Liisa
Jones, Richard J.
Evans, Joanne
Wang, Dr. Penbo
Moore, Jonathan
Hughes, Dr. Jeremy
Gibson, Dr. Rosemary M.
Boot-Handford, Dr. R.P.
Crocker, Ian
Campbell, Lorna A.
Janes, Sam M.
Aasen, Trond
Howie, Jacqueline
Seve, Dr. M.P.
Archer, Deborah
Teo, Dr. Soo-Hwang
Goldberg, Dr. Michal
Pettit, Dr. Jonathan
Jazayeri, Ali
Dean, Isabel
Fagg, Dr. Lisa A.
O'Grady, Dr. P.
Chen, Yun-Ju
Waters, Dr. Catherine
Gourlay, Dr. Campbell
Tsesmetzis, Nicolas
Zouwail, Soha Ahmed
Sawin, Dr. Kenneth E.
Wherlock, Matthew
Irons, Sarah
Winward, Lucinda

Chusainow, Janet
Ghafari, Fataneh
Terron, Ana
Wood, Pamela
Ellis, Verna
Scott, Charlotte
Tinsley, Dr. Jon
Chowdhury, Ferdousi
Hemers, Elaine
Weber, Roberta
Liovic, Dr. Mirjana
Moss, David K.
O'Callaghan, Dermott W.
Jones, Robert
Marsh, Dr. J.
Lygoe, Kate
Russell, David
Porter, Morwenna
Kassouf, Nick
Robertson, Claire R.
Tippett, Helen L.
Prowse, Dr. D.M.
Henshaw, Francesca N.
Manneville, Dr. S. Etienne
Clarke, Catriona
Wienke, Dr. Dirk
Groot, Karen
Pagliocca, Adelina
Rama, Dr. Aisha
Howell, Gareth
Cook, Neil R.
Maatta, Dr. Arto
Rapley, Joseph
Yarwood, Dr. H.
Messaritou, Georgia
Howat, Dr. W.J.
Trim, Andrew D.
Solanky, Nita S.
Jaffe, Dr. A.B.
Warner , C.L.
Banerjee, Monisha D.
Yamaji, Sachie
Broackes-Carter, Fiona
Israel, Michal
Cogram, Patricia
Patel, Anjana
Peacock, Jillian
Robertson, Vicki H.

Ivetic, Dr. Aleksandar
Cant, Sarah H.
Woolner, Sarah E.
Landy, Timothy A.
Wheeler, Ann P.
Hiley, Charlotte
Akhtar, Dr. Nasreen
Mathon, Nicole
McKeown, Lynn
Al-Khafaji, Dr. Farakid
Kwan, Tao
Fussing, Pia
Orme, Mariam
Nurrish, Dr. Stephen
Ursell, Elizabeth
Lloyd Davies, Melanie
Puligilla, Chandrakala
Loizou, Joanna
Bithell, Claire E.
Morgan, Mark R.
Batchelor, Clare
Behrendt, Dr. B.
Barral, Duarte C.
Hume, Dr. Alistair
Mauger, Emmanuel F.
Noble, Dr. P-J.M.
Pearce, Andrew
Rosenblatt, Dr. J.
Shima, Dr. DavidT.
Wojciak-Sothard, Dr Beata

Total 127

Honor Fell Travel Awards

Jointly funded by the BSCB and the Company of Biologists

Honor Fell Travel awards are made to provide financial support for young BSCB members to attend meetings. Applications are considered for any meeting relevant to cell biology. The amount of the award depends on the location of the meeting. Awards will be up to £250 for UK meetings, up to £350 for European meetings and up to £450 for meetings in the rest of the world.

Applications (including a copy of the meeting registration form) should be sent to: Kathryn Ayscough (Division of Biochemistry and Molecular Biology, Davidson Building, University of Glasgow, Glasgow G12 8QQ) using a copy of the form below. Awards will be given throughout the year. The following rules usually apply (at the discretion of the Committee):

- Awards are not normally made to applicants aged over 35 years.
- Applicants must have been BSCB members for at least a year.
- No applicant will receive more than one award per year or three *in toto*.
- The applicant must be contributing a poster or talk.

Application for an Honor Fell travel award

Name: .....

Age: .....

Work address: .....

.....

.....

..... Postcode: .....

E-mail address: .....

Degrees (with dates):

.....

.....

Present position (graduate students give start year of PhD): .....

.....

.....

Date of joining BSCB: ....

Record the years of previous Honor Fell awards (if any): .....

Key publications (2) or research interests:

.....

.....

.....

.....

Meeting for which application is made (Title, place, date): .....

.....

.....

Estimated expenses: Travel: .....

Subsistence: .....

Registration: .....

Other: .....

Have you submitted any other applications for financial support?: YES NO

If yes, please give details: .....

.....

Number of meetings attended last year: .....

Supporting statement by Head of Department:

The applicant requires these funds and is worthy of support

Name: .....

Signature: .....

Applicant's signature: .....

Date: .....

Application to join the BSCB

Please complete and return along with a signed Direct Debit mandate to:
Margaret Clements, Department of Zoology, Downing Street, Cambridge, CB2 3EJ.

Name: ..... Mr/Ms/Mrs/Dr/Prof

Position: ..... Male/Female

Academic qualifications: .....

Email: .....

Telephone: .....

Fax: .....

Address: .....

.....

..... Postcode: .....

Research interests: .....

.....

Membership of other societies:

.....

BSCB Member	Proposer	Seconder
Name:	.....	.....
Membership Number:	.....	.....
Signature:	.....	.....

Applicants without proposers should enclose a brief CV

The society has an searchable database of its members on the BSCB web page; if you wish your details to be included tick here ❑

The BSCB occasionally sells the mailing list of members to other organisations, this is a valuable source of income to the BSCB; if you **do not** wish your details to be included tick here ❑

Applicant's signature: ..... Date: .....

INSTRUCTIONS TO YOUR BANK/BUILDING SOCIETY TO PAY DIRECT DEBITS

British Society for Cell Biology

DIRECT Debit

Please complete parts 1, 2, 3, 4 and 6 to instruct your branch to make payments directly from your account. Then return the form to: British Society for Cell Biology, c/o Margaret Clements, Department of Zoology, Downing Street, Cambridge, CB2 3EJ.

To The Manager, Bank/Building Society

.....

Address

.....

.....

..... Postcode .....

Originator's identification number | 9 | 4 | 1 | 4 | 5 | 1 |

FOR BSCB USE ONLY
This is not part of the instruction to your bank/building society

5. Originator's reference number (for office use only) **BRITSO** | | | | |

1. Please write the full postal address of your branch in the box above.

2. Name of account holder

.....

3. Account number | | | | | | | | |

4. Sort code | | | — | | | — | | |

Banks/Building Societies may refuse to accept instructions to pay direct debits from some types of account.

6. Instructions to the Bank or Building Society

Please pay the British Society for Cell Biology Direct Debits from the account detailed on this Instruction subject to the safeguards assured by the Direct Debit Guarantee.

Signature .....

Date .....

This guarantee should be detached and retained by the payee

The Direct Debit guarantee

- This guarantee is offered by all Banks and Building Societies that take part in the Direct Debit scheme. The efficiency and security of the scheme is monitored and protected by your own Bank or Building Society.
- If the amounts to be paid or the payment dates change, the BSCB will notify at least 14 days in advance of your account being debited or as otherwise agreed.
- If an error is made by the BSCB or by your Bank/Building Society, you are guaranteed a full and immediate refund from your branch of the amount paid.
- You can cancel a Direct Debit at any time, by writing to your Bank or Building Society. Please also send a copy of the letter to the BSCB.

British Society for Cell Biology
Committee Members 2000

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– see guidelines for contributors)
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e-mail: jmarsh@wiley.co.uk
or joan_marsh@hotmail.com

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Edinburgh, EH9 3JR
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Fax: 0121 414 3982
e-mail: R.H.Insall@bham.ac.uk

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Wellcome Trust Biocentre,
University of Dundee,
MSI/WTB Complex,
Dundee, DD1 5EH
Tel: 01382 345473
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The BSCB newsletter is published twice a year in June and December.

Submission:
If you have an idea for an article please e-mail the editor a brief outline first. Appropriate colour images are welcomed for consideration for the front cover.

It is preferable to send all articles, reports and images by e-mail (though alternatives can be arranged after contacting the editor). Attachments for text are best received in Microsoft Word and images as 200-300 dpi JPEG/TIFF or Photoshop files. Hard copy images can also be sent.

Submission of articles and images should be made to
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Meetings:
Please note there is no charge to advertise a scientific or educational meeting. Please contact the editor with details of any meeting you wish to advertise.

Deadlines:
For the final version of articles and other materials and adverts is 1 April for publication in June and 1 October for publication in December. Please note the first version of any material must be received by the editor at least 2 weeks prior to this deadline so that any changes can be made.

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