

BSDB

Newsletter

British Society for Developmental Biology

www.bsdb.org

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16th International Society of Developmental Biologists Congress 2009

6–10 September 2009

Edinburgh International Conference Centre

Travel Grant Deadline	1 March 2009
Abstract Submission Deadline	1 May 2009
Early Registration Deadline	1 June 2009
Accommodation Deadline	17 July 2009

Life after
Hedgehog...
(meeting
report)

ISDB 2009:
registration
is open



Also in this issue:

- BSF report
- Book review



MECHANISMS OF DEVELOPMENT

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Mechanisms of Development is an international journal whose purpose is to communicate contemporary studies in developmental biology with special emphasis on the characterization of molecular mechanisms underlying development processes in either vertebrates or invertebrates. Areas of particular interest include embryogenesis, pattern formation, cell determination and differentiation, specification of tissue type, targeted disruptions of developmental control genes, the roles of transcription factor in development, regulatory hierarchies of gene expression, cell-cell communication and signal transduction in development, as well as post-transcriptional controls of developmental processes such as regulated splicing and protein modification.

Editorial

Hopefully you will all receive this newsletter *before* the holiday period. My apologies that it is being sent out a little later than usual, thanks to a combination of unforeseen factors.

Hopefully you will be well aware of the ISDB 2009. This newsletter is liberally sprinkled with its mention. We hope you'll all get the message that, if you can only make one meeting next year, this is the one! Our Treasurer, Guy Tear, admits in his report that he is already having

sleepless nights about the finances, so we all need to help him out!

As ever, I'm always looking for newsletter contributions. This can include offers of contributions, volunteering others to write a contribution, or even just letting me know that some development or other should be covered. All ideas are gratefully received!

Andrew Jarman, Editor

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Help us spread the word

Please print out a copy of this newsletter and leave it in a strategic place, such as your coffee room or staff room.

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From the Chairman



Many BSDB members took the opportunity to leave the chilly British autumn for the balmy streets of Seville to attend the joint meeting between the BSDB and our Spanish counterpart, the SEBD. The formula of excellent science plus excellent food plus excellent location added up to a meeting that was a great success. This was our second autumn meeting to be held jointly with a foreign society and on the form of the first two, you will be pleased to hear that there are already plans to join the French in 2011. The UK organisers of the Seville meeting were Alicia Hidalgo and Robert Kelsh, and planning in Spain was led by James Castelli-Gair and Acaimo Gonzalez-Reyes. On behalf of the committee and the BSDB members who went, many thanks to all of them.

In fact, our next international venture is much sooner than 2011, and is of a very different kind. As most of you will know, the BSDB is hosting the four yearly International Society of Developmental Biologists Congress in Edinburgh next September. This is a really exciting opportunity to boost UK developmental biology, and also for those of us in Britain to attend a major international conference on our own doorstep. There are three primary challenges faced when organising this kind of meeting. First, getting great speakers (over 100 of them!); this has been achieved, as you will see from the list on the ISDB2009 website. Second, raising enough sponsorship to make the meeting financially viable; I'm pleased to report that despite the financial climate, the fundraising campaign is proving successful. The final challenge is to get people to come! By the time you read this, the registration website will be open and all the signs suggest there will be a large and fully international attendance.

There are some practical things you need to know. Remember that there will be no Spring or Autumn Meeting in 2009. All the Society's energy and resources are going into the ISDB Congress. Also, be aware that space limits mean that it is likely that not all participants will be able to present a poster, although we are doing our best to squeeze in as many as possible (we will,

however, still offer to publish abstracts from people who cannot show a poster). Poster selection will be first come, first served, so there is a really strong incentive to register early. Another good reason to apply early is that accommodation is not included in the registration, and costs are sure to rise as the date gets closer. Edinburgh has lots of accommodation at all prices, with useful links on the ISDB2009 website, but earlier booking should mean better deals. The final practical advice is that the BSDB will be offering travel bursaries to this meeting, as it does to its own Spring and Autumn meetings. All BSDB members who are PhD students or postdocs are eligible; more information appears elsewhere in this newsletter.

The ISDB Congress has never taken place in the UK before. We hope you will agree that this is an exciting project that should provide a real boost to our field. Those members who set their seasonal body clocks by the regular cycle of BSDB Spring and Autumn meetings will need to adjust to one exceptional year, but we are pretty confident that you will all find that the Congress is exceptional, and that the disruption to your calendar is well worth it.

I finish with a request. Of the three challenges I mentioned above, the last one, getting people to come, is the most stressful, since we will not know how successful we have been until quite soon before the start of the Congress. We would much appreciate help from you in spreading the word as widely as possible. Please consider adding a link to your email signature; or sending an email to overseas colleagues who might have missed the marketing campaign; or posting a link to the ISDB2009 website on any pages you have control over; or adding a slide (available on the website) to the end of your presentations. In fact, anything that alerts people to the Congress would be great.

Thank you for your help and I look forward to seeing you as part of a record turnout of our members in Edinburgh next September.

“By the time you read this, the [ISDB2009] registration website will be open and all the signs are that there will be a large and fully international attendance”

www.isdb2009.com



The Company of Biologists increases support for BSDB

Many BSDB members will know of The Company of Biologists (CoB) as the publisher of *Development*. You may not be so aware of the generous financial support that CoB gives BSDB. This support has recently been increased — CoB now contribute £27,500 per annum to BSDB, which we in turn distribute as travel grants.

So what exactly is CoB? In addition to *Development*, CoB also publishes *Journal of Cell Science*, *Journal of Experimental Biology*, and the new *Disease Models & Mechanisms* (DMM). This is the CoB's own description of itself:

“The Company of Biologists is a non-profit organization whose objectives are the advancement and promotion of research in, and the study of, all branches of biology.

Company Directors act as trustees and are active biologists, librarians or computer scientists, whose expertise is valuable for the running of the Company. Their task is to ensure that the Company continues to provide a relevant and worthwhile service to the international community of biologists.

The Company was established in 1925 through the inspiration and business skill of G. P. Bidder, who was concerned to make a success of the affairs of The British Journal of Experimental Biology. It is a Company limited by Guarantee and not having a share capital. Its charitable status has the condition that none of the Directors receive any remuneration for services rendered to the Company”

<http://www.biologists.com/index.html>



biology
cob

Do your contact details need updating?

As always, it's a hard job keeping the database of the Society membership up to date. If you change your address, please remember to send us the details. You can use a new online feedback form to give us this information.

<http://www.bms.ed.ac.uk/services/webpace/bsdb/BSDBfeedbackform3.htm>

Have your say

If you have news, letters, or comments you would like aired to the developmental biology community, please write to the Editor (andrew.jarman@ed.ac.uk)

New BBSRC research priorities

The BBSRC have recently redefined their priority areas for funding.

Research priorities

- Ageing research: lifelong health and wellbeing
- Bioenergy
- Global security
- Living with environmental change
- Nanoscience through engineering to application: bionanotechnology
- Systems approach to biological research
- Synthetic biology
- Technology development for bioscience
- Animal health
- Crop science (food security)

Policy priorities

- Economic and social impact
- Impact on public policy
- Increased international collaboration
- Replacement, refinement and reduction (3Rs) in research using animals
- Welfare of managed animals (including livestock and companion animals)

One question is: where does developmental biology fit here? If you have any views that you'd like BSDB to represent, then let us know.



Financial report

“the Company of Biologists generously increased the funding they provide to support members to travel to meetings or courses overseas to £27,500.”

Are you paying your fair share?

We still have a ‘hard core’ of members who are paying less than they should. Please check your standing order today and update if necessary!

I am pleased to report that the Society continues to be in good financial health. We ended our financial year on 31 July 2008 showing a slight surplus sufficient to maintain our assets at an appropriate level. We had two very successful meetings during the financial year at Sheffield and Warwick. The BSDB makes a contribution to the running costs of all our meetings to reduce the registration fees as much as possible. We then aim for our meetings to run to budget and break even, hoping not to make a profit from your registration fees and not to make a loss for the Society to bear. This year we hit our targets with the Autumn meeting showing a slight profit which was balanced by the Warwick meeting posting a loss of a very similar small amount.

As I reported in the Spring, the Company of Biologists generously increased the funding they provide to support members to travel to meetings or courses overseas to **£27,500**. In recognition of their support these travel grants will be renamed the Company of Biologists Travel Awards. This year we made awards to 101

members to attend meetings or courses outside the UK. We were also able to fund all the applications we received for Travel Grants to attend BSDB meetings. Over the year we awarded £32,716 to 104 members to attend BSDB meetings.

ISDB 2009 finances

This year is going to be an exceptional year for the BSDB as we will be hosting the ISDB congress. This is a huge financial commitment for the Society and your Treasurer is already losing sleep over it. The meeting will replace our traditional Spring and Autumn meetings and will have an excellent programme of speakers. We have worked hard to make the meeting as affordable as possible but its sheer size will make the meeting more expensive than our traditional meetings. The BSDB is making a significant contribution to the meeting and will be setting aside funds for Travel Grants for BSDB members, see below. I hope as many of our members as possible take the opportunity to attend the congress, which will be the premier developmental biology meeting of 2009.

Guy Tear



Payment option for overseas members

It is possible to pay your subscription by PayPal. This facility is primarily aimed at our overseas members. The process is fairly painless and full instructions can be found on our webpage.

Louie Hamilton Fund

There is a small amount of money available from the Louie Hamilton Fund to provide travel support for handicapped members. Applicants should contact the

<http://www.bms.ed.ac.uk/services/webpace/bsdb/BSDBpaypal.htm>

Seed funding for small meetings

Members may approach the Treasurer for seed funding to help with organising developmental biology events (e.g. one-day meetings) that involve other institutions and at which students and post-docs are encouraged to attend and present work. The BSDB currently supports the meetings of several local developmental biology groups with small (~£250) annual contributions. Any further requests for this type of funding should be made in a letter to the Treasurer.



Travel grants (Company of Biologists Travel Awards)

ISDB Meeting, Edinburgh 2009

This year the BSDB will be hosting the four yearly ISDB congress. This will be the only UK meeting to which the BSDB will grant travel awards this year. These awards will cover cost of registration (but not conference dinner) and basic travel if funds permit. We anticipate considerable demand for awards this year and we will be as generous as possible. BSDB meetings must be postmarked by 1 March 2009.

The deadline for Autumn Meeting 2008 is 14 June 2008

Overseas meetings

There is considerable demand for funds to travel to meetings overseas. As this year's major meeting in the field of developmental biology will be in the UK we anticipate that demand for these awards will be less than in previous years. Applications are collected each month and a decision on awards made at the end of the month with funds awarded according to the remaining budget. To allow us to fund as many applicants as possible we are currently limiting awards to a maximum of £400. Preference is given to members presenting work at the meetings.

I process the applications as rapidly as I can but it can be 6–8 weeks after you submit an application before you are notified of your award. Please note that I do not make funds available to attend meetings that

have already taken place when I come to consider the applications. Please bear this in mind and submit your application at least two months before the start date of the meeting.

Practical courses

The BSDB will also provide funds up to a maximum of £500 for members to attend courses or to visit laboratories overseas. These applications are considered alongside those for overseas meetings.

Applying for a travel grant

Members should complete a Travel Grant Application form and send it to the Treasurer. Forms can be downloaded from the BSDB website: www.bsdb.org.

Applications for overseas meetings are advised to be submitted 3–4 months in advance so that the BSDB contribution can be used as a lever to prise the rest of the money from other sources. Grants will NOT be awarded in arrears.

Please note: Nobody will be awarded more than one travel grant per year for an overseas trip. No more than two people from one department or one person from a group will be awarded a grant to a particular meeting.

Deadline for Travel Grants to ISDB Meeting: 1 March 2009

Warning!

Only members paying the correct subscription to the Society will be eligible for a Travel Grant

Subscription information

Full members **£35** per annum
Student members **£15** per annum

Student members that joined the Society in 2004 are reminded that they should upgrade their subscription to the full member rate of £35.



The Graduate Students' Section

BSDBook
Visit the 'BSDB
graduate student group'
at Facebook.com to
keep up to date about
student events for
ISDB2009

Get in touch and get involved!

I'm happy to consider anything for the newsletter: articles, short tips, etc. If you wish to remain anonymous let me know but in all cases could you please give me your name, the name of your institution and your year of study

Questions? Complaints?

Is there anything you would like the student rep to raise for you at committee meetings? Anything you would like to discuss? Don't hesitate to email me (I'll pass it on). I look forward to hearing from you soon.

Gareth Powell

gp3@sanger.ac.uk

Embryonic Stem Cells as a Model System for Mammalian Development

University of Sao Paulo BRAZIL

6th-21st February, 2009

Faculty and Speakers

Yann Barrandon, Lausanne, Switzerland
Richard Behringer, Dallas, Texas, USA
Mark Bradley, Edinburgh, UK
Josh Brickman, Edinburgh, UK
Ray Dunn, Singapore
Tariq Enver, Oxford, UK
Outi Hovatta, Stockholm, Sweden
Keisuke Kaji, Edinburgh, UK
Meng Li, London, UK
Robin Lovell-Badge, London, UK
Alfonso Martinez-Arias, Cambridge, UK
Jennifer Nichols, Cambridge, UK
Shin-ichi Nishikawa, Kobe, Japan
Xavier Neto, Sao Paulo, Brazil
Tristan Rodriguez, London, UK
Janet Rossant, Toronto, Canada
Deborah Schechtman, Sao Paulo, Brazil
Alejandro Schindler, Argentina
Austin Smith, Cambridge, UK
Philippe Soriano, New York, USA
Azim Surani, Cambridge, UK
Testuya Taga, Kumamoto and Tokyo, Japan
Simon Tomlinson, Edinburgh, UK

Applications available on line.
Funding available for students
Closing Date: Dec 1st, 2008



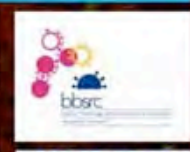
Sessions

Embryonic stem cells and pluripotency
Mammalian development
Culture and technology
Cell fate and potency
In vitro differentiation
Adult stem cells
2nd Symposium for the
Latin American Stem Cell Network

www.stemcellslatinamerica.org

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BRITISH COUNCIL



From the Biosciences Federation

New BSF report on learned societies and publishing

The Biosciences Federation (BSF) published a report in July with the results of several questionnaires they conducted earlier this year. Thanks to all those of you who took part in the researcher questionnaire. The survey and report were carried out by the BSF's Journals Committee, which is chaired by Sue Thorn of the Society for Endocrinology. The full report can be seen at the website given opposite. Some key details are included below as a taster.

You get more out of your society financially than you put in

You probably knew that already, but we can now show that the UK university system as a whole gets more money from bioscience societies than it spends with those societies in journal subscriptions. The survey showed that, for the 23 societies who responded, they put 2.16 times as much money into the UK university system by way of grants, meeting support and other educational services than they take out by way of journal subscription and licence fees. The societies analysed contributed almost £4M of such support in the last year. You might want to make sure your Vice-Chancellor is aware of that in the light of some of the more radical Open Access people who want only a free repository system which would probably cause the collapse of most journals and of the support that their owner societies provide.

In addition, the report shows that all the societies provide free access to much of their journal material, usually after 12 months, although many also make selected material available

earlier than that, e.g. review articles.

Most of the societies allow researchers to self-archive free in an institutional or other repository (eg PubMed Central) after a delay. Most of them would allow immediate self-archiving on payment of a fee. Many of the publishers would carry out the deposit for the author, especially where a fee is paid.

Do you really know what Open Access is?

The survey of researchers, which had 1349 usable responses, showed substantial confusion about what Open Access (OA) means. Many respondents seemed unable to tell the difference between online journals that are free at the point of use (because the library has paid a subscription fee) and Open Access ones, where all the material is free. Almost half the OA journals respondents said they read, and a third of those they published in, were not OA journals at all.

Only around 15% of the respondents had tried to access OA publication funds from their institutions or research funders to pay for author-side charges. Of these 53% had found it very difficult or fairly difficult. Sue Thorn and Steve Byford are taking part in a Universities UK working group to try to resolve this issue.

Interestingly, as regards self-archived material (usually an earlier version, such as the author's submitted manuscript), only 3.5% of respondents said they access this version if they have access to the final published version, and 67% rarely or never access the self-archived version even if they don't have access to the published version.

"The full report can be seen at

http://www.bsf.ac.uk/journals/BSF_survey_report_July_2008_FINAL.pdf.

"The survey of researchers...showed substantial confusion about what Open Access (OA) means"



International Society for Developmental Biology Congress 2009

For details and updates, visit:
<http://www.in-conference.org.uk/ISDB2009/>
Or contact:
isdb@in-conference.org.uk

Edinburgh International Conference Centre, Edinburgh 6–10 September 2009

Even though it may still seem a long way off, planning for this showcase meeting is well advanced. The spotlight of the developmental biology world will be on Britain and it is very important for BSDB and for British developmental biology that this meeting is a big success. Up to 1500 participants are anticipated, and we envisage that every UK developmental biologist will want to attend.

Programme includes:

- Stem Cells and Medicine
- Stem Cells and Pluripotency Regeneration
- Non-coding RNA in Development

- Mechanisms of Morphogenesis
- Morphogenesis and Birth Defects
- Organogenesis
- Growth Control and Tumours
- Advances in Imaging Technologies
- Cilia in Development and Disease
- Asymmetry in Cells
- Asymmetry in Organisms
- Darwin and Development 2009
- Early Neural Development
- Behaviour and Neural Circuits
- Cell Migration
- Signalling in Development
- Modelling and Networks
- Chromatin and Epigenetics
- Late Breaking News



20 years since Patched...life after Hedgehog

This meeting was held to celebrate the inauguration of the MRC Centre for Developmental and Biomedical Genetics (CDBG) in Sheffield. It was organised by Phil Ingham, director of the CDBG, and sponsored by TECNIPLAST S.P.A. and The Company of Biologists Ltd.

The CDBG has grown out of the Developmental Genetics Program (DGP), established in Sheffield in 1997. Over the past 10 years, the centre has built on its expertise in developmental biology and combined this with a more biomedical approach to form today's thriving CDBG with its strong emphasis on using zebrafish and *Drosophila* to model human disease. In his opening remarks, after reassuring participants that the meeting did NOT mark his retirement, **Phil Ingham** expounded the benefits of the combination of curiosity based, biologically driven developmental genetics and pathology-driven biomedical genetics used in the CDBG. Combined, these twin approaches provide a powerful means of attacking human disease, as was clearly demonstrated throughout the meeting. As an example of the former approach, he described how the cloning of *Drosophila* Ptc in 1989, led ultimately to the discovery of a link between mutations in human Ptc and basal cell

carcinomas (BCC). Genetic analysis in *Drosophila* had shown that Patched acts as the Hh receptor and negatively regulates Smoothened (Smo), the key transducer of the Hh signal. Excitingly, earlier this year, GDC-0449, a small molecule designed to target Smo (developed by Genentech/Curtis), was used successfully to treat large and metastatic BCCs in a US Phase 1 clinical trial.

Two local (CDBG) speakers, **Steve Renshaw** and **Tim Chico**, both of whom are practicing clinicians, described how their clinical experiences drive their pathology driven approach using zebrafish to model human disease processes. Steve aims to understand how neutrophil apoptosis causes inflammatory lung disease while Tim is interested in collateral vessel formation as a potential route for the treatment of cardiovascular disease. Both are taking advantage of the benefits of zebrafish for high throughput drug screening and are beginning to have considerable success in identifying modulators of neutrophil apoptosis and arteriogenesis respectively. Taking a similar approach, **Freek van Eeden** (CDBG) has isolated a zebrafish mutant in zVHL1, a homologue of a human tumour suppressor gene

**Kate Hammond,
Kyoji Ohyama**

*MRC Centre for
Developmental and
Biomedical Genetics,
University of Sheffield*

“Excitingly...a small molecule designed to target Smo...was used successfully to treat large and metastatic BCCs in a US Phase 1 clinical trial.”



“[Isabel Guerrero] continues to ‘have her life with Hh,’ investigating secretion and reception of Hh using fly wing imaginal discs.”

implicated in the hereditary cancer syndrome Von Hippel Landau disease. His study suggests that zVHL1 is a key regulator of hypoxic signalling.

Peter Currie, (Victor Chang Cardiac Research Institute, Sydney) illustrated how the analysis of zebrafish mutations isolated in forward genetic screens can also be used to shed light on the underlying genetic basis of human diseases. His lab has shown that the *candyfloss* and *softy* lines carry mutations in the *laminin a2* and *laminin b2* genes respectively. Mutations in *laminin a2* cause one of the most common forms of human congenital muscular dystrophy and Currie’s analysis of *candyfloss* mutants has shown that muscle fibre detachment is induced by motor activity. **Uwe Strähle’s** (Karlsruhe) presentation also exemplified the advantages of the zebrafish for investigating muscle biology, in this case unravelling the role of *unc45b/hsp90* in myofibril development/maintenance.

Batting for the fruit fly team, **Alex Whitworth** (CDBG) gave a fascinating talk that beautifully demonstrated the utility of *Drosophila* as a model for human neurological disease. His work has revealed interactions between genes in the Pink1-Parkin pathway, uncovered a new component of the Parkinson’s disease pathway, a mitochondrial intramembrane protease, Rhomboid 7, and shown that the balance of HtrA2/omi and Parkin regulates mitochondrial fusion/fission. On a similar theme, **Alicia Hidalgo** (Birmingham) discussed the identification of fly neurotrophic and gliotrophic factors. Clearly demonstrating the rewards to be had from developmental geneticists interacting with bioinformaticians, her group has identified a fly DNT1, which when lost or in excess causes a loss of Eve+ interneurons and motor neurons. DNT1 mutant flies show uncoordinated locomotion and should provide a useful model for neurodegenerative diseases such as motor neurone disease.

Using a more biologically driven, classic developmental biology approach, were other fly aficionados including **Isabel Guerrero** (Madrid) who contributed to the isolation of *Drosophila* Ptc in the Ingham lab in 1989. She continues to “have her life with Hh,” investigating secretion and reception of Hh using fly wing imaginal discs. She discussed how intracellular transendocytosis is a key molecular mechanism for controlling Hh levels in Hh producing cells. **Bruno Glise** (Toulouse) then proposed that Sulf1 (6-O-endosulfatase) also contributes to the formation of the Hh gradient, acting cell-autonomously, to create a barrier to Hh diffusion in fly wing imaginal discs.

Also using flies is **David Strutt** (CDBG) who addressed a fundamental question in developmental biology: how planar cell polarity (PCP) is established and how the asymmetric localization of the PCP proteins is determined. He demonstrated that Flamingo (Fl) recruits Frizzled (Fz) and Strabismus (stbm) in an asymmetric manner and suggested that the recruitment of Fz, Stbm and other components stabilizes the PCP protein complex by preventing, at least in part, the trafficking of Fl.

The utility of flies as a developmental model, however, goes beyond embryonic patterning. **Antonio Jacinto** (Lisbon) beautifully demonstrated the involvement of mitochondria in epithelial tissue repair. **Leanne Jones** (Salk Institute) then discussed the impact of aging on, and key mechanisms for the maintenance of, germ line stem cells (GSCs). Strikingly, a forced expression of the JAK-STAT ligand Unpaired in the Hub cells delays the ageing-related decline of GSCs. **Jean-Maurice Dura** (Montpellier) demonstrated that the nuclear receptors Hr39 and Ftz-F1 act through the ecdysone receptor EcR-B1 to regulate axon pruning of gamma neurons in the fly mushroom body. His data also nicely showed that axon pruning of gamma neurons is specifically required for short-term but not long-term memory.



Moving back into zebrafish territory, **Kate Lewis** (Cambridge, UK) showed that after Hh sets up the initial populations of interneurons in the spinal cord, Pax2a/2b and Pax8 are critical in determining the identity of GABAergic/Glycinergic inhibitory neurons. **Sudipto Roy** (Singapore) then demonstrated that Foxj1 is a target of Shh and a master regulator of cilia formation. Subsequently, two speakers discussed the role of Nodal in the development of asymmetry. **Patrick Blader** (Toulouse) discussed the establishment of epithalamic asymmetry in zebrafish, describing the involvement of Nodal/Cyclops and revealing that the parapineal gland is dispensable for early neurogenic asymmetry in the habenula. **Tom Schilling** (UC Irvine) followed this by revealing how chemokine signalling regulates endodermal migration in zebrafish: Nodal induces chemokine receptor Cxcr4a expression in endodermal progenitors.

Mesodermal progenitor-derived Cxcl12b signals through Cxcr4a to transcriptionally regulate *integrin b1* expression and integrin-mediated endodermal cell adhesion. This is critical for correct organ positioning and knockdown of Cxcl12b or Cxcr4a causes duplication of visceral organs, but not mesoderm derivatives such as the heart. Lastly, **Vincent Cunliffe** (CDBG) described epigenetic control of hindbrain development. He showed that Hdac1 opposes Notch activation independently of SuH and using high throughput screening has identified targets of Hdac1 in the CNS.

Moving away from flies and zebrafish, **Marysia Placzek**, a deputy director of CDBG and the sole exponent of the chick model system, described the significance of “life after Hh” in the hypothalamus, a clinical target of diseases such as obesity. In the brain region, floorplate cells initially express Shh, and subsequently BMPs derived from the underlying axial mesoderm downregulates Shh in the hypothalamic FP. This downregulation of Shh plays an

essential role in the progression of hypothalamic development in the chick embryo. **Gerrit Begemann** (Konstanz) later gave a fascinating talk showing that sword growth in male swordtail fish is controlled by an organiser and that sword evolution involved the co-option of the signalling mechanisms that control development of the gonopodium, the male sex organ.

Last, but certainly not least, there were two more technical talks. **Jean-Paul Concordet** (Paris) described genome modification by ‘cut and paste’ using two techniques: targeted nucleotide alteration using single stranded-oligodeoxynucleotides and gene targeting with site-specific endonucleases. Finally, in something of a tour de force, **Norbert Perrimon** (Harvard) demonstrated the possibilities of global network analysis in the post-genomic era. Using systematic RNAi screening and proteomics, his group have identified thousands of components of the insulin signalling network and have validated a huge number of interactions between them. In addition, they are using siRNA approaches to dissect myogenesis and have uncovered a crucial role for cell-autonomous insulin signaling, in *Drosophila* larval muscle growth and autophagy.

Overall, the meeting showcased the wide range of science being carried out by CDBG scientists and their ex-colleagues and clearly demonstrated the advantages of a close collaboration between developmental biologists and those using a more biomedical approach. It was also a great opportunity to catch up with old friends and colleagues as many of the participants were present at the DGP inaugural symposium in 1998 and, indeed, all bar one of the speakers were either current group leaders in the CDBG or had passed through the Ingham lab at some stage in their career. We can safely say that a good — and enlightening — time was had by all!

“Finally, in something of a tour de force, Norbert Perrimon demonstrated the possibilities of global network analysis in the post-genomic era.”



Phil Ingham, Director of CDGB

BSDB Meetings

ISDB 2009

Edinburgh International Conference Centre, Edinburgh, Scotland, 6–10 September 2009

This is the only BSDB-sponsored meeting of 2009. See article later in this newsletter. In case you haven't got the message yet, we expect every BSDB member to support this meeting!

Latest meetings news

Check the BSDB website for latest meetings updates and to submit details of meetings to be advertised to members.

<http://www.bsdb.org>

Future BSDB meetings

Spring 2010

12–15 April 2010. Warwick.

We'll be back to the regular Spring Symposium. This will be joint with the BSCB. BSDB organisers: Kate Lewis, Josh Brickman.

Provisional themes aim to mark 10 years since the publication of the human genome sequence:

Evolution and development — genomes and beyond. Limb development: classical

development in a post-genomic era. Genomic science achievements and challenges. Mechanisms of gene regulation. Interaction of signalling pathways.

Autumn 2010

Tentative arrangements:

Development of the peripheral nervous system/sensory systems.

Ideas for a meeting?

A major task of the BSDB Committee is to host high quality scientific meetings. We welcome suggestions for future topics for meetings or for a half-day themed session at the Spring Symposium. Contact James Briscoe



Announcing a New Journal
DMM Disease Models & Mechanisms
The use of model organisms to advance human health
www.biologists.com/dmm

Other meetings of interest

Frontiers in Reproductive Biology and Regulation of Fertility

1–6 February 2009
Santa Fe, New Mexico, USA

Organizers: Sudhansu K. Dey, Martin M. Matzuk and Kelle H. Moley

This meeting is designed to bring together a diverse group of leaders, established and rising in the field, who study the complex regulation of reproduction and related developmental processes. The speakers and participants will comprise a group that uses a variety of model systems to better understand the processes relevant to human and animal reproduction and fertility regulation.

Common themes and new concepts in sensory formation

13–15 April 2009
RIKEN Center for Developmental Biology, Kobe, Japan

Abstract Submission: 10:00 am, 9 January 2009 (Japan time).
Registration Deadline: 10:00 am, March 6, 2009 (Japan time).
Organizers: Raj Ladher, Clare Baker and Shinichi Nakagawa.

The purpose of this meeting is to bring together experts in the field to discuss in particular, the specification of sensory cells, the mechanisms of sensory cell organization, and the use of alternative model systems to understand the developmental basis of sensory integration and behavior.

A limited number of travel fellowships will be made available to younger scientists from abroad.

Keystone Symposia: Stem Cell Niche Interactions

21–26 April 2009
British Columbia, Canada

<http://www.kestonesymposia.org/9D5>

Course: Embryonic Stem Cells as a model system for mammalian development

6–21 February 2009
University of Sao Paulo, Brazil

See advert elsewhere in this newsletter.

<http://www.stemcellslatinamerica.org>

The Dynamic Cell

1–4 April 2009
University of Edinburgh

Joint BSCB Spring Meeting and Biochemical Society Focused Meeting 2009

Session themes include endocytosis, motors, cell movement and microtubules, with focused sessions on lipid droplets and the immunological synapse. The final day will include sessions relating to progress in imaging and will discuss new frontiers relevant to all modern cell biology. The meeting includes plenary lectures by Jennifer Lippincott-Schwartz, Kai Simons and Joan Steitz (Biochemical Society Jubilee Medal winner), and also the recipients of the BSCB's Hooke medal and the Biochemical Society's Early Career Research Award.

Fifth International Symposium on the Biology of Vertebrate Sex Determination

April 20 - 24, 2009
Kona, Hawaii

Organizers: Richard Behringer, Blanche Capel, Valentine Lance, Mark Bogart
This conference brings together junior and senior scientists from around the world to discuss sex determination and differentiation mechanisms in vertebrates, including fish, amphibians, reptiles, birds, and mammals.

Latest meetings news

Check the BSDB website for latest meetings updates and to submit details of meetings to be advertised to members.
<http://www.bsdb.org>



EMBO Workshop: bHLH Transcription Factors

7–8 May 2009.
Regent's College, London.

Organisers: Robert Benezra and François Guillemot. This workshop will focus on basic helix-loop-helix (bHLH) transcription factors and their role in tissue development and homeostasis, and in disease. The main aim is to foster interactions between scientists who study diverse aspects of bHLH protein function and activity, who would not normally meet because they work on different model systems and/or study these proteins from very different angles.

<http://cwp.embo.org/w09-30/index.html>

Society for Developmental Biology 68th Annual Meeting

23–27 July 2009
Hyatt Regency, San Francisco, USA

Organizing Committee: Marianne Bronner-Fraser (Chair, SDB President), Claude Desplan, Scott Fraser

Mechanisms of Developmental Patterning
History of Developmental Biology
Epigenetic Influences on Development
Stem and Germ Cells
Development and Tissue Engineering
Developmental Neurobiology
Body Plan Evolution
Evolution of Developmental Regulatory Systems

ESF-EMBO Symposium: Cell Polarity and Membrane Traffic

23–28 May 2009.
Sant Feliu de Guixols. Spain.

The conference will focus on cell polarity, vesicle sorting and membrane transport. It will aim to encourage interaction and collaboration between scientists working in these areas with investigators working on the application within these fields of computational modelling, high throughput screens and revolutionary imaging technologies in multiple model organisms. Organiser: Anne Spang, University of Basel. Grants available for young researchers to cover their conference and travel costs. Closing date for applications and abstract submissions: 22 February 2009.

www.esf.org/conferences/09288

The EMBO Meeting

29 August – 1 September 2009.
Amsterdam

The EMBO Meeting takes over from former European Life Sciences Organisation meetings following the fusion of ELSO into EMBO.

<http://the-embo-meeting.org>

Journal discounts for members

BSDB member discounts from Elsevier Press:

Mechanisms of Development (print): \$120

Mechanisms of Development + Gene Expression Patterns (print): \$125

Developmental Biology (print): \$380



How to write and illustrate a scientific paper

2nd Edition

Björn Gustavii

Cambridge University Press, 2008

ISBN 978-0-521-70393-2

Paperback: £14.99

The second edition of *How to Write and Illustrate a Scientific Paper* is a useful guide for biologists who are about to embark on writing their first paper. Björn Gustavii draws on his extensive experience of scientific writing to make the task of writing a paper a little less daunting.

The short chapters and straight-to-the-point writing style makes this book very easy to read. Although the order of some chapters is sometimes not intuitive, the comprehensive index makes this book very easy to dip into. There is an extensive further reading list at the end of the book for most of the topics discussed, so you can easily find out more about a particular aspect of scientific writing.

Gustavii includes many different examples of both good and bad writing selected from actual journal articles to illustrate the points he makes. A bad example is followed by correction, so that the reader is very clear on the acceptable and unacceptable styles in scientific writing. Despite this very practical approach, Gustavii keeps the reader entertained by including lively quotations and anecdotes. Indeed, the statistics chapter, a topic that is rarely viewed as exciting, starts with a quote likening the use of statistics to how a “drunken man uses a lamp post, more for support than illumination.”

Although the book markets itself to “all biological and medical

disciplines,” there were times when, as a developmental biologist, I found the content irrelevant and geared more towards medical writing. The author’s strong background in biomedical research was evident in the examples he uses throughout the book. In the majority of cases, this did not hinder my understanding of the topic. However, I did find the chapters advising on writing methods and case reports quite difficult to follow.

The comprehensive coverage of others aspects of writing a paper more than make up for the inevitable biomedical slant. The book is particularly strong on how to present your results and, to this end, the chapters on preparing a graph and designing tables were especially thorough. Indeed, Gustavii includes problems when writing a paper that I had not even considered. It is this careful consideration of all stages involved in writing a scientific paper, from the initial brainstorming of ideas, to the correction of proofs once the article has been accepted, that make this book a welcome guide for first-time authors.

In summary, it is clear that the book has its strengths and weaknesses, and, from a developmental biologist’s point of view, the content is sometimes a little irrelevant. However, it is a comforting tool for those of us who find the task of writing our first paper a little overwhelming.



Juliet Redhouse

*Physiology,
Development and
Neuroscience,
University of
Cambridge*

“...the statistics chapter, a topic that is rarely viewed as exciting, starts with a quote likening the use of statistics to how a ‘drunken man uses a lamp post, more for support than illumination.’”



Reviewing a book for the BSDB

Suggestions for future book reviews are always welcome. If you know a book you think should be reviewed, please contact the Editor. Reviewers receive a free copy of the book for their trouble.

Here are some possibilities:

From Allen Lane

Your Inner Fish: A Journey into the 3.5-Billion-Year History of the Human Body
Neil Shubin

Germline Stem Cells
Hou
978-1-603-27213-1

Exocytosis and Endocytosis
Ivanov
978-1-588-29865-2

From CUP

RNA Interference Technology: From Basic Science to Drug Development (Hardback)
Edited by Krishnarao Appasani
Cutting-edge overview of RNA interference (RNAi) technology, covering both fundamental science and applications.
<http://www.cambridge.org/0521836778>

Plant Embryogenesis
Suarez and Bozhkov
978-1-588-29931-4

Hedgehog Signaling Protocols
Methods in Molecular Biology, Vol 397
J.I. Horabin
978-1-58829-692-4

From Humana Press

Drosophila: Methods and Protocols
Dahmann
978-1-588-29817-1

Epidermal Growth Factor
Patel & Bertics,
1-588-29421-8

BSDB Discount from CSHL Press

Cold Spring Harbor Laboratory Press is offering a 15% discount on titles for BSDB members. In order to take advantage of this, visit their special offers page (<http://www.scionpublishing.com/special/index.php>).

Recent titles from CSHL Press:

The Writing Life of James D. Watson.
Professor, Promotor, Provocateur
Errol Friedberg
087969 7008

Gastrulation. From Cells to Embryos
Claudio Stern
087969 7075

Fly Pushing. The Theory and Practice of
Drosophila Genetics, Second Edition
Ralph Greenspan
087969 7113

The Condensed Protocols *From Molecular Cloning: A Laboratory Manual*
This manual is a single-volume adaptation of the three-volume third edition of *Molecular Cloning: A Laboratory Manual*.

Won for All: How the *Drosophila* Genome Was Sequenced
Michael Ashburner

The Strongest Boy in the World: How Genetic Information is Reshaping Our Lives
Philip R. Reilly



The main function of the BSDB Committee is to organise our meetings, from deciding on appropriate topics to arranging organisers and venues. If you have any ideas on topics for a good meeting, or on a good venue, don't hesitate to convey them to James Briscoe (or another committee member). The officers of the Society will be happy to answer any questions relating to their specific subjects.

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The Back Page

Don't forget to visit
the website for latest
news:

www.bsdb.org



A *Drosophila* egg bearing the recently discovered *rudolph* mutation
(courtesy of Matthew Freeman).



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<http://www.biologists.com/web/index.html>

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