

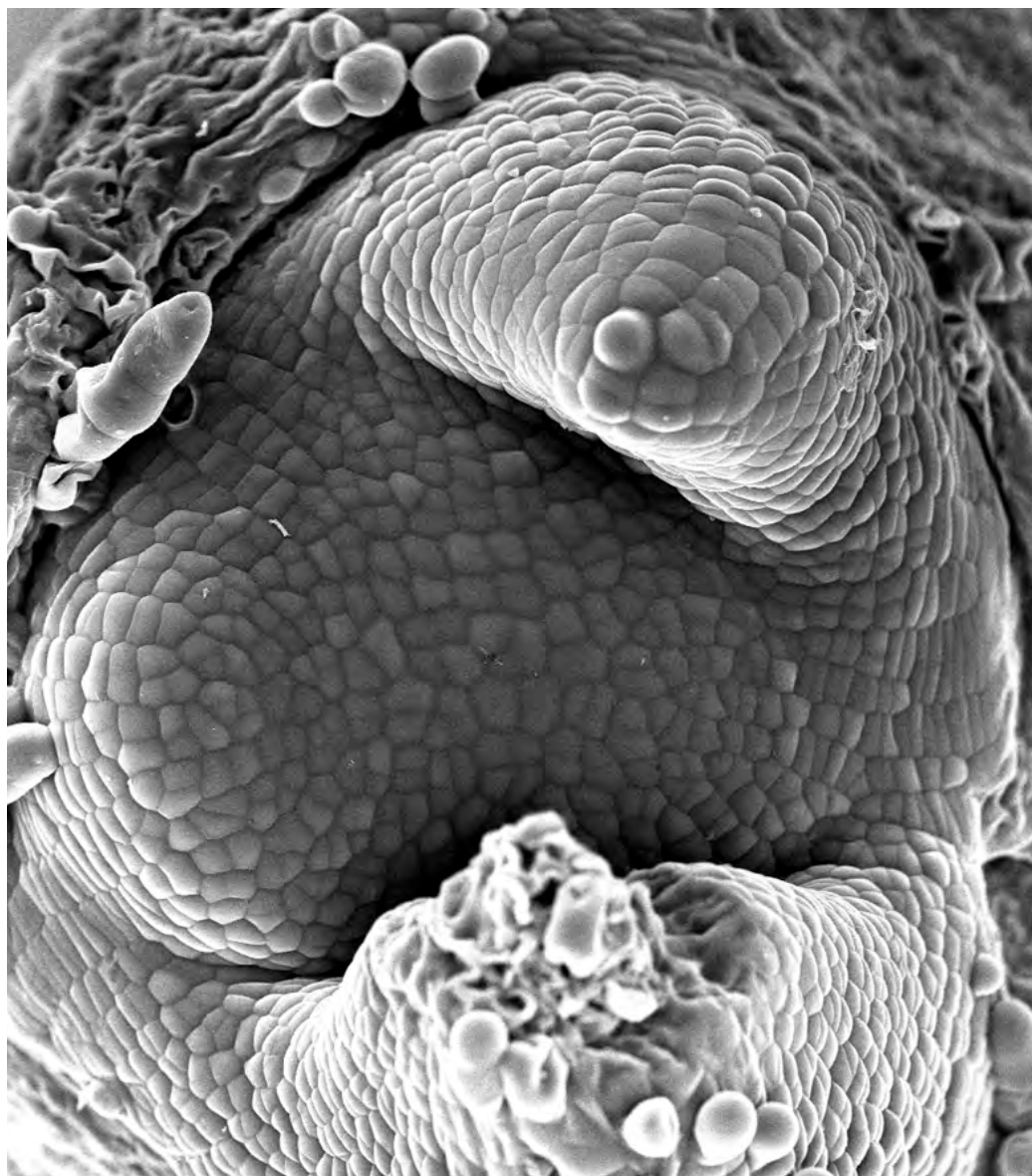
BSDB

Newsletter

British Society for Developmental Biology

www.bsdb.org

Winter 2009
Vol. 30, No. 2



**Spring Meeting
12–15 April – 10
years on for the
human genome
sequence**

Also in this issue:

- Human Developmental Biology Resource



An orchestra of instruments far beyond 3D

Listen to the Sound of Science



The Players



With many musicians, divided into woodwind, brass, percussion, and strings, and spread over a huge stage, the orchestra conductor must have at his fingertips the skills and knowledge to command total control. Likewise, mastering the bewildering array of techniques in fluorescence microscopy and high speed imaging requires the same attributes. Selecting the tools and techniques that are perfect for your experiment is paramount. Listen to the sound of Science . . .

http://www.zeiss.de/3d_bioforum

E-mail: micro@zeiss.co.uk



We make it visible.

Editorial

My apologies that this latest edition of the newsletter is being sent out a little later than usual, thanks to a combination of unavoidable factors. Hopefully you will all receive it well *before* the holiday period and in plenty of time to get round to registering for the BSDB Spring Meeting.

These are 'interesting' times for research funding what with The Wellcome Trust's recent bombshell. On p9, committee member Josh Brickman has written a short piece outlining some of the discussions of several policy issues considered by the committee, including our submission of a response to the BBSRC's draft Strategic Plan for 2010-2015. The committee would welcome

views from members about these and other issues.

This is my penultimate issue as newsletter editor. It's been an interesting job, but it's always difficult to gauge how useful or interesting any particular issue has been. It was gratifying, therefore, for one punter to take the time to let us know that he found the education-related article in last issue by David Martindill to be extremely worthwhile. Surely an inspiration to any of you out there who might be tempted or persuadable to pen articles of a similar nature. One can live in hope...

Andrew Jarman, Editor

andrew.jarman@ed.ac.uk

Contents

Editorial	1
Chair's letter	2
News	3
Treasurer's report	4–6
For graduate students	7
BSDB Spring Meeting	8
BBSRC consultation	9
Waddington Medal	10,11
Human Developmental Biology Resource	12,13
BSDB Meetings	14
Other meetings	15,16
Books to review	17
BSDB Committee	18

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.



Cover image

Scanning electron micrograph of an Arabidopsis apical meristem, courtesy of Joanna Wyrzykowska, University of Sheffield

Articles and images are copyright of the British Society for Developmental Biology or the respective authors unless otherwise indicated. The views published in articles herein are not necessarily those of the BSDB or its committee.



From the Chair



It's a great personal pleasure to have been asked to take over the Chair of the BSDDB, especially since although many of our present and former committee members have been women, I'm the first to serve in this capacity. My first act has been to change this section of the Newsletter, long titled "From the Chairman" to "From the Chair"!

I'd like to start by thanking my predecessor Matthew Freeman for all his hard work steering the BSDDB over the past five years. He's been an extraordinarily effective and energetic Chair of the society and, as many of you know, has been giving extremely eloquent performances at the BSDDB spring meeting over the past five years – a hard act to follow! I'd also like to thank other members of the committee who are standing down. Guy Tear hands over the management of the BSDDB accounts and all important cheque book to Andrew Fleming. Many thanks to Guy for keeping our balances firmly in the black. We also owe a vote of thanks to Betsey Pownell on completion of her term on the committee and for all her hard work drumming up corporate sponsorship for the BSDDB. Finally our Student member Gareth Powell from the Sanger Institute is well on his way to graduating and so is handing over to Hayden Selvadurai from Edinburgh. Gareth was responsible for organizing the highly successful Student Session at the recent ISDB Congress, while Hayden made good use of his local knowledge in arranging the student "activities" at the meeting. While I can't comment directly on the success of Hayden's pub crawl and Latino Dancing party, as the Chair of the student session I can feedback that the packed audience were treated to a series of very high quality presentations. Finally I'd like to extend a warm welcome to our two new committee members elected at the last AGM – Fiona Wardle from Cambridge and Keith Brennan from Manchester.

It's been a very different and exciting year for the BSDDB as we hosted the International Congress for Developmental Biology in Edinburgh. It was a hugely

successful and very enjoyable event, with a record-breaking attendance, a spectacular line-up of speakers, and a phenomenal number of posters. The credit for all of this goes to Matthew Freeman, who together with Guy Tear, Nancy Papalopulu and James Briscoe, worked tirelessly over the past three years to bring it all together, and also worked behind the scenes during the meeting to ensure everything ran like clock-work. I know they all went through a lot of stress in the run up to the meeting, which after the banking crash and ensuing recession made everyone fearful about a low turnout (rumour had it they had all mortgaged their homes to pay for the upfront costs). Thankfully the programme and location were a terrific draw and the outstanding attendance meant that our organizing committee could finally sleep easy at night. The ISDB, under its newly elected President Claudio Stern, moves to Cancun for the next Congress, where Matthew, Guy, Nancy and James will hopefully be able to relax by the pool with well-deserved large cold drinks (between sessions of course).

We're back to our normal schedule for 2010 with our regular joint BSDC-BSCB Spring meeting in Warwick 12th –15th April being organized by Josh Brickman and Kate Lewis. As usual the meeting looks very exciting – put the date in your diaries and don't forget that you can apply for travel grants. In addition to the Waddington and Beddington Medal Lectures, I'm pleased to announce that the Company of Biologists have decided to sponsor a special "Peter Lawrence Poster Prize" in recognition of Peter's many decades of service as a Handling Editor for Development – the eligibility criteria will be posted on our Website in the next few weeks. The Autumn Meeting, to be held in Oxford, will focus on Development of Sensory Systems, and is being organized by Jo Begbie, Anthony Grahame and Darren Williams. Details to follow! Look forward to seeing everyone in Warwick in a few short months.

Liz Robertson

"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



Committee changes

There have been several changes on the BSDB committee as members come to the end of their term. For those who don't know, ordinary committee members serve for five years, but that clock gets reset if the member becomes an officer during their term. The student representative is co-opted by the committee (rather than being elected) and serves until they receive their degree.

We have one new officer (in addition to our new Chair): **Andrew Fleming**, takes over from Guy Tear as Treasurer.

At the AGM held at the ISDB2009 meeting in September, two new committee members were voted in to replace **Betsy Pownell** and Andrew Fleming (who vacated his ordinary member post when he

became Treasurer). It was good to see that we continue to have a healthy stream of applicants for vacant committee member slots. As a result of the vote, we now have Fiona Wardle and Keith Brennan as new members.

Fiona Wardle is an MRC and Lister Fellow at the University of Cambridge, where she works on transcriptional regulation in zebrafish early mesoderm development. **Keith Brennan** is a Senior Lecturer at the University of Manchester, where he works on Notch and Wnt signalling in *Drosophila*.

Additionally, **Hayden Selvadurai** replaces Gareth Powell as student rep. Hayden works on Wnt signalling in mouse brain development at the University of Edinburgh.

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>.

BSDB sends response to BBSRC

In the last newsletter, it was noted that the BBSRC had invited comment on their new Strategic Plan, and we posed the question: where does developmental biology fit in the plan?

In the light of comments from members and discussion at on the

committee, a BSDB response document has now been sent to the BBSRC. This is introduced in more detail by Josh Brickman in an article on p9 of this newsletter. The text of the response itself can be downloaded from the BSDB website (www.bsdb.org/BSDBnewsStratPlan.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)



Financial report

"[we awarded] 114 BSDB grants to assist members' attendance at BSDB meetings (total value £40,490.60) and 79 CoB travel awards for overseas meetings/training courses (total value £27,660)"

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!

To begin my first report as Treasurer of the society I would like to acknowledge and thank my predecessor, Guy Tear, for the fantastic job he has done over the last years in maintaining the society in a strong and stable financial position. During the transition period as I take over the role, Guy has very kindly offered to provide guidance, in particular in the preparation of the final year accounts for 2008-2009. Due to the added complication this year of the successful ISDB conference in Edinburgh, this guidance will be gratefully received!

Overall, the society remains in a good financial position. The main income streams have been, as ever, the membership fees and the block grant and travel grant fund from the Company of Biologists (CoB). We were able to use these funds to award 114 BSDB grants to assist members' attendance at BSDB meetings (total value £40,490.60) and 79 CoB travel awards for overseas meetings/training courses (total value £27,660).

At present, we stand to make a slight loss on the year of just over £1000. More significantly, there has been an overall decrease in the total value of the society funds compared to the previous financial year, mainly due to the loss in value of

the Bailie Gifford Managed Fund (BGMF) in which a significant proportion of the society's capital is invested (decreased value of over £9000). In view of the turbulence of the whole financial system over the last year, this loss was not unexpected and, indeed, this fund has performed relatively well compared to many others in the field. Despite this slightly gloomy note, the society clearly still has sufficient funds to cover its activities (see the financial statement on p6).

To end on a positive note, although the final points on the ISDB conference balance sheet are still being adjusted, the indications are that, in addition to being an excellent scientific conference, the meeting will make an overall profit. Thus, the balance sheet for the on-going financial year (2009-2010) should make for positive reading. A more detailed breakdown of the figures will be available in the next newsletter, but in the meantime it should be noted that taking on and underwriting a significant international meeting was a major commitment for the society. The success of the conference (both scientifically and financially) reflects very well on the efforts and commitment of the organizing committee.

Andrew Fleming

Payment option for overseas members



It is possible to pay your subscription by PayPal. This facility is primarily aimed at our overseas members and we do not encourage other members to use this route as it causes us certain problems when it comes to renewal of subscriptions. For those who need to use it, the process is fairly painless and full instructions can be found on our webpage.

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



Travel grants (Company of Biologists Travel Awards)

BSDB Spring and Autumn meetings

These are the only UK meetings for which there is BSDB support. Grants cover cost of registration (but not conference dinners) and basic travel if funds permit. Generally we are receiving more applications than we can fund in full and preference is given to student members who present posters. BSDB members based abroad are eligible for a contribution (max. £400) to attend our meetings. All applications for travel grants to attend BSDB meetings must be in the hands of the Treasurer by the published deadline.

Note: The deadline for BSDB travel grant applications to attend the Spring Meeting in Warwick 2010 is Friday 22 January.

Overseas meetings

There is considerable demand for funds to travel to meetings overseas. 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. Also, due to our charitable status, the purpose of any award must be clearly identifiable as Developmental Biology

Deadline for Travel Grants to BSDB Spring Meeting: 22 January 2010

Warning!

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

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 Treasurer.

Subscription information

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

Student members that joined the Society in 2005 are reminded that they should upgrade their subscription to the full member rate of £35.



BRITISH SOCIETY FOR DEVELOPMENTAL BIOLOGY

PROVISIONAL FINANCIAL STATEMENT YEAR ENDING JULY 31st 2009

Accruals Basis

Balance Sheet

2007/08 £		2008/09 £
136,299	Investments	126,878
	Baillie Gifford Managed Fund	
	Current Assets	
11,106	Barclays Bank High Interest Account (1)	11,203
32,158	Barclays Bank Current Account	22,153
3,039	Barclays Bank: Louie Hamilton Account (1,2)	3,051
46,302		36,408
6,439	Less: Unpresented cheques	3,600
3,687	Debtors – Creditors	9,394
43,550	Net Current Assets	42,202
179,850	Total Funds	169,080

Income & Expenditure Account

Income	£	Expenditure	£
Membership (Standing Order)	31389	Grants (Overseas & Courses)	27660
Membership (Cheques)	1045	Grants (BSBD Meetings)	40491
Block Grant (CoB)	30000	Small meetings and other DBI meetings	650
Travel grant fund (CoB)	27500	ISDB Meeting	0
Sale of addresses	0	Prizes	108
Spring Meeting 2008 (Warwick)	925	Committee & administration	3924
Autumn Meeting 2008 (Seville)	0	Newsletter	0
Unpresented cheques		BSF	1369
		Bank Charges	28
		Refunds out	130
		Contribution to ISDB	18000
Interest and Investment Appreciation:			
Barclays High Interest a/c	97		
Barclays Louie Hamilton a/c	12		
Total Income	90,969	Total Expenditure	92,360
		Net Surplus for the Year	- 1,391
		Unrealised Gains on Baillie Gifford	- 9,421
		Fund balance at 31st July 2008	179,850
		Fund balance at 31st July 2009	169,037

Notes

These accounts were prepared under the accrual basis convention, in accordance with the applicable accounting standards and Recommended Practice of Accounting by Charities. There have been no major changes to our financial arrangements this year.

1. The Barclay High Interest and Louie Hamilton account valuations are at 30.6.09

2. This is the only restricted account and no call was made on it in the financial year 2008/09

The Graduate Students' Section

Aside from offering a nice distraction from the murky depths of my PhD research (I'm just coming into that infinitely frustrating bit where things stop working for no apparent reason), taking on the role of Graduate Representative for the BSDB has presented a brilliant opportunity to share some of my enthusiasm for our field with the wider graduate community and help the BSDB continue its solid tradition of encouraging student input into all facets of the society.

Gareth Powell did a great job as the previous Graduate Representative and I am definitely keen to follow his lead of encouraging the active participation of the graduate community in the BSDB. With this in mind, I'm pleased to inform you all that we will be holding a graduate symposium on the first day of the spring 2010 meeting in Warwick. This will be similar in style to the one at this year's ISDB meeting with four or five grad students given the opportunity to present their work in a less formal conference setting. This is a great opportunity to get experience talking at a reasonably big scientific meeting and also to share your work with your peers. If you would like to be considered for this, tick the box when you submit your abstracts for the meeting.

In addition, we're keen to have a bit of an informal social gathering at the meeting, so if any of you go to Warwick and think you may be able to offer suggestions or lend a hand organising something please get in touch. This sort of thing is always a great laugh and a good opportunity to get to know your colleagues from different institutes and unwind after a busy day of conferencing. Those who

attended the ISDB meeting in Edinburgh this year will also know that it's a great way get all the local bar tenders angry with you when you turn up with a hundred thirsty students on an otherwise quiet Monday night.

Finally, the BSDB is currently having a rethink about its website and overall Internet presence. At the moment we are considering a few changes to the website and we're keen to get a bit of student input on this. The BSDB website is a good source of information for membership details, travel grants and upcoming meetings, but if there are other things you'd like to see in terms of content or if you think it could be presented in a better way then please get in touch with me. We are also considering a student-specific section on the website so we are looking for ideas on content for this. I'd also like to encourage you all to join the BSDB graduate student Facebook group (easily found by searching through Facebook), as this provides a convenient forum for us all to keep in touch and share ideas.

Looking forward to meeting many of you in Warwick next spring, until then please free to get in touch with me with any questions, comments or suggestions.

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.

Hayden Selvadurai

h.j.selvadurai@sms.ed.ac.uk

BSDBook

Visit the 'BSDB graduate student group' at [Facebook.com](https://www.facebook.com/bsdbook) 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.



COMPANY OF BIOLOGISTS **BSCB** **BSDB** **COMPANY OF BIOLOGISTS**

Celebrating the 10th Anniversary of the first draft of the human genome

**British Society for Cell Biology &
British Society for Developmental Biology
Joint Spring Meeting**
12-15 April 2010
University of Warwick

Speakers:

Peter Andrews
Richard Behringer
Adrian Bird
Marty Cohn
Kevin Eggan
Anne Ferguson Smith
Amanda Fisher
Peter Fraser
Eileen Furlong
Isabella Graef
Alex Joyner
Bob Kingston
Birgit Lane
Ihor Lemischka
John Lis
Sylvie Mazan
Alex Meissner
Jan van Minnen
Eric Miska

Christine Mummery
Jennifer Nemhauser
Lee Niswander
Nipam Patel
Roger Patient
Geoff Raisman
Giampetro Schiavo
William Skarnes
Austin Smith
Beate Sodiek
Colin Stewart
Max Telford
Cheryll Tickle
Jeff Twiss
Kristin Tessmar-Raible
Jean-Paul Vincent
Marion Walhout
Fiona Watt
Melanie Welham
Emma Whitelaw
Rolf Zeller

**Plenary Lectures
from Elaine Fuchs
and Mike Levine**

*Topics include post-genomic approaches to:
ES/iPS Cell Biology & Regenerative Medicine,
Limb Development, Intracellular Transport,
Disease Models & Mechanisms, Epigenetics,
Signalling Pathways, Evolution,
Regulation of Gene Expression*

Scientific Organisers:
Paul Andrews, Josh Brickman,
Elizabeth Fisher and Kate Lewis

website: www.bscb-bsdb-2010.co.uk

Painting of Gregor Mendel by Rosa Beddington

BSDB, BBSRC, and SoB

A brief report of recent BSDB committee deliberations and decisions

In this climate of decreasing budgets, the funding councils have been increasingly concerned with demonstrating that research has a direct and immediate impact on society. As a learned society we feel very strongly that these efforts could cripple the excellent UK basic science base in developmental biology. I think it is safe to say that we all believe that there is no predicting where technological innovations will come from and that the BSDB needs to do its best to put these points to government and the relevant research councils. As a number of members of the community have approached both me and Matthew Freeman over the last few months to ask about these issues, I thought it appropriate to update you on some of the committee's efforts on your behalf.

BBSRC Strategic Plan

In September we prepared a response to the new BBSRC Strategic Plan (2010-2015). This was based on opinions solicited from the membership and in consultation with the BSDB committee. We also submitted a similar document as evidence to the House of Lords Science and Technology Committee. This committee is holding an inquiry to investigate how Government and other public bodies responsible for the allocation of funding for science and technology research set priorities in the context of likely overall cuts in public spending.

Society of Biologists

For the last few years we have been supporting the Biosciences Federation (BSF) as an organization through which we believed we could lobby government. The BSF has recently merged with the Institute of Biology, to create a Society of Biology (SoB). The Society aims to create an umbrella organization for all the Biosciences, creating professional certifications, such as a "chartered biologist," and attempting to provide a single voice through which biology could be represented to government (see article in last newsletter).

Initially we worked with the BSF (now SoB) on the BBSRC consultation document but we found that their response largely eviscerated the key points we wished to raise. As result we believe that our efforts are best focused on preparing our own responses to policy issues and collaborating with other like-minded societies such as the BSCB, GenSoc, etc. We are concerned that the position of the BSF is likely to become more divergent in the new SoB.

At the last BSDB committee meeting, we discussed what the benefits of SoB involvement would be for the BSDB. Reluctantly, we felt that any benefits did not fully justify the significant cost of membership, and so it was decided that BSDB would withdraw its involvement and financial support of this society.

Josh Brickman

*Institute of Stem
Cell Research
University of
Edinburgh*

"...we feel very strongly that these efforts could cripple the excellent UK basic science base in developmental biology."

The BSDB response document can be found by following this link: www.bsdb.org/BSDBnewsStratPlan.htm

Waddington Medal 2010

Elizabeth Robertson

Matthew Freeman
MRC Laboratory of
Molecular Biology
Cambridge

Since there was no BSDB annual meeting this year, the 2009 Waddington Medal lecture was presented at the ISDB Congress in Edinburgh. The medal is the main honour awarded by the BSDB and is given for outstanding achievement in developmental biology. Despite the unusual forum, the tradition of not announcing the winner until the presentation itself was upheld, adding to the Oscar-like excitement of the occasion.

This year it was a great pleasure to award the 2009 Waddington Medal to Liz Robertson, Professor of Developmental Biology at the Dunn School of Pathology at the University of Oxford. Liz's impact on developmental biology has been enormous, from her pioneering work as a PhD student on germline transformation of mice, to the deep insights into mammalian embryonic development that have continued to flow from her group.

Liz was born in Nigeria where she grew up with two sisters and a brother until she was eight years old. Her father was a plant virologist and the family lived in remote jungle, grew their own crops and kept chickens. Liz was educated in a one-room schoolhouse, went spear fishing, and never wore shoes. The idyll came to an end once the children reached an age where schooling became a more serious issue, and they moved back to a village

to the west of Oxford.

Liz did her first degree at Oxford (where, among other sports, she played cricket for the University Women's team) but then went in 1978 to Martin Evans's group, then in the Genetics Department at Cambridge, to do her PhD. And it was as early as this – during her PhD – where she set the stage for a series of breakthroughs that substantially contributed to one of the major breakthroughs in 20th century developmental biology.

Working first as a PhD student and then staying on as a postdoc, she and a slightly more junior student, Allan Bradley, figured out how to isolate mouse ES cells, and how to inject them into blastocysts efficiently to produce chimeras that transmit into the germline. They also identified the best mouse strains to use in these experiments – and in many ways wrote the book about the use of ES cells to manipulate mouse germlines.

This then set the stage for the first successful germline genetic engineering of mice and a rapid series of pioneering studies by Liz: introduction and germline transmission of retroviral sequences into ES cells; the first engineered mutants; and, with Robin Lovell-Badge, a mutant that provided the key to identifying the SRY testis determination gene.

(continued overleaf)

*“Liz was educated
in a one-room
schoolhouse, went
spear fishing, and
never wore shoes.”*



She was recruited in 1988, very young, to Columbia University in New York, where she continued to lead the way in mouse germline engineering. Liz's major discoveries are too long to list, but the themes that emerge are her talent for actually handling and injecting mice, and her ambition to understand mammalian development by using genetics to reveal the true *in vivo* role of key genes. She is probably most identified now with her work on the TGF β signalling pathway, which started when, as a PhD student, she identified what turned out to be the nodal gene.

After Columbia, she was head-hunted as a full professor to Harvard in 1992 and then, in 2003 moved back to Oxford as professor of developmental biology in the Dunn School of Pathology at Oxford University. Not surprisingly Liz has a long list of honours including being a member of EMBO, a Fellow of the Royal Society, and receiving the Conklin Medal of the SDB.

The Waddington Medal is traditionally awarded not only for science but also for contribution to the community, and here, again, Liz has an outstanding record. She is famous for the generosity with which she has given time, support, advice, reagents and methods to colleagues (and competitors) all over the world. She also became a central figure in the very influential Cold Spring Harbor summer course on Molecular Embryology of the Mouse.

Outside science, Liz is a keen gardener, a great cook, and has been a scratch golfer. In fact her father believed she had missed an opportunity by not turning professional. Also, especially with her dear friend, the much missed Rosa Beddington, Liz has enjoyed a reputation for great stamina at late night parties. Further evidence for this perhaps unexpected bacchanalian side of her character is that upon entering her lab, people have been known to receive detailed instructions about how to prepare the perfect gin and tonic – even down to the detail of how to roll the limes before slicing them.

Nothing comes for free, and the Waddington Medal winner is expected to give a lecture. It is made more daunting by the request to include a combination of science and autobiography. This year, the pressure was increased further by the audience being not just BSDB members but instead the 1500 attendees of the ISDB. Unsurprisingly Liz did a brilliant job on all fronts and her lecture was universally acknowledged as one of the highpoints of the Edinburgh Congress.

Matthew Freeman

“...the themes that emerge are her talent for actually handling and injecting mice, and her ambition to understand mammalian development by using genetics to reveal the true in vivo role of key genes.”

The Human Developmental Biology Resource

Assisting research into human embryonic and fetal development

Dr Dianne Gerrelli

Manager of the
London HDBR
Neural Development
Unit
Institute of Child
Health

*“Use of the HDBR
material should
illuminate...aspects
of functioning that
characterise
humans as
opposed to lower
animals”*

The Human Developmental Biology Resource (HDBR) is a unique resource funded by the MRC and Wellcome Trust. It provides human embryonic and fetal tissue for gene expression studies related to congenital disease, including both birth defects and inherited metabolic disorders. Use of the HDBR material should particularly illuminate developmental gene expression underlying aspects of functioning that characterise humans as opposed to lower animals (e.g. higher brain function, language), since such studies are not possible using rodent and other animal models. This research is essential if we are to introduce new methods for prevention of congenital defects.

The HDBR is based at the UCL Institute of Child Health and the Institute of Human Genetics, Newcastle University. It has Tissue Bank ethics approval for the collection, storage and distribution of material between 4 and 12 weeks of gestation. In

addition the HDBR administers the Fetal Tissue Bank (FTB) collection, previously at the Hammersmith Hospital, with specimens between 8 and 19 weeks of gestation. A significant proportion of the HDBR material is karyotyped and chromosomally normal material is provided for research but karyotypically abnormal material can also be provided on request. The HDBR's material can be used to generate cell lines, stem cells, protein, RNA and DNA. The HDBR can also provide cDNA from embryonic tissue for gene expression analysis. In addition, paraffin wax and frozen sections of embryos and early fetuses are available for *in situ* hybridisation and immunohistochemistry. Individuals wishing to use human and fetal tissue do not need to apply for local ethical permission as the HDBR ethics covers distribution of tissue to end users. Human embryonic and fetal tissue is provided free to registered users of the HDBR.

(continued overleaf)

*The age of embryos
in the collection is
measured
according to the
Carnegie staging
system. Examples
of Carnegie stages
14, 16 and 20 are
shown (right)*



For users who do not have experience in gene expression analysis the HDBR offers an in-house gene expression service (IHGES) using *in situ* hybridisation and/or immunohistochemistry. The service includes:

- Initial testing of *in situ* probes or antibodies. A report showing initial results with sense and antisense probes together with positive controls on the human fetal tissue will be provided.
- Once good quality results have been generated a full project can be performed on a number of different developmental stages. High quality photographs of gene expression patterns suitable for publication will be produced and the HDBR will provide advice on interpretation of results.

Recent IHGES projects have included analysis of gene expression in the limb, eye, liver, kidney, central and peripheral nervous system. Initial testing and full project phases are both provided at a very competitive rate to registered users.

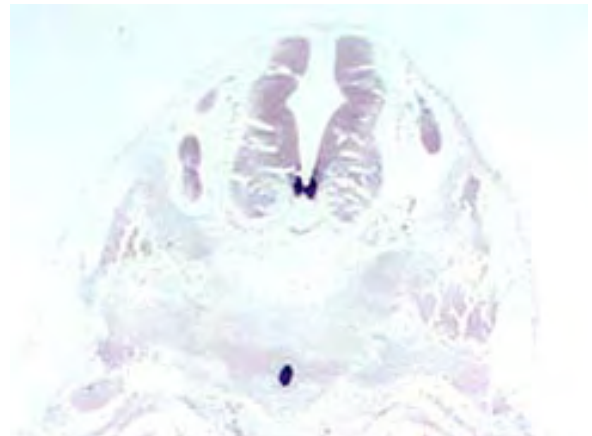
Information on all aspects of the HDBR, including publications using HDBR material, can be found on www.HDBR.org, or by contacting the centre manager at Hdbr@newcastle.ac.uk or Hdbr@ich.ucl.ac.uk.

D. Gerrelli
UCL, Institute of Child Health, London

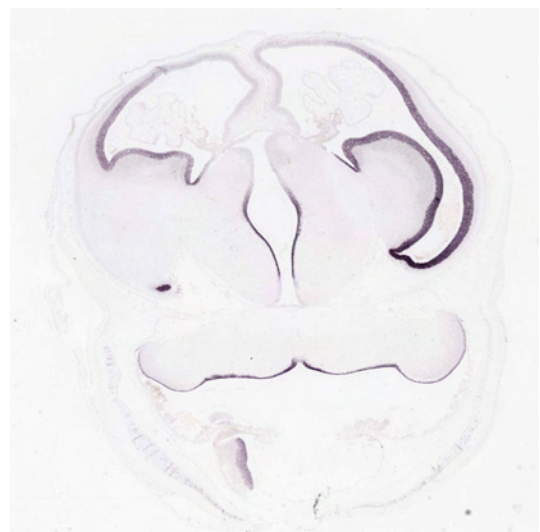
S. Lisgo
Institute of Human Genetics, Newcastle University

S. Lindsay
Institute of Human Genetics, Newcastle University

A. J. Copp
UCL, Institute of Child Health, London



Expression of Shh mRNA in transverse section of Carnegie stage 17 embryo is observed in the notochord and floorplate



Expression of FGFR3 mRNA in horizontal section of Carnegie stage 23 embryo is observed in cortical plate, luminal surface of the thalamus, and pons

HDBR
Human Developmental Biology Resource

BSDB Spring Meeting

12-15 April, 2010. Warwick

Joint symposium with BSCB.
BSDB organisers: Josh Brickman
and Kate Lewis.

See poster on p8.

Theme: Developmental Biology in
the Postgenomic era: 20 years
since the human genome project
began and 10 years since the

publication of the human genome
sequence.

Sessions include 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.

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>*

BSDB Autumn Meeting

Development of sensory systems

**7–9 September, St Anne's
College, Oxford**

Organised by Jo Begbie, Anthony
Graham, Darren Williams.

Progenitor populations

Robert Kelsh, Claire Baker, Jo
Begbie.

Somatosensory systems

Filippo Rijli, Patrick Ernsfor,
Wesley Grueber, Andrew
Jarman, Darren Williams.

Eyes/vision

Jane Sowden, Bill Harris,
Thomas Hummel.

Auditory

Tanya Whitfield, Andy Groves.

Taste

Linda Barlow, Ilona Kadow.

Evolution of sensory systems

Detlev Arendt, Lucia Manni,
Angelika Stollewerk

There will also be talks selected
from abstracts.

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*

Future BSDB meetings

Spring 2011

Joint Spring Meeting with BSCB

26-30 April, University of Kent,
Canterbury. BSDB organisers:
Chris Thompson and Juan Pablo
Couso

Autumn 2011

Joint meeting with French society of developmental biology

Nice, France. BSDB organisers:
Andrea Munsterberg and Stefan
Hoppler.

Other meetings of interest

Workshop on Development: at the crossroads of systems biology

14–18 March 2010
Ronda (Malaga), Spain

The British Council in Spain in collaboration with the Spanish Council # for Scientific Research (CSIC) is organising a series of scientific workshops to provide opportunities for researchers from the UK and Spain to meet face-to-face for the exchange of ideas, knowledge and information on priority topics and to explore future areas of research and collaboration. The next workshop in this series, entitled “Development: at the crossroads of Systems Biology”, will explore the links between biological and physical approaches to the understanding of developmental processes. Keynote speakers will give 30 min talks and other participants will give 15 min presentations of their work. Keynote speakers: Chris Bakal, Javier Buceta, Russell G. Foster, José Luis Gómez-Skarmeta, Marcos González-Gaitán, Johannes Jaeger, Enrique Martín-Blanco, Andrew C. Oates, Roger Patient, Claudio Stern. Early to mid career researchers wishing to participate should request an application form from belen.forte@britishcouncil.es before December 23, 2009. Further details are available on the BSDB website, or contact: Enrique Martin Blanco, embbmc@ibmb.csic.es or Claudio Stern c.stern@ucl.ac.uk

Society for Developmental Biology (USA) 69th Annual Meeting

August 5 - 9, 2010, Albuquerque, New Mexico
Joint with Japanese SDB
www.sdbonline.org

BSCB Autumn Meeting

Organisation Through the Cell Cycle
St. Catherine's College, Oxford
www.bscb.org (no further information available yet).

The EMBO Meeting 2010

4–7 September 2010
Barcelona, Spain
Evolution of animal forms;
Systems biology & functional genomics;
Signalling in development +21 workshops

EMBL workshop on Visualizing Biological Data (VizBi)

Wednesday, 3 March - Friday, 5 March 2010, EMBL Heidelberg
[www-db.embl.de/jss/EmblGroupsOrg/conf_128](http://www.db.embl.de/jss/EmblGroupsOrg/conf_128)

2010 Developmental Biology Teaching Workshop

15–18 June 2010
Darling Marine Center, ME, USA.
Registration deadline: May 1, 2010. For more information contact Dr. Leland Johnson (jleland68@yahoo.com) or Dr. Eric Cole (colee@stolaf.edu)
www.dmc.maine.edu/courses.html

Joint CSHL/Wellcome Trust Meetings

These meetings are held at the Wellcome Trust Conference Centre in Hinxton, UK. Meetings follow the Cold Spring Harbor tradition in that the majority of talks are chosen from openly submitted abstracts, program details are not available in advance of the meeting, and participants are strongly encouraged to stay for the duration of the conference.

Computational Cell Biology
February 10 - 14, 2010 (Wed - Sun)
abstracts due December 4, 2009

Systems Biology: Networks
August 11 - 15, 2010 (Wed - Sun)
abstracts due May 21

Genome Informatics
Sept. 15 - 19, 2010 (Wed - Sun)
abstracts due June 25

www.meetings.cshl.edu/wtcschlmeetings.shtml

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>



Developmental Vascular Biology Workshop IV

10–13 February 2010
 Asilomar, Pacific Grove, CA, USA
 This is the fourth installment of what has been a very highly regarded and very exciting series of meetings held every two years at this site, focusing on molecular control of vascular development, cell signaling pathways in angiogenesis and lymphangiogenesis, and mechanisms of patterning blood vessel growth and migration. The meetings are attended by researchers using a wide variety of different models, including mice, frogs, birds, fish, flies, and cell culture. In addition to invited speakers, talks will be selected from the submitted abstracts.

Preliminary program, additional information, and registration and abstract submission are available at: www.navbo.org/event/dvb

Cardiovascular development and repair

28 February – 5 March, 2010
 Keystone, Colorado, USA
 Keystone Symposium
 Joint with: Angiogenesis in Health and Disease Systems
www.keystonesymposia.org/Meetings

Integration of developmental signaling pathways

23–28 March, 2010
 Victoria, British Columbia, Canada
 Keystone Symposium
www.keystonesymposia.org/Meetings

Santa Cruz developmental biology meeting

30 June – 3 July 2010
 University of California, Santa Cruz
http://web.me.com/funkydonkey1/2010_Santa_Cruz_Developmental_Biology_Meeting/Welcome.html

Receptors, development, physiology and disease

21–26 March, 2010
 Keystone, Colorado, USA
 Keystone Symposium
 Joint with: Nuclear Receptors: Signaling, Gene Regulation and Cancer
www.keystonesymposia.org/Meetings

Cold Spring Harbor Meetings

www.meetings.cshl.edu/meetings.html

PTEN Pathways & Targets
 March 16 - 20 abstracts due Jan 15

Systems Biology: Global Regulation of Gene Expression
 March 23 - 27 abstracts due Jan 15

RNA and Oligonucleotide Therapeutics
 April 7 - 10 abstracts due Jan 22

Vertebrate Organogenesis
 April 27 – May 1 abstracts due Feb 5

The Biology of Genomes
 May 11 - 15 abstracts due Feb 19

The Cell Cycle
 May 18 – 22 abstracts due Feb 26

75th Symposium: Nuclear Organization & Function
 June 2 – 7 abstracts due March 12

Glia in Health & Disease
 July 22 – 26 abstracts due May 7

Mechanisms & Models of Cancer
 August 17 – 21 abstracts due May 28

Developmental origins and epigenesis in human health and disease

26–30 April 2010
 Swissotel The Stamford, Singapore
 Keystone Symposium
www.keystonesymposia.org/Meetings

Nuclear Receptors & Disease
 August 31 – September 4 abstracts due June 11

Personal Genomes
 September 10 - 12 abstracts due June 18

Translational Control
 September 13 – 17 abstracts due June 16

Axon Guidance, Synaptogenesis & Neural Plasticity
 September 21 – 25 abstracts due July 2

Germ Cells
 October 5 – 9 abstracts due July 16

Mouse Development, Genetics & Genomics
 October 26 - 30 abstracts due August 6

Neurodegenerative Diseases: Biology & Therapeutics
 December 1– 4 abstracts due Sep 17



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 CUP

Cancer Stem Cells
W. L. Farrar
9780521895283

The Neural Crest, Second Edition
N. Le Douarin, C. Kalcheim
9780521122252

Shoot Apex and Leaf Growth (first published 1975)
R. F. Williams
9780521112871

From OUP

Doing Science
Design, Analysis, and Communication of Scientific
Research
Second Edition
Ivan Valiela
978-0-19-538573-1

From Allen Lane

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

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:

Statistics at the Bench: A Step-by-Step
Handbook for Biologists
Martina Bremer
978-087969857-7

Live Cell Imaging: A Laboratory Manual,
Second Edition
Robert Goldman (ed.)
978-087969893-5

Mouse Hematology: A Laboratory Manual
Michael P. McGarry, Cheryl, A. Protheroe,
James J. Lee
978-087969886-7

Francis Crick: Hunter of Life's Secrets
Robert Olby
978-087969798-3

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



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.

Officers

Chair

Elizabeth Robertson (2009-2014)

Dunn School of Pathology
University of Oxford
Oxford OX1 3RE
Tel: 01865 275500
elizabeth.robertson@path.ox.ac.uk

Secretary

Michael Taylor (2004-2013)

Cardiff School of Biosciences
Cardiff University Biomedical Building
Museum Avenue
Cardiff CF10 3AX
Tel: 029 2087 5881
TaylorMV@cf.ac.uk

Treasurer

Andrew Fleming (2004-2014)

Dept. of Animal and Plant Sciences
University of Sheffield
Western Bank
Sheffield S10 2TN
Tel: 0114 222 4830
Fax: 0114 222 0002

Meetings Secretary

James Briscoe (2004-2013)

Division of Developmental Neurobiology
National Institute for Medical Research
The Ridgeway, Mill Hill
London NW7 1AA
Tel: 020 8816 2559
Fax: 0208816 2593
jbriscoe@nimr.mrc.ac.uk

Publications Secretary & Website Co-ordinator

Andrew Jarman (2003-2010)

Centre for Integrative Physiology
University of Edinburgh
George Square
Edinburgh EH8 9XD
Tel: 0131 650 3737
Fax: 0131 650 6527
andrew.jarman@ed.ac.uk

Graduate Representative

Hayden Selvadurai (2009-2012)

Centre for Integrative Physiology
University of Edinburgh
Edinburgh, EH8 9XD
Tel: 0131 650 1000
h.j.selvadurai@sms.ed.ac.uk

Committee Members

Keith Brennan (2009-2013)

Michael Smith Building
University of Manchester
Oxford Road
Manchester, M13 9PT
Tel: 0161 275 1517
Keith.Brennan@manchester.ac.uk

Josh Brickman (2007-2012)

Institute for Stem Cell Research
University of Edinburgh
Kings Buildings
Edinburgh EH9 3JQ
Tel: 0131 650 5828
Fax: 0131 650 7773
josh.brickman@ed.ac.uk

Juan Pablo Couso (2007-2012)

School of Biological Sciences
University of Sussex
Falmer
Brighton BN1 9QG
Tel: 01273 877448
j.p.couso@biols.susx.ac.uk

Kim Dale (2008-2013)

College of Life Sciences
University of Dundee
Dundee DD1 5EH
Tel: 01382 386290,
Fax: 01382 385386
j.k.dale@dundee.ac.uk

Kate Lewis (2005-2010)

Department of Physiology, Development and Neuroscience
University of Cambridge
Downing Street
Cambridge CB1 3LS
Tel: 01223 333760/766104
Fax: 01223 333786
kel36@cam.ac.uk

Malcolm Logan (2008-2013)

Division of Developmental Biology
National Institute for Medical Research
The Ridgeway, Mill Hill
London NW7 1AA
Tel: 020 8816 2001
mlogan@nimr.mrc.ac.uk

Andrea Münsterberg (2007-2012)

School of Biological Sciences
University of East Anglia
Norwich
Norfolk NR4 7TJ
Tel: 01603 592232
Fax: 01603 592250
a.munsterberg@uea.ac.uk

Chris Thompson (2008-2013)

Faculty of Life Sciences
Michael Smith Building
Oxford Road
Manchester M13 9PT
Tel: 0161 275 1588
christopher.thompson@manchester.ac.uk

Fiona Wardle (2009-2014)

Department of Physiology, Development and Neuroscience
University of Cambridge
Cambridge
Tel: 01223 333893
fcw27@cam.ac.uk



The Back Page

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

www.bsdb.org



*Surprisingly clement
weather greeted
participants at
ISDB2009 in
Edinburgh*



*The BSDB gratefully acknowledges the
continuing financial support of the
Company of Biologists Ltd (CoB).*

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

biology
cob

Advertising in the BSDB Newsletter

Current circulation ~1500 (delivered electronically)

Commercial advertising rates:

Inside front or back cover full page colour image £300

Full page greyscale image, inside pages £150

Full page text only £100

Half pages pro rata

Multi-issue rates negotiable

Learned Society Meetings and Course notices:

By arrangement

Contact the Editor for further details.