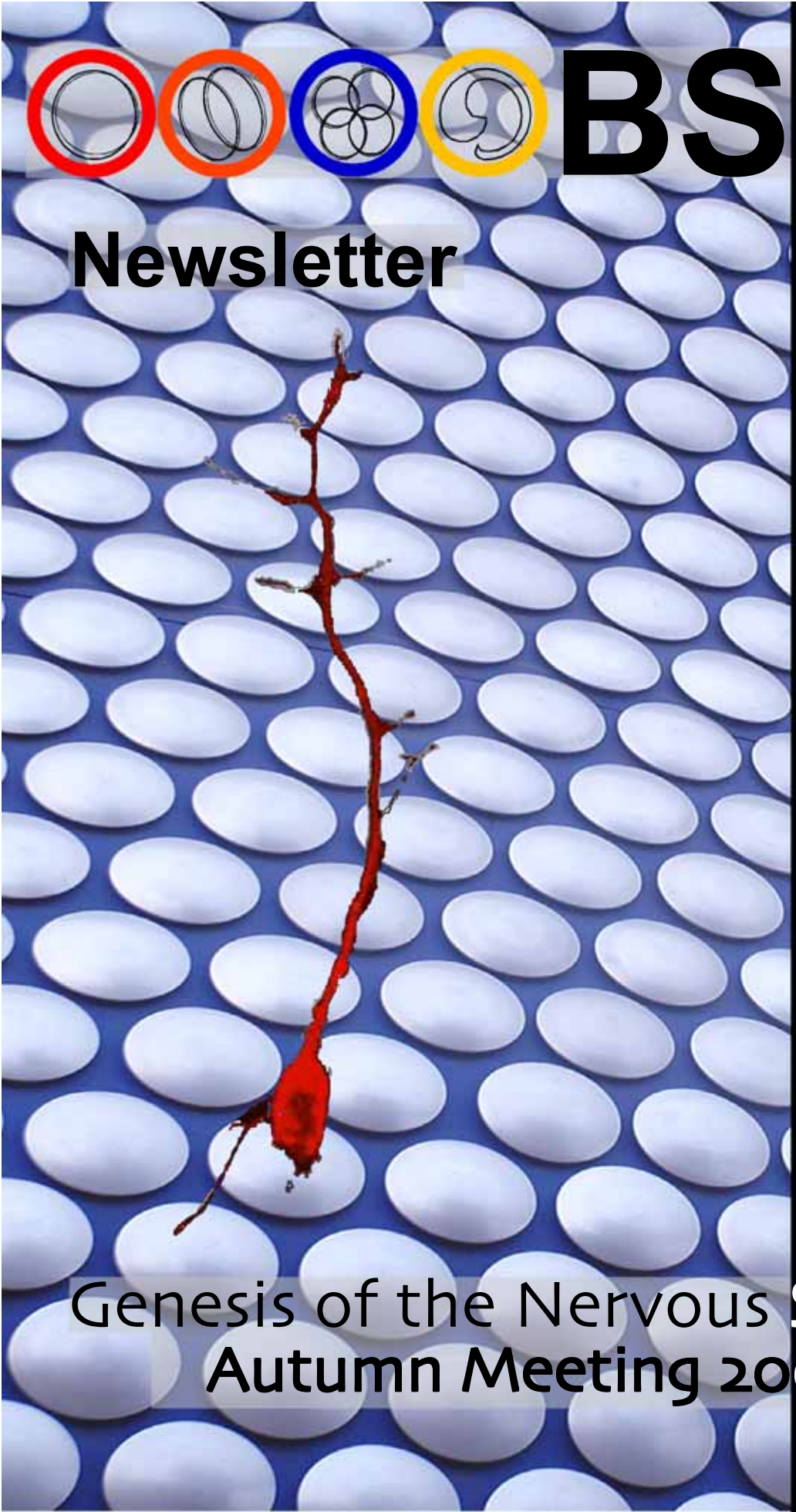

BSDB Newsletter

Summer 2004
Vol. 25, No. 1

British Society for Developmental Biology

Genesis of the Nervous System
Autumn Meeting 2004

(R)EVOLUTION

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BSDB Newsletter

Summer 2004 Volume 25, Number 1

Editorial

So finally we did it, we went all-electronic. I expect now I will, at last, hear the screams of protest. To date, however, I have had just one letter (thanks, Pat Tate. I'll do my best to send you hard copy) voicing any kind of objection, and this is why I decided to go ahead this issue.

Of course, this is an experiment. The main reason for trying this is the large amount of money it saves us – equivalent to three or four Travel Grants per issue. (I hasten to add that it saves me little time in its present format.)

The downsides, we suspect, will be that many of you simply won't read it (many such electronic newsletters do I myself drop in the Trash each month) and that at the moment it won't reach a number of you who have yet to let us know your e-mail addresses.

So we *do* want to hear from you. We want to hear whether you read the Newsletter like this (so if I don't hear will I have to assume you don't?!). Is it important to keep it in a format that you can print (as I have tried to do this issue)? How valuable is it to have links to the web, bookmarks etc. in the PDF Perhaps you would prefer an HTML e-mail (the kind that has links in used by the journals for their e-mail alerts for example) that links to the articles stored on the web? Actually, it would also be nice to hear that you liked it! But the main thing is that we do need feedback if we are to get this right.

What's in it? Well, there's a lot of change noted, particularly in the Committee (p3) where we lose our Chairman, our Treasurer and our Website Co-ordinator all at one shot. All have done fantastic jobs for which we are all very grateful (more on these retirements and their replacements in the departing Chairman's letter on p2).

We have some regular News (p3-5), but also some perhaps controversial Views which solicit your opinions on topics in science politics. And here I must emphasise what I hope is obvious, that the inclusion of these pieces does not imply that the views expressed are endorsed by the Society. Nonetheless, these are important issues and I encourage members to express their opinions as they feel fit.

Finally, together with the many other book and journal perks our members enjoy, OUP have made us a particularly attractive offer of 20% off all their Bioscience and Biology books. More details on page 10.

Last "final" point. Watch out for that Autumn Meeting deadline, it's *next week!!!*

The Editor
(a.j.furley@sheffield.ac.uk)

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Genesis of the Nervous System

Birmingham, 27 – 29 September

For further details see page 11 and
www.bsdb.org

Registration, Travel Grant and Abstract Deadline:
4th June, 2004

Chairman's Letter

It is with mixed emotions that I start writing this my final "Chairman's Report". I was first elected to the committee in 1988, and – save for a gap of three years in the 1990s - have served on it in one capacity or another ever since. Thus I feel both sadness that my close association with the Society is finally coming to an end, yet at the same time some relief that I will now have two fewer committee meetings to attend each year! Having said that, the last five years have hardly been onerous, as most of the real work of the Society is performed by the Officers and not by the Chairman. I'd like to thank all of those who have carried out those duties with such dedication during my tenure and in particular **Ottoline Leyser** who retires this year having done a brilliant job as Treasurer. A special mention is also due to **Kate Storey** who, though only an "ordinary" committee member, has helped bring the Society into the 21st Century by completely re-vamping our Website. This projects a very positive image of the Society and is well worthy of its increasingly prominent role as the principal medium for communication between the Society and its members.

Much has changed in the world since 1999 including the loss to the developmental biology community of some of its leading figures; I feel a particular poignancy that just as my assuming this position was occasioned by the sudden and tragic death of **Nigel Holder**, its drawing to a close has coincided with the passing last week of another pioneer of zebrafish neurobiology, **Jose Campos-Ortega**. José of course made major contributions both to our understanding of zebrafish development and of *Drosophila* neurobiology, his identification and groundbreaking characterisation of the "neurogenic genes" in the early 1980s defining the field for the next twenty years. He will be sadly missed, not only for his scientific contributions but also for his charm and urbanity.

In the interim, we have also mourned the passing of **Rosa Beddington**, a scientist of extraordinary talent whose unique contributions to the field the Committee felt could most fittingly be commemorated by the institution of an annual prize for the best PhD thesis in Developmental Biology submitted to a U.K. University. It was my great pleasure to present this award – the Beddington Medal -for the first time at this year's Spring Symposium to **Anne-Gaelle Rolland-Lagan** whose PhD thesis entitled " Quantitative analysis of petal morphology in Antirrhinum majus: an interdisciplinary approach" - an excellent example of an integration of biology with pure computing techniques - was jointly supervised by **Andrew Bangham** at the School of Information Systems at University of East Anglia and **Enrico Coen** at the John Innes Institute, both in Norwich.

The new format of the Spring Symposium continues to prove popular, this year's meeting again being oversubscribed. I am particularly pleased that this was achieved in collaboration with the Genetics Society, thus cementing a relationship between the two Societies that I hope can be sustained into the future.

Special thanks are due to **Jayne Richards** of the Gen Soc for all of her efforts in ensuring the smooth running of this enjoyable and stimulating meeting, two memorable highlights of which were the Waddington Lecture, delivered in inimical style by **Jeff Williams**, and the session celebrating the career and contributions of **Chris Graham**, one of the pioneers of mammalian developmental biology in the U.K.

Another important innovation of this year's meeting was the involvement of the International Society for Developmental Biology (ISDB) in its organisation. The ISDB has undergone a major rejuvenation under the leadership of **Eddy de Robertis** over the past five years and we are grateful to him for the support that he gave us this year. Not only did ISDB contribute towards the cost of the meeting but Eddy also accepted our invitation to deliver the Plenary Lecture - at his own expense! Eddy's mission to expand the activities of the ISDB, especially by arranging meetings for emerging communities such as in Latin America and Eastern Europe has our full support and in reflection of this we have recommended that the BSDB renew its subscription to the ISDB, a proposal that was endorsed by members at the Spring AGM.

Continuing the "International" theme, it was very gratifying that the joint meeting with the French Developmental Biology Society last autumn met with such enthusiastic support. By all accounts, there was an overwhelming view on both sides of the channel that this format should be repeated – and it seems that there is equal enthusiasm to initiate similar bi-lateral arrangements with other European Societies. I'd like to record our thanks to **Alfonso Martinez-Arias** for getting this initiative off the ground and I look forward to attending similar joint meetings myself in the future.

Well, I guess that is just about all that I have to report: it has been a pleasure and a privilege to represent what I consider to be the best Developmental Biology Society in the world, a status that will undoubtedly be sustained as the reins are passed to the more than capable hands of our new Chairman **Matthew Freeman**, to whom I wish every success.

Phil Ingham, Sheffield

Waddington Medal 2004

The award of the Waddington Medal recognises not only outstanding research achievement by a UK based developmental biologist but also contribution to the vitality of the subject, be it through teaching, mentoring or intellectual leadership. Although relatively few individuals fulfil all of these criteria, the choice is never easy: This year, the BSDB committee elected to award the Waddington Medal to **Jeff Williams**, Wellcome Trust Principal Research Fellow at the University of Dundee.

CH Waddington was arguably the most original and influential British developmental biologist of the 20th Century. In a career spanning 40 years, he published over 18 books including his "Introduction to modern Genetics" in 1939 and the seminal "Principles of Embryology" in 1956. Waddington began his career as a geologist but became an embryologist, performing the first organiser grafts in the chick embryo in the early 1930s. He had an acute awareness of the role of genes in development long before developmental genetics became fashionable and indeed was Professor of Animal Genetics at Edinburgh for over 20 years.

Jeff Williams undertook research for his PhD at the ICRF before going to MIT on a Harkness Fellowship to do post-doctoral work in the lab of **Sheldon Penman**. In 1975 he returned to the ICRF to work at their Mill Hill

Waddington Medal

laboratories with **Julian Gross,** where he subsequently established his own lab under the mentorship of **John Cairns**. In collaboration with **Alec Jeffreys**, Jeff cloned and characterised the alpha and beta globin genes from Xenopus. At this time, he was one of the pioneers in applying molecular biology to developmental biology and he had a major influence on research throughout the Mill Hill labs and beyond. In the late 1970s he devised the screening methodology for cloning genes on the basis of their differential expression in two cell populations and began applying this to the cloning of developmentally regulated genes in Dictyostelium. Through the identification of such genes, he discovered that there are several molecularly distinct types of prestalk cells – he also used these genes to show that DIF induces prestalk cell differentiation. He demonstrated that stalk cell differentiation is under negative control that is lifted by PKA when fruiting body formation begins. He also showed that different pre-stalk cells differ in their chemotactic behaviour and that patterning occurs by cell sorting.


Waddington Medal Winner, Jeff Williams, in full song at the BSDB Spring Conference

Jeff served on the BSDB committee from 1989 to 1994 and represented the Society on the board of the Company of Biologists from 1992. He is a long serving member of the Development Editorial Board and has served on the funding panels of the CRC, MRC and Wellcome Trust.

Few will forget Jeff's Medal Lecture at the Spring meeting, not only for his understated yet fascinating personal scientific history of the last twenty five years, but also for his extraordinary solo performance – on electric guitar and vocals – of his self-penned song reflecting – somewhat ruefully - upon the way science has changed during his career (see the BSDB website if you missed it. *Ed*). Never before have I witnessed such an ovation as greeted this song at a scientific meeting – a remarkable performance to mark an equally remarkable career.

Phil Ingham

News (& Views)

Who's Out and Who's In: Changes to the BSDB Committee

Out: Phil Ingham (Chair and my boss, so what can I say; he was great); **Ottoline Leyser** (stalwart Treasurer steered ship through stormy waters, now finds quiet harbour) and **Kate Storey** (website rejuvenator extraordinaire, surf-on).

In: Matthew Freeman (Chair-elect, my new boss so I tread with care. Welcome Matthew, you have the Comm); **Betsy Pownall** and **James Briscoe** (new members both, welcome to the crew).

New Officers, New Posts

As noted Matthew takes over from Phil as boss. **Guy Tear** bravely assumes Ottoline's mantle of Treasurer, but his task is eased by the creation of the new post of **Travel Grants Secretary** which **Mike Jones** takes on. Mike's task, as the name suggests, is to handle future applications for Travel Awards. The other new post is that of **Education Officer**, whose role is to promote the public understanding of science specifically with regard to developmental biology. This initially will be jointly held by **Corinne Houart** and **David Wilkinson**. Last but not least, **Andrew Jarman** takes over as Website Co-ordinator.

Biosciences Federation (BSF)

The interests of the BSDB and its members continue to be represented to government and society at large by the recently formed Biosciences Federation (de facto successor to the UK Life Sciences Committee). Our representative to this committee is **Guy Tear**, who will be happy to pass on any of your concerns should they arise. See also http://www.bsf.ac.uk

Beddington Medal Award 2004

We received five nominations for the first award of the Beddington Medal. The winner this year, **Anne Gaelle Rolland-Lagan,** presented her work at the Spring Meeting in Warwick. This award, which is given in memory of **Rosa Beddington**, is intended to recognise outstanding achievement by a PhD student throughout the course of his/her research project.

Changed Nomination Procedure for the Beddington Medal 2005

Nomination should be for a thesis submitted in the period from **1st October 2003 to 31st December 2004**. Each nomination should include a one page letter from the thesis supervisor, a two page summary outlining the background and findings of the thesis and documentation verifying the date of submission. Nominations should be sent to the BSDB Secretary **Robert Kelsh**. Note the **deadline for submissions is 31st December 2004**, (not 31st January 2005 as previously indicated)

See website for further details.

Development Subscription Rates

For current discounted subscription rates, please see the website (http://www.bsdb.org)

BSDB-funded Summer Students

The BSDB committee recently indicated that the Society would make available a limited amount of money to fund undergraduate students who wish to work in de-

velopmental biology labs during their summer vacation. Funds are tight at the moment, but bear this in mind for next year!! Enquiries to the Treasurer, **Guy Tear**.

MRC Newsletter Online

The latest issue of **MRC Network**, the Medical Research Council newsletter, is now available online.

The Spring 2004 issue provides full details of major changes to the MRC's grant schemes and to its Board and committee structures. It also celebrates the 60th anniversary of the MRC Cognition and Brain Sciences Unit, and reports on the success of the Government's Foresight Cognitive Systems project. Plus the latest on stem cells and the MRC Task Force on the National Institute for Medical research, and regular roundups of MRC people, funding opportunities, events and recent research.

If you have comments or suggestions for future issues, or would like to join the mailing list to receive a printed copy, please follow the simple instructions at http://www.mrc.ac.uk/mrc-network

Closure of Bioinformatics Resource

The UK Medical Research Council has decided to close the **Research and Bioinformatics Divisions of the RFCGR** (formerly **HGMP**) by 31 July of 2005. The Bioinformatics Service will close. **MRC geneservice** is not being closed and will remain in business. The following information will be updated when we know more. The URL for this announcement is:

http://www.rfcgr.mrc.ac.uk/About/closure.html

and the FAQ with any news is:

http://www.rfcgr.mrc.ac.uk/About/closure_faq.html

New registrations are still being accepted and will continue as registration is needed to use the services of MRCg.

The aim is to keep the bioinformatics service running for as long as possible. Alternatives are actively being sort so that users can be directed elsewhere. A specific date for the ending of the service will be announced-when the closure process is clearer. This is believed to be after 30 April 2005, however, if key staff leave operations will become difficult.

EMBOSS:
You will be able to download the EMBOSS sequence analysis package and install it locally after we have closed, but the GCG license will not be renewed and GCG will cease to be available after 1 January 2005. The EMBOSS homepage will be moved to:

http://emboss.sourceforge.net/

Training courses:
There will be no RFCGR courses in 2005. The Edinburgh Mouse Atlas of Gene Expression (EMAGE) course will be run in August and will continue to be run in the future.

Fugu genomics project:
The data from this project will continue to be available, mounted elsewhere in the future.

Microarray Programme:
The Microarray Programme will continue its array distribution service to the UK academic community, and its research and development activities until further notice. We are currently seeking funding to extend and relocate this programme, and an announcement will be made about progress towards this end at a later date.

Martin John Bishop

Views

The future of NIMR: A letter from David Wilkinson

Dear BSDB member,

The MRC Task Force committee is considering the future of NIMR, London, and in its final phase of decision making is asking for opinions by completion of a consultation document (**deadline 4th June**). My summary and opinions on several key issues may be helpful. There are many more detailed pros and cons for each of the options being considered, and the below is just the bottom line. A summary of the NIMR response and related documents can be found at: http://www.nimr.mrc.ac.uk/future/

1. **Should NIMR stay at Mill Hill or be moved to central London in order to be closer to a hospital?** Many practising research clinicians that we have consulted are sceptical about whether being next to a hospital would promote increased clinical collaborations (few of the relevant specialities would be in that hospital), and can be a disadvantage (can inhibit wider collaboration, more difficult to protect research time of practising clinicians). Our strong preference is to invest on the Mill Hill site that has existing first rate and extensive facilities (e.g. animal facilities), much space for building further facilities for use by London University partners and nationally, and critical mass and multidisciplinarity. If the NIMR moves, it is crucial that a central London location is sufficiently large to retain these important assets.

2. **Should the NIMR continue to be a multidisciplinary basic research Institute (it currently comprises of four main areas: Genetics and Development, Neurosciences, Infections and Immunity, and Structural Biology)?** This is strongly supported by the MRC Task Force, and it is widely believed that multidisciplinary basic research will be increasingly important for clinical translation during the long time scale under consideration. In my view, developmental biology will continue to have a crucial role, both in 'postgenomic' fundamental studies of gene function and gene networks, and in clinical translation such as stem cell biology. However, an option being considered is that the NIMR becomes more focussed, for example on diseases. A related possibility is that up to 50% of the groups would be carrying out clinical research, although it is not described whether this would substitute for basic research, or whether basic research would be maintained at approx its current level (in which case NIMR would double in size). A further possibility is that due to space constraints a move to central London may cause the NIMR to be split between several sites or buildings (see Nature 429, 117). The most important feature of the NIMR is that having multiple disciplines, each with critical mass, within one building has established its success in cross-disciplinary interactions (for more information see the publication highlights booklet at http://www.nimr.mrc.ac.uk/publications/highlights/) Subdividing the NIMR would dismantle this, and many

of you will be familiar with the difficulties in promoting interactions even between adjacent buildings.

3. **Should the NIMR have an increased role in clinical translation and clinical research training?** We strongly support this, and it builds upon the many existing collaborations with hospitals (mainly in London) and the clinicians carrying out translational and basic research at the NIMR. The major constraining factor is the career structure and funding for research training of clinicians at the national level.

In summary, the multidisciplinarity and location of NIMR are key issues for its future role, and our preferences at NIMR for the options being considered are: First, option 1 (appropriate re-development of the Mill Hill site); Second, options 2 and 4 (a move to a single site in central London if this has definite advantages that outweigh the disadvantages, and only if it retains the ability of NIMR to carry out multidisciplinary research under one roof). We are strongly opposed to options 3 and 5 that involve splitting of the research disciplines to different sites or buildings.

Your input into the Task Force consultation is very important for the future development of NIMR. The MRC prefers submission of completed questionnaires to be online via the www.mrc.ac.uk website (you can link to this via http://www.nimr.mrc.ac.uk/future/); you can also send it or any general comments via taskforce@headoffice.mrc.ac.uk. All comments will be collated by an independent analyst and summarised for the Task Force.

Thank you.

David Wilkinson
National Institute for Medical Research
email: dwilkin@nimr.mrc.ac.uk

Framework 6: Do you love it or hate it? A letter from Bart de Strooper

Dear Colleague

Have you heard about ELSO's petition 'for a new and ambitious European science policy'? The idea is to gather 'grass-roots' evidence of researchers' dissatisfaction with the current Framework Programmes to present to the European Commission (EC), Parliament and Council.

In the first five working days alone we collected over 1000 signatures, The Scientist online news service picked up the story, and the EC itself responded with a defensive press release!

This demonstrates the strength of feeling in the research community about the need to reform the Framework Programme and to create a new funding agency for basic research. It also shows that our message is getting through to Brussels!

We are aware of the EC's proposal to fund basic research in the next Framework Programme in the form of an investigator-driven **European Research Council**. Our campaign aims to support this move and we want you to sign the petition and spread the word to your colleagues. You can do this using the facility built in to the petition web page. All you have to do is to go to the petition web site, sign yourself and fill in as many e-mail addresses of colleagues as possible. **http://ultr23.vub.ac.be/petition**

Here's a quote from a colleague in Eastern Europe who was one of the first to sign:

"I spent most of my life in a very bureaucratic communist regime – they also liked very much the baroque schemes of 'complex projects', unrealistic multilateral collaborations within the country and within the Soviet block, etc. We hated it, BUT IT WAS NOTHING COMPARED TO BRUSSELS!!! Actually, it was a surprise for me that scientists from free Western countries so easily conform to that monster and do not protest... Your text is like a stream of fresh water in that deadly marsh of self-serving bureaucracy "

We hope that you will support us in this endeavour to produce a better European science policy in FP7.

Bart de Strooper
Flanders Interuniversitary
Institute for Biotechnology, Belgium

If you have news, letters or comments you would like aired to the developmental biology community, please write to the Editor, Andy Furley a.j.furley@sheffield.ac.uk

Please note, the opinions and views expressed in this column are those of the signatories. Inclusion here is not intended to indicate endorsement by the BSDB.

From the Treasurer

Travel grant update

As many of you will have noticed, requests for all categories of travel grant now exceed our budget, even with the generous contribution provided by the Company of Biologists. In the past we were able to offer full grants for all student and post-doc members who applied for funding to attend our own meetings; up to £400 for most applicants to attend an over seas meeting; and up to £500 for most applicants to attend a course or go on a laboratory visit. The squeeze on resources has come from a combination of more applicants and high meeting costs. The BSDB committee decided that it would be better to spread the limited funds across more applicants, rather than fully funding some, and providing nothing to others. In order to do this the follow procedures will be rigorously adopted:-

Grants to attend BSDB meetings

All applications for travel grants to attend BSDB meetings must be in the hands of the Travel Awards Secretary (**Mike Jones**) by the published deadline. This deadline will usually be ONE MONTH before the close of registration for the Spring meeting and at a similar time for the Autumn meeting. However, the precise dates will be published on the BSDB website and the Newsletter. These will be strictly adhered to. This will allow applications to be assessed and funds to be distributed in time for applicants to discover the size of their award before having to register or accept their place at the meeting.

***Deadline for Autumn Meeting 2004: 4th June, 2004**

Grants to attend overseas meetings and courses

Because of the multiple deadlines for registration for these meetings, it is necessary to process applications year-round. As before, applications will be collected over each month and awards will be made according to the remaining travel budget. The total amount needed will be taken into account so that an applicant who needs £1000 to attend an overseas conference will be more likely to receive the £400 maximum than one who needs a total of £500. Note:- those artificially over-inflating their request will be penalised.

Please take note of these new rules, which will hopefully allow an equitable distribution of funds among the membership.

To apply for a travel grant:

- Members should complete a Travel Grant Application form and send it to the Travel Awards Secretary (**Mike Jones**). **Forms** can be downloaded from the BSDB website: www.bsdb.org
- **Applications for grants to attend a BSDB meeting must be in the Travel Award's Secretary's hand by the published deadline, usually one month prior to the close of registration.**
- For other meetings, application 3-4 months in advance is advised 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**: Noone will be awarded more than one travel grant for an overseas trip per year.

Small Meetings

Members may approach the Treasurer for seed funding to help with organising developmental biology events (eg one-day meetings) that involve other institutions and at which students and postdocs 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.

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.

Summer studentships

The BSDB Committee recently agreed to make a small amount of money available to support undergraduates who wish to spend their summer vacations working in a developmental biology laboratory. These funds will become available in summer of 2005. The criteria on which they will be awarded will be announced in the next Newsletter.

Subscriptions

Following discussions at the AGM (Spring Meeting 2003), the BSDB Committee the Society has increased its annual subscription fees as follows:

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

Existing members should have recently received a letter instructing them how to update their Banker's orders for future payments. If you have not received this letter a copy is available on the BSDB website: http://www.bsdb.org

Time to do the decent thing……

Student members who joined in **2000** are reminded that they should quickly upgrade their subscription to £35 before they are **humanely culled f**rom our records.

Guy Tear
guy.tear@kcl.ac.uk

BSDB Financial Statement 2002 - 2003

BRITISH SOCIETY FOR DEVELOPMENTAL BIOLOGY

FINANCIAL STATEMENT YEAR ENDING JULY 31st 2003

Balance Sheet

2001/02 £		2002/03 £
	Investments	
91,969	Baillie Gifford Managed Fund (1,2)	85,985
	Current Assets	
27,854	Barclays Bank High Interest Account (2)	10,187.75
8,972	Barclays Bank Current Account	16657.49
2,875	Barclays Bank: Louis Hamilton Account (3)	2885.62
39,701		29,731
1,954	Less: Unpresented cheques	6247.81
37,747	Net Current Assets	23,483
129,716	**Total Funds**	**109,468**

Income & Expenditure Account

Income	£	Expenditure	£
Membership (Standing Order)	16294	Grants (Travel & Courses)	39126
Membership (Cheques)	93	UKLSC etc	2720
Capitation Fee (CoB)	13993	Newsletter	8027
Travel grant fund (CoB)	20000	Small meetings and other DB meetings	3855
Sale of addresses	1300	01/02 meetings and 03/04 meetings	22
Refunds	2312	Committee & administration	5033
		Bank charges	17
		Prizes	1055
		Autumn Meeting 2002 (Nottingham)	8342
Interest and Investment Appreciation:		Spring Meeting 2003 (Warwick)	413
Barclays High Interest a/c	334		
Barclays Louis Hamilton a/c	10		
Barclays Current Account	10		
	354	Total Expenditure	**68,610**
		Net Surplus for the Year	**- 14,265**
Total Income	**54,345**	Unrealised Gains on Baillie Gifford Managed Fund	- 5,983
		Fund balance at 31st July 2002	129,716
		Fund balance at 31st July 2003	**109,468**

Notes

These accounts were prepared under the historic cost 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 Baillie Gifford and Barclay High Interest Account valuations are on 30.6.03

2. This account includes £25,500, the surplus on BSDB practical courses; this is used to provide grants for members to go on courses, and £2,700 was spent in 2002/03 for this purpose.

3. This is the only restricted account and no call was made on it in the financial year 2002/03

Graduate Students

Welcome

I hope you like the new-look graduate section; Leigh (Wilson) worked hard to put it together. As you will gather (below) Leigh has now retired as your student rep, as she is no longer a student. My name's **Caroline Parkin**, and I'm the new Graduate Student rep. I hope to continue the work Leigh has started on building the graduate student community. While the BSDB are updating the **website** I thought it would be a good idea to introduce a student page, at the centre of which would be a **message** board. This could be a really useful resource for **sharing ideas and protocols**, plus we could use it to request papers or materials from other labs. I'd also like to have some more input from you guys, I want **more news and reviews**, (conferences, books, commercial reagents, films, chocolate bars…) and also your thoughts on anything to do with your work. So this is a plea to anyone with a desire to communicate with the rest of the development world to **send me your ideas and thoughts** for the website and newsletter. Also I'm here to communicate your views to the BSDB committee, so if you have anything to say, let me know. Email me at **emujuice@hotmail.com** or **mdp02cp@shef.ac.uk**. Bye for now.

A book review out of place

Because of it's particular interest for those new to science, I have included this review here. But of course there is much that those of us longer in the tooth may find useful, so don't shy away! Of course, it's also here because the graduate students haven't been very productive this issue, so get your fingers out guys….. Ed.

How to Write and Illustrate a Scientific Paper.

Björn Gustavii
Publisher: Cambridge University Press 2003
Paperback: ISBN 0-521-53024-5 £13.95
Hardback: ISBN 0-521-82323-4 £40.00

This book is aimed at writers of scientific papers of all levels from novice to expert and contains tips to assist in the preparation of a paper. The main body of the text is divided into chapters each of which covers a separate section of a paper including how to present the results and structure the methods. In addition there are chapters on more general points, ranging from how to write a covering letter to choosing a title. There is also advice on such things as how to generate interest with an opening sentence.

The book was easy to read and it is well structured. It is separated into distinct chapters, which mimic the sections included in a scientific paper and also includes a number of sections covering more general issues. The author makes good use of examples to illustrate various points. A bad example is shown first and this is then followed by details of how to improve it and then a good example. The examples are often light hearted and humorous and have been taken from actual journal articles although only the good examples are referenced. A chapter is dedicated to correcting proofs with a comprehensive list of correction marks commonly used, this is useful as most postgraduates will not have come across these. There are a number of chapters that cover different aspects of scientific styles including sections covering the mechanisms of scientific writing, types of referencing and using appropriate abbreviations. The book also provides a list at the end detailing further reading and references.

There are a number of chapters which cover how to illustrate a paper with extensive information on preparing and designing tables and graphs. This section is very useful and well presented and it is particularly effective here to have a bad example and good example to compare. It would however have been useful to also include a section on producing, labelling and using pictures or photographs for figures, although the author does include two references for further reading in this subject matter. The book is aimed towards Biology and Medical students, but almost all of the examples used are from medical rather than biological papers. However this does not make the examples difficult to understand for those not in that field.

Overall I found this book to be enjoyable and well written. It is an ideal reference book to have at hand when writing and organising many types of scientific literature. I am sure it will be useful in the future when I am writing my thesis.

Laura Wagstaff
School of Biological Sciences
University of East Anglia

Warwick again, but what a great meeting

The University of Warwick was host again to this year's Spring Meeting, a joint meeting of the Genetics Society and the BSDB. Wide-ranging is possibly an understatement to describe the meeting's scientific coverage (from stems cells to evolution of patterning mechanisms) and diverse were the model systems presented (mouse haematopoiesis to spider neurogenesis); all-in-all a superb programme pulled together by the able hands of **Ivor Mason** and **Mike Jones** and co-ordinated by the pro-active session chairmen: **Daniel St Johnston** (polarity), **Christopher Wright** (organogenesis), **Adam Wilkins** (evolution of patterning mechanisms), **Austin Smith** (stem cells), and **Richard Gardner** (honouring **Chris Graham**).

As recipient of the 2004 Genetics Society Medal, **Peter Holland**, Linacre Professor of Zoology in the University of Oxford, made a prominent and fitting start to the meeting with a plenary lecture on 'Gene clusters, germ layers and the Bilateria'. Peter highlighted the key differences between diploblasts and triploblasts and the advantages gained by this evolving body plan. He effortlessly distilled recent work in comparative embryology that then led him to propose how evolution may have achieved the 3 germ layers of living bilaterians by using 3 different homeobox gene clusters: the hox cluster to pattern the ectoderm (incl neurectoderm), the parahox cluster to pattern the gut and the NK cluster to pattern mesoderm.

The meeting then launched into consecutive sessions on stem cells, polarity, organogenesis and the evolution of patterning mechanisms, interspersed by further plenary lectures, and medal awards. What follows are but a few of the many highlights:

Stem cells: The ability of a planarian to regenerate completely from a piece of tissue that represents less than 1/279 of the adult organism demonstrates just how useful these organisms could be in providing important insights into the mechanisms that define and regulate pluripotential stem cells. **Kiyo Agata** from RIKEN in Kobe, Japan, is tapping this potential and gave a fascinating lecture on his group's efforts at molecular characterisation of planarian stem cells, the neoblasts. Kiyo showed that neoblasts are sensitive to x-irradiation and has used this property to identify 2 populations located within the mesenchyme: a resting, slowly dividing population found on the periphery of the mesenchyme from head to tail, and a second BrdU positive population that is restricted spatially to the deeper mesenchyme located around the intestine. Kiyo also presented evidence for a stem cell regulator called noudarake, an FGFR-like molecule that is responsible for restricting a regenerating brain to the head region of a planarian. nou-darake is Japanese for 'brains everywhere' and this is what results from Ndk loss-of-function caused by RNA interference. Kiyo proposed that Ndk functions within neoblasts to inhibit FGF signalling as demonstrated by its ability to prevent gastrulation in Xenopus embryos.

Neural induction - double assurance: On the second day at the conference we were privileged to receive a plenary lecture from **Eddy De Robertis**, who is the current President of the International Society of Developmental Biologists (ISDB). Sporting his beloved Xenopus jumper, Eddy began by showing us that Xenopus neural induction begins earlier than previously thought and requires the activity of 2 distinct signalling centres: the Nieuwkoop centre and the preorganiser BCNE (Blastula Chordin and Noggin Expressing) domain. He proposed a model whereby following an early b-catenin signal, the Nieuwkoop centre induces endomesoderm and the BCNE predisposes the prospective neurectoderm to neural induction in response to endomesodermal signals. Eddy went on to present a molecular mechanism for the integration of anti-BMP, FGF and IGF signals that induce neural differentiation: BMP inhibition is achieved by Chordin/noggin inhibition of BMP receptors on one hand, and then by targeting the downstream BMP-effector, Smad1, whose activity is inhibited by phosphorylation via FGF/IGF activated MAPK activity. BMPs thus require low MAPK activity in order to work.

In the **Organogenesis** session, **David Wilkinson**, in a departure from the Eph-ephrin field, presented his groundbreaking data that implicates Notch signalling in boundary formation in the zebrafish hindbrain. In much the same way as Radical Fringe (Rfng) operates in the Drosophila wing imaginal disc, David showed that this molecule modulates notch signalling in boundary cells via activation by Delta. Using a series of striking fluorescent images, David showed that activation of notch signalling leads to cells segregating to the boundaries. Furthermore Notch signalling acts to maintain boundary cells by preventing premature neuronal differentiation. Knockdown of Rfng in boundary cells leads to spreading of boundary cells. Proneural and delta gene expression in cells adjacent to the boundary restricts boundary spreading. Therefore lateral inhibition is working in both directions and Notch activation couples the regulation of location and differentiation in hindbrain boundary cells.

The prestigious Waddington medal was awarded to **Jeff Williams**, in honour of his enormous contribution to British developmental biology over the last 35 years, not least his most recent seminal work on cellular differentiation in the slimemould, Dictyostelium. He made a lasting impression by concluding his lecture with an audiovisual rendition of his hilarious: '**yesterscene meets Stratagene**' - a poem set to the Beatles tune, 'Yesterday'– quote: 'It came about as a result of having to recall all the changes that have occurred over my career and then extrapolating them to imagine how Darwin would view our present scientific culture'.*(see "Yesterscene" link on the website: http://www.bsdb.org)*

Vertebrate development: a session in honour of Chris Graham: Chris Graham started as an amphibian embryologist doing a D.Phil with **John Gurdon**. Postdoctorally, he switched to mammalian development with initial guidance from the late **David Kirby**. In this field, his wide-ranging research has included meticulous analysis of cell fate and lineage in early development, use of teratocarcinomas as a model system for the embryo, the study of imprinted genes implicated in growth and, most recently, efforts to erase the programming of differentiated cells. In addition, through his undergraduate teaching and pre- and post-doctoral research training, he has also played a seminal role in recruiting able people to the field of mammalian developmental biology. Four such people featured in this session, **John Heath**, **Liz Robertson**, **Andy McMahon** and **Frank**

BSDB/GenSoc Spring Meeting 2004: Review

Constantini, together with his PhD advisor: Sir John Gurdon.

Evolution of patterning mechanisms: This gem of a session was reserved for last and featured perhaps the most unusual set of model organisms: spiders (can you imagine one of these embryos escaping!), centipedes, sea squirts, amphioxus and polychaete worms, together with a more familiar beast, the zebrafish. Using the latter, **Vicky Prince** gave an elegant account of her lab's continued efforts to identify the mechanisms underlying brain evolution. Building on her studies of the function of duplicated Hox genes in Zebrafish hindbrain patterning, Vicky's group are now analysing how duplicated neural circuits, brought about by altered hox gene expression, can be used as substrates for evolution. Misexpression of hoxb1b causes a homeotic transformation of rhombomere 2 (r2) such that ectopic Mauthner neurons form in r2 as well as in their usual position at r4. Using calcium imaging to test function and laser ablation to delete neurons, they were able to show that the ectopic neurons are fully functional and able to provide the larval fish with a startle response in the absence of endogenous r4 Mauthner neurons.

The scientific programme was enhanced this year by the easy access to the posters – the effort put into making the posters was aptly rewarded by the amount of exposure gained by the organisers scheduling tea, coffee and lunch in the poster venue, as well 2 formal poster sessions. A spot of wine tasting, the conference dinner and the boisterous Ceilidh added some culture to the full and entertaining programme enjoyed by all!

Christine Ferguson

MRC Centre for Developmental Neurobiology, KCL

.

Royal Society Offer

The Royal Society has recently published an issue entitled **"Epigenesis Versus Preformation During Mammalian Development,"** organised and edited by Professors **Richard Gardner**, **Davor Solter** and **Azim Surani**. The aim of the issue is to provide a review of recent findings in areas such pluripotency and lineage restriction of embryonic stem cells, Nuclear reprogramming, and Regulation of germline stem cells. Further information can be found by following the link below:
http://www.pubs.royalsoc.ac.uk/phil_trans_bio_archive.shtml
The RS is offering this issue at a discounted rate to BSDB members - £45 instead of the usual £85. For further details please contact:

royalsociety@twoten.press.net

Next BSBD Meeting

Genesis of the Nervous System
27th - 29th Sept 2004
University of Birmingham

Findings From Vertebrate And Invertebrate Model Organisms In The Study Of Nervous System Development

Organisers: Alicia Hidalgo and Guy Tear

PROGRAMME OUTLINE

Monday 27th September 2-6pm

Lineage and diversity in early neurogenesis
Jon Clarke (UK)
Bill Chia (Singapore & UK)
Yves-Alain Barde (Germany)

Cell number regulation: proliferation and survival
Alex Gould (UK)
Charles Ffrench-Constant (UK)
Nick Baker (USA)

Poster Session: 8-10pm

Tuesday 28th September 9-6pm

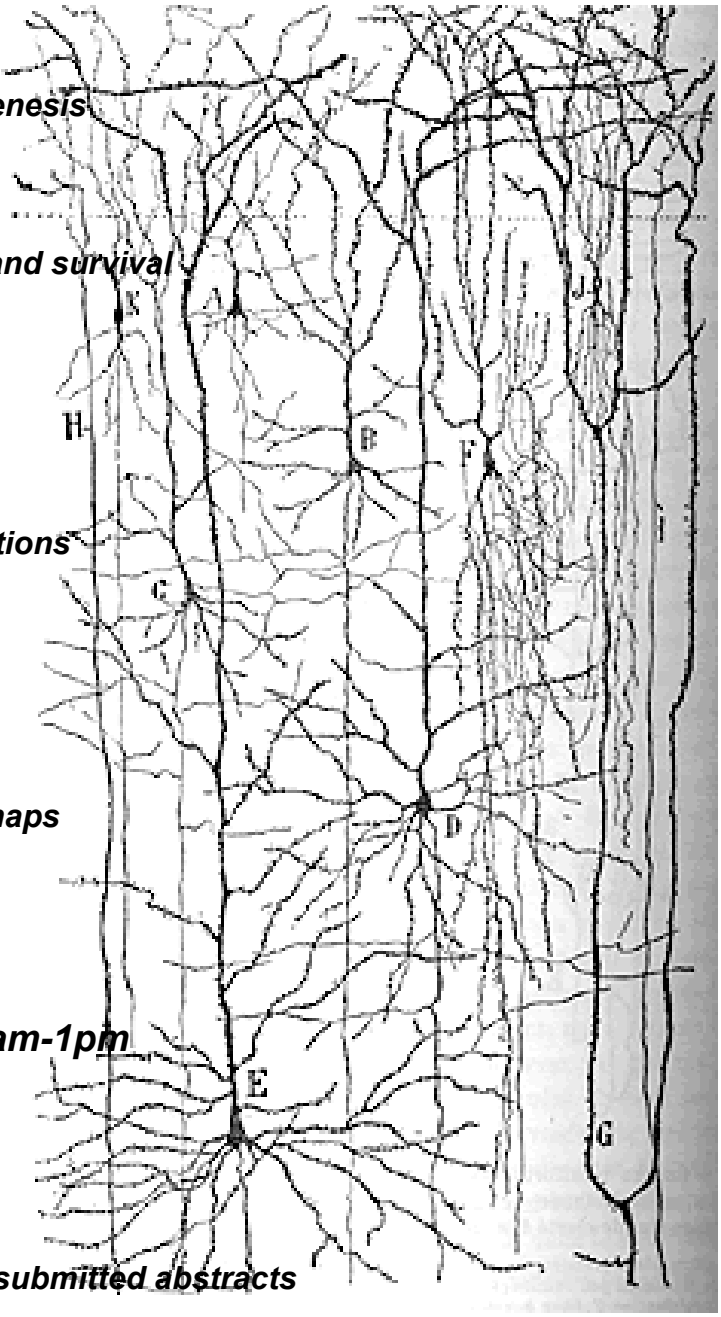
Neuron-glia and neuron target interactions
Karen Christopherson (USA)
Alicia Hidalgo (UK)
Alun Davies (UK)
Iris Salecker (UK)
Patrica Salinas (UK)
Jasprien Nordermeer (Holland)

Dendrite formation and topographic maps
Matthias Landgraf (UK)
Christine Holt (UK)
Greg Jefferis (USA)

Poster Session: 8-10pm

Wednesday 29th September 9am-1pm

Disease and repair
Amritpal Mudher (UK)
Frederic Saudou (France)
Damian Crowther (UK)
Brian Anderton (UK)
Short talks will also be selected from submitted abstracts



For further information and online registration please visit:
www.bsdb.org

Abstract Submission and Registration Deadline –
4th June 2004

Future BSDB Meetings

Spring 2005
Cell and Developmental Biology Annual Symposium Joint with the BSCB

6th-9th April, Warwick University, UK
BSDB Organisers: Alfonso Martinez-Arias and Phil Ingham

Topics to include:

- **The Development Of Marine Organisms**
- **Guidance Systems**
- **Regeneration And Wound Healing**
- **Epithelial Migrations And Cell Movement**
- **Space And Time**
- **Systems Approaches**

Autumn 2005
Wnt Signalling

Organisers: Pippa Francis-West, Stefan Hoppler & Adrian Harwood

Beddington Medal 2005

Nominations should be for a thesis submitted between **2nd September, 2003 and 31st December, 2004**. Each nomination should include a one page letter from the thesis supervisor, a **one** page summary outliining the background and findings of the thesis, with a further page including figures illustrating a) the main point of the thesis and b) the quality of the figures. The application should also include documentation verifying the date of submission. Nominations should be sent to the BSDB Secretary (**Robert Kelsh;** contact details in back pages of this issue).

Next Deadline 31st December, 2005
(note new deadline)

For further info see:

www.bsdb.org

Topics for Future Society Meetings

One of the major tasks of the BSDB Committee is to select topics to be covered in future meetings and then to ensure that these meetings are well organised and successful. It is obviously crucial that meetings are supported by the members of the Society, and we always welcome suggestions for future topics. If you have an original idea for:

- **a half-day theme for the Annual (Spring) Symposium**
- **a two day Autumn meeting**
- **a one day workshop**

please get in touch with the **Meetings Secretary:**
Nancy Papalopulu (np209@cam.ac.uk)

Have you seen?
BSDB Website!

Some of you may have already noticed our website has changed, thanks to the fine efforts of Kate Storey. Kate has now handed over her task to Andrew Jarman, so enquiries to Andrew please (andrew.jarman@ed.ac.uk)

New features include:

- **Resources section**. Info on where to find Fellowships etc., in particular, fellowships for returning to work after periods of absence
- **Jobs section**. Submit your ad for post-docs, PhDs, techs etc. online on the Jobs page.
- **Meeting Adverts**. Online submission of meeting and course notices, seminars etc.
- **Plus** many other new features……
- ***Suggestions*** for other features always welcome.

Check it out on:

www.bsdb.org

Other Meetings & Courses

BioScience2004 - From Molecules to Organisms

SECC Glasgow, UK

18th – 22nd July 2004

Focus topics for the meeting:

* Lipids, Rafts and Traffic
* Structure Related to Function: Molecules and Cells
* Signalling Outwards and Inwards
* Genes: Regulation, Processing and Interference
* Energy: Generation and Information
* Ethics, Education and Employment

Plenary Speakers:

* **Roger Y. Tsien** (Howard Hughes Medical Institute, La Jolla, CA, USA) - Opening Lecture
* **Stephen O'Rahilly** (Cambridge, UK)
* **Tony Pawson** (Toronto, Canada)
* **Chris Dobson** (Cambridge, UK) - EMBO Lecturer
* **Karen Vousden** (Beatson Institute, Glasgow, UK)
* **Graham Warren** (Yale, New Haven, CT, USA)

Poster abstract deadline: 23 April 2004
Early registration deadline: 18 May 2004
www.BioScience2004.org

Cajal Club Conference: 'Neuronal Networks, Building on Cajal and Szentagothai'

August 28-30, 2004

Lake Balaton, Hungary.

Travel Grants Available!

http://www.ibro.info/secondary/calendar/index.asp?mode=detail&EventID=362>http://www.ibro.info/secondary/calendar/index.asp?mode=detail&EventID=362

4th Australian Developmental Biology Workshop

Rottnest Island, Western Australia

30th September to 4th October, 2004.

Organisers: **Patrick Tam**, **Peter Koopman**, **Richard Harvey**, **Rob Saint** and **Mel Ziman**

This is an intensive workshop covering concepts and experimental approaches in the Development of common model organisms such as Drosphila, zebrafish, chick and mouse.

In previous workshops, Developmental Biologists of international standing shared their history and insights in extremely personalised meetings. Previous lecturers were Brigid Hogan, Marianne Bronner-Fraser, Konrad Basler, Paul Trainor, Rob Krumlauf, Ruth Lehmann, Richard Behringer, Nadia Rosenthal, Phil Ingham and Cliff Tabin.

This year, our guest lecturers are **Scott Fraser**, J**anet Rossant** and **Alex Schier**.

The venue, Rottnest Island, is off the coast of Perth in Western Australia and participants will be staying in resort accommodation. The island is famous for its unique local inhabitants, the quokkas. On a English "Spring" day like today, the pictures at http://www.chs.ecu.edu.au/dbw/venue.php will make your knees tremble. Bloody gorgeous mate!

The workshop is open to all researchers interested in Developmental Biology, whether they be PhD students, postdoctoral fellows or laboratory heads. Places are limited to 21.

The registration fee will be AUD$1,100 (approx. £450) which includes all food and accommodation for the duration of the workshop. Registrants will be responsible for meeting travel costs.

Applications close Friday 30th July, 2004

Further information on the workshop can be found at:
http://www.chs.ecu.edu.au/dbw/
or by contacting the local organiser Dr Mel Ziman, Edith Cowan University on: mailto:m.ziman@ecu.edu.au

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EuroScience Open Forum,

Stockholm, Sweden,

25-28 August 2004

ESOF2004 will be held in Stockholm, Sweden, from 25 to 28 August 2004. It is the first pan-European meeting highlighting science, technology and innovation for the benefit of society. The intention is to create an inspiring and exciting open forum of the highest quality, with contributions from leading scientists of international reputation, from Europe and beyond. The Forum is open to scientists, policy makers, politicians, industry representatives, journalists, teachers and the informed public. The event, initiated by Euroscience, is supported by several research councils, foundations, organisations and companies, such as the Swedish Research Council, the European Science Foundation, the Robert Bosch Foundation, the European Commission, AstraZeneca and many others. The programme will include 250 speakers from 33 countries, more than 80 scientific workshops, symposia, plenary lectures and debates spanning across all fields of science from nanotechnology to climate change, arts and science, culture and language, medicine and science policy.

More information on ESOF2004 can be found on the website http://www.esof2004.org

The Development of Animal Form: Ontogeny, Morphology, and Evolution.

Alessandro Minelli
Cambridge University Press, 2003.
ISBN 0-521-80851-0

Alessandro Minelli has produced a book on animal evolution and development that is wide-ranging and ambitious. I liked the book and would recommend it to researchers in the field. The book is a useful source of provocative ideas and numerous examples to support the arguments, many of which I had never come across before. I shall certainly be returning to the book to re-read sections, and to mine it for references.

I would say that this book is suitable for researchers in evolutionary developmental biology. It is not a book for undergraduates, or people merely wishing to dabble or get an easy introduction. The book can be demanding to read at times; the ideas come thick and fast and the number of examples cited in connection with each point at times left me a bit punch-drunk. I regularly found myself having to re-read sections, because I had lost the thread amongst all of the information that was being described, and because important new points and ideas seemed to suddenly appear out of nowhere. Minelli questions many ideas and assumptions, and at times seems to be on the honourable quest for more precise thinking and terminology. This is often useful, but occasionally he does not convincingly succeed; the question of what is a larva does not really get clarified, and the 'metagenesis' description of metamorphosis struck me as introducing another term that requires definition and clarification, without much gain. Perhaps the book might have benefited from a heavier editorial hand. But notwithstanding this effort that was required to get through it, I still enjoyed reading it and over the next few years I'm sure that it will become well thumbed.

Minelli's stated aim is to fill in the gaps that are present in animal Evo-Devo at the moment. Principally he thinks that there needs to be more theoretical work before Evo-Devo can be considered as an established field of enquiry. Minelli's view is that the major input to the field has come from the side of developmental biology, to explain the origin of adaptive traits and evolutionary novelties, whilst what can be considered as traditional evolutionary biology (such as population genetics) has so far had relatively little input. Also the endeavours of comparative morphology and investigations of postembryonic development, that were once so central to the field in the 1800's and early 1900's, have now gone 'out of focus', and we should be giving them greater attention once again.

The starting point for the book is that development can be, and should be, considered as cyclical rather than goal-directed or finalistic. In Minelli's view developmental biology at the moment is extremely adultocentric in its mindset: developmental biologists tend to only consider how to make an adult organism, or bits of it. I'm not at all sure that this view of developmental biology is entirely justified. But this is a moot point, and actually does not detract from the rest of the book, even though this theme of timing does run throughout.

This first chapter sets up the modus operandi of the book, with each chapter attempting to deal with a theme or idea that Minelli considers to be neglected or in need of viewing from a different angle. Each chapter can thus often be largely considered on its own, so that readers more interested in cuticles, size, tagmosis, axes, homology, segmentation, larvae and metamorphosis, or differentiation, will be able to focus their attention to the relevant chapters without fear of missing out too much. This approach of the book also means that each chapter can almost be considered in isolation, and stands or falls on its own merits. Given the range of the book, and its provocative and speculative tone, then I would be surprised if every reader agreed with everything that Minelli suggests. I certainly would question some of the views. However this is definitely not a negative criticism, as even if one finds that they disagree with an idea, at least it has stimulated some thought and consideration of the matter, and possibly may even lead to an experiment or test of the hypothesis.

As a flavour of the sorts of hypotheses proposed we are presented with the following views. Cuticles evolved to control morphology, and only later took on a protective or locomotary role. Development should be considered as a generic process rather than a genetic one; generic physical mechanisms and constraints lead to the convergence onto forms and processes, and the genes merely steer us within these limits. Many of the apparent complexities of development and evolution can be simplified by greater appreciation of the 'periodisation' of structures and phenomena. Tagma boundaries are fuzzy and the focus of evolutionary change, as well as tagmata being a basic principle in the organisation of bilaterian animal bodies, apparently being restricted to about 3 – 5 tagma across the bilaterians. Phylotypic stages are limited to bilaterian animals. An inability to regenerate the main body axis is another character of the Ecdysozoa. Developmental specification happens early in development, when cell number is low and anlage are small, as there are limits to the distances that morphogens and signalling can act over. The 'dual animal' consists of ectomesoderm and endoderm with largely independent specification and development, and crosstalk between these primary germ layers is a secondary phenomenon. There is no obvious correlation between body miniaturisation and cell number except in the context of phylogenetic history. Appendages evolved by axial paramorphism. Segments are generic, and homologous genes and even gene batteries come to be involved in their development independently. The generic mode of development and the 'dual animal' were my personal favourites from this list, and I will certainly be returning to these sections of the book again.

As can be seen from this long list, which is by no means complete, Minelli covers a lot of ground and provides food for thought for almost anyone interested in the evolution of development. The depth of his reading is impressive, particularly of the zoological literature as well as the more traditional developmental literature, and the reference list is pleasingly long (a semi-retired zoologist working just along the corridor from me was pleasantly surprised when I told him that one of his papers from 1971 had been cited; a paper that he thought had only ever been referred to 5 or 6 times and had long since disappeared from the light of day!). I would be amazed if any reader of this book did not finding something new in it, and so I would certainly recommend it.

David Ferrier, Oxford

Book Reviews

Developmental Biology 7th Edition

Scott F. Gilbert
Sinauer Associates, 2003
ISBN 0-87893-258-5 £39.99 (Amazon)

The 7th edition of Gilbert's Developmental Biology is like a sumptuous buffet meal. With 838 pages of text and generous servings of beautiful illustrations, many of which are in colour, the book should meet the nutritional requirements of most undergraduate and postgraduate courses in developmental biology. It also serves as a rich dietary supplement for medical students who are taking a module in human embryology.

For the gourmet who is familiar with previous editions of this book, there should be no difficulties in navigating through the updated text, in which the same organisation and writing style as before have been maintained. Gilbert walks the reader through the subject at a leisurely pace, presenting not just the facts but the key experiments that led to them as well. Introductory chapters set the scene by providing a brief background on the subject and laying down basic concepts and experimental tools. These are followed by detailed accounts of the development of invertebrate and vertebrate model organisms. There is also a chapter on plant development, contributed by Susan Singer. The book concludes by examining the influence of developmental biology in evolution and ecology. Given the amount of coverage in the popular press on stem cells and cloning in recent years, it is timely that a new chapter devoted to the medical applications of developmental biology has been added. As in previous editions, additional snippets of information are provided in Sidelights and Speculations boxes and through links to the web site that complements the book.

For students in urgent need of a quick snack on the night before their finals, Gilbert has provided a Snapshot Summary at the end of each chapter. Together with the figures in the book, these summaries provide a rapid means of revising the subject without having to plough through the entire text. Of course, full nutritional value cannot be obtained unless students have already invested some time towards digesting the main meal during the academic year.

Worthy of special mention is the great dessert that accompanies the book: The Vade Mecum2 CD-ROM is arguably the next best thing to having a personal developmental biology laboratory. The 140 QuickTime movies on the CD-ROM almost literally breathe life into the subject. Also found on the disc is a complete PDF version of Mary Tyler's Developmental Biology: A Guide for Experimental Study. This is a helpful resource for lecturers planning laboratory work for their students. However, it is disappointing that a section on mammalian animal models has not been included.

Overall, the book is an excellent read and does a brilliant job of capturing the wonders of developmental biology. It is not difficult to see why it has been, and is likely to continue to be, a favourite text among lecturers and budding developmental biologists.

George Yip,
National University of Singapore

Books for Review

I always welcome suggestions for future book (& meeting) reviews. If you know a book (or meeting) you think should be reviewed, please contact me (Andy Furley). For books, I will arrange for a copy to be sent to you gratis. Below are some suggestions:

Invertebrate Zoology – 7th Edition, Ruppert, Fox and Barnes. Thomson Learning. "The return of a classic"

Genesis: The Evolution of Biology, Jan Sapp. OUP. ISBN 0195156196

Evolution – 3rd Ed. Mark Ridley. Blackwells. ISBN 1405103450

Readers Of The Book Of Life. Anton Markos. OUP. ISBN 0195149483

George Beadle: An Uncommon Farmer. Paul Berg & Maxine Singer. CSHLP. ISBN 0879696885

Biased Embryos and Evolution
Wallace Arthur
The first book on Evolutionary Developmental Biology that is for undergraduate and general readership.
http://titles.cambridge.org/catalogue.asp?isbn=0521541611

Shaping Primate Evolution: Form, Function, and Behavior Edited by Fred Anapol, Rebecca Z. German, Nina G. Jablonski
Series: Cambridge Studies in Biological and Evolutionary Anthropology, No. 40
Explores how form is described in primate biology, and the effects of form on function and behavior.
http://titles.cambridge.org/catalogue.asp?isbn=0521811074

Evolution: From Molecules to Ecosystems
Andres Moya and Enrique Font
Paperback 0-19-851543-X £37.50
Hardback 0-19-851542-1 £75.00
http://www.oup.co.uk/isbn/0-19-851543-X

A Practical Guide to Developmental Biology
Melissa Ann Gibbs
0-19-924971-7
£16.99 Paperback
http://www.oup.co.uk/isbn/0-19-924971-7

Inborn Errors of Development The Molecular Basis of Clinical Disorders of Morphogenesis
Edited by Charles J. Epstein, UCSF, Robert P. Erickson, U. Arizona, USA, and Anthony Wynshaw-Boris, UCSD.
0-19-514502-X
£150.00 Hardback
http://www.oup.co.uk/isbn/0-19-514502-X

Tissue Engineering - Engineering Principles for the Design of Replacement Organs and Tissues
W. Mark Saltzman, Goizueta Foundation Professor of Chemical and Biomedical Engineering, Yale University
Price: £60.00 (Hardback)
0-19-514130-X
http://www.oup.co.uk/isbn/0-19-514130-X

Embryology, Epigenesis and Evolution: Taking Development Seriously
Jason Scott Robert
Series: Cambridge Studies in Philosophy and Biology
This book explores the nature of development against current trends in biological theory and practice.
http://titles.cambridge.org/catalogue.asp?isbn=0521824672

EVOLUTION & DEVELOPMENT

"Dream caused by the flight of a bumblebee around a pomegranate, one second before awakening" by Salvador Dalí (1944). © Salvador Dalí, Fundación Gala-Salvador Dalí, VEGAP, Leioa, 2003.

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BSDB Committee Members

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 hestitate to convey them to Nancy Papalopulu (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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