





# BSDB Newsletter

## Spring 1990 No. 21

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The British Society for Developmental Biology now has no fewer than 746 members, and the pile of Newsletters that Rob Moore, James Howard and I send out is getting higher and

higher. This pile represents the destruction of more and more trees and to do our bit for the Greenhouse effect we have decided to print this and future Newsletters on recycled paper.

The design on the cover of the Newsletter is by Karen Jaques, the graduate student representative on the BSDB Committee. Such contributions are always welcome and should be sent to me. I know its not quite as prestigious as a picture on the cover of **Development** but it's a start!

Jim Smith, Publications secretary

## FUTURE BSDB MEETINGS

### Autumn 1990, Norwich: Molecular and Cellular Basis of Pattern Formation

The Autumn meeting of the Society will be held jointly with the 9th John Innes Symposium on September 3rd - 6th at the University of East Anglia. The topic is **The Molecular and Cellular Basis of Pattern Formation**, with particular emphasis being placed on pattern formation in

plants - until now a subject rather neglected by the BSDB. The programme for the meeting, together with information for delegates, is below. A booking form for the meeting is in the 'Centre Section' of the Newsletter.

### PROGRAMME

**Monday, 3rd September 1990**

Chairman: Professor Richard Flavell

20:00                      14th Bateson Memorial Lecture  
**Professor Christiane Nüsslein-Volhard**  
*Axis determination in the Drosophila embryo*

Wine and Cheese Reception

**Tuesday, 4th September 1990**

09:00 - 09:10            Introduction and Welcome  
**Professor Richard Flavell**

### CELL POLARITY AND CELL LINEAGE

Chairman: Dr Keith Roberts

09:10 - 09:50            **Professor Ralph Quatrano** (Chapel Hill, USA)  
*The establishment of cell polarity in the Fucus zygote*



- 
- 09:50 - 10:30     **Dr Bernard Maro** (Paris, France)  
*Polarisation of cells in early mouse development*
- 10:30 - 11:00     Coffee
- 11:00 - 11:40     **Dr Gurd Jürgens** (München, FRG)  
*Genetic analysis of pattern in the Arabidopsis embryo*
- 11:40 - 12:20     **Professor Scott Poethig** (Philadelphia, USA)  
*Genetic regulation of phase-change in maize*
- 12:20 - 13:00     **Dr Gary Ruvkin** (Boston, USA)  
*Temporal control of C. elegans development by heterochronic genes*
- 13:00 - 14:00     Lunch

#### **CELL DIVISION**

Chairman: Dr Caroline Dean

- 14:00 - 14:40     **Dr Clive Lloyd** (Norwich, UK)  
*Cellular basis of plant form*
- 14:40 - 15:20     **Professor David Kirk** (St. Louis, USA)  
*Genetics and cytological control of the asymmetric divisions that pattern the Volvox embryo*
- 15:20 - 15:50     Tea
- 15:50 - 16:30     **Professor Ian Sussex** (New Haven, USA)  
*The meristem and plant pattern formation*
- 19:15 - late       Symposium Dinner

**Wednesday, 5th September 1990**

#### **CELL INTERACTIONS**

Chairman: Dr Nigel Holder

- 09:00 - 09:40     **Dr Tsvi Sachs** (Jerusalem, Israel)  
*Cell polarization and cell competition - bases for tissue patterning in plants*
- 09:40 - 10:10     **Dr Nick Hopwood** (Cambridge, UK)  
*Regulation of mesodermal differentiation in Xenopus*
- 10:10 - 10:50     **Professor Sarah Hake** (Berkeley, USA)  
*Positional information in the maize leaf is altered by the knotted mutation*
- 10:50 - 11:20     Coffee
- 11:20 - 12:00     **Dr Cheryl Tickle** (London, UK)  
*Retinoic acid and limb development*

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12:00 - 12:40      **Professor Ernst Hafen** (Zurich, Switzerland)  
*Inductive events in Drosophila eye development*

12:40 - 14:00      Lunch

Chairman: Dr Keith Chater

14:00 - 14:40      **Dr Rob Kay** (Cambridge, UK)  
*Cell signalling and patterning in Dictyostelium development*

14:40 - 15:20      **Professor Steven Dellaporta** (New Haven, USA)  
*Using transposons to study regulatory genes in maize*

15:20 - 15:50      Tea

#### HOMEOSIS

15:50 - 16:30      **Dr Enrico Coen** (Norwich, UK)  
*Flower homeotic mutation in Antirrhinum majus*

16:30 - 17:10      **Professor Elliot Meyerowitz** (Pasadena, USA)  
*Genes directing flower development in Arabidopsis*

18:30 - late        Poster Session/Informal social evening/Bar

**Thursday, 6th September 1990**

#### HOMEOSIS (Continued)

09:00 - 09:40      **Dr Zsuzsanna Schwarz-Sommer** (Köln, FRG)  
*Properties of Deficiens, a homeotic gene involved in the control of flower morphogenesis in Antirrhinum majus*

09:40 - 10:10      **Dr Richard Garber** (Seattle, USA)  
*Function and regulation of Drosophila homeotic genes*

10:10 - 10:50      **Dr Robb Krumlauf** (London, UK)  
*Homeobox genes and patterning of the vertebrate hindbrain*

10:50 - 11:20      Coffee

11:20 - 12:00      **Dr Mike Akam** (Cambridge, UK)  
*Evolution of pattern-forming genes and the evolution of development*

12:00 - 12:40      **Professor Ian Sussex** (New Haven, USA)  
Summary Talk      *The special features of plant development*

12:40 -              Lunch

Optional site visit to the John Innes Centre for Plant Science Research  
and 'Special Collection' of rare botanical books.

Departure



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## INFORMATION FOR DELEGATES

### VENUE

Accommodation, lectures and posters will all be at the University of East Anglia (UEA). The John Innes Centre for Plant Science Research is about half a mile away on the edge of the campus, which is situated on the outskirts of the City of Norwich.

### ACCOMMODATION

Accommodation will be in single study bedrooms in the Norfolk Terrace of UEA for the nights of Monday 3rd, Tuesday 4th and Wednesday 5th September 1990. Accommodation for the nights of Sunday 2nd and Thursday 6th September is available if required. Breakfasts will be served between 07:45 and 09:00 in the Conservatory Restaurant at the Sainsbury Centre for Visual Arts at UEA. Should you require additional accommodation to be reserved at the University to tie in with travel arrangements, please provide full details when returning your Registration form.

### HOTEL ACCOMMODATION

If you wish to use hotel accommodation as an alternative to the University, we regret that we are unable to make reservations on your behalf. However, if you would like an information sheet giving full details of local hotels and tariff rates, please advise the symposium secretary when returning your Registration form.

### BATESON LECTURE

On Monday evening, 3rd September 1990, the 14th Bateson Memorial Lecture will be given by Professor Christiane Nüsslein-Volhard in Lecture Theatre 2 at UEA. The lecture will be followed by a Wine and Cheese Reception provided by the Trustees of the John Innes Foundation.

### SYMPOSIUM DINNER

The Symposium Dinner will be held at Norwich Castle on the evening of Tuesday 4th September. Transport will be provided between the castle and UEA.

### MEALS

Vouchers (to the value of £3.75) will be provided toward the cost of lunches for Tuesday 4th, Wednesday 5th and Thursday 6th September. Lunches can be obtained from a number of catering services on the University campus and a list of University Catering Services will be provided. Evening meals can be purchased by delegates either in 'The Diner' or the 'Sainsbury Centre Carvery', or, if required, a list of local restaurants will be available on request. If you are likely to be using the facilities on the Univer-

sity campus, please indicate this on the Registration form in the centre of the Newsletter so that we can provide guidelines as to possible demand for the University caterers.

### ACCOMPANYING PERSONS

A limited number of rooms can be made available for *non-participants* and the fee in this instance would be £19.00 per night. This would include bed and breakfast accommodation for the nights of Monday 3rd, Tuesday 4th and Wednesday 5th September. Again, accommodation for the nights of Sunday 2nd and Thursday 6th September is available if required. Please note that non-participants are most welcome to attend the Bateson Lecture and Reception. Unfortunately, because of staffing restrictions, we are unable to arrange a visitors' programme. Full information on Norwich and the surrounding area will be provided on request in the Reception area and we will assist and advise wherever possible.

### FREE PLACES FOR UK GRADUATES

The organisers are endeavouring to secure funds to provide a limited number of free places for UK graduate students. The award would cover bed and breakfast on Monday 3rd, Tuesday 4th and Wednesday 5th September, vouchers towards the costs of lunches for Tuesday 4th, Wednesday 5th and Thursday 6th September and attendance at all lectures including the Bateson Lecture and the Reception. The award would not cover accommodation for other nights, travelling expenses to and from Norwich, evening meals, the Symposium Dinner or any out-of-pocket expenses that might be incurred. Applications for these awards should be made to the Symposium Secretary in writing and *must* be supported by a letter of recommendation from the student's supervisor. Closing date for applications is Monday 25th June 1990.

### BSDB TRAVEL GRANTS

As well as the awards described above, younger BSDB members are, of course, also entitled to apply for travel grants from the Society. See the announcements section of the Newsletter.

### CAR PARKING

There are ample parking facilities at UEA. A map will be provided to registrants.

### POSTERS

There will be plenty of room for the display of posters and ample time for discussion. All registrants are strongly encouraged to submit



posters and are requested to provide the Symposium Secretary with a title and abstract, to arrive not later than **Monday 23rd July 1990**. The abstract should be typed clearly on a good quality sheet of A4 (210 x 297 mm) white paper, it should begin with the authors' names and addresses, and should not exceed 250 words. Dimensions of poster boards will be 87 cm wide by 117 cm deep. Posters will be attached by Velcro.

#### PROCEEDINGS

The Proceedings of the Symposium will be published as a supplement volume to the journal *Development*.

#### REGISTRATION

A Registration form, giving details of costs, is included in the Centre Section of the Newsletter. Please send the completed form, together with the total fee due (cheque or approved draft in Sterling made payable to 'John Innes Foundation', Barclays Bank, Bank Plain, Norwich, Norfolk; Account number 205008791) to: The Symposium Secretary, John Innes Institute, Colney Lane, Norwich, Norfolk NR4 7UH. Telephone: 0603 52571; Fax 0603 56844. **The form must arrive no later than Monday 30th July 1990.** Abstracts booklet, final programme and other relevant literature will be provided in folders which will be available on arrival at UEA.

## Spring 1991, Leeds: Cellular and Developmental Neurobiology

The 1991 Spring Symposium meeting will be a joint meeting with the British Society for Cell Biology. The meeting is being held in Leeds from Tuesday 9 to Thursday 11 April. The main topic of the BSDB is developmental neurobiology, while the BSCB is concentrating on cellular neurobiology. The programme (which is not yet final) is arranged so that morning sessions are held jointly with the BSCB and afternoon sessions are separate. Joint session speakers include **J. Campos-Ortega, G. Schoenwolf, C. Kimmel, S. Fraser, G. Banker, A. Matus, S. Smith, F. Bonhoeffer, M. Poo, R. Lindsay, S. Thanos and D. Purves**. The parallel sessions are on *Cell Lineage* (**A. Lumsden, A. Tomlinson, M. Bronner-Fraser, P. Patterson and J.**

**Price**) and *Neuronal Membranes* (**J. Cohen, D. Edgar, P. Doherty, H. Betz and S. Kater**); *Axon Guidance* (**R. Keynes, J. Taylor, D. O'Leary, F. Rathjen, and M. Palczek**) and *Neuronal cytoskeleton* (**P. Gordon-Weeks, M. Fishman, D. Cleveland, R. Vallee and R. Vale**); and *Neuronal specification* (**R. Krumlauf, D. Wilkinson, C. Kintner, M. Maden and C. Doe**) and *Growth factors and survival* (**A. Davies, R. Oppenheim, B. Richardson, K. Unsicker and M. Sendtler**). As well as these talks there will also be sessions on transcription factors and on imaginal discs.

Full details of the meeting will be published in the Winter 1990 Newsletter.

## Autumn 1991, Lancaster: Genetic and developmental consequences of insertional mutagenesis

The Autumn 1991 meeting is a joint meeting with the Genetical Society. It will be held in Lancaster

on the 18th and 19th September. The organisers are Mary Bownes and David Finnegan

## Spring 1992, Sussex: Gastrulation

The Spring 1992 meeting will be held in Sussex and will be a joint meeting with the BSCB. The

main BSDB topic will be gastrulation, while the BSCB are concentrating on transcription factors.



# OTHER MEETINGS OF INTEREST

## Developmental patterning of the vertebrate limb

This NATO Advanced Research Workshop will be held on 22/23 - 26 September 1990 in Santander, Cantabria, Spain, in collaboration with the University of Cantabria.

**Topics:**    **Molecular basis of limb patterning**  
              **Extracellular matrix**  
              **Limb development and evolution**

**Speakers include:** P. Alberch (Madrid), J. Brockes (London), G. Eichele (Harvard), B. Hall (Halifax), H. Ide (Sendai), M. Solursh (Ohio), D. Summerbell (London) and L. Wolpert (London).

### Further details from the Workshop director:

Professor Richard Hinchliffe  
Department of Biological Sciences  
University College of Wales  
Penglais  
ABERYSTWYTH  
Dyfed SY23 3DA, UK

Or from co-directors Professor Juan Hurle, Department of Anatomy, Medical Faculty, The University of Cantabria, SANTANDER, Spain, Dr Dennis Summerbell (NIMR, London) and Professor John Fallon (Madison).

## Protein targeting and membrane traffic

This meeting is the Biological Council's 6th Annual Symposium on Biotechnology. It will be held at the Edward Lewis Lecture Theatre, University College and Middlesex School of Medicine, Windeyer Building, Cleveland Street, London W1P 6DB on Thursday 13th and Friday 14th December 1990.

The meeting is organised by Dr John Armstrong of the Imperial Cancer Research Fund, Lincoln's Inn Fields, London WC2A 3PX

Speakers include John Armstrong (ICRF, London), Dan Cutler (Imperial College, London), Bruno Goud (Institut Pasteur, Paris), Colin Hopkins (Imperial College, London), Richard Klausner (NIH, Bethesda), Susan Michaelis (Johns Hopkins, Baltimore), Hugh Pelham (MRC Cambridge), James Rothman (Princeton, New

Jersey), Randy Schekman (Berkeley, California), Michael Sheetz (St Louis), Alain Townsend (IMM, Oxford), David Vaux (EMBL, Heidelberg), Graham Warren (ICRF, London), Martin Watson (Durham).

The Symposium is being sponsored by many societies affiliated to the Biological Council. The Registration fee is £60 (a reduced fee of £10 will be available to a limited number of senior graduate students) and includes coffee and tea for the two days. Lunch is available at cost. A list of cheaper hostels and hotels is available on request. **Admission will be by ticket only.** For tickets, please write to:

Mrs B. Cavilla, c/o Institute of Biology  
20 Queensbury Place  
London SW7 2DZ  
UK

## Cell biology of cartilage and bone

This is a joint meeting of the British Society for Cell Biology and the British Connective Tissue Society to be held in Oxford, September 17th - 20th, 1990. Lectures and the poster session will

take place in the University Catholic Chaplaincy, St. Aldate's. Accommodation is available at Christ Church. The programme is as follows:

### Monday 17th September

14:00 - 18:00    Registration  
18:00            Reception in JCR  
19:00            Dinner

### Tuesday 18th September

#### THE EXTRACELLULAR MATRIX OF CARTILAGE AND BONE

Chairman: Dr. H. Muir (London)

09:00 - 09:40    D.R. Eyre (Seattle)  
                      *The cartilage collagens: structure and function in the extracellular matrix*



- 
- 09:40 - 10:20 **B.R. Olsen** (Harvard)  
*Cartilage collagen genes*
- 10:20 - 11:00 **T.E. Hardingham** (London)  
*Cartilage proteoglycans*
- 11:00 - 11:30 Coffee
- 11:30 - 12:10 **J. Termine** (Bethesda)  
*Glycoproteins and proteoglycans of the bone matrix*
- 12:10 - 12:50 **D.J. Prockop** (Philadelphia)  
*Diseases caused by mutations in collagen genes. The inherent risks of a system for protein self-assembly*
- 13:00 - 14:00 Lunch

### CELL-MATRIX INTERACTIONS

Chairman: Professor S.Y. Ali (London)

- 14:00 - 14:40 **J. Lian** (Worcester, Mass)  
*The role of the ECM in promoting osteoblast differentiation and osteoclast activation*
- 14:40 - 15:20 **R. Cancedda** (Genoa)  
*Environmental control of chondrogenesis in vitro*
- 15:20 - 16:00 **M. Horton** (ICRF, London)  
*Adhesion receptors and osteoclast function*
- 16:00 - 16:30 Tea
- 16:30 - 17:10 **G.A. Rodan** (West Point, Pa)  
*Control of phenotypic expression in osteoblasts and osteoblast-like cells*
- 17:00 - 17:50 **R. Wuthier** (Columbia, SC)  
*Recent advances in understanding the mechanism of matrix vesicle-mediated mineralization*
- 18:30 Dinner (Buttery open from 18:00)
- 17:30 - 21:30 **EVENING POSTER SESSION**
- 21:30 - 23:00 JCR open

### Wednesday 19th September

#### GROWTH REGULATORY MOLECULES

Chairman: Professor R.G.G. Russell (Sheffield)

- 09:00 - 09:30 **A.B. Roberts** (Bethesda)  
*The family of TGF- $\beta$ 's - their roles in cartilage and bone in development, healing and disease*
- 09:30 - 10:00 **M. Gowen** (Bath)  
*Cytokines and the control of bone cell activity*
- 10:00 - 10:30 **J. Tyler** (Cambridge, UK)  
*Influence of cytokines and growth factors on cartilage degradation and repair*



- 
- 10:30 - 11:00 Coffee
- 11:00 - 11:30 **S.A. Jimenez** (Philadelphia)  
*Modulation of collagen gene expression by  $\gamma$ -interferon and tumour necrosis factor*
- 11:30 - 12:00 **G.R. Mundy** (San Antonio, Texas)  
*The effects of growth regulatory molecules on osteoclasts and osteoblasts*
- 12:00 - 12:30 **J. Wozney** (Cambridge, Mass)  
*The role of the bone morphogenetic protein (BMP) family of proteins in cartilage and bone induction*
- 13:00 - 14:00 Lunch

## DEVELOPMENT

Chairman: Dr. M. Owen (Oxford)

- 14:00 - 14:40 **M. Aydelotte** (Chicago)  
*Heterogeneity of articular chondrocytes*
- 14:40 - 15:20 **M. Solursh** (Iowa)  
*The cytoskeleton in chondrogenic differentiation*
- 15:20 - 16:00 **N. Teich** (ICRF, London)  
*From fos to os: a way into osteogenesis*
- 16:00 - 16:30 Tea
- 16:30 - 17:10 **P.J. Nijweide** (Leiden)  
*Osteoclast progenitor/precursor differentiation*
- 17:10 - 17:50 **S. Dedhar** (Vancouver)  
*Osteosarcoma cell differentiation and integrins*
- 19:30 **CONFERENCE DINNER** (Buttery open from 19:00)

## Thursday 20th September PATHOLOGY

Chairman: Professor D.L. Gardner (Edinburgh)

- 09:00 - 09:40 **M. Bayliss** (London)  
*Molecular and cellular changes in ageing human articular cartilages*
- 09:40 - 10:20 **J. McClure** (Manchester)  
*Endochondral ossification - order and disorder*
- 10:20 - 11:00 **A.P.L. Kwan** (Manchester)  
*Type X collagen and endochondral ossification*
- 11:00 - 11:30 Coffee
- 11:30 - 12:10 **G. Murphy** (Cambridge, UK)  
*Metalloproteinases and matrix degradation in health and disease*
- 12:10 - 12:50 **A.R. Poole** (Montreal)  
*Pathological changes in cartilage matrix in arthritis*
- 13:00 - 14:00 Lunch and end of meeting



This 'Centre Section' is designed to be removed without damaging the rest of the Newsletter. It contains a form for subscribing to **Development**, a membership application form (overleaf), and Registration/Booking forms both for the John Innes/BSDB *Molecular and Cellular Basis of Pattern Formation* meeting and the BSCB Cartilage and Bone meeting.



## APPLICATION FOR MEMBERSHIP

Full Name .....  
Title ..... Degree(s) .....  
Professional Address .....

Post Code .....

Research interests .....  
.....  
.....

I wish to apply for ordinary (£10)/student (£5) membership of the Society (Delete as applicable)

Applications must be supported by two members of the Society, who should sign below:

.....  
.....

Please return this form, together with the completed Banker's Order form below to the Secretary: Dr Peter Thorogood, Institute of Dental Surgery, Eastman Dental Hospital, 256 Gray's Inn Road, London WC1X 8LD.

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.....  
..... (Address)

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LONDON W1N 6BX

the sum of £ ( pounds) on 1st October, 1990 and on the same day each succeeding year unless this instruction is altered in writing by me.

Signature ..... Account No. ....  
Name ..... Date .....  
Address .....  
.....  
.....



# Development

## The Developmental Biology Journal

### Emphasizing cellular and molecular aspects of animal and plant development

**The aim of DEVELOPMENT** is to act as a forum for all research that offers a genuine insight into mechanisms of development. *Manuscripts will be considered primarily with respect to this aim.*

Studies on both plant and animal development are welcome and can be focused upon any aspect of the developmental process, at all levels of biological organization from the molecular and cellular to the tissue levels.

**All profits put back into science** – the journal is published by a registered charity directed by working scientists: **The Company of Biologists, Department of Zoology, Cambridge, UK** invests all profits in supporting meetings, summer schools and travel scholarships.

#### 1990 Subscriptions:

Libraries – \$820 (USA), £500 (Japan), £455 (rest of world)

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Telephone: Colchester (0206) 46351. Telex No: 987275 BIOSOC G

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**REGISTRATION/BOOKING FORM**  
(Please print legibly and use one form for each person)

**MOLECULAR AND CELLULAR BASIS OF PATTERN FORMATION  
9TH JOHN INNES SYMPOSIUM: A JOINT MEETING WITH  
THE BRITISH SOCIETY FOR DEVELOPMENTAL BIOLOGY  
3RD - 6TH SEPTEMBER, 1990: UNIVERSITY OF EAST ANGLIA**

Name:.....

Address:.....

.....Tel:.....Telefax:.....

**REGISTRATION/ACCOMMODATION (Please tick relevant boxes)**

The Registration Fee/BSDB Member Fee is inclusive of the 14th Bateson Memorial Lecture and Reception, attendance at all talks, poster and discussion sessions, luncheon vouchers (4th - 6th September), tea/coffee and biscuits (4th - 6th September) but excludes the Symposium Banquet on Tuesday, 4th September, 1990.

	Sun 2 <sup>nd</sup>	Mon 3 <sup>rd</sup>	Tue 4 <sup>th</sup>	Wed 5 <sup>th</sup>	Thu 6 <sup>th</sup>	TOTAL
Registration Fee £80.00						
BSDB Member Fee £40.00						
Daily Registration £15.00 per day						
Bed & Breakfast £19.00 per night						
Symposium Banquet £19.50						
<b>TOTAL</b>						

\* Delete where not applicable

Use of University facilities for evening meals

Yes/No\*

Informal visit to John Innes Centre for Plant Science Research

Yes/No\*

**Notes:**

- (1) For information on BSDB Membership, please write to the BSDB Secretary, Professor Peter Thorogood, Institute of Dental Surgery, Eastman Dental Hospital, 256, Gray's Inn Road, London, WC1X 8LD.
- (2) Please indicate any special dietary/mobility requirements here: .....

**BOOKING FORM(S) MUST BE ACCOMPANIED BY PAYMENT IN FULL, TO  
ARRIVE PREFERABLY BY MONDAY, 30TH JULY, 1990, BUT IN ANY EVENT, NO  
LATER THAN MONDAY, 20TH AUGUST, 1990**

I enclose a cheque/have arranged a bank transfer for £..... in advance payment, in £ Sterling only, made payable to 'John Innes Foundation', Barclays Bank, Bank Plain, Norwich, Norfolk. Account No. 20500879. I understand that if it is necessary to cancel my booking, full reimbursement may not be possible.

Signature:.....Date:.....

Please complete and return to:

Symposium Secretary, John Innes Institute, Colney Lane, Norwich, Norfolk, NR4 7UH, UK.



**CELL BIOLOGY OF CARTILAGE AND BONE**  
**A Joint Meeting of the British Society for Cell Biology**  
**and the British Connective Tissue Society**  
**17th - 20th September, 1990**

**Registration and Booking Form**

**Name:** ..... **Sex:** .....

**Address:** .....

.....

.....**Telephone:** .....

Please circle dates you require accommodation/meals and give total cost:

					Total
Bed and breakfast (£25 per night)	17th	18th	19th		
Lunch (£9 per meal)		18th	19th	20th	
Dinner (£12 per meal)	17th	18th			
Conference Dinner (£25)			19th		
Registration (BSCB, BCTS members) :	£10				
Registration (non members) :	£20				
					Total _____

Make cheques payable to 'BSCB Oxford Meeting Account'.

Would you be willing to share a set of rooms (2 bedrooms, 1 living room; price per person is the same as for a single room)?

YES / NO

Special requirements (eg. vegetarian meals; ground floor accommodation)? .....

If you wish to present a poster, please enclose abstract (single-spaced, an area 15cm wide x 12cm high).

Completed forms and abstracts should be returned before 10th July to:-

Professor M.E. Grant  
Department of Biochemistry & Molecular Biology  
University of Manchester  
Stopford Building  
Oxford Road  
Manchester. M13 9PT



# ANNOUNCEMENTS

## Sponsors for the Symposium on *Cell Messengers at Fertilization*

By an unfortunate oversight the list of sponsors for the joint BSDB/SSF meeting held in Warwick at the end of last year was omitted from the programme. Both Societies apologise for this mistake and express again our gratitude for the great generosity shown by the Departments, Hospitals and Societies listed below:

Bridge Fertility Centre, London Bridge Hospital, London  
Department of Obstetrics & Gynaecology, Birmingham Maternity Hospital, Birmingham  
Department of Obstetrics & Gynaecology, Bristol Maternity Hospital, Bristol  
Department of Obstetrics & Gynaecology, Hammersmith Hospital, London  
Department of Obstetrics & Gynaecology, King's College Hospital, London  
Department of Obstetrics & Gynaecology, University Hospital of South Manchester, Manchester  
University Department of Obstetrics & Gynaecology, Jessop Hospital for Women, Sheffield  
Embryo & Gamete Research Group, The Rosie Maternity Hospital, Cambridge  
Fertility and IVF Unit, Humana Hospital, Welington, London  
Hallam Medical Centre, London  
Infertility Advisory Centre, London Independent Hospital, London  
IVF Programme, Cromwell Hospital, London  
In Vitro Fertilisation Unit, Lister Hospital, London  
Journals of Reproduction and Fertility Ltd., 22 Newmarket Road, Cambridge  
Manchester Fertility Services, BUPA Hospital, Manchester  
Parke Hospital, Nottingham  
The Royal Society of London

## Poster prize

At the Manchester meeting on Genomic Imprinting the graduate student Poster Prize was awarded to Oliver Bögler from Mark Noble's lab, for his poster *PDGF and FGF control differentiation and self-renewal in O-2A progenitor cells*. Oliver's co-authors were Damian Wren and Susan Barnett.

The value of the prize has been increased so that it now covers the cost of a return flight to the USA or some other equally exotic location.

## Travel Grants

The Committee has decided to increase the sum available for travel grants to £4,000. Applications should be from BSDB members who are students or postdocs. Priority is as follows: (1) Ph.D. students to attend BSDB meetings; (2) Ph.D. students to travel to other meetings; (3) Postdocs to attend BSDB meetings; (4) Postdocs to attend other meetings.

Applications, which should be made in advance, must include the details of the meetings, the cost, details of any other support applied for, a note of your salary and a letter of support from your supervisor and should be sent to Dr. Liz Jones, Department of Biological Sciences, University of Warwick, Coventry CV4 7AL. Support is not automatically guaranteed because of the limited budget and does not include the cost of the conference dinner.

## The Committee

Two members of the Committee retired at the last AGM: Rob Kay and Marilyn Monk. We are grateful to Rob and Marilyn for all they have done for the Society, and in particular for the work they did in organizing the last two Symposia; Rob was co-organizer of the *Positional signalling* meeting and Marilyn of the recent *Genomic imprinting* meeting. Their places are taken on the Committee by Rosa Beddington (currently at the ICRF labs in Oxford but shortly to move to the AFRC Centre for Animal Genome Research in Edinburgh) and Peter Holland (Zoology Department, Oxford).



# MEETING REPORT

## Manchester 1990: Genomic Imprinting

Some may feel that a large meeting concerned with genomic imprinting was long overdue and absolutely essential for an ever-expanding sector of the 'biological' community whose interests have recently diverted towards this fascinating area. It is perhaps most important for the 'new recruits' of imprinting that these meetings are convened. However, it is instructive and enlightening for those sages in the field who have a chance to serve embryonic theories to a captive audience (count the double-faults) and (perhaps more pragmatically) survey the market for ideas, future collaborations and post-docs! Imprinting is becoming a household word in developmental biology. It seems to crop up everywhere: its borders threaten to encompass established cytogenetic, molecular and clinical territory. This is exemplified by the enigma of the 11p13 Prader-Willi/Angelman deletion syndromes and the continuing methylation story - lest we forget! A facetious remark, perhaps, but one might be forgiven for thinking that imprinting, a still largely unknown process, revolves around methylation. This meeting served as a reservoir for a plethora of novel examples of imprinting; the experts in the field being present to collate these and devise a system of nomenclature in which they might reside. Although we remain largely ignorant as to the origins of the imprint as a memory mechanism, what makes imprinting exciting is its expression across a wide range of phenotypic parameters. The use of transgenes, the production of maps to indicate imprinted loci, and the revision of certain clinical disorders (having disparate parental origin effects) seem to be particularly fruitful avenues of research. However, I am certainly not qualified to chronicle the work presented at the meeting (the first of many disclaimers!); interested absentees will, no doubt, procure themselves a copy of the 1990 **Development** supplement. This volume will stand proud on your bookshelf and tell you everything you wanted to know about your parents' methylation pattern but were afraid to ask ..... The scientific value of this supplement to masters and novices alike is great credit to the organizers, Azim Surani and Marilyn Monk, who I would like to thank earnestly on behalf of BSDB members everywhere, for conspiring to bring together a truly eclectic assemblage. Thanks must also go to the team at Registration, who proved to be a highly efficient 'operation' in view of the large numbers in attendance (take note Trusthouse Forte talent spotters!).

For many, the 1990 venue, Manchester, appeared uninviting. However, the choice proved successful and is part of a greater plan to ease events away from the capital. Manchester (City of Heavenly Water in Anglo-Saxon) had it all; and more than 20 inches of rainfall per annum (or was it per conference?). On a brighter note, the scheduled recreational pursuits were welcome. For some reason, I don't recall the beer-tasting! It is with great pleasure that we, the unscorched, can praise Dr Salthouse (that prime perpetrator of professional pyromania!) for the indoor barbecue. As for the 'come-as-the-animal-you-work-on' disco, congratulations are in order for the chick embryo costume (cunningly fashioned from several abstract booklets) but I was shocked to find that someone has Bonzo the Clown as an experimental subject!

The range of posters this year was stunning (desk-top publishing facilities especially 'space-age' at the University of Manchester). Sadly though, the large numbers of posters in isolated positions, back to back, meant that a lot of work probably remained unnoticed (what might be termed the *conference position effect*, which states that the distance from the bar or main entrance is inversely related to the number of interested parties at a poster). While on the subject, well done to the BSDB for generously increasing the poster prize to accommodate an overseas air-fare. The quality of the poster presentations was ably matched by that of the speakers, some of whom I feel should be singled out: Peter Jones for his excellent delivery, Julia Deloia (an excellent stand-in) and Judith Hall for an extensive clinical review (not to mention her dynamic role in discussion). An overall impression, then, at this my first (of many!) conference? A fairly intense series of lectures punctuated by frequent refreshment breaks (where the 'real' questions are both asked and answered), active discussion and amusing incidents: Sharat Chandra's current interest in avian behavioral imprinting for example, or Amar Klar's fits of inappropriate laughter at the mention of Angelman's syndrome (an ice-breaking episode we all remember with gratitude!). Once again thanks to organizers and delegates for maintaining high level discussion in an informal atmosphere: Reykjavic 1991 here I come!

Alan Thornhill  
MRC Mammalian Development Unit  
London



# BOOK REVIEWS

## CIBA Foundation symposium 144: Cellular Basis of Morphogenesis

John Wiley and Sons Ltd, £32.50

Put twenty-four scientists in a cosy room, let them present some data and some thoughts to each other, record the discussions and publish what happens. This is the formula of the Ciba Foundation Symposia and it works. Symposium 144 entitled *Cellular Basis of Morphogenesis* was held in October 1988. As one might expect, some of the papers presented are no longer the latest wisdom, but if the role of its predecessor *Cell Patterning* (Symposium 29, 1975) is anything to go by, that does not matter. Produced in a solid book format and with pleasing typography and layout, the volume is thoroughly edited and clearly meant to last. Furthermore, the chapters by Nüsslein-Volhard and Struhl on axis formation in *Drosophila* should serve as landmark reviews. The recorded discussions after these and other papers also give a flavour of the state of developmental biology today, and their recurring themes of thresholds and gradients will no doubt remain relevant and indeed topical for some years to come.

The book is introduced by Lewis Wolpert whose main theme is to urge us all to build models. Antonio Garcia-Bellido is also in philosophical mode and calls for more studies of cells as developmental units. Peter Lawrence, in typical provocative form, sets off two stimulating arguments, one on the concept of stable cell states and the other on intra-compartmental morphogenetic gradients versus mosaic interactions. Most of the other papers rest more on the details of the systems they describe than general developmental themes. The *Drosophila* papers (Nüsslein-Volhard, Struhl, Morata) are almost on the level of algebra, and begin to provide that sense of satisfaction one gets from solving an equation. At the other extreme, David Weisblat and Richard Gardner in their papers on cell lineage show admirable clearness in facing up to our comparative ignorance in the leech and mouse systems respectively. *Xenopus* is well-represented. Doug Melton's review of his work on the *Vg1* and *Xhox3* genes contains snippets of information not published elsewhere. Janet Heasman and Jonathan Cooke each consider the timing of specification, both proposing that more happens before gastrulation than was once thought. Chapters on the neural tube floor plate (Jessell), cadherin (Takeichi) and the *Drosophila* eye (Tomlinson) are all straightforward,

while Eric Davidson's chapter on *in vivo* titration of regulatory DNA-binding proteins is too technical to fit comfortably in this volume among more developmental papers. Judith Kimble on the *glp-1* gene in *C. elegans* suffers from datedness, if only because she herself has made so much progress since 1988.

Just as Brenner chaired the Ciba symposium that heralded the triumph of *Drosophila* developmental genetics, I would like to think that this symposium chaired by Wolpert will presage a resolution of the more conceptual problems of gradients and thresholds in morphogenesis, particularly in vertebrate systems. From the discussions presented in this book, I am optimistic.

Jeremy Green  
Laboratory of Embryogenesis  
NIMR

## Genes and Embryos

Eds D. Hames and D. Glover  
IRL Press

Twenty five years ago a certain prestigious journal contained articles with titles such as *The molecular basis of development II. Ribosomes of Xenopus embryos*. With this portentous title those Knights Errant proclaimed the quest for the Holy Grail of Embryology starting, apparently, with the nuts and bolts of macromolecule synthesis. Happily, this was not the way forward. *Genes and Embryos* tells us, in the most engaging way, how differently this adventure turned out. Unlike the Knights of old, modern Galahads have had little trouble with the powers of darkness. This book recounts the now well-known story of the astonishing and unexpected sources of light that have illuminated the quest so far. In just over 200 pages the authors have managed to review in a concise and scholarly manner what is known about the molecular basis of development. Nearly half the book is taken up with the contributions of *Drosophila* genetics and the still thrilling notion that it is possible, with this organism, to identify and characterise gene products active in early development in minute concentrations. The story is well-told and up-to-date including the fascinating studies on the molecular basis of embryonic axis formation and the ways in which the early-expressed genes cross-regulate each other.

Chapters on *Caenorhabditis*, *Xenopus* and mouse complement the account of *Drosophila*, emphasising the special contribution of each system to our understanding of development.



Lowly *Caenorhabditis* will interest readers for its analysis of the genetics and cell biology of the asymmetric cell divisions that create two phenotypically different cells. The account of *Xenopus* covers the importance of classical experimental embryology and of more recent investigations of the origins of dorso-ventral polarity and the nature of induction phenomena. The chapter on the mouse discusses the important role that transgenic animals will have in this field. The available information on homeobox-containing genes is deftly described.

This is an excellent book, of a sensible size and a sensible price.

Michael Sargent  
Laboratory of Embryogenesis  
NIMR

## Cell to Cell Signals in Mammalian Development

Eds. S.W. de Laat, J.G. Bluemink and C.L. Mummery  
NATO ASI Series, Springer Verlag

These days, homeo-boxes crop up in the most unlikely places, so it was with more disappointment than surprise that I opened this book to find no fewer than nine papers devoted to mouse Hox genes. This may be a good way of extending your publication list (three of the rather dreary offerings come from different permutations of the same authors) but it hardly makes for stimulating reading. Unfortunately, this opening section largely sets the standard for the rest of the volume; one can only hope that with the end of the Cold War we will see the eventual demise of NATO and with it, their superfluous workshop proceedings!

Phil Ingham  
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