

1985 (#8, 9, 11)

GLASGOW, SPRING 1985

Joint meeting with BSCB, University of Glasgow, March 25-27th 1985. Local Organiser Adam Curtis.

This will be a big meeting; the joint meeting of the two societies will immediately precede a "Tenovus Symposium" on the control of gene expression. Components of the meeting will be as follows:-

- 1) Symposium March 25-26th "Early Amphibian Development" - Organised by Jonathan Slack. This will be published as a supplement volume to JEEM in Autumn 1985. There will be a BSCB Symposium at the same time on "Growth factors".
- 2) "Cell Invasiveness Phenomena in vitro" Organisers: J. Lackie & J.V. Forrester.
- 3) "Cell/Environment Interactions in Cell Movement".
- 4) "Endothelial Interactions"
- 5) "Morphogenetic Movements"
- 6) Contributed paper session.

The following introduction to the 11th BSDB Symposium is from Jonathan Slack:

"The Symposium for 1985 will be on "Early Amphibian Development" to be held on March 25 and 26 in Glasgow. It is intended that the content will appeal not only to those who work with amphibian embryos but to all developmental biologists since the problems are often similar in different organisms but technically easiest to solve for a particular one.

Amphibian embryos are uniquely suitable for micromanipulation and, in contrast to other vertebrates, are readily accessible during the stages of embryogenesis in which the body plan becomes determined. After a period in which they have been relatively out of fashion, the application of modern techniques is once again putting them into the vanguard of developmental biology. In particular:

- New methods of cell marking (HRP, Bolton Hunter Reagent, fluorescent dyes) are allowing very high resolution fate maps to be produced and have made it possible to find the precise times of developmental decisions by clonal analysis.
- Modern methods (protein analysis, monoclonal antibodies, electrophysiology) are allowing direct observation of cellular states of determination in the early embryo.
- Molecular biology is producing data on stage and region specific regulation of single genes, soon to be taken to the single cell level with in situ techniques.

It is possible that major long standing problems of vertebrate embryogenesis will be solved in the next few years with the help of amphibian embryos. It is quite certain that there will be a major revival of interest in the field."

Jonathan Slack

I. MEETINGS

Spring Meeting 1985 Glasgow 25th - 29th March

Joint BSDB/BSCB Meeting - Includes the following:-

1) BSDB Symposium "Early Amphibian Development" - organizer Jonathan Slack. Monday 25th, Tuesday 26th March.

Topics and Speakers:

The role of the oocyte in early development. L.D. Smith, C.C. Wylie, G. Malacinski.

Clonal analysis of development J.Cooke, J. Heasman.

Cell movements in early development R. Keller, J. Boucaut, R. Gordon.

Region- and stage-specific markers I. Dawid, J. Slack, P. Hausen, E. Jones.

Timing of early development M. Kirschner, R. Laskey, N. Satoh.

Inductive interactions and information transfer P. Nieuwkoop, H. Grunz, J. Smith, A. Duprat, A. Warner, J. Gurdon.

2) BSCB Symposium "Growth factors" - organizers C. Hopkins and C. Hughes. 25th - 27th March.

Topics:

Structure and biology of EGF, PDGF, NGF, haemopoietic growth factors, tumour growth factors and insulin-like

growth factors. Structure and function of growth factor receptors. Signals and interactions generated by growth factor-receptor complexes.

Speakers:

Todaro (Seattle), Metcalfe (Cambridge), Berridge (Cambridge), Rosengurt (London), Hopkins (Liverpool), Allen (Beckenham), Waterfield (London), Schlessinger (Rehovot), Goldstein (Texas), Scott (London), Blundell (London), Nissely (Bethesda), Heldin (Uppsala), Gallo (Bethesda), Melchers (Basel), Dexter (Manchester), Beug (Heidelberg), Thoenen (Munich), Scheider (Heidelberg).

3) General session BSDB/BSCB "Modelling morphogenesis and invasiveness in vitro" - Organizers A. Curtis, J. Edwards, J. Lackie. 25th - 26th March.

Topics:

Normal and pathological invasiveness in vitro, environmental cues for cell behaviour.

Speakers

Folkman (Harvard), Dorozsweski (Warsaw), Evans (St. Andrews), Mareel (Ghent), Cramer (New York), Edwards (Sutton), Parish (Zurich), Lackie (Glasgow), Weston (Eugene), Birchmeier (Tubingen), Dunn (London), McCaig (Edinburgh), Tucker (St. Andrews), Curtis (Glasgow), Gallin (New York).

4) Tenovus Symposium, BSCB/Nucleotide Group "Eukaryotic Genes" Organizers Goddard (Chairman) and local organizing committee.

Topics:

Genes in embryogenesis, transformation and oncogenesis, DNA rearrangements, control sequences, DNA and chromatin structures.

Speakers:

Gurdon (Cambridge), Davidson (Pasadena), de Robertis (Basle), Hogan (London), Rigby (London), Weiss (London), Barbacid (Bethesda), Gallimore (Birmingham), Lane (London), Wilkie (Glasgow), Sherratt (Glasgow), Borst (Amsterdam), O'Hare (London), Sharp (Cambridge Mass.), Wyke (London), Travers (Cambridge), Cortese (Heidelberg), Dudler (Zurich), McGeoch (Glasgow), Treisman (Cambridge), Lilley (Dundee), Drew (Cambridge), Laskey (Cambridge), Nordheim (Heidelberg), Wu (Bethesda).

All those who are interested in contributing a poster or a platform presentation at this meeting, should send an abstract to Mike Snow, MRC Mammalian Development Unit, Wolfson House, 4 Stephenson Way, London, NW1, before December 17th 1984.

AUTUMN 1985 Dates and venue to be confirmed. Topics will include

- Pattern formation
- Limb development
- Mammalian Development
- Cell Recognition
- Slime mould development

AUTUMN 1985 LONDON

This will also be a joint meeting with the BSCB. It will be held on September 5th and 6th at Middlesex Polytechnic, Trent Park, in North London.

Topics

Thursday 5th - "Wound Healing" organizers J. Couchman and B. Hogan.
 - "Mammalian Development" organizer Martin Johnson
Friday 6th - "Cell recognition" organizer R. Kay.
 - "Limb development and patterning" organizers D. Summerbell and R. Hincliffe.

The BSCB component of the meeting will be as follows:-

"The Extracellular Matrix: receptors, genes and signals" - Organizers B. Hogan and C. Hughes. 1 - 5 September, 1985

Topics

Molecular genetic analysis of matrix components, receptors for matrix molecules, cell adhesion molecules and neural development, matrix modifications in development and neoplasia, epithelial maintenance and wound healing.

Speakers

F. Barelle (Oxford), B. Olsen (Rutgers), Y. Courtois (Paris), M. Pope (London), J. Couchman (Bedford), E. Ruoslahti (La Jolla), G. edelman (New York), M. Sumper (Regensburg), D. Edgar (Munich), C. Tickle (London), M. Johnson (Cambridge), R. Timpl (Munich), P. Liesi (Mill Hill), R. Trelstead (Rutgers), K. Von der Mark (Munich), A. Vaheri (Helsinki).

The meeting will be limited to 150 participants. In addition to talks by invited speakers, time will be available for short free communications and posters. Applications should be sent, including title of proposed free communication or poster, to either organiser BEFORE 1st April, 1985. The registration fee is £20 for BSCB members or £25 for non-members. Full board and accommodation is £20 per day.

1) BSDB/BSCB Autumn Meeting, Trent Park 5th and 6th September, 1895

Trent Park is a conference centre, part of Middlesex Polytechnic, just North of London. This two day meeting will follow the BSCB Meeting on 2nd-4th September. (Details below).

Thursday 5th

(i) Joint BSCB/BSDB Symposium on "EPITHELIAL MAINTENANCE AND WOUND HEALING" Organiser: John Couchman (Unilever). Speakers include: I. Mackenzie (Iowa), M. Pepys, J. Polack (Hammersmith), M. Green (Unilever).

(ii) "MAMMALIAN DEVELOPMENT". Organiser: Martin Johnson (Cambridge).

This discussion meeting will be in four sessions. Topics and speakers include:

Repeat sequences in development - P Brulet (Paris), N. Hastie (Edinburgh), C. Watson (London), J. McConnell (Cambridge).

Homoeo-boxes and somites - I. Jackson (London), B. Hogan (Mill Hill), G. Morriss-Kaye (Oxford), R. Keynes (Cambridge), C. Stern (Oxford).

Imprinting - Azim Surani (Cambridge)

Cell Interactions - S. Lee (London), J. Heath (Oxford), A. Handyside (Carshalton).

Transgenic Mice - Robb Krumlauf (Mill Hill).

Cycling proteins - S. Howlett (Cambridge).

Cell lineages - R. Beddington (Oxford).

Also taking part:- Chris Graham, Richard Gardner, Marilyn Monk, Anne Warner, Anne McLaren and many others.

Discussion is informal, everyone welcome. Further enquiries to Martin Johnson, Anatomy Dept., Downing Street, Cambridge, CB2 3DY.

N.B. Members are invited to contribute papers and posters for this meeting. Please send abstracts (before 7th July) to: Mike Snow, MRC Mammalian Devt. Unit, 4 Stephenson Way, London, NW1 2HE.

The BSCB Meeting at Trent Park immediately precedes ours, and begins on Monday 2nd Sept. 1985.

Sessions Include:

Molecular and genetic analysis of matrix components
Cell surface receptors for matrix components
Matrix modification in development and neoplasia.

Registration forms for the BSCB meeting are available from: Colin Hughes, NIMR, The Ridgeway, Mill Hill, London NW7 1AA.

1986 (#8, 9, 11, 12, 13)

Spring 1986 University of East Anglia

This meeting is still in the planning stage. It will be a joint meeting with BSCB. It will contain a BSDB Symposium on "Insertion of novel informational molecules into developing systems" - organizer J.B. Gurdon. Tentative topics for general sessions are "Drosophila development" and "developmental biology of oocytes".

The BSCB symposium will be on "Cytoplasmic Organization".

2) BSDB/BSCB Spring Meeting. University of East Anglia, Norwich. April 7th-11th 1986
Local Organizer Richard Warn

This will be a symposium meeting for both Societies. Symposia will be on April 7th - 8th.

BSDB Symposium "INTRODUCTION OF INFORMATIONAL MOLECULES INTO DEVELOPING SYSTEMS". Organizers: J. Gurdon & Azim Surani (Cambridge). Details in next Newsletter.

BSCB Symposium "THE CYTOSKELETON: CELL FUNCTION AND ORGANIZATION" Organizers: R. Warn (E. Anglia) and C. Lloyd (Unilever).

Wednesday April 9th

BSDB/BSCB Joint Session: "THE CYTOSKELETON IN DEVELOPMENT" Organizer: R. Warn. International Xenopus Workshop (which may run to Friday 11th). Organizer: J. Gurdon.

Spring 1986

University of East Anglia
6th - 9th April, 1986

FULL PROGRAMME, GENERAL INFORMATION AND BOOKING FORM,
ACCOMPANY THIS NEWSLETTER.

This will be the joint meeting of 1986 between the BSDB and BSCB. It will consist of two major symposia:-

- 1) The BSDB/Company of Biologists Symposium on "ANALYSIS OF GENE EXPRESSION IN DEVELOPMENT BY TRANSFER OF MACROMOLECULES". Organizers - J.B. Gurdon, Azim Surani & C.C. Wylie.

This symposium will be published as a supplementary volume to JEEM in October, 1986.

- 2) The BSCB/Company of Biologists Symposium on: "THE CYTOSKELETON: CELL FUNCTION AND ORGANIZATION" Organizers - C.W. Lloyd, J.S. Hyams & R.M. Warn.

This symposium will include a joint BSDB/BSCB Session on THE CYTOSKELETON IN DEVELOPMENT, and will be published as a supplementary volume to Journal of Cell Science in Autumn 1986.

- 3) BSCB Symposium on "COATED MEMBRANES" Organizer - C. Ockleford.
- 4) THE INTERNATIONAL XENOPUS GROUP will meet from mid-day on Wednesday 9th April to Friday 11th April. All BSDB/BSCB members are welcome to attend (this is not in any sense a closed meeting, the "group" referred to above includes any interested person!). Most major groups working on Xenopus will be represented. Further details and BOOKING FORMS from:- Prof. J.B. Gurdon, Department of Zoology, Cambridge University, Downing Street, Cambridge, CB2 3EJ.

Autumn 1986

University of Sussex
4th & 5th September, 1986
Local organizers: J. Bacon & Chris Ford.

This will be a workshop style meeting, emphasizing current research rather than review style presentations, on the following subjects:-

"DEVELOPMENTAL NEUROBIOLOGY IN INSECTS AND VERTEBRATES"
Organizers - J. Bacon, Vernon French & Nigel Holder.

"PHYSICAL APPROACHES TO SPATIAL ORGANIZATION IN DEVELOPMENT" Organizers - Brian Goodwin and R. Ransom.

There will also be an additional subject yet to be arranged.

BSDB Autumn Meeting, University of Sussex 4th and 5th September, 1986.

There will be two parallel topics at this meeting -

- 1) DEVELOPMENTAL NEUROBIOLOGY - Organised by Nigel Holder and Jonathan Bacon

Thursday 4th September, 1986

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| 1000 | Welcome to Sussex |
| 1010 | Alun Davies (St. George's London) - Neurotrophic requirements of sensory neurons in the chick embryo |
| 1100 | Short talks |
| 1140 | Gerd Technau (Köln) - HRP studies of early events in <u>Drosophila</u> neurogenesis. |
| 1230 | General Discussion |
| 1240 | LUNCH |
| 1400 | The Virgin Lecture (Sponsored by Virgin Atlantic). Rod Murphy (Albany, N.Y.) Development of sensory projections in insects |
| 1500 | Short talks |
| 1530 | TEA |
| 1600 | Bill Harris (San Diego) - Development of the retino-tectal projection in amphibians. |
| 1650 | General Discussion |
| 1715 | DINNER |
| 1930 | Short talks |
| 2010 | Stan Kater (Fort Collins, Colorado) - <u>In vitro</u> studies of synapse formation between identified snail neurons |
| 2100 | Discussion |
| 2100 | LATE BAR |

Friday 5th September

- 0900 Jeremy Taylor (Edinburgh) - Pathway cues in the retino-tectal system
- 0950 Dennis Bray (London) - Movements of growth cones in culture.
- 1040 COFFEE
- 1110 Short Talks
- 1150 Professor P. Bonhoeffer (Tubingen) - Studies of neuronal specificity in culture
- 1240 General Discussion

THERE WILL BE SPACE IN THE PROGRAMME FOR 10 SHORT TALKS, GIVEN BY YOUNGER MEMBERS OF THE SOCIETY (PRIMARILY GRADUATE STUDENTS AND POST-DOCS.). WOULD THOSE INTERESTED PLEASE SUBMIT ABSTRACTS TO NIGEL HOLDER (SEE END OF NEWSLETTER FOR ADDRESS). THERE WILL ALSO BE A POSTER SESSION. ABSTRACTS TO NIGEL HOLDER BY THE END OF JULY PLEASE.

2) PHYSICAL CORRELATES OF MORPHOGENETIC PHENOMENA

Organisers B.C. Goodwin and R. Ransom, Open University

The object of this meeting is to explore a range of physical processes that may be involved in spatial organisation and morphogenesis, and the techniques that are available for studying them. The forces characteristically result in long range order in developing systems over distances of μm to mm within cells and cell sheets, and coordinate movements over similar dimensions.

Thursday 4th September, 1986

Morning Session: Chairman, B.C. Goodwin

- 0900 J. Clegg (Davis, California) Coherent excitations, long range order and cell architecture.
- 0950 C.W. Smith (Salford) Possible roles of electromagnetic fields in biological structure and function.

- 1040 Coffee
- 1100 M.S. Cooper (Berkeley) The control of cell motility and cell growth by external electric fields.
- 1150 C.D. Stern (Oxford) Mechanoelectrical events in early vertebrate development.
- 1240 LUNCH

Afternoon Session: Chairman, R. Ransom

- 1400 J. Lohman (Oxford Research Systems) In vivo imaging and localized NMR spectroscopy of the locust embryo Schistocerca gregaria.
- 1450 R.G. Ratcliffe (Oxford) NMR techniques for investigating the compartmentation of plant tissues.
- 1540 TEA
- 1600 B.C. Goodwin (Open University) The mechanochemistry of cyto-plasmalemma-cell wall interactions in plant morphogenesis.
- 1650 J.D. Murray (Oxford) Complex spatial patterns from tissue interactions: an illustrative example.

1987 (#11, 12, 13, 14)

4) BSCB/BSDB Spring Meeting. University of Oxford.
March 23rd - 26th 1987

Organizer: Gill Morriss-Kaye

The BSDB Symposium will be on "SEX CHROMOSOMES". Other topics to be arranged.

Spring 1987

University of Oxford

23rd - 26th March, 1987

Local organizer - Gillian Morriss-Keay.

This will be a joint BSDB/BSCB Symposium meeting. Symposia will be:-

BSDB/COB Symposium on "SEX CHROMOSOMES" Organizers - Peter Goodfellow & J. Wolfe.

BSCB/COB Symposium, the "ABERCROMBIE MEMORIAL MEETING ON CELL BEHAVIOUR" Organizers - Adam Middleton & Joan Heaysman.

Other sessions to be announced later.

SPRING 1987

BSDB/BSCB Spring Symposium Meeting

Oxford - 1987

This joint meeting will contain 2 symposia, sponsored by the COMPANY OF BIOLOGISTS.

BSDB SYMPOSIUM

SEX CHROMOSOMES AND SEX DETERMINATION

Organisers - Peter Thorogood and Jonathan Wolfe

Topics and speakers are provisionally as follows:

Sex Determination: Theoretical Considerations and Examples from Different Animal Groups (Chairperson - Anne McLaren) Nothinger (Heidelberg), Hodgkin (Cambridge), Lyon (MRC Oxford), Eicher (Bar Harbor).

Mapping the Y Chromosome (Chairperson - P. Goodfellow) Page (MIT), Fellows (Pasteur Inst., Paris), Ferguson-Smith (Glasgow), Pritchard (ICRF, London), Bishop (Pasteur Inst., Paris).

Molecular Analysis of Y Chromosome Structure (Chairperson - J. Wolfe) Jones (Edinburgh), Smith (John Hopkin's), Cooke (Edinburgh), Brown (Oxford), Weissenbach (Pasteur Inst., Paris), Avner (Pasteur inst., Paris).

Genes on the Y Chromosome (Chairperson - E. Southern) de la Chapelle (Helsinki), Simpson (CRC London), Burgoyne (London), Darling (London), Craig (Oxford).

BSCB SYMPOSIUM

THE SECOND ABERCROMBIE CONFERENCE ON CELL BEHAVIOUR

Organisers - Joan Heaysman, Adam Middleton and Fiona Watt

1) Modelling and Analysing Cell Behaviour in Culture Oster (Berkeley), Vasilier (Moscow), Ireland (London), Dow (Glasgow), Dunn (London), Wilkinson (Glasgow).

2) Quantifying Cell Behaviour in vitro Thorogood (Southampton), Keller (Berkeley), Kucera (Lausanne), Wylie (London), Morris-Reay (Oxford).

3) Analysing Malignant Invasion Harris (N. Carolina), Schor (Manchester), Mareel (Ghent), Parish (Zurich).

4) Cell-Substrate Adhesion Grinnell (Texas), Burridge, (N. Carolina), Buck (Philadelphia), Hughes (London), Gieger (Rehovot).

5) Cell Shape Ben-Zeev (Rehovot), Spiegelman (Boston), Lisstizky (Marseille), Watt (London).

N.B. There will be a space available for Workshop sessions if anybody would like to organize them. Please contact Nigel Holder if you would like to arrange an evening workshop. Funds are available

SPRING 1987
Oxford University, March 23rd-26th

The booking form for this meeting accompanies this Newsletter. Please note that it has been necessary to impose a late booking fee of £20 on forms received after January 28th. This is because the Universities have started introducing additional fees on bookings received after their deadlines, and on rooms booked but not occupied. The BSDB has no choice but to pass these costs on to the relevant section of the membership.

The Spring 1987 meeting is a joint meeting with the BSCB. It will consist of two major symposia together with three BSCB workshops, all of which should be of interest to developmental biologists. There will also be a poster session, in which a prize will be awarded to the best poster presented by a graduate student (see Announcements). Poster abstracts should be sent to Nigel Holder (address at back of Newsletter) before January 28th.

Registration for the Spring 1987 meeting will take place from 4 p.m. on Monday, 23rd March. Both the BSDB and the BSCB sessions will start on the morning of Tuesday, 24th March, with the BSDB sessions ending on Wednesday evening and the BSCB sessions ending at Thursday lunchtime. The conference dinner takes place on Wednesday evening, but please note that there is a limit of 250 people, so book early to avoid disappointment! To whet your appetites, Gillian Morris-Kay, the local organizer, has sent a sample menu - wine is included in the price of £14:

Melon and Orange Cocktail
Doré of Salmon - Hollandaise Sauce
Vegetables in Season
Crème Brûlée
Cheese and Biscuits
Coffee with cream and mints

1. The BSDB/Company of Biologists Symposium is organized by P. Goodfellow, J. Wolfe and I. Craig, and is on:

THE MAMMALIAN Y CHROMOSOME: MOLECULAR SEARCH FOR THE SEX DETERMINING GENE

Peter Goodfellow writes:

The genetic and molecular analysis of development in *Drosophila* sp and *Caenorhabditis* sp has met with spectacular success. Unfortunately, similar genetic analysis of mammalian development has been hindered by both technical and conceptual limitations. The technical limitations, such as lack of adequate genetic maps and difficulties in cloning mammalian genes, have been largely solved by recent advances in molecular biology. The conceptual problem in recognising and defining regulatory genes has not been solved. One exception, however, is the male sex determining gene *TDF* (or *Tdy* in the mouse). This gene must play a central role in mammalian development. The meeting will consider the rapid progress that is being made towards cloning the *TDF* gene and elucidating its mode of action. It is hoped that the meeting will appeal not only to those with a direct interest in sex determination but will also interest those who wish to apply similar genetic and molecular techniques to investigate other developmental and cellular interactions.

The programme for this meeting is as follows:

Tuesday 24th March

Introduction : "Aims of the meeting" P. Goodfellow (ICRF, London)

Clues from other animals and theoretical considerations

Chairperson : A. McLaren (MRC, London)

Sex determination in Drosophila : R. Nothinger (University of Zurich)

Sex determination in Nematodes : J. Hodgkin (MRC, Cambridge)

X-inactivation and sex determination : M. Lyon (MRC, Didcot)

Sex determination in mice : E. Eicher (Jackson Laboratory, Bar Harbor)

Mapping the Y chromosome

Chairperson : P. Goodfellow (ICRF, London)

A map of the human Y chromosome : D. Page (Whitehead Institute, Boston)

Y specific polymorphic sequences : M. Fellous (Pasteur Institute, Paris)

Construction of a Y chromosome map : M. Ferguson-Smith (Glasgow)

Y chromosome mapping by chromosome mediated gene transfer : C. Pritchard
(ICRF, London)

A map of the mouse Y chromosome : C. Bishop (Pasteur Institute, Paris)

Wednesday 25th March

Molecular analysis of structural features of the Y chromosome

Chairperson : J. Wolfe (London University)

BKm : K. Jones (Edinburgh University)

Repeat sequences on the human Y chromosome : K. Smith (Johns Hopkins,
Baltimore)

Telomeres of the human X and Y chromosome : H. Cooke (MRC, Edinburgh)

The centromere of the Y chromosome : C. Tyler-Smith (Oxford University)

The human pseudoautosomal region : J. Weissenbach (Pasteur Institute, Paris)

The mouse pseudoautosomal region : P. Avner (Pasteur Institute, Paris)

Genes on the Y chromosome

Chairperson : E. Southern (Oxford University)

Genes on the X and Y chromosome: phenotypic correlations: A. de la Chapelle
(University of Helsinki)

Mapping the H-Y gene : L. Simpson (CRC, London)

Role of the Y chromosome in spermatogenesis : P. Burgoyne (MRC, London)

Pseudoautosomal genes in man : P. Goodfellow (ICRF, London)

Summary and Perspectives : I.W. Craig (Oxford University)

2. The BSCB/Company of Biologists Symposium is organized by Joan Heaysman, Adam Middleton and Fiona Watt, and is:

THE SECOND ABERCROMBIE CONFERENCE ON CELL BEHAVIOUR

This meeting runs concurrently with three workshops:

Cell Junctions	(organized by Nancy Lane)
The Nucleus	(David Lane)
Thresholds	(Lewis Wolpert)

The programme for this meeting is as follows:

Tuesday 24th March

The two Abercrombie sessions are on 'Modelling and Analyzing Cell Behaviour In Vitro'. The Plenary Speaker will be Malcolm Steinberg (Princeton) and other speakers include Oster (Berkeley), Vasiliev (Moscow), Ireland (Oxford), Dow (Glasgow), Dunn (London), Wilkinson (Glasgow), Harris (North Carolina), Schor (Manchester), Mareel (Ghent) and Parish (Zurich).

Nancy Lane's 'Junctions' sessions will run concurrently with these talks, and extend into the evening.

Wednesday 25th March

The morning Abercrombie session will be on 'Quantifying Cell Behaviour during Development'. The Plenary Speaker will be Ray Keller (Berkeley) and other speakers include Thorogood (Southampton), Kucera (Lausanne), Wylie (London) and Morriss-Kay (Oxford).

The afternoon Abercrombie session will be on 'Cell Shape and Gene Expression'. Speakers include Ben-Ze'ev (Rehovot), Spiegelman (Boston), Watt (London), Mauchamp (Marseille) and Bissell (Berkeley).

David Lane's 'Nucleus' talks also take place today, and the Conference Dinner is in the evening.

Thursday, 26th March (morning only)

The Abercrombie session is on 'Cell-substrate adhesion molecules'. Speakers include Grinnell (Texas), Burridge (N. Carolina), Buck (Philadelphia), Hughes (London) and Geiger (Rehovot).

Lewis Wolpert's 'Thresholds' session also takes place this morning.

5) EDBC 1987

The next European Developmental Biology Congress, organized by the Finnish Society for Developmental Biology, will be held at the University of Helsinki, 14th - 18th June 1987. To receive further information, please write to:

EDBC-Congress Secretariat,
PO Box 189,
SF-00171 Helsinki,
Finland.

Meeting reports

EDBO '87

The European Developmental Biology Organization (EDBO) aims to act as a clearing house for information exchange among European developmental biology societies and groups, as a sponsor of workshops and small meetings, and as a convenor of Congresses every 3-4 years. The latest Congress was held in Helsinki, in mid-June 1987. The U.K. contingent was small, partly because Helsinki is expensive to get to from Britain, but also because mid-June is not the most carefree time for anyone involved with the British university system.

Those of us who were able to attend the Congress enjoyed a wide-ranging scientific programme and a number of memorable social events, all impeccably organized by our Finnish colleagues. The extensive poster sessions were particularly rewarding. We were reassured to find that Britain is not the only place where it rains in mid-June, but the clouds cleared long enough for us to appreciate the beauty of the "White Nights".

The EDBO Board meeting in Helsinki approved a change in constitution, to appoint Dr. John Bluemink as honorary business manager. John Bluemink is the assistant director of the Hubrecht Laboratory, which had been agreed at the 1984 Southampton Congress to be the permanent seat for EDBO administration. His appointment should greatly facilitate this administration. Professor Signoret retired as President of EDBO, and since the BSDB's nomination of me as his successor was unopposed, I was perforce elected as the new president. Dr. Siegfried de Laat continues as Secretary/Treasurer.

On joining the Board I learnt with interest that the next EDBO Congress is to be in Israel in 1991 (the date has not yet been fixed but it will not be in June), that Australia and New Zealand are now constituent members of EDBO, and that the Chinese developmental biology society is an associate member. Clearly the boundaries of Europe are extending. It is of course important that developmental biologists throughout the world should be kept informed of one another's activities, and while no worldwide federation of developmental biology societies exists, it falls to EDBO to satisfy this need. But we see this as an interim role. The focus of EDBO remains in Europe. Western and eastern, northern and southern Europe share a common tradition of embryological research that forms one of the corner-stones of developmental biology as we know it today.

Anne McLaren
President, EDBO.

3) BSDB Autumn Meeting. Durham, September 17th - 19th 1986

Local Organizer: J. Horton.

Meeting will include Workshops on: Immunology, Neurobiology, Oncogenes and Viruses in development, Mathematical Modelling.

CALL FOR SUGGESTIONS

Concerning

Joint BSDB Meeting with the Materno-fetal

Immunobiology Group

Durham, September 18 & 19 1987

(Roger Sutcliffe, John Horton and Martin Johnson)

This two day workshop will cover the development, genetics, molecular biology and immunobiology of the feto:maternal interface, particularly of trophoblast and extraembryonic endoderm. Topics to be covered could include trophoblast markers and sub-populations, selective gene expression and X-inactivation in extraembryonic lineages, MHC expression, trophoblast-uterine interactions, cross-species implantations and chimaeras.

Your suggestions on speakers, topics, working sessions etc. are welcome. Please contact Martin Johnson.

AUTUMN 1987

Next September the BSDB is holding two meetings, one in Durham and one in Bath. Full details of both meetings will be announced in the Spring Newsletter.

The Durham meeting is organized by Martin Johnson, and takes place on 16th-18th September. Martin writes:

The outline programme for this special topic Autumn discussion meeting will be finalized over the next month or two. The meeting will include a joint session with the Feto-maternal Immunology Group covering topics related to the materno-fetal interface, particularly the origins and properties of the "front-line" endoderm and trophoblast tissues, and the influence that events at or shortly after fertilization have on the segregation of these two cell lineages and on the nature of nuclear "imprinting". Accompanying this joint session we hope to have workshops on in-situ hybridization in mammalian embryos and on the technical aspects of making transgenic mice. There will also be a mammalian development session. The Feto-maternal Immunology Group will also have a session of their own at which BSDB members will be welcome. In addition, the BSDB will run a major session on Developmental Immunobiology in Xenopus with speakers from the USA, Japan, Switzerland, Belgium and the U.K. Suggestions for contributions to this meeting should be sent to Martin Johnson (address at back of Newsletter).

AUTUMN 1987

This September the BSDb is holding two meetings, the first in Durham and the second in Bath. Full details of these meetings are given below and the booking forms are in the 'Centre Section' of this Newsletter. Make sure you use the right booking form for the right meeting!

Durham: - 16th - 18th September, 1987.

THE IMMUNOLOGY OF DEVELOPMENT

This is a joint meeting with the Materno-Fetal Immunology Group, at which there will be two major sessions. On Wednesday and Thursday (16th and 17th) we are holding an international symposium on the Developmental Immunobiology of Xenopus, which will be followed on Friday, 18th by a workshop on the Thymus, with contributions from workers using comparative and mammalian models. On Thursday and Friday (17th and 18th) a joint meeting of the BSDb with the Materno-Fetal Immunology Group of the British Society for Immunology will consider the origins and properties of the extra-embryonic tissues of the mammal and in particular how these might influence the immunological relationships with the mother.

On Thursday morning the two sessions will combine under the guidance of Anne McLaren for talks on "The evolution of histocompatibility antigens" (Flajnik/Kaufman, Basel); "The molecular control of histocompatibility antigen expression during differentiation" (Kieran, Paris); "Transfection, transgenesis and histocompatibility antigen expression" (Holmes, Cambridge); "What else do histocompatibility antigens do?" (Curtis, Glasgow) and "The acquisition of immune function in development" (Edwards, Cambridge).

There will be a reception in Durham Castle and a tour of the cathedral on the evening of Wednesday, 16th. There will be a poster session (prize for the best poster) and a workshop on in situ hybridization as applied to the mammalian embryo on the evening of Thursday, 17th. This will be followed by an entertainment of the songs and music of Northumbria with piper, harpist and fiddler, plus a late bar!

Provisional programme for the Xenopus meeting

1. Generation of clones and histocompatible families. Kobel (Geneva), Picard (Louvain).
2. Embryonic origins and early differentiation of haemopoietic cells. Turpen (Omaha), Katagiri (Sapporo, Japan), Smith (Omaha), Tochinal (Sapporo).
3. Role of the thymus in T cell ontogeny and acquisition of tolerance to histocompatibility antigens. Horton (Durham), Manning (Plymouth), Nagata (Tokyo), Flajnik (Basel), Cohen (Rochester).
4. Metamorphosis, immunologic/endocrine interactions, interleukins. Cooper (Los Angeles), Ruben (Portland), Clothier (Nottingham), Rimmer (Aston), Rollins-Smith (Nashville), Jurd (Essex).
5. B cell ontogeny and immunoglobulin genes. Du Pasquier (Basel), Schwager (Basel).

Provisional programme for the mammal meeting

1. Origins and properties of extra embryonic membranes. Rossant (Toronto), Gardner (Oxford), Surani (Cambridge), Babinet (Paris), Monk (London), Graham (Oxford).
2. Immunological aspects of trophoblast. Sargent (Oxford), Billington (Bristol), Stern (Liverpool), Sutcliffe (Glasgow), Redman (Oxford).
3. Immunology and genetics of pregnancy disorders. Johnson (Liverpool), Lawler (London), Allen (Cambridge), Antczak (Ithaca), Stirrat (Bristol).
4. Workshop. Gaunt (Cambridge), Fleming (Cambridge).

Please return the booking form for this meeting to John Horton (local organizer) by Friday, 3rd July, 1987. If you wish to present a poster, please send the title and abstract to Dr. Horton by the same date.

Use the poster enclosed with this Newsletter to advertise the meeting in your department or Institute.

JANET ROSSANT
is the
VIRGIN ATLANTIC
Lecturer

CHARLES BABINET
is the
AIR UK
Lecturer

XENOPUS AND DEVELOPMENTAL IMMUNOBIOLOGY

September 1987, Durham, England

The goal of these sessions was to provide an update of immunological research that uses the *Xenopus* model system for probing important developmental issues. For this purpose the world's leading experts on *Xenopus* immunobiology were invited to Durham to review and discuss their ongoing research. The gathering of scientists from Denmark, France, Japan, Switzerland, U.S.A. and the U.K. promoted interactions between research groups and provided a long overdue state-of-the-art review.

The first session reviewed the production of clonal *Xenopus* (with defined major histocompatibility complex (MHC) types) from interspecific hybrids and the generation of histocompatible *X.borealis* (a species that has the useful quinacrine fluorescence nuclear marker). Such *Xenopus* are becoming increasingly available for research and are proving invaluable, not only for immunological studies, but also for examining sex determination and tumour gene expression. The advantages of using amphibian embryos for elucidating early differentiation pathways was highlighted in the second session. Studies on the embryonic origins of lymphoid cells are revealing the early restriction of mesodermal precursors to T- and B-cell lineages. This session highlighted the uses of monoclonal antibodies to characterize the emergence of various haemopoietic cell lines and their associated differentiation antigens.

Three sessions revealed the extent to which molecular and genetic characterization of the molecules of the *Xenopus* immune system are being probed by various laboratories. Thus the *Xenopus* MHC class I and II antigens appear to be very similar to equivalent mammalian glycoproteins. The tissue distribution of MHC antigens during development was described and the probable absence of class I MHC expression in the larva was highlighted. Immunoglobulin (Ig) diversity (*Xenopus* possesses 3 Ig heavy chain isotypes: IgM, IgY and IgX) was discussed at the protein and DNA level; mechanisms for differences between antibody repertoire of larvae and adults were suggested. The genomic organization of the Ig heavy chain cluster of *Xenopus* is proving to be similar to that of mammals (with multiple V_H regions, a few J elements and adjoining C region genes), but different from the multiple V-D-J-C subunits existing in elasmobranch fish. Homology between *Xenopus* and mammalian complement component C_3 genes was also described. The production and characterization of *Xenopus* cytokines, in particular interleukin-2 (IL-2), was described. The extent to which IL-2 and its receptor are evolutionary conserved molecules is currently being explored by *in vitro* (flow cytometry) studies, using recombinant human IL-2 and anti-human IL-2 receptor antibodies, to assess cell-surface binding.

The immunology of metamorphosis - a time when the frog is needing to reassess the spectrum of antigens it must consider as self - was discussed at some length. The role of corticosteroids in causing altered immunoregulation (e.g. inhibitory effects on IL-2 production) was highlighted and the effect of thyroxine and ageing on the immune system were considered. Altered susceptibility of metamorphosing *Xenopus* to a lymphoblastic lymphoma was also discussed. Studies on immune reactivity developing in larvally-immunized *Xenopus* are probing the mechanisms involved in the induction and maintenance of tolerance to xenogeneic proteins and alloantigens. In the final session the use of head/body chimeric *Xenopus* (that can be established with thymus epithelium and haemopoietic cells of different MHC haplotypes) to probe the role of the thymus in immune development was considered. This system is proving to be helpful for examining thymic education. This latter topic was also covered in the thymus workshop that successfully brought together amphibian and mammalian immunologists for lively discussion.

A much more detailed review of the *Xenopus* session has been submitted for publication in the journal Development.

John D. Horton,
Department of Zoology,
University of Durham.

The Bath meeting is the BSDB/COB

SYMPOSIUM ON CRANIOFACIAL DEVELOPMENT

This meeting will be published as a supplement to Development (JEEM). It is organized by Peter Thorogood and Cheryll Tickle, who write:

The development of the vertebrate head is a challenging and fascinating problem. It is challenging because the entire basic repertoire of cell behaviour, ranging from migration to differentiation, is called into play. The head is fascinating because it not only houses the major sense organs but also because the face has a key role in human social interactions, allowing the recognition of individuals and the mirroring of emotions. The first BSDB conference on Craniofacial Development will take place on 21st-23rd September, 1987 at Bath University.

The purpose of the conference is two-fold: first, to bring together research workers in the field from this country and to invite outstanding experts from abroad, both from the US and Europe; second, to be educational and provide an outline of the current status of research on the head and face. This will serve to demonstrate that craniofacial development is not impossibly complicated and will highlight general principles of development that have traditionally been studied in other systems. The conference thus aims to appeal not only to those actively working on craniofacial development but to developmental biologists in general. In addition, the subject is relevant in a broader medical context, particularly to dentistry and orthodontics.

Sessions will include the following topics:

- Evolution and morphogenesis of the head
- Neural crest and placodes
- Patterning of muscle and connective tissue
- Patterning of nerve and sense organs
- Abnormalities of craniofacial development.

Bath : 21st-23rd September, 1987.

This is the BSDB/Company of Biologists Symposium on

CRANIOFACIAL DEVELOPMENT

The meeting is organized by Peter Thorogood and Cheryll Tickle and the proceedings will be published as a supplement to Development. The programme is as follows:

Monday, 21st September

EVOLUTION AND MORPHOGENESIS OF THE HEAD

Chairman - Harold Slavkin (Los Angeles)
 Carl Gans (Ann Arbor)
 Ed Gilland (Harvard)

COFFEE

Sarah Wedden/Cheryll Tickle (London)
Mark Ferguson (Manchester)

General remarks by Chairman/Discussion

LUNCH

THE CEPHALIC NEURAL CREST AND PLACODES

Chairman - Nicole Le Douarin (Nogent)
Gordon Tucker (Nogent)
Jan Lofberg (Uppsala)

TEA

Brigid Hogan (London)

General remarks by Chairman/ Discussion

POSTER SESSION

CONFERENCE DINNER

Tuesday, 22nd September

PATTERNING OF CONNECTIVE TISSUES IN THE HEAD

Chairman - Brian Hall (Dalhousie)
Drew Noden (Cornell)
Peter Thorogood (Southampton)

COFFEE

Andrew Lumsden (London)
General remarks by Chairman/Discussion

LUNCH

PATTERNING OF NERVE AND SENSE ORGANS IN THE HEAD

Hendrik van der Loos (Lausanne)
Alun Davis (London)
Lewis Tilney (Philadelphia)

TEA

Jonathan Bard (Edinburgh)
General remarks by Chairman/Discussion

WORKSHOPS

- (i) 'Cellular and molecular aspects of cephalic neural crest development'.

Convenors - Don Newgreen (Manchester), Jim Bee (London)

(ii) 'Strategies of head development'.

Convenors - Pere Alberch (Harvard), Ed Kollar (Farmington)

D I N N E R

CIVIC RECEPTION AND ROMAN BATHS

Wednesday, 23rd September

ABNORMALITIES OF CRANIOFACIAL DEVELOPMENT

Chairman - Malcolm Johnston (Chapel Hill)

David Poswillo (London)

Kathy Sulik (Chapel Hill)

C O F F E E

Bob Williamson (London)

General remarks by Chairman/Discussion

Lewis Wolpert (London)

L U N C H

END

Please return booking forms for this meeting to Peter Thorogood by 7th August, 1987. If you wish to present a poster, please send the title and abstract to Dr. Thorogood by the same date. A prize will be awarded for the best poster.

CRANIOFACIAL DEVELOPMENT

September 1987, Bath, England.

How the vertebrate head develops and how it has evolved is a fascinating problem but one that has traditionally been avoided by many developmental biologists who have felt that the head is far too complicated a structure to study. One of our purposes in organising this meeting was to overcome this prejudice and illustrate not only that the head is amenable to developmental analysis but that very exciting work in this field is currently being carried out in laboratories around the world. Our intention in composing the programme was to bring together specialists from a number of different fields to provide a unique mixture of scientists and medics. To a large extent this worked and worked well. Over 130 people attended ranging from evolutionists right through to craniofacial plastic surgeons and travelling from as far afield as Japan and California. Clearly it was one of the first occasions on which European and American craniofacial developmental biologists had assembled together on such a scale.

The programme was organized around five major themes:

- The evolution and morphogenesis of the head
- The cephalic neural crest and placodes
- Patterning of connective tissues in the head
- Patterning of nerves and sense organs in the head
- Abnormalities of craniofacial development

and included two workshops:

- Cellular and molecular aspects of cephalic neural crest development
- Strategies of head development.

Perhaps the underlying theme running throughout was an attempt to define those mechanisms which specify the patterning of the various tissues of the head, not simply the differentiation of the various constituent cell types. Emerging from this was also discussion of just how changes in those mechanisms might underly evolutionary/phylogenetic change in organization of the head, and also generate the various human craniofacial abnormalities encountered by the clinician or surgeon. Several directions for future research emerged. Firstly, the question of lineage composition of the neural crest was raised on a number of occasions and is clearly going to be the focus of attention in several labs. Secondly, the old nineteenth century anatomists question of whether or not the head is a segmented structure now seems likely to be resolved by parallel developments in two different fields; somitomes (nascent somites) have been identified in early head mesoderm before becoming obscured by subsequent developmental events, and also cDNA probes to homeobox-containing genes may be used to map their expression in the developing head by in situ hybridization techniques. And thirdly, we learnt of the achievements and potential of applying recombinant DNA technology as a diagnostic technique in screening for various familial craniofacial disorders, illustrated by the chromosomal mapping and imminent isolation of the gene involved in familial cleft palate.

We were blessed with active lively registrants who guaranteed good discussions, sunny and dry autumn weather and a pleasant campus setting adjacent to a beautiful old city. The meeting was organized under the auspices of the British Society for Developmental Biology and its success ensured by generous support from BSDB, the Royal Society, The Nuffield Foundation and the British Council. The proceedings of the meeting will be published by the Company of Biologists as a supplementary volume of Development in the Spring of 1988.

Peter Thorogood and Cheryl Tickle.