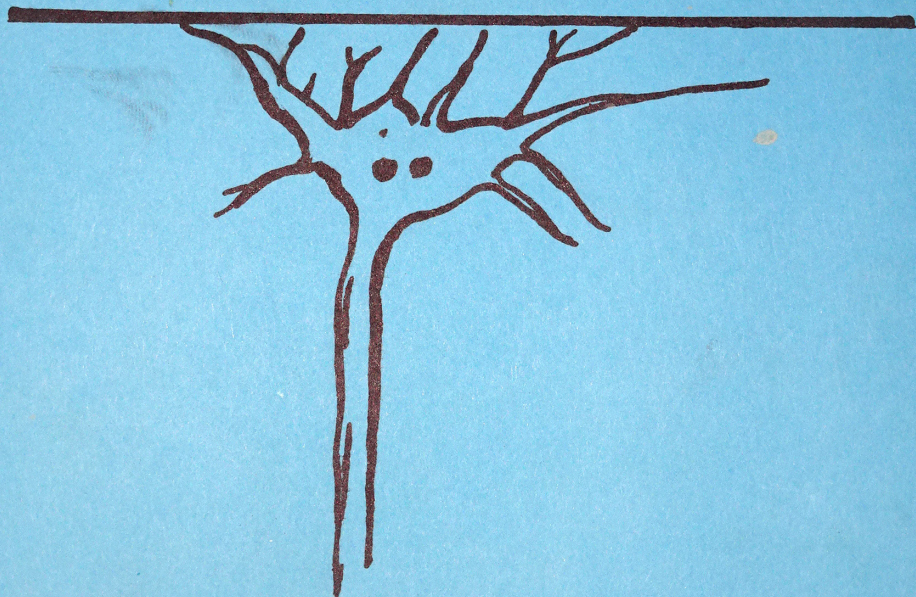


**BSDB
&
BSDB/BSCB
MEETINGS**



Glasgow
25—26 March 1985

PROGRAMME & ABSTRACTS

British Society for Developmental Biology

and

BSDB/BSCB

Joint Meetings

GLASGOW : 25-26th March 1985

BOYD ORR BUILDING

EARLY AMPHIBIAN DEVELOPMENT

NORMAL AND PATHOLOGICAL INVASIVENESS IN VITRO
& ENVIRONMENTAL CUES FOR CELL BEHAVIOUR

PROGRAMME AND ABSTRACTS

BSCB/BSDB JOINT MEETING

University of Glasgow
Boyd Orr Building

25-26 March 1985

MONDAY 25th March : Lecture Theatre 1

9.15 Plenary Lecture J. FOLKMAN (Harvard) Regulation of angiogenesis:
a new function for heparin

10.00 Coffee

NORMAL AND PATHOLOGICAL INVASIVENESS IN VITRO Session 1

Joint BSCB/BSDB Symposium Lecture Theatre 2

Chairman : J.M. LACKIE (Glasgow)

10.30 E.B. CRAMER (New York) Leukocyte migration across endothelium
and epithelium

11.10 C.W. EVANS (St Andrews) Adhesion, motility and invasiveness of
normal and tumourigenic cells

11.50 P.A.W. EDWARDS (Cambridge) Cell populations in the mammary gland

12.30 Session ends

NORMAL AND PATHOLOGICAL INVASIVENESS IN VITRO Session 2

Lecture Theatre 2

Chairman : G. DUNN (London)

2.00 J.M. LACKIE (Glasgow) Problems of movement in 3-D matrices

2.40 J. DOROSZEWSKI (Warsaw) Cell adhesion and locomotion on endothelium
and other substrates

3.20 Tea

4.00 R.W. PARISH (Zurich) In vitro studies on the invasivity of
mouse sarcoma cells

4.40 M. MAREEL (Ghent) Mechanisms of tumour invasion: in vitro
studies

5.20 Session ends

The bar at Queen Margaret Hall will be open to all participants during the
evening to provide a meeting place for informal discussions.

7.30 Workshop on Ultrastructure of Protoplasmic Surface of Ventral
Membranes (at Queen Margaret Hall)

Chairman: M.V. Nermut (NIMR)

Speakers:

M.V. Nermut (NIMR), A. Nicol (NIMR), Z. Avnur (Rehovot)
C.G. Smith (Unilever), S. Stamatoglou (NIMR), L.D.
Williams (NIMR)

7.30 Meeting of Xenopus Club at Queen Margaret Hall

ENVIRONMENTAL CUES FOR CELL BEHAVIOUR Session 1

Continuation of the joint BSCB/BSDB Symposium Lecture Theatre 2

Chairman : A.S.G. CURTIS (Glasgow)

9.00 J.A. WESTON (Eugene) The role of extracellular matrix in
neural crest development

9.45 R.E. KELLER (Berkeley) How is cellular behaviour related to the
morphogenetic movements of amphibian
gastrulation?

10.30 Coffee

11.00 W. BIRCHMEIER (Tubinger) The use of monoclonal antibodies for the
study of cell adhesion and metastasis

11.45 W. GALLIN (New York) Cell adhesion molecules in organogenesis

12.30 Session ends

ENVIRONMENTAL CUES FOR CELL BEHAVIOUR Session 2

Chairman : J.G. EDWARDS (Glasgow) Lecture Theatre 2

2.00 G. DUNN (London) Analysing cell collision behaviour in a
model of invasion

2.40 C.D. McCAIG (Edinburgh) Neurite growth in a steady electric field

3.20 P. CLARK, A.S.G. CURTIS,
J.A.T. DOW &
C.D.W. WILKINSON (Glasgow) Topographical control of cell behaviour

4.00 J. TUCKER (St Andrews) Spatial integration of cell shaping and
cytoskeletal deployment during tissue
construction

4.40 Session ends

4.45 to 5.45 Sherry Reception in the Trade Exhibition and Poster Session areas.

5.30 BSDB AGM in Lecture Theatre A

The bar at Queen Margaret Hall will be open to all participants during the evening to provide a meeting place for informal discussions.

EARLY AMPHIBIAN DEVELOPMENT

Programme

(All lectures will be in the Boyd Orr Building, Lecture Theatre A.)

Monday March 25th

1. Organization of the oocyte and fertilized egg

- | | | |
|-------------|------------------------|--|
| 9.00 | D. Smith (Purdue) | Translation of maternal messages in amphibian oocytes. |
| 9.35 | C. Wylie (St. Georges) | The cytoskeleton of the oocyte and its role in early development. |
| 10.10 | Coffee | |
| 10.35-11.15 | P. Hausen (Tubingen) | Displacement of cytoplasmic and nuclear components during maturation of <u>Xenopus</u> eggs. |

2. Cytoplasmic determinants

- | | | |
|-----------|-------------------------|--|
| 11.15 | G. Malacinski (Indiana) | Sperm extragenic contribution to early pattern specification. |
| 11.50 | J. Cooke (NIMR) | Dynamics of a system controlling body pattern in the egg and early embryo. |
| 12.25 | R. Gimlich (Berkeley) | Cell-cell interactions and the origin of the organizer. |
| 1.00-2.00 | Lunch | |

CSF blocks the cell cycle oscillator
Presumably anti MPF does not?
CSF a catch name to confuse us
conceptually

3. Regional and temporal specificity of gene expression

- 2.00 I. Dawid (Bethesda) Gene expression in Xenopus embryogenesis.
- 2.35 J. Gurdon (Cambridge) Actin gene activation in Xenopus development.
- 3.10 J. Slack (ICRF) Regional specificity of glycoconjugates in Xenopus and axolotl embryos.

3.45-4.15 Tea

- 4.15 Elizabeth Jones (Warwick) Epidermal differentiation in early Xenopus embryos.
- 4.50 Anne Marie Duprat (Toulouse) Neural induction: embryonic determination elicits full expression of specific neuronal traits.

Tuesday March 26th

4. Cell and tissue movements

- 9.00 R. Keller (Berkeley) How to close the blastopore: The role of convergent extension in amphibian gastrulation.
- 9.35 G. Boucault (Paris) Evidence for the role of fibronectin in amphibian gastrulation.
- 10.10 R. Gordon (Manitoba) A review of the theories of neurulation with their implications for understanding neural tube defects.

10.45-11.15 Coffee

5. Temporal control

- 11.15 R. Laskey (Cambridge) Chromatin replication in early development.
- 11.50 C. Ford (Sussex) Maturation promotion factor and cell cycle control.

12.30-2.00 Lunch

6. Embryonic induction

- 2.00 P. Niewukoop (Utrecht) Inductive interactions in early amphibian development and their probable nature.
- 2.35 J. Smith (NIMR) The use of cell lineage labels to analyse inductive interactions.
- 3.10 Janet Heasman (St. Georges) States of commitment of individual blastomeres as analysed by single cell labelling.
- 3.45 H. Grunz (Essen) Information transfer between cells during early embryonic induction.
- 4.20 Anne Warner (UCL) Antibodies to gap junctions as probes for studying cell interactions during development.

4.45-5.30 SHERRY RECEPTION Floors 2 & 3.

5.30 AGM BSDB in Lecture Theatre A.

Posters offered by BSDB members will be on display (Posters nos. 71 onwards) on Floors 2 or 3 from Monday morning until Tuesday 6pm.

From newsletters

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.