1993 (#24, 25, 26, 27, 28)

SPRING 1993, University of East Anglia: Cell Communication in Development

Over the past few years, the genetic analysis of local cell signalling phenomena in Drosophila and the nematode has made significant progress, with a number of the genes involved being cloned and characterised. Not surprisingly, many of these turn out to encode homologues of well known vetebrate proteins; however, the genetic analyses have for the most part provided the first good examples of the roles of these proteins in normal development. Perhaps the most exciting outcome of these analyses to date is that they bring together groups of well known, yet in some cases, apparently unrelated molecules in a single developmental process; this is stimulating new lines of investigation amongst cell biologists and geneticists alike The Symposium, organised by Tony Brown (New York) Phil Ingham (Oxford) and Alfonso Martinez-Arias (Cambridge), aims to reflect this rapid convergence of disparate areas of investigation, by providing a forum for both cell biologists and developmental geneticists to meet and present the results of their research on different aspects of cell interactions. Details of the programme and of the invited speakers will appear in the next issue of the Newsletter.

SPRING 1993, Univertsity of East Anglia: Signals, Polarity and Adhesion in Development

The 1993 Spring Symposium will take place at the University of East Anglia in Norwich from the 13th to 16th of April and is being organised by Tony Brown, Philip Ingham and Alfonso Martinez-Arias. As previously announced, the meeting will be concerned with different aspects of cell communication; the new title which the organisers have chosen reflects the differening perspectives from which from which this topic will be addressed. Most of the invited speakers have already confirmed their participation: the provisional programme is as follows:

Patterning of Cell Assemblies:
P. Simpson (Strasbourg), D. Hartley (London), M. Bate (Cambridge), H. Skaer (Cambridge), J. Williams (South Mimms)

Cell Adhesion:
R. Kemler (Freiburg), N. Brown (Cambridge), C. ffrench-Constant (Cambridge), F. Watt (London)

Localised Cell Interactions:
A. Martinez-Arias (Cambridge), A. Brown (New York), L. Dale (Birmingham), J. Smith (London), P. Besmer (New York)

Cell Behaviour:
K. Howard (New Jersey), R. Keynes (Cambridge), E. Wieschaus (Princeton), C . Goodman (Berkeley)

Signal Transduction:
E. Hafen (Zurich), L. Zipursky (Los Angeles), S. Courtniedge (Heidelberg), P. Bryant (Irvine), N. Perrimon (Harvard), P. Sternberg (Caltech)

Cell Polarity:
P. Nurse (Oxford), K. Simons (Heidelberg), J. White (Cambridge), E. Knust (Köln)

The Main **BSCB Symposium** which will run concurrently with the BSDB Symposium will be on **Intracellular Vesicle Transport**. In addition to the main Symposia there will also be parallel sessions on Microtubule Motors (BSCB), Programmed Cell Death (BSCB/BSDB) and Applications of Optical Microscopy, Image Anlaysis and Embryological Databases (BSDB).

Spring Symposium 1993

"Signals, Polarity & Adhesion in Development"

Venue: University of East Anglia, Norwich

The Spring 1993 Symposium entitled "**Signals, Polarity and Adhesion in Development**" will take place at the University of East Anglia from **Wednesday 14th April to Friday 16th April**. As usual, the Symposium will run concurrently with that of the British Society for Cell Biology. The organisers of the BSDB Symposium have put together a very full programme of International speakers, which aims to integrate the latest exciting advances in the genetic analysis of cell-cell interactions with analysis of these processes at the cellular and molecular level.

The main **BSCB symposium** is entitled "**Intracellular Vesicular Transport**". In addition to the two main Symposia there will be a joint Poster Session and parallel workshops on "**Microtubule Motors**" (BSCB), "**Programmed Cell Death**" (BSCB/BSDB) and "**Applications of Optical Microscopy and Image Analysis**" (BSCB/BSDB)

Detailed information about the venue, together with a **Booking Form** and **Abstract Form**, can be found in the 'Centre Section' of the Newsletter. The full scientific programme appears on the following pages.

BSDB Symposium: Signals, Polarity and Adhesion

PROVISIONAL PROGRAMME

Scientific Organisers: Philip Ingham
Alfonso Martinez-Arias and Tony Brown

Local Organisers: Peter Shaw
Ian Gibson

Wednesday 14th April

Signal transduction
Chair: Alfonso Martinez-Arias

9.00 Welcoming Remarks

9.05 E. Hafen (Zurich) " Genetic Dissection of a Signal Transduction Pathway in the Developing Eye of *Drosophila*"

9.45 J. Downward (London) "Regulation and function of *ras* proteins in thecontrol of mammalian cell growth and differentiation"

10.25 COFFEE

10.50 P. Sternberg (Caltech) "Inductive interactions during *C.elegans* vulval development"

11.30 N. Perrimon (Harvard) "The *Drosophila* terminal signal transduction pathway"

12.10 S. Courtniedge (Heidelberg) "Regulation and Function of *Src* Family Tyrosine Kinases"

13.00 LUNCH

14.00 ***POSTER SESSION***

Cell polarity
Chair: Helen Skaer

19.00 J. White (Cambridge) " Cell Polarity in the Early Embryo of *C. elegans*"

19.40 E. Knust (Köln) " Control of Epithelial Morphogenesis in *Drosophila*"

20.20 BREAK

20.40 D. Gubb (Cambridge) " Genetic Control of Cellular Polarity in *Drosophila*"

21.20 P. Nurse (Oxford) "Spatial Organisation of the Fission Yeast Cell"

Thursday April 15th

Cell Behaviour
Chair: Tony Brown

9.00 C. Goodman (Berkeley) "Genetic Analysis of Growth Cone Guidance and Target Recognition in *Drosophila*"

9.50 C. ffrench Constant (Cambridge) "Cell Matrix Interactions and the Regulation of Cell Migration"

10.30 COFFEE

11.00 K. Howard (New Jersey) "*Drosophila* Germ Cell Behaviour" (New Jersey)

11.40 J. Williams (Clare Hall) "Regulation of Morphogenesis in *Dictyostelium* by Interacting Signal Transduction Pathways

12.20 P. Bryant (Irvine) "Tumour Suppressor Genes Required for Signal Transduction, Cell Polarity and Adhesion in *Drosophila*"

13.00 LUNCH

Signalling factors
Chair: Philip Ingham

14.00 R. Moon (Seattle) "The role of *Wnts* during mesoderm induction and patterning in *Xenopus*"

14.40 A. Brown (New York) "*Wnt* genes and their mechanism of action"

15.20 TEA

15.50 M. Bernfield (Harvard) "The Syndecans: Proteoglycan Co-receptors for Matrix and Growth Factors"

16.30 L. Dale (Birmingham) "Bone Morphogenic Proteins and Mesoderm Formation in Amphibians"

17.10 P. Bessmer (New York) "The c-kit receptor system: insights from germline mutations"

CONFERENCE DINNER

Friday April 16th

Cell adhesion
Chair: Sarah Courtniedge

9.00 R. Kemler (Freiburg) " From Cadherins to Catenins: The importance of Cytoplasmic Anchorage for Epithelial Function"

9.40 F. Watt (London) "Role of Integrins in Regulating Keratinocyte Proliferation, Differ entiation and Adhesion"

10.20 COFFEE

10.50 N. Brown (Cambridge) "Integrins and Morphogenesis"

11.30 D. Simmons (Oxford) "Families of Cell Adhesion Molecules"

Cell Interactions
Chair: Fiona Watt

12.10 R. Cagan (San Diego) "Cell fate choice and patterning in the developing *Drosophila* retina"

13.00 LUNCH

14.00 R. Pruitt (Harvard) "Molecular Genetics of Cell Interactions in *Arabidopsis*"

14.40 H. Skaer (Cambridge) "Cell Interactions in the Developing Malpighian Tubules of *Drosophila*"

15.20 TEA

15.40 P. Simpson (Strasbourg) "Lateral Signalling in *Drosophila*: the role of *Notch*, *Delta* and *shaggy*"

16.20 M. Bate (Cambridge) "Mechanisms of Muscle Patterns in *Drosophila*"

17.00 D. Hartley (London) "Cell fate determination: A view from the *Enhancer of split* complex"

END OF SYMPOSIUM

MEETING REPORTS

SIGNALS, POLARITY & ADHESION IN DEVELOPMENT

BSDB Spring Symposium NORWICH 1993 : RAS, ROCK AND ROLL

Maybe it was naive of me to expect to actually see cells talking to each other, crawling, and arranging themselves; it was all indirect evidence: "signalling pathways", cultures, growth factors. A. Martinez-Arias had said it proudly, as he introduced the conference on wednesday morning: "We are moving away from wooly concepts towards molecules", a definite step away from last year's Gastrulation meeting. The first morning set the trend: Ras was the star, as we learnt that signal tranduction involved similar components in different systems. This left some of us puzzled about how specificity can be achieved by these signalling molecules.

The level of observation was the cell no doubt. This was illustrated by the fact that the Yamanouchi Lecture was given by Paul Nurse on the spatial organisation of Fission Yeast cell. At that point, "wooly concepts" made a come back. His talk summarised the message of the conference: if we want to understand how the whole embryo develops, we have to understand how single cells behave. Hence we moved on to Cell Behaviour. The question, it seems, is always the same: how do cells sort themselves out

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and know were to go and get organised? I enjoyed mostly the talks by C.Goodman (on the Drosophila nervous system) and J.Williams (on Dictyostelium) from that point of view. The Signalling factors session came in the afternoon, completing the picture. I spent some time also in the Programmed Cell Death session and enjoyed M.Raff's talk, on survival factors. The level of gel saturation (but we all know it's like bran: it might not be very good to swallow but it's very good for our health) was approaching dangerously when the Microscopy Advances section saved it all. I finally got to see cells crawling, calling, and doing the most counter-intuitive dances.

On the whole, there was a good balance of Ras, Rock and Roll, as developmental biologists and cell biologists dansed away at the Thursday night disco. The meeting might not have been as well attended as the last Spring one, but the atmosphere definitely was there! The meeting was a success in as much as the relaxed atmosphere alowed for meeting new people and feel part of a community.

My only regret is that although most organisms were represented (even Yeast and Dictyostelium got their chance), the leech was nowhere to be found, apart from the local pond!

Isabelle Desjeux,
Dept. of Physiology,
University of Edinburgh
