

1992 (#21, 22, 23, 24, 25)

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, with Clau-

dio Stern as organizer. The BSCB are concentrating on transcription factors.

SPRING 1992, Sussex: Gastrulation

The 1992 Spring Symposium will be a joint meeting with the **British Society for Cell Biology**. The meeting is being held at Sussex University from **Wednesday 8th April to Friday 10th April**. The main BSDb symposium will be on **Gastrulation** and is organised by Claudio Stern. Speakers will include Lewis Wolpert, Chuck Ettensohn, William Jeffery, J.P. Trinkhaus, Hilde Bortier, Luc Vakaet, Rosa Beddington, Chris Wylie, David McClay, Salome Waelsch, Maria Leptin, Nigel Brown, Rudolf Raff, Jane Dodd, Jonathan Slack, Jim Smith, Kirstie Lawson, Claudio Stern, John Gurdon, Tom Fleming, Anne Warner, Chuck Kimmel,

Robert Ho, Eric Wieschaus.

The main **BSCB symposium**, organised by Peter Rigby and Robb Krumlauf, will be on **Transcription Factors**. In addition, there will be alternative BSDb sessions on Nematode Development (Ian Hope), Teleost Development (Nigel Holder & Peter Thorogood), and BSCB sessions on Cytoskeleton and Tumour Suppressor Genes. A joint BSDb/BSCB session on Signal Transduction is also planned. Provisional speakers for the latter include: Galione (Oxford), Otte (Utrecht), Green (NIMR), Runyan (Iowa), Muller (Heidelberg), Bernstein (Toronto)

Spring Symposium 1992

"Gastrulation" Venue: University of Sussex

The Spring 1992 Symposium is, as is customary, organised jointly with the **British Society for Cell Biology** and will take place at Sussex University from **Wednesday 8th April to Friday 10th April**. The topic of the symposium, which is organised by Claudio Stern is **Gastrulation**. Claudio has put together an excellent programme and the Symposium promises to be one of the major international meetings of 1992.

The main **BSCB symposium**, organised by Peter Rigby is on **Transcription Factors**, and includes many talks that will be of direct interest to Developmental Biologists. In addition to the main symposia, both Societies have organised a number of other sessions that will run in parallel. The BSDb sessions are on Nematode Development (organised

by Ian Hope) and Teleost Development (Nigel Holder & Peter Thorogood), with BSCB sessions on Actin-Binding Proteins (D. Critchley), Kinases and Phosphatases (P.J. Parker) and Tumour Promoters (B. Ponder) and a joint BSDb/BSCB session on Signal Transduction.

For those of you who have not visited Sussex University before, I can assure you, as a former Sussex student, that it has a great deal to offer. Access to the campus is easy either by car or rail, and the delights of Brighton are only a few miles down the road!

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.

PROVISIONAL PROGRAMME

Main BSDB Symposium: Gastrulation

Scientific Organiser: Claudio Stern

Local Organiser: Robert Whittle

Wednesday 8th April

9:00-9:05 Welcome

THE SYSTEMS

Chair: Claudio Stern

9:05-9:30 Lewis Wolpert (London): Gastrulation and the evolution of development

9:40-10:05 Chuck Ettensohn (Pittsburgh): gastrulation in sea urchins

10:15-10:40 William Jeffery (Bodega Bay): 'Determinants of gastrulation and axis formation in ascidians'

10:50-11:20 coffee

Chair: Chris Wylie

11:20-11:45 J.P. Trinkaus (Yale): Convergent cell movements during gastrulation in *Fundulus*

11:55-12:20 Ray Keller (Berkeley): Convergence, extension and gastrulation movements in the frog

12:30-2:00 lunch

Chair: Ray Keller

2:00-2:25 Hilde Bortier & Luc Vakaet (Ghent): fate mapping gastrulation in the chick

2:35-3:00 Rosa Beddington (Edinburgh): gastrulation in the mouse

3:10-3:35 Kirstie Lawson (Utrecht): cell lineage and mesoderm formation in the mouse

3:45-4:15 tea

CELL ADHESION AND CELL INTERACTIONS

Chair: Jonathan Slack

4:15-4:40 Urs Rutishauser (Case Western): cell adhesion molecules in morphogenesis

4:50-5:15 David McClay (North Carolina): cell interactions during gastrulation in sea urchins

5:25-6:50 Chris Wylie (Cambridge): manipulating cell adhesion in frogs

6:00-7:30 Poster session & trade exhibition

7:00-8:00 dinner

8:30-9:30 PLENARY: Salome Waelsch (New York): Life in Han Spemann's lab

Thursday 9th April

DEVELOPMENT OF EMBRYONIC POLARITY

Chair: Lewis Wolpert

9:00-9:25 Maria Leptin (Tübingen): dorso-ventral polarity and cell interactions in fly gastrulation

9:35-10:00 Anne Warner (London): gap junctions and cell communication in early development of the mouse

10:10-10:35 Tom Fleming (Southampton): epithelial junction maturation during pre-implantation development and the development of embryonic polarity in mouse

10:45-1:00 poster session and trade exhibition

1:00-2:00 lunch

Joint BSDB and BSCB session:

PGFs, ACTIVINS AND MESODERM INDUCTION

Chair: Rosa Beddington

- 2:00-2:25 Jonathan Slack (Oxford): 'Dorsalization, anterior-posterior specification or both'
 2:35-3:00 Jim Smith (London): Control of gastrulation by mesoderm inducing factors: is integrin 1 involved?
 3:10-3:35 Claudio Stern (Oxford): relationship between axis formation and mesoderm formation in the chick
 3:45-4:15 tea

MUSCLE DEVELOPMENT

Chair: Jim Smith

- 4:15-4:40 Michael Bate (Cambridge): muscle development in insects
 4:50-5:15 John Gurdon (Cambridge): mesoderm formation and muscle development in frog
 5:25-5:50 Tim Mohun (London): gene expression during early muscle development
 6:00-6:25 Michael Krause (Seattle): *MyoD* and muscle development
 7:30 for 7:45 Conference dinner

Friday 10th April

- 9:00-10:00 PLENARY: David Baltimore
 10:00-10:30 coffee

DETERMINATION/DECISIONS

Chair: Michael Bate

- 10:30-10:55 Rudolf Raff (Bloomington): developmental decisions in sea urchin
 11:05-11:30 Robert Ho (Oregon): transplantation of cells in zebrafish
 11:40-12:05 Bernard Thisse (Strasbourg): Control of *twist* expression by *dorsal* in *Drosophila*
 12:30-2:00 lunch

NEURAL INDUCTION

Chair: John Gurdon

- 2:00-2:25 Tabitha Doniach (Berkeley): mesoderm and neural induction in frog
 2:35-3:00 Tony Durston (Utrecht): neural induction in frog: RA, cAMP and PKC
 3:10-3:35 Jane Dodd (New York): the mesoderm and neural induction: chick/frog
 3:45-4:15 tea
 End of Main Symposium

Parallel Sessions

Wednesday 8th April

TELEOST DEVELOPMENT

- Organisers: N. Holder & P. Thorogood
 Speakers: M. Schartl (Wurzburg), L. Timmermans (Wagenigen), R. Ho (Oregon), C. Kimmel (Oregon), A. Fjose (Bergen), T. Jowett (Newcastle), U. Strähle (Oxford), S. Wilson (London), S. Schulte (Tübingen), N. Maclean (Southampton)

Nematode Development

- Organiser: I. Hope
 Speakers: J. Sulston (Cambridge), J. Thierry-Mieg (Montpellier), A. La Volpe (Naples), R. Plasterk (Amsterdam), E. Schierenberg (Köln), I. Hope (Leeds), J. White (Cambridge), R. Schnabel (Tübingen), J. Hodgkin (Cambridge), D. Thierry-Mieg (Montpellier)

MEETING REPORT

BSDB/BSCB Joint Symposium Sussex University, April 1992

Hats off to Sandy MacGillivray and Robert Whittle for overseeing the smooth running of the recent joint BSDB/BSCB spring meeting held at the University of Sussex! With contributions from as far afield as Moscow and California covering everything from gastrulation to transcription and actin binding proteins there was enough to keep the 700 plus participants busy well into the evenings. It was gratifying to find overlap between the two societies such that one was never left wanting for an interesting session.

The first morning's BSDB gastrulation session was highlighted by Chuck Ettensohn's elegant analysis of the induction of skeletogenic cell fate in the sea urchin embryo. William Jeffrey explained how cytoplasmic reorganisation between the time of fertilisation and the first cleavage of the ascidian embryo is required for correct gastrulation, and just before lunch Ray Keller had us believing, with the use of a video, that bipolar, mediolateral directed protrusive activity is "the only show in town" left to explain gastrulation movements the *Xenopus* embryo.

In the afternoon I confess to defecting to the BSCB: Herbert Jäckle and Mike Levine discussed the dissection of promoter elements that control the striped expression patterns of the pair-rule genes *hairy* and *even-skipped* in the *Drosophila* blastoderm, while Rob White described his lab's promising efforts to isolate genes under the control of the homeotic selector genes by cloning Ultrabithorax binding sites using an immunopurification technique.

The scheduled first day festivities were concluded with an excellent plenary lecture by Eddy De Robertis on the dorsal lip specific homeobox gene *gooseoid* and its effects on gastrulation in *Xenopus*. I am able to relate that unscheduled first day festivities carried on until last orders. My only real grumble with Claudio Stern, Peter Rigby and the other session organ-

isers concerned the vast choice of interesting speakers they had assembled, with four excellent sessions running in parallel each day! On the second day, in addition to the main Symposia there was a Teleost extravaganza that opened with Chuck Kimmel giving an overview of gastrulation movements and the power of cell lineage tracing in the Zebrafish embryo. Stefan Schulte-Merker then discussed the pattern of expression of the Zebrafish *brachyury* gene products and the remarkable finding that the embryonic lethal mutation *ntl* (notochord and tailless) is due to disruption of this gene. The emphasis after lunch was placed on analysis of the expression in the Zebrafish embryo of genes shown to be important in the development of other organisms with talks on the fish *forkhead* orthologue (Uwe Strähle), *Pax* genes (Steffan Krauss) and *Hox* and *Krox-20* expression (Trevor Jowett).

The final day of the meeting was highlighted by Nobel laureate David Baltimore who accomplished the impressive feat of presenting a staggering amount of data on the activity of Nuclear Factor Kappa B without losing the attention of his audience!

Attendance on all days was good and interaction was greatly helped by the pleasant surroundings of the campus plus the unexpectedly clear blue skies and daily sunshine. The only apathy shown during the meeting was that of the BSDB membership whose lack of attendance at the AGM suggests that they assume that the society neither wants nor needs feedback from its members. I, however, do not believe this and would like to thank the executive for holding meetings of this quality and for making funding available for graduate students allowing them to attend.

Patrick Blader
ICRF Developmental Biology Unit
Oxford

Autumn 1992, London: Mouse Embryology and Prenatal diagnosis

This meeting will be organized by Audrey Muggleton-Harris, and will be held at Kingston

Polytechnic. Further information can be obtained from Audrey.

AUTUMN 1992, Kingston Polytechnic: The Developmental Basis of Inherited Disorders

The Autumn 1992 Autumn meeting will be held at Kingston Polytechnic from the 10th-12th September. The topic will be The Developmental Basis of Inherited Disorders and the meeting is being organised by Audrey Muggleton-Harris in collaboration with David Whittingham. This meeting will also be used as an opportunity for the BSDb to extend their thanks to Anne McLaren for all she has done for the Society over the years. Speakers at the meeting will include: Readhead (Caltech), Patton (St. George's, London), Johnson

(Cambridge), West (Edinburgh), Hastie (Edinburgh), Tuddenham (Harrow), Rastan (Harrow), Williamson (St. Mary's, London), Winter (Harrow), Griffin (UCL, London), Cattanaach (Harwell), Brown (St. George's, London), Monk (MDU, London), Hooper (Edinburgh), Scrambler (St. Mary's, London), Surani (Cambridge), Goodfellow (ICRF, London), Bolton (King's, London), Whittingham (St. George's, London), Muggleton-Harris (St. George's, London).

AUTUMN 1992, Kingston Polytechnic: The Developmental Basis of Inherited Disorders

The Autumn 1992 meeting will be held at the Kingston Hill site of Kingston Polytechnic from the 9th - 12th September. The topic will be the Developmental Basis of Inherited Disorders and the meeting is being organised by Audrey Muggleton-Harris in collaboration with David Whittingham. Plans for the Scientific Sessions have now been finalised and the full list of speakers is as follows: Readhead (Caltech), Johnson (Cambridge), West (Edinburgh), Hastie (Edinburgh), Wood (Oxford), Stirling (King's, London), Caplan (St. Mary's, London), McLaren (UC, London), Burgoyne (UC, London), Rastan (Harrow), Williamson (St. Mary's, London), Tuddenham (CRC, Har-

row), Patton (St. George's, London), Handyside (Hammersmith Hospital, London), Griffin (UC, London), Winter (Harrow), Cattanaach (Harwell), Brown (St. George's, London), Monk (MDU, London), Hooper (Edinburgh), Scrambler (St. Mary's, London), Surani (Cambridge), Goodfellow (ICRF, London), Bolton (King's, London), Whittingham (St. George's, London), Muggleton-Harris (St. George's, London). On the Friday evening there will be a Reception in honour of Anne McLaren followed by the Society Dinner.

The detailed Programme for this meeting will appear in the next issue of the Newsletter.

AUTUMN 1992, Kingston Polytechnic: The Developmental Basis of Inherited Disorders

This Autumn's meeting is organised by Audrey Muggleton-Harris and will take place at the Kingston Hill site of Kingston Polytechnic from the 10th to 12th of September 1992. Understanding of the developmental basis of inherited disorders is progressing at an increasingly rapid pace and the meeting provides a timely opportunity to hear the latest from a number of internationally recognised workers in this field. The meeting will also be used as an oppor-

tunity for the BSDb to extend their thanks to Anne McLaren for all that she has done for the Society over the years.

The full programme of the meeting can be found on the following pages; the registration form and Poster abstract form are in the Centre Section of the Newsletter. Since space is limited, preference will be given to BSDb members who indicate that they will attend the entire meeting

WEDNESDAY 9 SEPT:

Arrivals/registration desk open from 5:00pm - 9:00 pm
Pre-ordered buffet/dinner at 6:30 pm

THURSDAY 10 SEPT:

9:15 am **A L Muggleton-Harris** (St. Thomas's Hospital, London)
"Opening remarks, introduction to scientific session"

CHAIRPERSON: **M Hooper** (University Medical School, Edinburgh)

9:30 am **R M Winter** (Northwick Park Hospital, London)
"Limb defects: animal models and candidate genes"

10:10 am **P Goodfellow** (ICRF, London)
"Defects in sex determination"

10:50 am COFFEE/TRADE EXHIBITION

11:10 am **R Lovell-Badge** (NIMR, Mill Hill)
Sox genes and inductive events during development of the nervous system

11:50 am **N Hastie** (Western General Hospital, Edinburgh)
"Wilms tumour - Aniridia Syndrome?"

12:30 - 1:45 pm LUNCH

CHAIRPERSON **A McLaren** (MRC Mammalian Development Unit, London)

1:45 pm **R Williamson** (St. Mary's Hospital Medical School, London)
Opening Speaker: The Molecular Genetics of Dysmorphic Syndromes.

2:25 pm **W Wood** (John Radcliffe Hospital, Oxford)
"Development regulation of haemoglobin and its disorders".

3:05 pm **P Scambler** (St. Mary's Hospital Medical School, London)
"DiGeorge syndrome and other dysmorphologies caused by monosomy 22q11"

3:45-4:50 pm TEA/TRADE EXHIBITION

4:05 pm **J Stirling** (Kings College, London)
"The developmental and biochemical regulation of Tay-Sachs hexosaminidase deficiencies".

- 4:45 pm **N Caplan** (St. Mary's Hospital Medical School, London)
"The prospects for gene therapy for cystic fibrosis and the implication of treatment for other inherited disorders".
- 5:20 pm CONCLUSION OF SCIENTIFIC SESSIONS
- 6:30 pm DINNER
- 8:00 pm POSTERS/WINE RECEPTION hosted by Dean of St. George's Hospital Medical School, London.

FRIDAY 11 SEPT:

CHAIRPERSON: **A L Muggleton-Harris** (St. Thomas's Hospital, London)

- 9:00 am **C Readhead** (California Institute of Technology, Pasadena)
Myelin basic protein deficiencies and development, diagnosis and gene therapy of the genetic defect using the "Shiverer" mouse". (Opening Speaker)
- 9:40 am **M H Johnson** (Department of Anatomy, Cambridge)
"A transgene model for the study of HLA function".
- 10:20 am **J D West** (Centre for Reproductive Biology, Edinburgh)
"Mouse models of genetic effects that are confined to the fetus or membranes".
- 10:50 am COFFEE/TRADE EXHIBITION
- 11:20 am **M Hooper** (Department of Pathology, Edinburgh)
"Modelling genetic disease in the mouse by germline manipulation using embryonal stem cells".
- 12:00 am **R Beddington** (Centre for Genome Research, Edinburgh)
"Chimeras to analyze mutants".
- 12:40 pm - 1:40 pm LUNCH

CHAIRPERSON: **J D West** (Department of Obstetrics and Gynaecology, Edinburgh)

- 1:40 pm **A McLaren** (Mammalian Development Unit, London)
"Imprinting: maternal effects in mammals".
(Opening Speaker).
- 2:30 pm **B M Cattanach** (MRC Genetics Division, Didcot)
"Studies on imprinting in mice".

- 3:10 pm **A Surani** (Cambridge Research Station, Babraham)
"Genomic imprinting: Developmental consequences, mechanisms and human genetic disorders".
- 3:50 pm **TEA/TRADE EXHIBITION**
- 4:10 pm **S Rastan** (CRC, Harrow)
"Recent advances in the molecular genetics of the mouse X-chromosome".
- 4:50 pm **P Burgoyne** (MRC Mammalian Development Unit, London)
"The consequences of X-chromosome monosomy in female mice".
- 5:30 pm **CONCLUSION OF SCIENTIFIC SESSIONS**
- 6:30 pm **WINE RECEPTION HOSTED BY BSDB** in honour of **Dr A McLaren**
- 7:30 pm **BSDB SOCIETY DINNER.** Recognition of Dr A McLaren's retirement and contribution to the Society.

SATURDAY 12 SEPT:

CHAIRPERSON: M H Johnson (Department of Anatomy, Cambridge)

- 9:00 am **E G D Tuddenham** (CRC, Harrow)
Opening Speaker:"The mutations causing haemophillia and progress towards gene therapy for their correction".
- 9:40 am **M Patton** (St. George's Hospital Medical School, London)
"Cytogenetics and inherited human genetic disorders".
- 10:30 am **A Handyside** (Hammersmith Hospital Medical School, London)
"Genetic defects in early human embryos".
- 11:10 am **COFFEE**
- 11:20 am **V Bolton** (King's College Hospital, London)
"Preimplantation diagnosis of inherited defects in human embryos".
- 12:00 pm **D K Griffin** (The Galton Laboratory, London)
"Novel cytogenetic techniques dianosing genetic disease in human preimplantation embryos".
- 12:40 pm **Audrey L Muggleton-Harris** (St. Thomas's Hospital, London)
CONCLUDING REMARKS

MEETING REPORTS

THE DEVELOPMENTAL BASIS OF INHERITED DISORDERS

BSDB Meeting Kingston Polytechnic, September 1992

Following a challenging selection procedure, involving finding the Kingston Hill Site of what is now Kingston University, an international gathering of scientists embarked on a programme of talks concerning the developmental basis of inherited disorders. The meeting will have interested molecular biochemists, developmental biologists and clinical geneticists alike, and drew together speakers and participants from these disciplines.

Of those searching for mutations causing human inherited disorders, P. Scambler discussed DiGeorge syndrome and other dysmorphologies caused by monosomy 22q11, and J. Hewitt updated us on her attempts to identify the defect in facioscapulohumeral muscular dystrophy (FSDH). M. Patton presented a host of intriguing inherited human disorders and gave cytogenetic data localising Waardenburg syndrome to 2q37, and ectrodactyly to 7q21.

Mutations of cloned human genes were discussed with the prospect of mouse models and progress towards gene therapy in mind.

Those involved in Tay-Sachs disease were described by J. Stirling while haemophilia A and B associated mutations were outlined by E. Tud-denham. N. Hastie described his laboratory's approaches to understanding the role of WT-1 in development, and a candidate aniridia gene, *Pax6*, which is mutated in Small eye mice.

Further discussions of mouse mutants and the insight they provide into developmental biology were given by R. Beddington, who spoke about *Brachyury* chimaeras, and C. Readhead, who explained preimplantation detection of genetic defects and detailed attempts to correct these defects using transgenes in *shiverer* and *jimpy* mice.

In the field of mouse models of human disease, M. Hooper gave a comprehensive overview of retinoblastoma, mouse embryonal stem (ES) cells and transgenic mice, as well bringing us up to date on his work with *Rb-1* transgenics. Cystic fibrosis (CF) and mouse models for CF were discussed in talks and informally. It was exciting to hear N. Caplen's review

about the prospects for gene therapy for inherited disorders and progress that has been made in this area. Clearly, somatic gene therapy for cystic fibrosis is now a realistic goal.

Those involved with IVF (*in vitro* fertilisation) provided interesting talks with a direct clinical application to their work. D. Griffin demonstrated the power of his analysis using rapid dual FISH (fluorescent in situ hybridisation) to sex human blastomeres. V. Bolton emphasised the advantages of biopsy of the trophectoderm at the blastocyst stage over biopsy at the cleavage stage, leading to some lively discussion.

Our thanks to Audrey Muggleton-Harris for the organisation of a full and varied programme. The posters/wine reception provided a relaxed

atmosphere to discuss work and was a launchpad to an evening's entertainment. The Conference dinner was held in recognition of Anne McLaren's contribution to the society and the wine reception gave ample opportunity for pre-dinner speeches, and warm "farewells" to Anne McLaren.

Overall, the BSDB Autumn Symposium was a lively and stimulating meeting, and a great way to discuss ideas about how to further our understanding in the field of development.

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