

BAS

BRITISH ANDROLOGY SOCIETY

NEWSLETTER

AUTUMN 2005

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A NOTE FROM THE NEWSLETTER EDITOR

I would like to take this opportunity to thank all the members of BAS who have contributed to this issue of the newsletter. As usual I have tried to incorporate articles from a wide selection of disciplines to reflect the diverse nature of our organisation. Of particular interest in this edition of the BAS newsletter I have included an article (In vivo gene transfer in the testis: a new tool for infertility research) by this year's winners of the BAS prize for work presented at the joint BAS, British Fertility Society and Society of Reproduction and Fertility's biennial conference.

I would like to take this opportunity to stress that we do encourage you to submit articles or to request articles that you feel will be of benefit to our general readership. I will do everything possible to accommodate requests and get them published in the next issue of the newsletter. I hope you enjoy reading this edition of the newsletter.

Regards
N S Prathalingam
nprathalingam@rvc.ac.uk

COMPETITION FOR A NEW BAS LOGO

The committee has decided that it is time to have a new BAS logo to replace our current one. The logo should be fairly simple and contain the letters BAS and/or British Andrology Society. The deadline for the submission of the new logo will be 14th November 2005. A vote will be taken at the next AGM and the winner will receive free registration to the Autumn BAS meeting in Leeds ...so get designing!!!

Please submit your applications by email or post to:
N.S. Prathalingam
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A NOTE FROM THE CHAIRMAN

When I took on the role of Chairman last year I thought it would be useful to take the BAS into the Bioscience Federation (BSF), a national organisation set up by life scientists across many disciplines and whose aim is to respond to policy issues, particularly from government, with a single and unified voice. The BSF has been very active throughout the year, having produced several authoritative responses to various consultations and proposals about the way in which research and education are organised and funded in the UK. As you can imagine, this produces a huge number of documents which will be of varying interest to members. These documents are nevertheless accessible via the BSF website (<http://www.bsf.ac.uk/>). I think it is nevertheless worthwhile reproducing the summaries and highlights of a couple of recent documents; one contains items and press comments about topical issues in science and the other is the executive summary of a response to an RCUK proposal about the need for institutional data repositories in research laboratories. As a new member society we were invited to take part in the Animal Science Group of the BSF, initially with observer status. The group is clearly an active proponent of animal use in research and can claim considerable credit for bringing relevant issues to the attention of the press and public. I am not sure, however, whether full membership of this group would be particularly useful for the BAS as few of our members are as involved in animal research as members of other societies. I am inclined to drop our involvement in this at the end of our first year, but would welcome any views from BAS members.

My second immediate objective as Chairman was to obtain charitable status for the BAS. This has several advantages; protecting the society and its officers against a major financial disaster would be one objective, but on the other hand the BAS would also be able to claim Gift Aid on personal subscriptions, thus boosting out income to some extent. This process is under way, albeit rather slowly. I am currently making the case that the BAS undertakes activities that are of benefit to the general public (especially when they turn into patients and present themselves for fertility treatment), but I am sure this process will take some time to complete.

Bill Holt (Institute of Zoology)

Digest of reports in science journals and newspapers (August 2005)

Science Policy: UK HEFCE launched a consultation on the third round of the Higher Education Innovation Fund. It proposes allocating 75% of the £218 million fund by formula, based on figures supplied by institutions on staffing numbers, external income and entrepreneurial activity. The remaining 25% will be allocated to around 20 large projects after a bidding competition.

Speaking on the eve of his presidential address to the annual meeting of the British Association for the Advancement of Science, Lord Winston criticised scientists who make exaggerated claims about the supposed benefits of scientific research, warning that they could trigger a public backlash. He referred particularly to the "hype" over embryonic stem cells, where the public and parliamentarians were led to believe that a major clinical application is just around the corner, whereas in reality it is still some years away. He also criticised the trend towards commercialisation of science, which "increases secrecy and undermines its public role". "Once the pursuit of science becomes heavily geared to profit, which the public feels it is not sharing in any major way, scientists may be compromised. They may be perceived as...not working merely for the public good" (all papers, 5/9). A new study by the think-tank Demos also warned that close ties between universities and business could stifle public debate and distort research. One of the report's authors commented "We need to ask who is setting the agenda for science" (Gdn, 5/9).

The Human Fertilisation and Embryology Authority (HFEA) announced that it is to seek the public's views on the appropriateness of pre-implantation genetic screening of embryos for "later onset and lower penetrance" disorders such as inherited breast cancer, inherited ovarian cancer and hereditary non-polyposis colon cancer. The Department of Health launched a consultation on changes to the Human Fertilisation and Embryology Act 1990. The consultation will consider changes to rules on storage of embryos for fertility treatment, sex selection, embryo screening and the requirement for IVF clinics to consider the welfare of the child including its need for a father. The role of the HFEA, which is to be merged with the Human Tissue Authority in 2008, will also be examined (DT, 12/8; Gdn, 12/8).

Darley Oaks farm, the guinea pig-breeding facility that became the focus of a long-running campaign by animal rights extremists, announced that it will close at the end of the year. Government officials, concerned about the message that the closure would send out, are understood to have tried to persuade the owners to keep the farm open. The announcement has raised questions over whether the Government is doing enough to protect researchers and suppliers. Evan Harris MP, the Liberal Democrat Science spokesman, criticised the tardiness of the Government in tackling the issues of economic sabotage and harassment. The ABPI emphasised the need for committed long-term resources to back up newly-introduced legislation (DT, 24/8). An article in the Telegraph expressed the view that scientists are partly to blame "as they have been mostly uncritical of the new laws" and "also been slow to respond to pressures to be more open" (DT, 25/8). In response to the announcement of the farm closure, the Research Defence Society issued a declaration signed by more than 500 leading scientists who pledged support for animal testing in medical research whilst acknowledging the need, where possible, for such experiments to be replaced by non-animal methods (FT, 24/8; Gdn, 25/8).

BSF submission on the impact of open access publishing compiled for the Federation by a working group from member organisations having a particular interest in the topic.

A response to the Research Councils UK position statement on Access to Research Outputs (August 2005):

The member organisations therefore represent the interests of scientists in their disciplines. In addition, many of them publish scientific journals and so have a detailed knowledge of the issues raised in the RCUK position statement. This submission was prepared by a working group established by the Federation.

EXECUTIVE SUMMARY

This response states that:

1. The role of learned societies in supporting UK academic life is substantial and important and that the funding contributed by the societies to the UK academic community far outweighs the money paid by that community in journal subscription fees.
2. Repositories will inevitably lead to loss of subscriptions to established journals once a critical mass of material is available free.
3. Loss of journal income would lead to cut-backs in other learned society support services such as grants, and possibly to the closure of some societies.
4. If existing journals cease to be viable, then the peer review system will either be lost or will need to be supported by the funding bodies, with attendant loss of independence.
5. RCUK have established no evidence for any beneficial effects of their Repository proposals, but the negative effects could be substantial.
6. Repositories will largely duplicate the content of existing high-quality journals, thus duplicating costs without providing equivalent functionality or any guarantee of the quality or authenticity of the deposited version.

The response concludes with three recommendations:

1. Before implementing the plans in its position statement, RCUK should carry out adequate research to establish:
 - a) The views of active researchers and their learned societies
 - b) The likely effects of the Repository proposals on the whole academic community, including taking into account likely effects on services provided by learned societies
 - c) The costs and benefits/risks of Repositories
 - d) The costs and benefits/risks of Author Pays/Open Access, including transition issues
2. Until the results of such research are available, any deposit requirements should respect publishers' embargo periods, as is the case with NIH in the USA.
3. RCUK should espouse a culture of open and constructive discussion and research, rather than imposing inadequately researched requirements.

MEMBERSHIP SECRETARY'S MESSAGE

New Members

A warm welcome to all the new members of the BAS!

Dr N. Al-Mously, Ms A. Derry, Mr H. Flores Gonzalez, Mr G. Horne, Mrs H. Lloyd, Mrs A. McEwen, Dr J. Parrington and Mr J. Thompson.

Please can the BAS committee request that all members update their email address for our records. This can only be done by sending your current email address to Dr Alireza Fazeli (A.Fazeli@sheffield.ac.uk). It is possible that in the future information concerning the BAS might be circulated to members using this medium and we would like to ascertain the number of members with email access at present. Thank you.

Call for nominations for:

- 1.) Ordinary Member
- 2.) Postgrad/doc representative

Dear Members,

There are currently two vacant positions available on the BAS committee. The committee requires one

addition Ordinary Member and a Postgrad position to replace Nina Rogers who has served her term.

Eligibility for the Ordinary Member position is open to all BAS members.

The Postgrad position is open to postgraduate students and other young members working in the field on andrology. Committee meetings are usually held three times a year and the committee members are required to attend at least one.

A copy of the Nomination Form is enclosed in your Newsletter. Please photocopy as required and return nomination forms to:

**Alireza Fazeli,
Academic Unit of Reproductive and Developmental
Medicine,
University of Sheffield, Level 4, The Jessop Wing,
Tree Root Walk, Sheffield S10 2SF
e-mail: A.fazeli@Sheffield.ac.uk**

IN VIVO GENE TRANSFER IN THE TESTIS: A NEW TOOL FOR INFERTILITY RESEARCH

(Winners of the BAS Prize at the biennial joint BAS, BFS and SRF meeting)

Kevin Coward & John Parrington

Department of Pharmacology, University of Oxford, Mansfield Road, Oxford, OX1 3QT.

Here, we report the development of a novel approach for studying sperm function which is likely to aid research into male infertility. In work published in this month's edition of the journal *Biology of Reproduction*, we demonstrate, for the first time that it is possible to introduce a transgene directly into a normal healthy animal in such a way that the gene is subsequently expressed in mature sperm. The new approach is particularly important because although many cells of the body can be cultured and genetically modified *in vitro*, this is not possible for sperm cells because of their small size and unusual shape, and because they only live for a short time outside the body. This new method shows great promise for fertility research as it allows many different aspects of gene function in sperm to be studied in a transient fashion. This is likely to lead to improved knowledge of how sperm function might be related to certain cases of infertility.

Transgenic approaches have been particularly important for studying gene function in the testis and sperm because of the lack of a way of fully recapitulating spermatogenesis in the laboratory culture dish. However, the production of a transgenic mouse using existing techniques remains a costly and laborious process as this invariably involves the injection of a transgene into the pronuclei of a fertilised egg. Recently an alternative way to study gene expression in the testis has been pioneered that involves the *in vivo* gene transfer of transgenes directly into testicular cells by a process known as electroporation. A number of studies in mice have shown that it is possible to use this approach to express reporter genes (e.g. lacZ, green fluorescent protein) in spermatogenic cells under the control of constitutive or testis-specific gene promoters. In one particular study, this approach was used to express a transgene in testicular sperm which were subsequently dissected from the testis and successfully used to create transgenic offspring by intra-cytoplasmic sperm injection (ICSI) (Huang et al., 2000).

These findings have led to the proposal that *in vivo* gene transfer into the testis represents an

alternative way to study gene expression in testis and sperm, and as a potential new way of creating transgenic animals. However, doubts have been raised about the viability of the technique as a practical alternative to a standard transgenic approach. One problem is that although high expression levels of the transgene can be detected after 24-48 hours following electroporation, at later times the level of expression in the male germ cells appears to drop substantially. Significantly, there have been no reports of expression of transgenes in epididymal sperm after *in vivo* gene transfer into the testis by electroporation. Finally, while expression of transgenes in the testis has been demonstrated in mice using this approach, it is unclear how applicable it is to other mammalian species important for studies of fertilisation and other aspects of reproduction.

Our recent study successfully demonstrated, for the first time, that *in vivo* gene transfer by electroporation can indeed be used to express a fluorescent transgene in the testis of a mammal other than mice, the Syrian golden hamster (Hibbitt et al., 2005). We initially chose to study the Syrian golden hamster because of the important role that this species has played in studies of mammalian egg activation and also because the hamster is also the chosen organism for a number of reproductive research models including the reproductive endocrinology of embryo implantation, reproductive aging, endocrine disruption and the effects of smoking/nicotine upon oviductal function. Furthermore, for the first time, we also demonstrated transgene expression in mature epididymal sperm using this approach. Transgene expression could be detected in the sperm for as long as 60 days following gene transfer. Using a combination of computer assisted sperm analysis (CASA), quantitative histological analysis and assays of apoptotic cell death, we clearly demonstrated that this method of gene transfer does not lead to any significant long-term adverse effects on either testicular integrity or sperm quality.

The transgene used in our study was a simple mammalian expression construct designed to

produce enhanced yellow fluorescent protein (EYFP) and contained a mitochondrial localisation signal which led to the specific sequestration of EYFP into the mitochondrial-rich sperm mid-piece. We created green sperm in this way to demonstrate that this approach could work. However, our real long-term aim is to use this technique to study the function of genes that are important during fertilisation and that may cause infertility if they become defective. This is an important goal given that a recent study found that one in seven British couples have fertility problems and a third of these have an unknown cause. One potential use of the new approach is to fluorescently 'tag' sperm proteins of interest and investigate their localisation and functional role during the acrosome reaction, egg activation or during embryonic development. One of our main interests is the role of a sperm-specific novel phospholipase C (PLC_γ) during egg activation and early embryogenesis (Saunders et al., 2002). Using *in vivo* gene transfer by electroporation, it should be possible to produce sperm in which PLC_γ is fluorescently tagged, thus providing a powerful tool for studies concerning localisation and function. Other groups have been using *in vivo* gene transfer to address other issues in reproductive biology. For example, one study recently used *in vivo* electroporation of mammalian testes to help characterise the promoters of epididymal epithelial cell-specific genes (Kirby et al., 2004). Another recent study showed that *in vivo* gene transfer by electroporation can be successfully used to introduce small hairpin RNAs into the testes and subsequently demonstrating that RNA interference (RNAi) functions effectively throughout spermatogenesis in this animal (Shoji et al., 2005).

The technique may also offer the possibility of a new way of creating genetically modified animals for all sorts of other research. Currently, genetically modified mice are created by introducing transgenes into an egg. However, this method is relatively inefficient, and so far attempts to use it to create genetically modified versions of important model species such as hamsters and guinea pigs have failed. Creating the transgenic animals from transgenic sperm (in other words genetically modifying the sperm and then fertilizing a normal egg with it) might on the one hand help to reduce the numbers of mice used in medical research, and on the other hand, open up the possibility of studying gene function in species that are better models than mice for studying certain human diseases.

Kevin Coward and John Parrington are funded by a Medical Research Council Senior Research Fellowship awarded to JP and study molecular reproduction and calcium signalling. This research was awarded the British Andrology Society (BAS) Prize at the biennial joint meeting of the UK fertility societies ('Fertility 2005'). The authors wish to acknowledge the support and assistance of Dr Olivia Hibbitt (University of Oxford), Dr Hiroki Kubota (Nagoya City Hospital, Japan), Dr Nilendran Prathalingam (Royal Veterinary College), Professor Kenjiro Kohri (Nagoya City Hospital, Japan), Professor Bill Holt (Institute of Zoology) and Claire Young (University of Oxford).

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TRAVEL GRANT AWARDS

The Society for the Study of Reproduction (2005)

The Society for the Study of Reproduction held its 38th Annual meeting this year in the beautiful old-world city of Quebec. Hosted by the Centre de Recherche en Biologie de la Reproduction at Laval University, this was the largest international congress on reproduction to date.

On Sunday morning I attended the 'Techniques in Reproductive Biology' workshop, in which Dr. Michnick, Dr. Robert Blaban and Dr. Victoria Centonze Frohlich discussed their work concerning the use of Multiphoton Confocal Microscopy in the biochemical mechanism imaging of whole cells and whole animals. In particular, they highlighted the limitations of using a Petri dish to study cell biochemical mechanisms, and emphasised the need for more effective techniques to enable a more insightful understanding of true in vivo conditions.

Society president Dr. Joy L. Pate officially opened the meeting on Sunday afternoon, which began with the presentation of society awards to Dr. Gordon D. Niswender in acknowledgement for his outstanding scientific work and contribution and services to the scientific community. Awards were also handed to Dr. Virenda B. Mahesh for his willing service and leadership in advancing the discipline of reproductive biology. The 2005 SSR Research Award and 2005 SSR New Investigator Award were presented to Dr. Mary Hunzicker-Dunn and Dr. Robert Viger, respectively.

The subsequent programme included a presentation of the first Keynote address: "The aftermath from fetal-maternal cell traffic of pregnancy", as presented by J. Lee Nelson, followed by concurrent sessions of seven platform presentations.

In recognition of the Society for the Study of Reproduction's foundation, nearly four decades ago, the Sunday afternoon programme ended with a showing of a documentary film premiere called "SSR-The generation of a legacy". Later that evening, an opening reception took place in the foyer of the Quebec City Convention Centre, where attendees were able to enjoy live music from jazz trio "Black&White Jazz" whilst taking in the views overlooking old Quebec city.

The following three days consisted of five concurrent minisymposium sessions each morning, and seven concurrent platform presentations each afternoon. One of the more interesting presentations included that given by Dr. Janice L. Bailey, entitled, "Insight into sperm capacitation: Tyrosine phosphorylation of sp32, a proacrosin-binding protein." This concentrated on acrosomal protein sp32 identification and its involvement in sperm acrosome reaction and sperm function. Yet, perhaps the most enthusiastic and inspiring talk was the "What can we learn from the transcriptome profiling? Promises and Caveats" debate given by given by Dr. Toshihiro Shioda.

In total, 168 abstracts were presented orally and another 616 through poster sessions. Of great delight was to see that such a large number of presentations were organised to provide young and upcoming scientists with the opportunity to present their work.

During the congress, I had the pleasure of visiting some laboratories in the Centre de Recherche en Biologie de la Reproduction at Laval University. This was a valuable opportunity to meet fellow researchers, acquire new scientific knowledge whilst at the same time giving me the chance to discuss common problems.

I would like to thank the British Andrology Society for providing the funding that supported this trip. Edita Sostaric (University of Sheffield)

Travel Grant Award: Fertility 2005

Fertility 2005 was held at the Warwick Arts Centre at the University of Warwick, Coventry on 3-6 April 2005. It was the 4th joint meeting of the UK fertility societies: the British Andrology Society (BAS), British Fertility Society (BFS) and the Society for Reproduction and Fertility (SRF). The joining of the societies resulted in the largest fertility and reproductive biology/medicine conference in the UK this year.

The objective of Fertility 2005 was to enhance scientific and clinical understanding of reproductive processes in both humans and mammals. The meeting welcomed a large number of international speakers from across Europe, USA, Canada and Australia. Of particular note were the

BFS conference exchange prize lectures and the SRF-SSR exchange: new investigator lectures. Dr Colin Duncan was the recipient of the SRF new investigator prize this year, who gave an excellent overview of the research that he is conducting at the moment. Colin will then travel to Omaha, Nebraska next year to give a lecture at the 2006 SSR conference.

Each day began with a symposium session, with the second day being the most relevant for BAS members. Professor Suarez presented data on sperm-oviduct communication, followed by Professor Karl Swann who talked about sperm-oocyte interactions. Three testis and sperm parallel sessions were held over two days of the meeting with the second session hosting entrants for the BAS prize. This year the prize was won by K Coward from University of Oxford who presented data showing no significant long term adverse effects on testicular integrity and sperm quality following in vivo gene transfer into the testis using electroporation. The University of Sheffield presented three excellent abstracts on day two, focussing on the oviductal epithelium surface membrane proteins. Once again Dr LM Thurston gave an excellent talk on the modulators of 11beta-HSD1 in seminal plasma of boars and their effect on boar sperm at both room temperature and after cryopreservation. All talks were of a very high standard and extremely informative. However, the one that stood out for me was the data shown by Dr ERS Roldan who examined both semen traits and relative antler size and their effect on male fertility in natural populations of Iberian red deer, concluding that red deer antlers honestly signal male fertility.

A fantastic social programme was organised, and for a first timer to this conference, it allowed plenty of

opportunities to establish new links but for regular visitors, the opportunity to meet old friends in a relaxed atmosphere. Of particular relevance for me, was the Postgradoc quiz on the Sunday evening, which was a very successful event. On the Saturday delegates were treated to a trip to the National Motorcycle Museum and on the final evening the Gala dinner, which was highlighted for BAS members by Professor Paul Watson being awarded the 2005 SRF Marshall Medal.

This was as a whole an excellent meeting and Victoria Sharp would like to express her thanks to the BAS for the travel award that enabled her to attend Fertility 2005.

Victoria Sharpe (Royal Veterinary College, London)

Travel Grant Applications

BAS Travel awards are available to successful applicants for travel to national and international conferences- so apply today.

To qualify for an award, applicants must have been a BAS member for at least one year, or a student member for six months. Only one BAS travel grant per applicant will be awarded in a 2 year period and the maximum award value is £250. Successful applicants will be required to write a report on the conference attended for the BAS newsletter.

If you would like to apply for a travel grant, complete the travel grant application form (<http://www.britishandrology.org.uk>) and return it to the BAS treasurer (Mark Curry mrcurry@dmu.ac.uk). Applicants submitting abstracts will be favoured and we request that where possible applicants enclose a copy of the abstract to be presented. Applications will be assessed in January, April and September.

FUTURE BAS MEETINGS

BAS 2005 (17th - 19th Nov 2006)

Meeting Program

British Andrology Society annual meeting is held this year on 17th and 18th November in Sheffield. The topic of the first day of the meeting is gamete interaction with the female reproductive tract. Speakers will address this topic from different perspectives and special attention will be paid to sperm-female reproductive tract interactions. On the second day, the focus of the meeting will be on clinical aspects of andrology, with topics related to assisted conception and sexually transmitted diseases. The second day is partially dedicated to the latest advances in gametogenesis from stem cells and its ethical, legal and social consequences.

As always for BAS annual meetings, ample time is dedicated to discussion in the program. To promote discussion, the total number of people attending the meeting will be kept to 80 allowing ample interaction between participants. There will also be an opportunity for presenting short communications.

At the end of the first day of the meeting, we will have the AGM of the society. The social program will start with a wine reception and will be followed by a light "Salsa Workshop" (have your dancing shoes on please!). Thereafter the official dinner of the meeting with music and dancing till the end of the night!

The meeting is well subsidised by BAS. The registration fee is the same as last year (£65 for BAS members). Dinner, entertainment and accommodation are booked within walking distance from the meeting venue. We have negotiated discounted prices for rooms for our delegates. Please note a limited number of hotel rooms are available. These will be allocated on first come, first served basis.

If you have further questions regarding BAS annual meeting, please enquire by e-mailing: A.fazeli@Sheffield.ac.uk

At the end I can assure you a memorable meeting both scientifically and socially this year. I look forward to see many of you (to be accurate 80 of you) in Sheffield.

Sincerely, **Alireza Fazeli**

Programme for BAS 2005

Thursday 17th November

10:45-11:00 Registration
 11:00-12:00 Short Communications
 12:00-13:30 Lunch
 13-30-14:40 First Session

Kurt A. Zuelke, US Department of Agriculture, Biotechnology and Germplasm Laboratory, "Molecular Aspects of Sperm Oviduct Interactions in Poultry"

Kai-Fai Lee, Department of Obstetrics and Gynaecology, and Research Center of Reproduction, Development and Growth, The University of Hong Kong, "Gamete/Embryo - Oviduct Interactions: Implications on in vitro Culture"

14:40-15:15 Tea-Coffee Break
 15:15-16:25 Second Session

Alireza Fazeli, Academic Unit of Reproductive and Developmental Medicine, University of Sheffield, "Recognition of gametes by female reproductive tract"

Peter Whittaker, Centre for Economic and Social Aspects of Genomics, Lancaster University, "Stem Cells to Gametes: How Far Should We Go?"

16:25-16:45 Break
 16:45-18:00 AGM
 19:00- Reception, Salsa Workshop, Dinner and Disco

Friday 18th November

9:30-10:40 First Session

Tim Birkhead, Animal and Plant Sciences, University of Sheffield, "The Evolution of Male and Female Reproductive Traits"

Bill Ledger, Academic Unit of Reproductive and Developmental Medicine, University of Sheffield, "Consequences of IVF and ICSI, what has been the effect of bypassing natural barriers?"

10:40-11:15 Tea-Coffee Break
 11:15-12:25 Second Session

George Kinghorn, Sheffield Teaching Hospitals NHS Foundation Trust, "STIs and HIV: The current situation in the UK and impact upon fertility"

Ewa Rajpert-De Meyts, Department of Growth & Reproduction, Copenhagen University Hospital, Embryonic stem-cells like features of testicular carcinoma in situ and germ cell cancer.

12:30 Meeting Ends

BAS 2006 (9th - 11th Nov 2006)

The meeting will commence Thursday Nov 16th 12:00PM and conclude on Saturday Nov 18th 4:00pm.

BAS 2006 Advanced Workshop on "The testis as a conduit for genomic plasticity."

Nov 16th-17th. The BAS will follow on (Nov 17th-18th) with two sessions on Chromatin repackaging in spermatogenesis (Session A) and Epididymal function, transport and maturation (session B). There will be poster session on the evening of Friday 17th and each of the BAS sessions will support two or three free communications.

The mammalian testis is known to be transcriptionally highly active as a normal feature of spermatogenesis. However, much of what is expressed (at the RNA level) is not destined to become protein. The identity and function of this 'non-coding' RNA is obscure. One possibility is that it acts as a regulator of transcription in a manner similar to RNAi. In this respect, anti-sense RNAs for a number of protein encoding genes have been detected in ejaculate spermatozoa. Paralleling these observations is the intriguing expression of disproportionate numbers of intronless genes during spermatogenesis. These 'retrogenes' were probably derived via an RNA intermediate and through reverse transcription to cDNA and eventual integration into the germ line. In addition to these intronless genes, the repetitive SINE and LINE elements were also probably generated via a similar 'capture and integrate' mechanism. Coupled with the observation that at least murine testes and epididymi express high levels of endogenous provirus as well as the ORF1 and possibly ORF2 of the LINE 1 element, it is tempting to speculate that the testis is an excellent environment for the acquisition and embedding of 'new' genes. Interestingly, many testis-expressed intronless genes reside on the X chromosome, which undergoes progressive albeit temporary inactivation during spermatogenesis. Expression of their autosomal and Y-linked retro homologues compensates for X inactivation as required. If the mechanism generating 'redundant' RNA can lead to the production of male-benefit genes, could it also lead to the creation of new haplotypes with other effects? Indeed, is the testis a 'breeding ground' for epigenetic changes that can accelerate evolutionary change? Could the expression of retroelements in the testis be an important factor

generating genomic plasticity in mammals? In this workshop, we shall discuss the evidence for transcriptional promiscuity in the testis and the connection between the mediator of genomic plasticity, the reverse transcriptase (RT) enzyme and the presence of RT-expressing elements in the mammalian testis. The likely role played by spermatogenic de-methylation of the male genome in permitting expression of retroposable elements and transcriptional promiscuity will also be considered. A key element will be an exploration of the possibility that the male gamete introduces novel 'extra-genomic' variation into the zygote and that absence of this epigenetic factor may be responsible for the poor success rates of cloning strategies.

This symposium hopes to bring together scientists working in the fields of testis gene expression and genomic plasticity and to encourage discussion with those working on LINE and proviral expression and the repertoire of testis-specific retrogenes. Scientists working on solving the problem of genomic imprinting in somatic cell cloning will also be invited to contribute. Together, we aim to shed light on the role of the testis in shaping rapid mammalian evolution and how the likely mechanism that has brought this about is also being used by retroelements and proviruses to further their own procreation and in so doing, mediating the generation of novel haplotypes.

Possible speakers

Stephen Krawetz, Detroit, US (chromatin remodelling)
Steven Ward, Hawaii, US (spermatozoal endogenous nucleases)

Rod Balhorn, US (spermatozoal chromatin)
Ernst Schmidt, Salt Lake City, US (transcriptional promiscuity)

Ann Kiessling, Boston, US (proviral expression in male reproductive tract)
Kenneth Kleene, Boston US (intronless genes and the testis)

Barbara Knowles, Bar Harbor, US, (retroelements in pre-implantation development)

John Moran, Ann Arbor, US (retroelements of the genome)

Jurgen Brosius, Munster, Germany (genomic plasticity)

Corrado Spadafora, Rome, Italy (sperm-mediated transgenesis)

Thierry Heidmann, Villejuif, France (proviral expression in the testis)
Lorraine Young, Nottingham, UK (developmental imprinting)
David Miller (University of Leeds)

DIARY DATES

2005

British Andrology Society Annual Meeting
17-18 November 2005
Sheffield, UK
Contact: A.fazeli@Sheffield.ac.uk

11th World Congress on the Menopause
18-22 October 2005
Buenos Aires, Argentina
Contact: ana.juan.congresos@sarmiento15624.com.ar
Tel: +54 11 4381 1777 Fax: +54 11 4382 6703
E-mail: info@menopause2005.org Web: <http://www.menopause2005.org/>

196th Meeting of the Society for Endocrinology
7-9 November 2005
London, UK
Contact: Feona Horrex, 22 Apex Court, Woodlands, Bradley Stoke, Bristol, BS32 4JT, Event Organiser
Tel: +44 (0)1454 642240 Fax: +44 (0)1454 642222
E-mail: conferences@endocrinology.org Web: <http://www.endocrinology.org/SFE/confs.htm>

2006

BES 2006: 25th Joint Meeting of British Endocrine Societies
12 - 16 March, 2006
Bournemouth, UK
Email: Society for Endocrinology (conferences@endocrinology.org)

8th European Congress of Endocrinology
1 - 5 April, 2006
Glasgow, UK
Contact: Liz Brookes, Society for Endocrinology, 22 Apex Court, Woodlands, Bradley Stoke, Bristol, BS32 4JT
Tel: +44 (0)1454 642210 Fax: +44 (0)1454642222
E-mail: conference@endocrinology.org

Annual Meeting of the British Association for Animal Science (BSAS) 2006
10 - 12 April, 2006
Venue to be confirmed
Email: British Society of Animal Science (BSAS@ed.sac.ac.uk)

American Society of Andrology 31st Annual Conference
8 - 11 April, 2006

Chicago, Illinois
E-mail: <http://www.andrologysociety.com/default.asp>

22nd Annual Meeting of the ESHRE
18 - 21 June, 2006
Prague, Czech Republic
Tel: +32 (0)2 269 09 69
Fax +32 (0)2 269 56 00
E-mail: info@eshre.com Web: <http://www.eshre.com/emc.asp?pageId=206>

ENDO 2006
24 - 27 June, 2006
Boston, USA
The Endocrine Society, 8401 Connecticut Avenue, Suite 900, Chevy Chase, Maryland 20815-5817
Tel: +1 301 9410200 Fax: +1 301 9410259
E-mail: endostaff@endo-society.org Web: <http://www.endo-society.org/scimeetings>

Society of Reproduction and Fertility (2006)
in conjunction with the National Ovarian Workshop
3 - 5 July
University of Leeds
Further details: <http://www.srf-reproduction.org/events/default.htm>

10th International Symposium on Spermatology
17-22 September 2006
Madrid, Spain
Tel: +34 91 310 43 76; Fax: +34 91 319 57 46
Contact: secretariat@spermadrid2006.org
Web: <http://www.spermadrid2006.org>

Second Asia-Pacific Forum on Andrology
19 - 23 October, 2006
Shanghai, China
E-mail: apfa@sibs.ac.cn Web: <http://www.conference.ac.cn/apfa/html/general.html>

2007

2007
American Society of Andrology 32nd Annual Conference
18 - 24 April, 2007
Hyatt Regency
New Orleans, Louisiana
E-mail: <http://www.andrologysociety.com/default.asp>

8th European Congress of Endocrinology
28 April - 2 May 2007
Budapest, Hungary
Contact: Blaguss Ltd Congress Bureau, PO.Box 706, 1365 Budapest
Tel: + 36 1 374 7030 Fax: + 36 1 312 1582
E-mail: benyhe@blaguss-congress.hu

IFFS 2007 - 19th World Congress on Fertility and Sterility

30 April - 5 May 2007
Durban, South Africa
Contact: Paul Dalmeyer, IFFS2007 President
E-mail: pdal@iafrica.com Web: <http://www.iffs-reproduction.org/>

23rd Annual Meeting of the ESHRE
1 - 4 July, 2007
Lyon, France
Tel: +32 (0)2 269 09 69
Fax +32 (0)2 269 56 00
E-mail: info@eshre.com Web: <http://www.eshre.com/emc.asp?pagelD=206>

FORM FOR NOMINATION OF COMMITTEE MEMBERS

I Nominate*: _____

Address: _____

Telephone: _____ Fax: _____

BAS Member: YES / NO

For the position of: _____

(*Please photocopy the form if nominating more than one person)

SHORT DESCRIPTION OF SUITABILITY OF NOMINEE.

(Include details of qualifications and current position)

Name of Proposer: _____ Signature of Proposer: _____

Signature for Nominee: _____

Return completed form to:

**Alireza Fazeli, Academic Unit of Reproductive and Developmental Medicine, University of Sheffield,
Level 4, The Jessop Wing, Tree Root Walk, Sheffield S10 2SF**

DEADLINE FOR NOMINATIONS: 14th November 2005.