

## A message from the Editor

I would like to take this opportunity to thank all the members of BAS who have contributed to this issue of the newsletter.

I would like to stress that we do encourage you to submit or request articles that you feel would benefit our general readership and will do anything to try to accommodate requests to get them published in the next issue.

I hope you enjoy reading this edition of the newsletter.

Regards  
BAS Secretary  
(secretary@britishandrology.org.uk)

## Stirrings of the British Andrology Society; thirty years on.

In 1974 Howard Jacobs said we needed an Andrology society in the UK. The American Andrology Society was founded in 1976 and the BAS later. According to the constitution, BAG was founded in 1977 but initially was to be called the British Andrology Group (BAG), the closest thing to (scrotal) sac we could think of, but the Inland Revenue informed us that one doesn't get tax relief for groups, only societies!

At around this time Anne Jequier realised that semen analysis was done badly and held the first semen workshop in Nottingham in 1981. Three more

## In this Issue

*BAS 30 Years on... – page 1-2*

*Virgin gives birth to a baby – page 2*

*A day in the life of... – page 3*

*Reflections of an andrologist – page 5*

*Annual Congress Report – page 7*

*BAS Travel Grant Report – page 8-9*

*Report of Prof Paul Watson's Retirement Symposium – page 9*

*BAS Committee – page 11*

workshops were held in Nottingham and later elsewhere, e.g. Bristol.

In 1978 Howard Jacobs set up a meeting in the London Institute of Urology, Shaftesbury Avenue with ~30 people. Founding members were (alphabetically) Trevor Cooper, Chris Ford, Lynn Fraser, Tim Hargreaves, Robin Harrison, Bill Hendry, Barry Hinton, Tony Hirsch, Bill Holt, Roy Jones, John Tyler, Howard Jacobs, Ann Jequier, Phil Matson, Anne McLaren, Harry Moore, Chris Polge, John Pryor, Brian Setchell, Geoff Waites and Paul Watson.

GS Brindley and Rune Eliasson attended subsequent meetings that were held at the Royal Society of Medicine in 1977 or 1978, a cold winter in Cambridge, also Manchester (where hotel room reservations mysteriously disappeared), Bristol (where we ate the menu designed for the "Bristol

## Virgin Gave Birth to a Baby

OK, this one does not have to do anything with spermatozoa and therefore you may wonder why I have brought it here, but.....



In a widely publicized case that occurred on 14 December 2001, one of the three captive adult female bonnethead sharks (*Sphyrna tiburo*, family: Sphyrnidae (hammerhead sharks)) gave birth to a normally developed, live female pup which was apparently later killed by another fish in the aquarium. This birth is significant because the well-documented capture history of these sharks is inconsistent with sperm storage by the mother as the probable explanation. All three-candidate mothers had been held in the absence of males for 3 years, since they were wild caught in the Florida Keys as immature animals less than 1 year old. At least 2 years away from the age of first maturity, it is improbable that they were capable of sexual activity and sperm storage prior to capture. In their paper Chapman et. al., genetically confirm automictic parthenogenesis as the mechanism underlying the hammerhead shark birth, providing the first evidence for asexual reproduction in the most ancient jawed vertebrate lineage (Chapman DD, Shivji MS, Louis E, Sommer J, Fletcher H, Prodohl PA. Virgin birth in a hammerhead shark. *Biol Lett.* 2007 May 22; [Epub ahead of print]).

At the end it seems not only in the lab but in the nature spermatozoa presence is not necessarily needed for procreation!!!

Alireza Fazeli, University of Sheffield

## Cont. from page 1

Hip Society”), Liverpool (where people froze on a train held up for 2 h at Crewe), Southampton in June 1981 and Babraham Downing College March 1982 (where my smart suit brought a query from Robin Harrison of whose funeral I was attending). Memorable occasions indeed!

Since then the founder members have moved away and generally grown older and more forgetful.

Chairmen	
1977-1984	JP Pryor
1984-1987	WCL Ford
1987-1990	TB Hargreaves
1990-1994	CLR Barratt
1994-1997	DS Irvine
1997-2000	EA McLaughlin
2000-2004	DI Lewis-Jones
2004-	WV Holt

Professor Trevor Cooper

## Human Tissues & Embryos Draft Bill

The Human Tissues and Embryos (draft) Bill, published on 17th May sets out the Government's proposals to update the law on assisted human reproduction. A House of Lords and House of Commons joint committee set up to consider the details of the bill invited responses from interested parties. The British Andrology Society submitted a response, as did many other professional societies and interested individuals. Our response focused on the specific proposals that would cause problems for labs wishing to use the zona-free hamster egg test, or indeed who proposed mixing human gametes with those of another species, regardless of the motive or whether any resultant zygote would be able to develop. The BAS response has recently been published by the joint parliamentary committee, together with all the other written responses.

The BAS response can be found on our website.

## A Day in the Live of...

**Name:** Jacqui Piner

**Title:** Toxicologist

**Company:** GlaxoSmithKline Research and Development

### **How I arrived at my present job**

**(academic and other influences):** A long and winding road which I'm still on having never stopped my education. I suppose it all started with a degree in Biology and a fascination with understanding processes and functions. Taking things one step further and to create more challenges, I became interested in toxicology, which studies the adverse effects of chemicals on living organisms. So getting a job within Safety Assessment at a Pharmaceutical Research and Development company was ideal. The role of Safety Assessment is to enable safe clinical trials and successful, efficient compound registration via non-clinical hazard identification and risk assessment. I have received fantastic on-the-job training plus was given the wonderful opportunity to work for a PhD focussing on male reproductive toxicology.

**How I organise my day:** I escape from the madness of getting 3 young children to school, to the relative calm of the office. And then I realise that my work life is not always organized either! The work environment at GSK is very dynamic and exciting where there is a great deal of information exchange ranging from informal conversations to true business meetings. When I need to concentrate on reviewing documents I tend to work from home which is far from the madding crowd.

**Amount of time spent working daily:** Fortunately GSK encourages the mental resilience of its employees. Consequently the hours spent at work are intensive in nature but not routinely long in duration.

### **What I do to get myself thinking**

**creatively:** The majority of my ideas occur in the shower in the morning as I prepare myself for the day. Otherwise more long term projects are usually sparked from attending scientific conferences and applying new ideas to my work area.

**My problem-solving strategy:** My favourite part of my job. Think, discuss, think, discuss, think and then decide. And when time allows return to the problem after a few days to check logic and to add any extra ideas.

**What I do to relieve stress:** Go home to my family.

**My hero, mentor, or person I most admire and why:** Numerous colleagues who I wouldn't embarrass by recording here.

**How a negative event changed my life in a positive way:** I started a new job in a research unit which was closed 6 weeks later. I took the opportunity to take a look at alternative careers and was fortunate to obtain a job at GSK which I love and have been doing for the last 18 years.

**One event or decision in my life I wish I could go back and change:** To have learned a second language and/or musical instrument.

**What values are the most important to me and what I value in others:** Honesty, integrity, respect, enthusiasm and humour. Most of all family life.

**What inspires, motivates, or gets me excited about my job on a daily basis:** People and team work - working with amazing people, solving problems and getting tasks completed. The feeling that I'm contributing towards the GSK mission of preventing, treating and curing disease, allowing people to live longer, feel better and do more.

Jacqui Piner, GSK

## BAS Student

### Calling all post-graduate students and post-doctoral members of BAS!

#### BAS Annual Meeting (15-16 November 2007, hosted by GlaxoSmithKline, Ware)

This is an exceptional year for those of you that are attending the BAS Annual Meeting. Not only will there will be a chance to listen to some world-class speakers, we have organised a new student/post-doc orientated session on the first day of the meeting, entitled 'Career possibilities for postgradocs – academic and pharma'. The session includes 3 talks (shown below) followed by a tour of the Ware laboratories.

- Dr Julie Holder, UK, Ware, GSK, Investigative Preclinical Toxicology: 'Non Clinical Safety Assessment'
- Dr Rhiannon Lloyd (academic career path) UK, London, Institute of Zoology. 'You do what??!!'
- Dr Terrie-Anne Cock (pharma career), UK, Ware, GSK

#### NEW – Student Poster Prize!!

For those of you who submitted an abstract and were accepted for a poster presentation, this year there is the chance to win £100. All student posters will be judged over lunch on the first day by a panel of committee members. The poster deemed to be the best both in presentation, scientific content and oral explanation will win the £100 prize, to be presented at the conference dinner. In order for the judges to make a more informed decision, please be available to stand by your poster during the viewing times.

#### Don't forget, if are not yet a member there are plenty of reasons to join:

- You can purchase a full years student membership of the BAS for a small fee of £15.
- Apply for travel grants up to the value of £250 to attend national and international conferences - so apply today! To qualify for an award you must have been a BAS member for at least 6 months by the date of travel. BAS members can apply for one travel grant every two years and each application can be up to a maximum of £250. As a token of your appreciation all you have to do is make the most out of the conference and oh yes, write a short report on the conference for our newsletter! Travel grant application forms can be found on the BAS website.

Looking forward to seeing you all at the BAS annual meeting.

If you have any concerns, questions or you would like to contribute to the BAS newsletter I would love to hear from you.

**Victoria Sharp**, Molecular Endocrinology Laboratory, Institute of Reproductive and Developmental Biology, Imperial College London, Du Cane Road, London, W12 0NN.  
Email: [v.sharp@imperial.ac.uk](mailto:v.sharp@imperial.ac.uk)

## A Few Reflections of one of Yesterday's Andrologists

During the last century, much of the research into testicular function concentrated on its hormonal control. We know quite a lot about this now, but many unanswered questions of a different nature needed answers. The fact that spermatozoa complete their maturation in the epididymis and not in the testis has been known for eighty years, but what precisely is involved is not, even now, completely clear. Certainly, the epididymis plays a major role in sperm maturation and storage and this is androgen dependent. If the organ is deprived of androgen, contained spermatozoa disintegrate and disappear. This includes spermatozoa in the cauda epididymidis which in laboratory mammals normally stores them for fairly long periods.

A very interesting hypothesis is that spermatozoa in the epididymis are able to survive, because a balance exists between survival and death signals in the lumen, which are mediated by the cells lining the duct. If androgen is withdrawn the survival signals cease and the sperms disintegrate and evanesce, as witnessed in the epididymis of seasonally breeding mammals at the end of the mating season. What the signals are is not entirely clear, but deoxyribose has been detected in the epididymal plasma of some species. This indicates that degraded DNA can occur in the epididymis and active DNAase activity confirms it. Apparently also, ubiquitin and other proteins are able to bind to sperm heads of non viable sperms and mark them out for disintegration. We await a more definite story about possible death signals. Survival signals are even more obscure. Survivin, an apoptotic inhibitor, is a possible candidate. I hope this line of work will continue, because it shows great promise in the potential development of an epididymally based contraception agent. This applies also to work on osmolytes in the lumen of the epididymis. We are learning more about how the domain structured plasma membrane works too and about acrosomal function.

Apoptosis is an interesting facet of sperm production. It has long been recognized in the mitotic division of spermatogonia and is now known to occur in spermatocytes. If, unlike necrosis, this cell degeneration is preplanned, then the occurrence of dead or functionally effete spermatozoa could be part of the normal scheme of things. The death of apoptotic spermatozoa, if it exists, may not occur immediately, so sperms marked for death could die in the epididymis, during ejaculation or in the female tract. Such a system would ensure that too many sperms do not reach the site of fertilization and it must be remembered that capacitated sperms are especially vulnerable. Moreover the occurrence of so many dead sperms in a "normal" ejaculate can surely not be an accident or be reasonably construed as being purely a matter of biological diversity. There are too many of them, especially in human semen.

Extra vulnerability of spermatogenic cells occurs after meiosis, so it seems that meiosis has a fault line in it. Immature sperms, spermatids and later, spermatocytes, are more susceptible to adverse conditions such as increased temperature or certain alkylating agents, than mitotically dividing cells, yet mature sperms in the cauda epididymidis are relatively protected and only respond to such influences after a longer period of application. So survival must improve during maturation. Of course, there must be a signal for meiosis in the first place. What is it and where does it come from? Although dividing spermatogonia represent a perfect example of natural cloning, they must contain a hidden signal for the triggering of meiosis at a later stage, as well as one for apoptosis. It is surely not unimportant that gonocytes arise from the yolk sack endoderm and migrate to the dorsal body wall when it would be much easier for them to be formed from mesenchyme *in situ* like other testicular cells. They, therefore, seem to be special.

Continued on page 6

Such problems can now be explored in more depth. Molecular biological techniques provide us with the tools to do this. New instruments of investigation suggest that reverse transcription can occur during spermatogenesis and that DNA can be restructured in the testis in a highly regulated fashion to produce changes in the structure of chromatin.. Transposons and retrotransposons, the expression of RNA binding protein, and the presence of DNA polymerase and endonucleases all indicate that spermatogenic tissue is a very busy place with a great deal of genomic plasticity. This plasticity is probably permitted or at least facilitated by the early demethylation of spermatogonial DNA. It would certainly help. But it can only be a surprise that more errors are not made. Thus, we have to be cautious in what we do clinically.

Such plasticity appears to continue in the spermatid during the packaging of DNA by arginine rich protamines and since such changes can mediate gene expression, they give food for thought in relation to conventional concepts of evolution and Mendelian genetics. Chromatin domains in sperms must also be significant in fertilization and this plasticity seems to be important in the shaping of the sperm nucleus. In addition, we know more about the degradation of DNA in sperms, the fragmentation of chromatin and the role of nuclease/ topoisomerase (Topo II) interaction in the process. This all gives a clearer picture of what might be happening in the fashioning of sperms in the testis and what can occur thereafter.

One of the most important of all recent findings is the identification of RNA in spermatozoa. It indicates that the plasticity of the genome, that is rife in the testis, continues in the sperms themselves. Moreover, it is apparent that both exogenous RNA and DNA can become attached to sperms, ingested by them and processed through transcription or retrotranscription (there is a reverse transcriptase in sperms). This could lead to modified gene expression in the zygote and have both genotypic and phenotypic consequence. It would be a sort of natural transgenesis, but how often it happens naturally is obscure. However, the presence of RNA tells us that, although sperm chromatin is so packaged in the spermatid that the DNA is transcriptionally inert, the sperm head may be much more than a passive mass of DNA that is only awakened in karyogamy or syngamy. Oestrogens too can latch onto sperms and it is interesting that sperms in asthenospermia apparently lack aromatase transcript. On the other hand, very motile sperms, evidently have reduced transcripts, but this all changes during capacitation.

Reproductive physiologists and spermatologists in the past have tried valiantly to get at the truth of things, but methods of investigation were limited and there were lots of wrong conclusions. Our ability now to identify damaged DNA in sperms is a useful advance, but many newer findings are bound to have a powerful impact on our understanding of male fertility. Today, the excitement lies in the details, too numerous to cover here. But the fruitful collaboration between labs all over the world should continue apace. I urge those in the field to ride on even faster and bring more of this interesting news to ageing bystanders such as myself and to their colleagues who are still active in the discipline.

**Professor Tim Glover**

## New Members

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

**Mr Haval Abdulkhalik, Coventry University**

**Miss Naomi Elkin, MRC Human Reproductive Sciences Unit, Queens Medical Research Institute**

**Dr Simon de Graaf, Royal Veterinary College**

# British Toxicology Society Annual Congress - Report

## The British Toxicology Society Annual Congress, University of Surrey, 15-18 April 2007: Symposium: Current Challenges in Male Reproductive Toxicology – Report

I'm probably not a typical member of the BAS. I work as a toxicologist in Safety Assessment within Pharmaceutical Research and Development. The role of Safety Assessment is to enable safe clinical trials and successful, efficient compound registration via non-clinical hazard identification and risk assessment. Consequently the types of scientific conferences attended are diverse and perhaps unfamiliar to those working in the field of andrology. This is a report from a meeting symposium which may be of interest to BAS members.

As introduction, the British Toxicology Society (BTS) has a membership of around 950 individuals drawn from industry, academic institutions and regulatory authorities. Toxicology is the science of disease induced by chemicals present in the diet, medicines, the environment and the workplace, and the BTS promotes the advancement, communication and understanding of these scientific disciplines. A significant way in which these objectives are achieved, is via the organisation of regular scientific meetings. These meetings are organised by the BTS Scientific Sub-Committee (SSC), who for this particular symposium requested assistance from the UK Industrial Reproductive Toxicology Discussion Group (IRDG) in order to draw attention to current challenges in male reproductive toxicology.

The objectives of the UK IRDG are to provide a forum for informal discussion of the scientific and technical aspects of the reproductive toxicology tests required by regulatory authorities, the overall test strategy, new tests and techniques under development, and their successful validation. Membership is restricted to industrial manufacturing companies or contract organisations based in the UK who are involved in reproductive toxicology, plus there is a strong European associate membership.

As an active member of the IRDG with an interest in male reproductive toxicology, it was a great personal privilege to be involved in the organisation of the symposium. I was subsequently invited to chair the symposium as well as delivering a presentation on behalf of a GlaxoSmithKline colleague who was unable to travel to the meeting.

So off to sunny (it was) University of Surrey, to attend my first BTS meeting which is shameful since I've been a toxicologist for more than 17 years. It won't be my last as the meeting was fantastic scientifically and also excellent in terms of social events which encouraged informal meetings with other scientists.

In common with all disciplines of science the current challenges in male reproductive toxicology are diverse. A decision was made to link the presentations comprising the symposium using a common theme in order to provide some continuity. Accordingly, endocrine disturbance as the underlying cause of toxicity was selected as the connecting topic.

The symposium was opened by Dr Beate Ulbrich (Federal Institute for Risk Assessment, Germany) who described methods used to detect male reproductive toxicity. It was a great honour to have Dr Ulbrich speaking at the symposium because she was very much involved in developing the guidelines currently used to develop new pharmaceuticals for human use. This was followed by a presentation which I gave on behalf of my GlaxoSmithKline colleague Dr Patrick Wier (Philadelphia, US). This focussed on actions to take following detection of a male reproductive toxicant which are not clearly defined in regulatory guidelines but usually include confirmation and characterisation of the effect. Two case studies from GSK's portfolio were used to demonstrate typical investigative programmes.

The next two presentations examined consequences for endocrine disturbance for the male fetus and for the germ line. Professor Richard Sharpe (MRC Human Reproductive Sciences Unit, Edinburgh) described how specific time windows of testosterone action are important in susceptibility to disorders of "masculinisation" in the male fetus. This was followed by an overview from Professor Lorraine Young (University of Nottingham) on developmental programming of embryonic cells via DNA methylation and the relevance to embryotoxicity.

Finally, the direction changed to the intentional manipulation of endocrine status for the development of male contraception. This was provided by Professor Richard Anderson (University of Edinburgh) who reported the current challenges in using hormones to reversibly suppress spermatogenesis, and discussed various combinations of testosterone, progestogens and GnRH antagonists.

The symposium was well received stimulating much discussion between delegates and presenters.

Why not take a look at forthcoming scientific meetings organised by BTS – there may be something relevant to you in which you work ([www.thebts.org](http://www.thebts.org)).

Jacqui Piner, GlaxoSmithKline, Safety Assessment.

# BAS Travel Grant - Report

## 5th ISSCR Annual Meeting

June 17-20, 2007

Cairns Convention Centre

Cairns, Queensland, Australia

Behrouz Aflatoonian (PhD Student)

The international society for stem cell research is the premier society in the field of stem cells. The 4<sup>th</sup> ISSCR meeting in Toronto was very well organised with big names in the field of stem cells, which was very exciting for me and encouraged me to try to submit an abstract for the 5<sup>th</sup> ISSCR annual meeting in Australia.

My Journey started at 7:15 am on 14<sup>th</sup> of June from Manchester and I arrived to Cairns at 6:55 am on 16<sup>th</sup> of June. During the way I met Dr Zoë Hewitt, who is post doctoral fellow in our laboratory (Centre for Stem Cell Biology, Sheffield) and her boy friend. I also, met Dr Miho K Furue, who was a visiting scientist at Centre for Stem Cell Biology for one year, and we have been together in 4<sup>th</sup> annual meeting in ISSCR in Toronto)In Narita airport in Tokyo (Japan),.

I stayed in the Oasis resort hotel (room number **301**) and shared it with Professor Kent Erickson (University of California, Irvine, and visitor professor at the Centre for Stem Cell Biology). It was good to have a good company during my stay in Cairns. I had a rest on the 16<sup>th</sup> of June and prepared for the start of the meeting on the 17<sup>th</sup>. Cairns was extremely relaxed city with nice and cool people.

17<sup>th</sup> of June meeting was started and I took my tube to set up my poster entitled: "Gonocytes; another source of pluripotent stem cells?". It was very interesting discussion with Dr Lee Turnpenny when he was visiting my poster. Dr Lee Turnpenny has published several papers with Dr Neil Hanley from Southampton University about derivation of human embryonic germ (hEG) cells and their differentiation to other cell types such as neurons. In summary both of us agreed that working with these putative hEG cells is more difficult and complicated than working with hESCs.

Neighbor to my poster was a poster from Cambridge University which is published in *Nature*: "Derivation of pluripotent epiblast stem cells from mammalian embryos".

The most interesting and exciting research was about reprogramming a somatic genome back into an embryonic epigenetic state using nuclear transplantation, and producing of a cloned animal or derivation of pluripotent embryonic stem cells with reprogrammed nucleus. This work was presented for the first time in 4<sup>th</sup> ISSCR meeting in Toronto by Professor Shinya Yamanaka from Japan and he did present his work with more results in 5<sup>th</sup> annual meeting in Cairns in Australia which is published in *Nature*: "Generation of germline-competent induced pluripotent stem cells". Professor Yamanaka was invited to present his work in one day symposium which was organized by Centre for Stem Cell Biology on 13<sup>th</sup> of July 2007 in Sheffield in UK. After his talk Professor Rudolf Jaenisch did present similar work which is also, published in *Nature*: "In vitro reprogramming of fibroblasts into a pluripotent ES-cell-like state".

ISSCR is a huge meeting and I don't think any one could cover all the posters presented in this meeting. However, I was interested to know about other aspects of stem cell research but as my knowledge and my potential is limited; I tried to follow those researches related to field of germ cells and stem cells which is in my interest.

Professor Engel from Germany did present their work about getting offspring from mESCs published in *Dev Cell*: "In vitro-differentiated embryonic stem cells give rise to male gametes that can generate offspring mice".

I met Professor Karim Nayernia who is working in Newcastle University and was working with Professor Engel in Germany. Also, I met Dr Amander T Clark from LA who did publish the first paper about germ cells differentiation from hESCs in 2004. I met Dr Orly Lacham-Kaplan who is also well known in field of

Continued on page 9

# Professor Paul Watson's Retirement Symposium

On the 5th September an impressive and diverse array of nearly eighty scientists from as far afield as Australia, Singapore, Germany and Spain attended a special symposium organised by the Royal Veterinary College, London, to mark the retirement of Professor Paul Watson. As many BAS members will know, Paul has been an influential andrologist and cryobiologist throughout his career, and holds the Chair of Reproductive Cryobiology at The Royal Veterinary College. Paul is also a former member of the BAS Steering committee.



The day began inauspiciously with a strike on the London Underground system, which caused the organisers some significant consternation, but nobody seemed to have been put off by it. The programme consisted of a series of talks that reflected Paul's varied interests throughout his career, and Paul himself had identified the speakers and provided them with a strong steer as to their topic. The formal programme began with a discussion by Professor David Pegg (University of York) about the role and nature of Cryobiology itself. Is cryobiology just a technique rather than a science? Professor Pegg argued persuasively that it is more than a set of methods, arguing that it is rooted in fundamental scientific principles, many of which were established by James Lovelock, who is now better known for his discoveries about depletion of the ozone layer and climate change. Professor Chis Maxwell (University of Sydney) then gave a broadly based talk which began with stories of Paul as a PhD student in Sydney. More seriously, Chis then summarised some of the diverse scientific advances to which Paul had contributed, including the identification of "Cryocapacitation", the observation that cryopreserved sperm are ready to fertilise eggs without the usual lead-in period for capacitation. He also described some of his own work in Sydney on sperm sorting for sex preselection. Interestingly, but rather surprisingly, it seems that sex sorting results in a cohort of highly fertile sperm that produce pregnancies after the insemination of unusually small numbers of spermatozoa. Could the flow sorter be imposing a form of quality selection over and above the sex selection? This is an interesting and significant advance in this field. Dr Mark Curry (University of Lincoln) then described how he and Paul had investigated the logical approach to sperm freezing, measuring biophysical parameters of membrane permeability, and presented the complex equations for water transport across membranes, beloved by cryobiologists but that baffle everyone else. Mark also described how he has been analysing the studbook for a rare horse breed, the Cleveland bay, which would benefit from the application of genetic management by the use of frozen semen. Dr Lisa Thurston (Royal Veterinary College) began her talk with an entertaining parody of Paul as a serious professor, and admitted that she had originally found him quite scary. That effect has now clearly worn off! She described how she had identified a strong boar-dependent link between the susceptibility of spermatozoa to cryoinjury and genomic DNA

polymorphisms. This was a significant piece of work and one into which both Paul and I had direct input; we are both proud of Lisa's data and have been frustrated that we have not been able to pursue this work any further.

After lunch I gave a talk about the role of reproductive technologies in conservation and tried to provide a realistic, and rather pessimistic, perspective about their value for saving species. Some years ago Paul and I organised an EU grant which involved surveying cryopreservation methods for as many species as possible with the objective of establishing sperm banks. Ten years later it is rather depressing to see not



Continued from page 8

reproductive biology in Australia. She is working with Dr Alan Trounson and I know her from her talk in ESHRE2005 about derivation of germ cells from mouse ESCs which is published in 2006: "Testicular cell conditioned medium supports differentiation of embryonic stem cells into ovarian structures containing oocytes". There were several reports about derivation of germ cells from ES cells and also getting stem cells from germline cells such as gonocytes stem cells and spermatogonia stem cells.

As I am from Iran I checked the number of abstracts from inside Iran. 21 abstracts were accepted from Iran which most of them (11 abstracts) were from Royan Institute in Tehran in Iran. I met Dr Baharvand who is the head of the stem cell laboratory of Royan Institute. Mr. Mehdi Pirouz who is a MSc student in Royan Institute was going to present his research about derivation of germ cells from hESCs.

I think there were 9 people from our lab (Centre for Stem Cell Biology) presenting their works in 5<sup>th</sup> annual meeting of ISSCR.

In general it was very useful and nice meeting with good opportunity to meet people from around the world working on stem cells. I would like to express my gratefulness to the BAS, SRF, BSCB and ISSCR for the travel awards and supporting my work for presenting in 5<sup>th</sup> ISSCR meeting in Cairns in Australia.

During the way back I had to stay overnight in Narita airport. It was interesting for me that the room number of hotel in Narita airport was **301** similar to my room number in Cairns.

When I came back to UK, I told my wife the story about the same room number in Cairns and Tokyo and I said if I discover something or derive a cell line in my own laboratory I will call it **301**. She said: "I am waiting to see the day that you will report your **301** in a meeting or in a scientific journal".

**Behrouz Aflatoonian (PhD Student)**  
Centre for Stem Cell Biology  
University of Sheffield  
Level 4, Jessop Wing  
Tree Root Walk  
Sheffield S10 2SF

## News from the Society

### 2008 BAS AGM

The 2008 BAS AGM will be held in North West Spain. The meeting will be a joint meeting with AERA, with the BAS meeting on one of the days with AERA's on the other.

## Forthcoming Meetings

### 2007

#### BAS AGM

15-16 November 2007

Ware, Hertfordshire

Web: [www.britishandrology.org.uk/BAS/Meeting.htm](http://www.britishandrology.org.uk/BAS/Meeting.htm)

### 2008

#### ASA 33rd Annual Conference

April 12-15, 2008

Hyatt Regency Albuquerque  
Albuquerque, NM

Abstract Submissions: August 1-  
November 1, 2007

Web: [www.andrologysociety.com](http://www.andrologysociety.com)

#### 10th European Congress of Endocrinology

3 - 7 May, 2008

Dresden, Germany

Web: [www.euro-endo.org](http://www.euro-endo.org)

### 2009

#### 11th European Congress of Endocrinology

25 - 29 April, 2009

Istanbul, Turkey

Web: [www.euro-endo.org](http://www.euro-endo.org)

only that there are still many problems with these techniques, but where the problems are solved the techniques are hardly used in a meaningful sense. Dr Alireza Fazeli (University of Sheffield) described recent advances in proteomics technology and how they could be used for research in sperm biology. Alireza, Paul and I have collaborated for 10 years on studies of oviductal function, and the advent of proteomics has had a major impact on the way this research has developed. Dr Nilendran Prathalingam (Rez), who worked with us on the oviduct project, presented his data that showed how a subset of proteins derived from the bovine oviduct can be used to enhance the post-thaw survival of African elephant sperm. This cross-species interaction is impressive and, in agreement with other data from this project, indicates that the significant oviductal proteins are highly conserved among mammals.

The last speaker of the day was Professor Rawson (University of Bedfordshire), who had been asked to consider the limits to cryobiology, especially in the context of fish embryo freezing. Fish embryos have so far proved completely resistant to all cryopreservation techniques, mainly because of their large size and impermeable outer coatings, and Paul wondered whether it is now time to give up on this problem. David Rawson explained that there might still be some hope of success, albeit low, and that there may be some benefit in trying to cryopreserve different developmental stages.

Finally, I asked Dr Robin Harrison (formerly from the Babraham Institute, Cambridge) to round off the day with an appraisal of the talks. Robin took me at my word, gave a very detailed and considered critique of all the talks, and made a number of interesting comments. Robin was particularly critical of cryobiologists for not paying sufficient attention to the biochemistry and cell biology of frozen-thawed cells. For example, he pointed out that at the cellular level “cryocapacitation” is actually completely different from physiological capacitation. He also suggested that there might still be some value in studying the physiology and biochemistry of frozen-thawed fish embryos, even though the cell itself is defunct by that stage.

We rounded off the day with a wine reception hosted and sponsored by Planer Products Ltd, who had also demonstrated a portable cell freezer during the day, and a dinner hosted by the Royal Veterinary College itself. Paul and I would like to thank all those who contributed to the day, especially Nana Satake who bore the brunt of organising it.

**Professor Bill Holt, BAS Chairman**

## Letters

The BAS Newsletter is published in Spring and Autumn of each year.

If you wish to contribute to the newsletter please write to us with your news and views to:

secretary@britishandrology.org.uk

## Update your email address



The BAS is increasingly using email to contact members with news and important announcements. However, we do not have an email address for all the society's members and suspect that some of the addresses we have are out of date. Please use the opportunity of this year's membership renewal form to the secretariat to update your details or email secretary@britishandrology.org.uk.

## Membership

**Dr Alireza Fazeli**  
 BAS Membership Secretary  
 Academic Unit of Reproductive &  
 Developmental Medicine  
 University of Sheffield  
 Jessop Wing, Level 4  
 Tree Root Walk  
 Sheffield, S10 2SF

Email: [a.fazeli@sheffield.ac.uk](mailto:a.fazeli@sheffield.ac.uk)

## Executive Committee



*Chairman*  
*Treasurer*  
*Secretary*  
*Student Rep*  
*Member*  
*Member*  
*Member*

**Prof Bill Holt**  
**Prof Sheena Lewis**  
**Dr Alireza Fazeli**  
**Ms Vicky Sharp**  
**Dr Iwan Lewis-Jones**  
**Dr Jacqui Piner**  
**Dr David Miller**  
**Dr Sue Avery**

Institute of Zoology  
 Queen's University Belfast  
 University of Sheffield  
 Royal Veterinary College  
 Liverpool Women's Hospital  
 GlaxoSmithKline  
 University of Leeds  
 Birmingham's Women's Hospital