



AETE

Association Européenne de Transfert Embryonnaire
European Embryo Transfer Association

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Editor: Dimitrios Rizos

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President's letter

Dear Colleagues,

Summer has started and it is the ideal time to take holidays to reduce stress levels and to accumulate new power. However, holidays could provoke also stress afterwards. To ease the holiday burden, check your diary for when you return in case you need to prepare anything in advance. You need to be able to fully relax and rest assured that things won't fall down without you being around to supervise. And lastly, don't forget to register for our next AETE meeting. This year, our 29th annual meeting will be held in Istanbul, from the 5th to the 7th of September.

Istanbul is truly a world city, which everyone should visit at least once in lifetime. It is a charming blend of East-Meets-West cultures - but also a vibrant, modern city, with a unique identity. The Bosphorus, which connects the Sea of Marmara to the Black Sea, divides the city into a European, Thracian side - comprising the historic and economic centers - and an Asian, Anatolian side. The city is further divided by the Golden Horn, a natural harbor bounding the peninsula where the former Byzantium and Constantinople were founded.

Sunset is this city's moment of magic and it is recommended to do a ferry trip across the limpid waters of the Bosphorus. Sitting on the outside deck of one of the ferries that ply the Bosphorus and have good discussions with some good friends should be an unforgettable moment. And what should I say: Joining us for the AETE meeting - you will

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Letters to the Editor are welcomed.
Please include name, address, telephone,
FAX, and E-mail address

experience such combination of cultural and scientific moments.

Please visit the AETE web site (www.aete.eu) for more detailed information about Istanbul and travel information.

Of course, in the last time all of us have seen the pictures on TV and in the news from Taksim Square. We are all educated people, able to build up an own comprehensive opinion. Here is not the place to comment political developments; however the board of the AETE is in charge to guarantee a fruitful and peaceful AETE conference in Istanbul. Therefore I questioned the colleagues from the local organizing committee, some people directly in Istanbul as well as the Federal Foreign Office in Berlin regarding the situation. And I was convinced and I am sure that we will have a safe and interesting meeting. The scientific program is framed by four invited lectures, which will focus on interesting scientific topics such as oviductal mechanisms contributing to the fertilization, Embryo transfer strategies in sheep and alpaca, biological sensing of the embryo by the maternal environment and their *in vivo* and *in vitro* sensitivities and resilience.

The two workshops included in the program will gives us the opportunity to go more in detail regarding “embryo transfer in small ruminants” because we are in a particular region of the world where it is a most powerful biotechnological tool. Furthermore we will have the honor to welcome Juan Moreno form Sexing Technologies, Texas, who will introduce new approaches in this growing market. Another well-established and accepted part of the scientific program will be the student competition. The board has selected again four abstracts from students for the competition. In total more than 60 abstracts have been accepted this year and will be included in the proceedings. Several different species and topics are addressed in the abstracts, which will form the poster sessions once more to a source for discussion and exchange of information and ideas between friends.

Finally I would like to thank Ebru Emsen and Sezen Ocak, the members of the local organizing committee, the board members of the AETE as well as the Sponsors for all what they have done to prepare a promising conference at a place where Europe and Asia meet each other.

I like to finish my letter with the desire to be able to welcome many of you to our annual conference in Istanbul.

Wish you all a happy and safe holiday season,
Kind regards

Frank BECKER

President A.E.T.E

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Cryopreservation and Culture of Bovine Embryos – Effects of DMSO

Christine Wrenzycki and Hanna Stinshoff

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Cattle embryos that are produced *in vitro* still differ from their *in vivo* derived counterparts. These differences include not only morphological changes but also differences at the molecular level (Wrenzycki et al. 2007, Rizos et al. 2008). Cryopreservation techniques of bovine embryos are well established. However, cryopreservation affects embryonic quality. Despite the recent improvements in cryopreservation methods, results for post cryopreservation survival vary immensely. Comparisons between slow cooling and vitrification have mainly been drawn at a morphological level (Saragusty and Arav 2011). Differences between cryopreservation methods can be seen for the first time after cryopreservation in reexpansion and hatching rates. Efforts to improve survival rates were mainly restricted to altering the IVC media or to modifications of the cryopreservation method itself (Scherzer et al. 2008). In a previous study we were able to show that although not visible in gross morphology, but in the relative amount of gene transcripts, vitrification may be the more suitable method to cryopreserve *in vitro* produced bovine embryos (Stinshoff et al. 2011).

Many techniques for *in vitro* production of embryos frequently make use of dimethylsulphoxide (DMSO) as solvent for those pharmacological compounds that have little or no solubility in water. Furthermore, DMSO is used as cryoprotectant at very high (12–25%) concentrations (Vajta et al. 1998). However, its effects on mammalian embryos have been mostly limited to its already mentioned property as a cryoprotectant (Kasai and Mukaida 2004). A previous study using human embryonic stem cells detected a substantial dose-dependant alteration in morphology and cell attachment in the presence of DMSO (Pal et al. 2012).

In a recent study, we have used DMSO as a solvent in order to ensure absorption of the CLA (conjugated linoleic acids) into the preimplantation bovine embryo (Stinshoff et al. 2013). Despite cleavage rates were not affected by the addition of the solvent, developmental rates up to the blastocysts were significantly increased when the culture medium was supplemented with DMSO. Furthermore, the results obtained by our group at the molecular level suggest that during *in vitro* culture unwanted effects of DMSO might even occur in concentrations that have been previously deemed ‘safe’ for *in vitro* maturation (Stinshoff et al. 2013). Avery and Greve (2000) studied dose-dependent effects of DMSO on the developmental competence of bovine COC during *in vitro* maturation. They state that adding up to 0.4% DMSO to the maturation medium seems ‘safe’, whereas higher concentrations – though still resulting in regular maturation rates – negatively affect subsequent embryo development (Avery and Greve 2000). In comparison, the concentrations employed in the present study are equivalent to 0.1 and 0.2%, respectively. The reasons for the increased development rates following supplementation with DMSO are unknown and will need further study.

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Embryo transfer with fighting-cows and white wine

As soon as winter says goodbye, time has come for the “queens” to show what they can do. Leaving their stable in spring, the combative cows are eager to fight each other for supremacy in the herd. Herens cows are unique, just as the popular festivals are, which have developed around the natural fighting-habit of these animals. My life as breeder and ET-veterinarian takes place in the midst of this exclusive spectacle.



Turtmantal, Alp in the Valais. Fotos: Alain Passeraub

The Herens (Eringer in German, Hérens in French) are a breed of cattle which are mainly kept in the canton of Valais in Switzerland.

Breeding history

The ancestors of this breed seem to have arrived with the Romans in the region of today's Valais. But a breeding standard was only introduced in 1884 for this old breed. In 1917 a specialised breeding federation was founded. Herens cattle were often cross bred with other cattle breeds in the alpine region. For example Tux Cattle, Évolène Cattle, and Pustertal Pied Cattle may be partially related to the Herens. The population of Herens has decreased since the 1960s. In the year 2008, it was about 13,500 animals.



Herens cows. Foto: Alain Passeraub

Characteristics

Herens Cattle are one of the smallest cattle breeds in Europe. Their fur is dark red to brown or black, pied animals being very uncommon. A distinguishing feature is the short and broad head, with a concave front line. The animals are very muscular, both sexes wearing strong horns.

Bulls typically reach a height of 125–134 cm, full-grown bulls weighing 650–1000kg. Cows reach 118–128 cm and 500–800 kg. The cattle are reputed to be a meat-accentuated dual-purpose breed. The cows produce around 3,200 kg of milk per year. Often the effective production is lower, as the cows are only milked during a short period, so that they can save their energy for the combats. Herens Cattle are considered as being undemanding and flexible. They are well adapted to pasture in alpine altitudes and on steep slopes.

Cow-fighting – epitome of the authentic and emblematic

The single-combats are not enforced. The cows are neither trained for this event nor taught to attack their conspecifics. Cherished by their owners, the majestic cows push each other with their foreheads, until one of them turns around and walks away. Injuries during these fights are extremely rare. This is certainly one of the reasons why these battles attract so many enthusiastic spectators. The cows may be determined to fight, but always bloodless.



Fotos: Alain Passeraub

Cow-fighting doesn't have anything in common with Spanish Corrida. The aim of the fighting is to establish a hierarchy and to determine the leading cow of the herd.

The cows are separated into categories and taken into the arena in groups of 12 to 20 animals. Herders are in charge to make sure that the cows fight in groups of two, one against another. A jury rates the duels. The colossuses fight by themselves, one against another, until the defeated one turns away and escapes. The winner will choose a new opponent. Every cow that loses three battles, must leave the ring. This scheme continues until six animals are left in the arena. Now every animal will fight against all its adversaries. The winner – the

cow that triumphs over all its rivals – is crowned queen. Her value decuples in one day.

During the summer, the cows determine the queen amongst themselves, she is the one who will lead the herd.



Turtmantal, Alp in the Valais with Herens cows.

Fotos: Alain Passeraub

My work with the Herens

(Alain Passeraub, Swissgenetics ET-veterinarian with his cows on Alp Turtmantal)

The ET-work with Herens cows is fascinating, but is also a big challenge. The cows and their environment are very special:

Because of the fighting-rules and the breeding in alpine regions, seasonal calving is obligatory in Herens breeding (best from September to December). On the one hand, the pressure is high that cows get gravid as soon as possible. On the other, breeders are still very sceptic about embryo transfer, similar to the suspiciousness about artificial insemination 60 years ago.

For these two reasons, the only animals we get for embryo transfer are those which have some problems with fertility.

The prognostic for flushing success is therefore quite evident:

If the cow isn't cyclic or shows other problems with fertility, the results to be expected are always unsatisfactory – unfortunately these expectations are mostly verified. But if the cow is young, has a regular cycle and doesn't show any problems with fertility, I know I can expect 15 embryos or more – fortunately, this positive outlook is also verified in most cases! If the flushing of a Herens cow is successful, we get our nicest working days, because

we celebrate – always! Then it is usually better if this happens just before the week-end...



Alain Passeraub, Swissgenetics ET-veterinarian with his cows on Alp Turtmannental

In private life, I am also fascinated by the Herens Cattle. Thanks to my father, I am closely involved in Herens breeding since I was a boy. In 2006, I began to raise Herens Cattle. A hobby that offers optimal recreation to my daily job. I am happy about first successes, as well in my own breeding as with the animals I bought additionally. This year, Cobra has impressively won the National Final. My aim is to reduce the scepticism of the breeders about ET. I am on good track to reach this goal. An embryo that I bought is actually the best rated heifer on one of the big alps in the Valais. Who knows, maybe this fact will initiate a break through of the embryo transfer in Herens Cattle breeding...



Cobra, Queen of the Queens 2013, she is currently the best Herens cow in Switzerland and comes from my stable

Upcoming Events

American Embryo Transfer Association (AETA) & Canadian Embryo Transfer Association (CETA/ACTE)

Joint Scientific Convention

October 10-12, 2013

Grand Siera Resort & Casino, Reno, Nevada

For more information, please visit the CETA/ACTE

web site at: <http://www.ceta.ca/convention.html>

or the AETA web site at: <http://www.aeta.org/2013/>

40th Annual Conference of the International Embryo Transfer Society (IETS)

January 11-14, 2014

Reno, Nevada

For more information, please visit the IETS web site at: <http://www.iets.org/2014/>

2014 International Cow Fertility Conference
“New Science-New Practices”

May 18-21, 2014

Castlecourt Hotel, Westport, Mayo, Ireland

For more information, please visit the IETS web site at: <http://www.bsas.org.uk/events>



IETS Annual Conference 2014

Reno, Nevada, USA

Program Co-Chairs: Pablo Ross and Jim Murray

Local Organizing Committee Chair: Matthew Wheeler

On behalf of the IETS and the chair of the Local Organizing Committee, we would like to extend a warm invitation to join us at the annual conference of the IETS, scheduled for January 11–14, 2014, in Reno, Nevada, USA.

“Advancing embryo technologies in the genomic era”

The program topics include:

Genetics and genomics of animal reproduction
Molecular aspects of embryonic development
Cryopreservation of sperm and embryos
Novel imaging approaches for predicting reproductive outcomes
Advances in genetic modifications of livestock species

The program will include a keynote address by Kevin Sinclair entitled “Beyond Genetics - Maternal nutritional effects in developing oocytes, embryos and offspring”. Also, there will be a Practitioner’s Forum addressing issues related to implementing IVF programs in commercial farms, a Think-tank in which current advances in ovarian stimulation will be discussed, and the traditional DABE and CANDES symposiums.

In addition to the main program, there will be a Preconference Symposia on Saturday, January 11, 2014. The preconference symposium title is “Practical Advances in Embryo Technologies”, organized by Matt Wheeler.

The Local Organizing Committee is planning a variety of events. Tours will be available for pre- and post- meeting. There will be an opening reception on Sunday Evening and on Tuesday evening a gala and activities.

Details about the program, including the invited speakers and titles of their presentations, are currently available on the IETS website at - <http://www.iets.org/2014>

Further details can be found on the IETS website - <http://www.iets.org/2013/index.asp>.

Deadline to submit abstracts is, Thursday, July 25, at 11:59 PM, Central Time.

We sincerely hope that you will all be able to join us in Reno, Nevada, USA to participate in this educational, fun and exciting conference, IETS 2014!

New science, new practices

International Cow Fertility Conference
Castlecourt Hotel
Westport, Mayo, Ireland
Sunday 18 - Wednesday 21 May 2014



Helping to tackle the major challenge facing farmers
and animal health professionals around the world

Topics to be covered:

- Global fertility trends
- Optimising reproductive performance in beef cows and replacement heifers
- Cyclicity post-calving (Uterine tract recovery, immune response and coping with infection)
- The embryo-maternal dialogue
- Progesterone - embryo survival and pregnancy loss
- Heifer fertility for life-time production
- Genetic improvement
- Expression and detection of oestrus - new technologies
- Semen sexing - current technologies, application and cost benefits
- Better semen diluents
- Fertility Management programmes and herd monitoring to optimise fertility

Plus workshops including:

Uterine infection - Dry cow nutrition - Breeding soundness examination of the Bull - Synchronisation and ovulation control regimens - Superovulation and embryo transfer

And special symposium:

What have “omics” contributed to our understating of cow fertility?

Speakers include:

Michael G Diskin, Stephen Butler, Mark Crowe, Pat Lonergan, Donagh Berry, Laurence Shalloo, Ian Hutchinson, Stephen Carrington (Ireland), Claire Wathes, Bob Smith (UK) Jim Drackley, Milo Wiltbank, Matt Lucy, Paul Fricke, George Seidel, Jose Santos, Victor Cabrera (USA), Gabriel Bo (Argentina), Scott McDougal (New Zealand), Steve LeBlanc (Canada)

For more details and information, go to www.bsas.org.uk/events

Jointly hosted by:



In Memoriam of our Colleague

*Keith H. S. Campbell
(1954 - 2012)*



Keith Campbell was born in Birmingham, England in 1954 and grew up there and in the Scottish city of Perth. He had an interesting training and career path as he left school early and went on to take an Ordinary National Certificate in Medical Laboratory Sciences and then a Higher National Certificate in 1975; so his early career was via the technician's training route. He then graduated from Queen Elizabeth College, London with a BSc in Microbiology in 1978. He subsequently had various jobs, including a locum position as chief medical laboratory technologist in South Yemen, before starting a PhD in 1980 at the University of Sussex, UK.

Keith had several postdoctoral positions whilst at the Universities of Edinburgh and Dundee, before joining the Roslin Institute in 1991. By that time he had already been developing his ideas concerning cell cycle regulation (Campbell KH, Ritchie WA, Wilmut I. Nuclear-cytoplasmic interactions during the first cell cycle of nuclear transfer reconstructed bovine embryos: implications for deoxyribonucleic acid replication and development. *Biol Reprod.* 1993 49: 933-42), building on earlier studies conducted at Dundee that investigated DNA replication in *Xenopus* eggs and human fibroblasts. The existing dogma at that time was that once cells had

commenced the process of differentiation they could not be 're-programmed' to a totipotent or indeed pluripotent state. Keith's breakthrough was the discovery that they could.

Keith's working hypothesis was to induce donor cells to enter a quiescent state, G₀, to facilitate reprogramming by the withdrawal of serum from the culture media. Following nuclear transfer and egg activation, the donor nucleus was in a state more amenable to reprogramming by the oocyte's cytoplasm. Working with donor cells from an embryo-derived epithelial cell line, Keith and the team at Roslin created Megan and Morag in 1995 (Campbell KHS, McWhir J, Ritchie WA and Wilmut I. Sheep cloned by nuclear transfer from a cultured cell line. *Nature* 1996. 380: 64-66). The next step was to transfer a nucleus from an adult somatic cell which ultimately led to the birth of Dolly in 1996 (Wilmut I, Schneike AE, McWhir J, Kind AJ and Campbell KHS. Viable offspring derived from fetal and adult mammalian cells. *Nature* 1997. 385: 810-814). Whilst the 'Dolly' paper understandably has received much more acclaim than the earlier paper in *Nature*, Keith always stated that the paper introducing the world to Megan and Morag was the seminal work. Keith was to publish further cloning papers in *Nature* and *Science* where he created genetically modified sheep and pig offspring for biomedical research.

The impact of these and later studies has been profound. In an era of metrics, where we each keep abreast of one another's citation indices, Keith's reads like this (from Thomson Reuters Web of Knowledge, as of June 2013): 6,126 total citations with an average of 91 citations per peer-reviewed item. Incredibly, the paper introducing the world to Dolly has been cited 2,150 times. Of Keith's top 10 papers, 5 were published in *Nature*, 1 in *Science* and 1 in *Nature Biotechnology*.

In 1999, Keith became Professor of Animal Development at the University of Nottingham (UK) where he continued to work on nuclear reprogramming and cloning techniques. Much of this work focused on epigenetic alterations to donor DNA and associated proteins following nuclear transfer. Although animal cloning has yet to come of age as a commercially useful biotechnology it has, nevertheless, inspired a generation of scientists to embark on studies of cellular reprogramming, and it was the inspiration behind the studies that ultimately

The 29th Scientific Meeting of the AETE

Will be held in

*Istanbul, Turkey
5th-7th September 2013*

The Conference Location

In 2013, the meeting will take place in Istanbul, at “**Renaissance Polat Istanbul Hotel**”, located five minutes from Istanbul Ataturk International Airport and World Trade Center and 15 minutes from Istanbul city center.

<http://www.marriott.com/hotels/travel/istrn-renaissance-polat-istanbul-hotel/>



Renaissance Polat Hotel Istanbul Airport Transfer

***Ataturk Airport to the Renaissance Polat Istanbul**; Distance from hotel: 15km **Drive time**: 20min.

***Sabiha Gokcen Airport to the Renaissance Polat Istanbul**; Distance from hotel: 70km **Drive time**: 90min.

Friday 6th September 2013

Gala Dinner will at the Congress Hotel, Palandoken Ballroom.



Saturday 7th of September 2013

Dinner Cruise and Turkish Night on The Bosphorus

We will share our culture with Turkish Night Cruise along the Bosphorus. During this enchanting cruise, the show explains why Istanbul is such a glorious place to visit. Sail up the Bosphorus, the waterway between Europe and Asia, passing under the suspension bridges and viewing Ottoman summer palaces, waterside mansions and modern villas which line the European and Asian coasts.



Welcome to Istanbul, Turkey.

With its long history at the center of empires, Istanbul offers a wealth of historic and religious places to take in. The bulk of these ancient monuments, dating back to Roman, Byzantine, and Ottoman periods, including the Hagia Sophia, Topkapı Palace, Sultanahmet Mosque (Blue Mosque), and Basilica Cistern are located around Sultanahmet Square, while some others are dispersed throughout the peninsula of old city, such as Church of St Savior in Chora (Kariye Müzesi), entire inside of which is covered by mindblowing frescoes and mosaics. An impressive section of mostly intact Theodosian walls, which mark the full length of western boundary of the peninsula, is right next to this particular church.



North of the peninsula of old city, across the Golden Horn, is Galata, crowned by the Galata Tower. Istanbul Modern, with its exhibitions of contemporary Turkish art, is on the nearby waterfront of Karaköy. Another sight of religious significance close by is the Galata Whirling Dervish Hall of Sufi Mevlevi order, just north of the Tower. Further north is the Istiklal Avenue, Istanbul's prominent pedestrian street running from near Galata Tower to Taksim Square, the central square of whole city.



North of Taksim Square is New Istanbul, main business district of the city. If venturing out to this direction, don't forget to check out Military Museum, where Ottoman military music concerts (Mehter) are held every afternoon. Most of the skyscrapers of the city are located in the north of this district, around Levent and Maslak, with a totally different skyline from that of the old city. However southern reaches of the very same district has some fineneo-classical and Art Nouveau buildings from the turn of the 20th century, around the neighbourhoods of Osmanbey, Kurtuluş, and Nişantaşı. Just east from here, with a little drop in elevation as you approach the shore, is the banks of Bosphorus, that is lined by pleasant neighbourhoods full of waterfront mansions(yalı) and a number of waterside palaces where you can admire what money could buy in times gone by.



Heading west rather than north from the old city brings you deeper into the banks of the Golden Horn estuary. A neighbourhood perhaps well worth a visit here is Eyüp, to visit city's holiest Islamic shrine and just to see what daily life in Ottoman Istanbul was like. On the opposite shores of the Horn, in Söğütözü is the Miniaturk, the first miniature park in the city, with models from around the former Ottoman Empire.



Across the Bosphorus to east is Asian Side, centred around the historical districts of Kadıköy and Üsküdar, and perhaps best symbolized by Maiden's Tower, located at about the halfway between these districts, on an islet just off the shore. Bosphorus and Marmara coasts of this half of the city is characterized by quite picturesque neighbourhoods, overlooked by Çamlıca Hill, one of the highest hills of the city which has a view of much of the rest of the city as well, with a cafe and a pleasant park on its summit.

Southeast of the city, off the southern coast of Asian Side are the Princes' Islands, an archipelago of nine car-free islands, characterized by stunning wooden mansions and pine groves.

How to travel

- by plane :

Atatürk Airport

Most planes arrive at [Istanbul Atatürk Airport](#) (IATA: IST), 20 km west of the city centre and 15 km from Congress Hotel. From the airport, there are various options for getting into Istanbul. You can take a **taxi** too. There is no night fare in Istanbul anymore.

Sabiha Gökçen Airport

Istanbul also has a second airport, [Sabiha Gökçen International Airport](#) (IATA: SAW), located in the [Anatolian side](#) of the city.

The cheapest way to arrive from Sabiha Gökçen in the European side of Istanbul is by bus (E10 line, from Sabiha Gökçen to Kadiköy) + ferry (from Kadiköy to many ferry stations, including some in the Sultanahmet area). It costs no more than 7TL for the bus ride and then you pay only 2TL for the ferry ride (which is linked to the public transport system, meaning you can also use akbil or electronic transport prepaid cards to pay for the ferry). That's less than €4 in total.

A **Havatas bus** connects this airport with Taksim in the city centre for 12 TL (April 2013) and takes about an hour (closer to two or more in heavy traffic).

Various private operators offer internet bookable shared minibuses to central locations - a good choice when arriving late.

When arriving at Sabiha Gökçen airport, there are people offering shuttle services to the European side of the city, most costing €10, which is much cheaper than booking a taxi with your hotel/hostel (about €50-60). It is the best option after the Havatas airport buses.

- by train :

International trains from across Europe arrive at the station in Sirkeci, close to Sultanahmet. Asian trains arrive at Haydarpaşa station. To get between the two, catch a ferry across the Bosphorus.

International trains to Sirkeci

Daily overnight train:

BalkanExpress from [Belgrade](#) (Serbia) via [Sofia](#) (Bulgaria)
BosphorusExpress from [Bucharest](#) (Romania) (departure at 12.16PM from [Bucharest](#), arrival at 8.30AM in Istanbul, but expect about 2 hours delay) Cost: 170 RON

(about 40 euro) for a second class sleeper, plus an additional fee if you wish a sleeping compartment (77 euro for a single-bed cabin or 10 to 33 euro for twin/up to six beds/cabin). No restaurant.

Trains from [Budapest](#) and [Thessaloniki](#) are cancelled since 2011.

International trains to Haydarpaşa

Weekly trains to [Aleppo](#) (Syria) - taken out of service in 2008; it is unknown whether and when this service will resume.

Weekly train to [Teheran](#) (Iran) (from Haydarpaşa station) every Wednesday 10.55PM, costing 105 Turkish lira. It is also a good way to drive in the Eastern part of [Turkey](#). You change trains on Friday at [Lake Van](#) which requires a four hour ferry ride to get across. Both the Turkish and Iranian trains are comfortable and clean. Waggon restaurants are rather cheap. Arrival in [Tehran](#) on Saturday at 6.45PM (but expect up to 10 hours delay...).

Schedule and price list of railway trips can be gathered from TCDD (Turkish Republic State Railways).

When arriving at the Turkish border from Europe, you may need to buy a visa before getting your passport stamp. This counter accepts only Euros or USD, not Turkish Lira. You need to go to the visa counter first to purchase your visa, then to passport control to get it stamped.

- by bus:

Buses depart/arrive for international destinations including cities in [Bulgaria](#), [Greece](#), [Republic of Macedonia](#) and [Romania](#).

- by boat:

International ferries, carrying tourist groups from outside Turkey stop at Karakoy Port. The port is ideally located close to Sultanahmet and Taksim.

Cruise ships often dock close to downtown. Passengers not on tours will find taxis readily available at the port entrance, and modern streetcars a short walk away

- by car:

The city currently holds more than 1,500,000 automobiles and there is a strong demand for building of new or alternate highways.

If you've arrived in Istanbul by car, and you're not familiar with the streets, it's better to park your car in a safe place and take public transportation to get around.

Visa:-

Depending on nationality, foreigners arriving in Istanbul may need to purchase tourist visas (USA and some EU citizens, depending on exact nationality, do). This must be done upon arrival before queuing for passport control. The windows for purchasing the visa are located immediately to the left of the main passport control booths. You must pay in cash US dollars, Euros, or British pounds. Turkish lira is NOT taken, but there is an ATM where you can withdraw your own currency should you not have any (this ATM is frequently out of Euro and US \$). You can pay by Mastercard/Visa at the visa desk as at May 2012. The fee varies depending on the visitor's nationality. The fee is \$20 (or €15 or 10 GBP) for visitors traveling with U.S. and \$60 for Australian passports (May 2012). As of Sep 2008, Canadians pay US\$60 (or €45). EU pays €15 (note that GB citizens may pay cash in Pounds (£10), and USD are taken in cash) you can use a debit or credit card but it will be charged 15 Euro.

Accommodation:-

A list of hotels nearby the Congress hotel, Renaissance Polat Istanbul Hotel is available in AETE web site: www.aete.eu. The hotels will book directly from the website or by www.booking.com.

Transportation from the airport to the hotels will not be provided since the hotels do provide their own shuttle service.

Transportation from the different hotels to the Congress centre (Congress hotel Renaissance Polak) will also not be provided. Istanbul is a 'taxi' city, the common way of transportation.

We look forward to seeing you in Istanbul.

Ebru EMSEN, Ataturk University
Sezen OCAK, Zirve University
 Local Organizing Committee.

Language

The official language of the conference is English.

Scientific Secretariat

AETE board

REGISTRATION FEES

Istanbul, Turkey 2013	Euros
Full/Associate Member <i>Before 15th July 2013</i>	290 €
Full/Associate Member <i>After 15th July 2013</i>	340 €
Student Member <i>Before 15th July 2013</i>	140 €
Student Member <i>After 15th July 2013</i>	155 €
2013 Membership Fee <i>Members who pay their annual fee but do not attend the Meeting will receive a copy of the proceedings</i>	90 €
2013 Accompanied Person	120 €

This price includes:

- membership fee
- participation at the Meeting (two full days)
- two workshops
- published proceedings
- lunch and coffee breaks
- social events

Fees for Sponsoring AETE Meeting

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Full color back page	800 Euros
Full inside color page	600 Euros
Half inside color page	400 Euros



AETEA

Association Européenne de Transfert Embryonnaire
European Embryo Transfer Association

29th SCIENTIFIC MEETING

Renaissance Polat Hotel

Istanbul, TURKEY

PROGRAMME

6th and 7th September 2013

THURSDAY, September 5th 2013

19.00-20.00: Registration

20.00-22.00: Welcome Reception

FRIDAY, September 6th 2013

07.30-09.00: Registration

09.00-09.15: Opening meeting by the AETE President **Frank Becker**

SESSION 1 - Chairpersons: HIEMKE KNIJN & RAINER SANER

09.15-10.00: First invited lecture:

Olivier Sandra (France): Biological sensing of the embryo by the maternal environment.

10.00-10.45: Short oral communications (*Developmental competence and energy status of oocytes and embryos*)

- (1) **Kassens** et al.: Intrafollicular oocyte transfer (IFOT) – a new method to provide in vivo culture conditions for in vitro matured bovine oocytes.
- (2) **Guardieiro** et al.: A diet enriched in linoleic acid compromises the cryotolerance of embryos from superovulated beef heifers.
- (3) **Ghaffarilaleh** et al.: The effects of omega-3 and omega-6 polyunsaturated fatty acids on lamb embryo development and quality in entirely serum-free media.

10.45-11.00: Sponsor presentation

11.00-12.00: POSTER SESSION 1 and coffee break

12.00-13.15: Lunch

SESSION 2 – Chairpersons: IAN KIPPAX & JO LEROY

13.15-14.00: Second invited lecture:

Tom McEvoy (UK): Livestock embryos: in vivo and in vitro sensitivities and resilience.

14.00-14.15: Tom McEvoy - AETE Medallist Presentation

introduced by **Ian Kippax (UK)**

14.15-15.15: Short oral communications (Student Competition)

- (1) **Dovolou** et al.: Daily supplementation with ghrelin improves in vitro bovine blastocysts formation rate and alters gene expression related to embryo quality.
- (2) **Veshkini** et al.: Effect of α -linolenic acid on goat oocyte developmental competence and expression of apoptotic-related genes in subsequent blastocysts.
- (3) **Cordova et al.**: Bovine in vitro produced embryos induce modifications of gene expression profile of bovine oviduct epithelial cells in vitro.
- (4) **Krania** et al.: Inclusion of tissue type plasminogen activator (t-PA) in IVF medium induces alterations in gene expression and affects blastocyst formation rate in bovine IVP.

15.15-16.00: POSTER SESSION 2 and coffee break

16.00-17.30: Workshop I – New approaches in the field of sexed semen for embryo production.

Managed by **Juan F Moreno (USA)**

Evening : Gala Dinner, Polat Renaissance, Congress Hotel



SATURDAY, September 7th 2013

SESSION 3 – Chairpersons: SERGE LACAZE & MARIA DATTENA

09.00-09.45: Third invited lecture:

Henry William Vivanco-Mackie (Peru):

Strategies for superovulation, embryo production and transfer in sheep and alpacas.

09.45-10.30: Short oral communications (Application of Repro-Techniques)

- (1) **Ruiz** et al.: Birth of the first calf of Murciana-Levantina bovine breed derived by OPU, in vitro production and embryo vitrification.
- (2) **Valckx** et al.: The effect of human follicular fluid from women with differential art outcomes on bovine in vitro oocyte maturation, fertilization and blastocyst formation.
- (3) **Richard** et al.: Transcervical embryo collection in late stage in cattle.

10.30-11.00: General Assembly

11.00-12.00: POSTER SESSION 3 and coffee break

12.00-13.15: Lunch

SESSION 4 – Chairpersons: DIMITRIOS RIZOS & PETER VOS

13.15-14.00: Fourth invited lecture:

Pilar Coy (Spain): Oviductal mechanisms contributing to the success of fertilization in mammals.

14.00-14.45: Short oral communications (Oviduct environment for optimal development for gametes and embryos)

- (1) **Ballester** et al.: Effect of oviductal fluid on the porcine in vitro fertilization with frozen-thawed sperm.
- (2) **Lopera** et al.: Extracellular vesicles secreted by bovine oviductal epithelial cells increase the quality of in vitro produced bovine embryos.
- (3) **Eissa** et al.: Immunolocalization of Ha-synthases and hyaluronidases in camel oviduct.

14.45-15.15: Coffee break

15.15-16.45: Workshop II – Reproductive biotechnology in small ruminants: How to improve the success rates?

Managed by **Sema Birler (Turkey)**

16.45-17.00: Closing session: Student Competition results and invitation to the AETE Conference 2014

Social event: Bosphorus Dinner Cruise



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