AETE
Association Européenne de Transfert Embryonnaire
European Embryo Transfer Association

June 2012 | A.E.T.E. NEWSLETTER N°37 | Editor: Dimitrios Rizos

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

President's letter

Dear Colleagues,

Before we all may enjoy a well deserved holiday period, I hope you all have registered already for our coming meeting in September. This year, our 28th annual meeting will be held in the city of Saint-Malo, from the 6th to the 8th of September. Saint Malo is located in the "Far West" of France in the Bretagne region. After the walled city of Chester in United Kingdom, we invite you to discover another outstanding walled city in France, facing the sea. In the 12th century, to escape Viking invasions, the residents of Saint-Malo moved to a neighboring islet, which constitutes now the walled city. A must-do tour of the ramparts will give you a chance to admire panoramic views of the English Channel and its ever-changing tidal landscape. Please visit the AETE web site (www.aete.eu) for more detailed information about Saint-Malo and travel information. I would like to invite you to use the shuttle transport from Rennes, which has been set up on Thursday 6th in the afternoon and will enable you to visit one of the newest semen production center in France: Saint Aubin du Cormier.

The scientific program includes four invited lectures, which will cover very interesting scientific topics such as maternal environment in the early life of embryos, effect of metabolism on embryo development together with practical and applied topics as genotyping of embryos and improvement of superovulation treatments. This year, our society

will have the honour to welcome Dr Gabriel Bo, who will share his huge experience in testing superovulation schedules. The two workshops included in the program will focus on *"oocyte collection techniques"* and *"equine biotechnologies"*. As you may know, equine ET activity is worldwide increasing during the last years. Moreover, Normandy and Bretagne are two main regions involved in equine breeding in France, so that it will be interesting to have an updated overview in this field. In both workshops practical experience and scientific knowledge will be shared and discussed by several members of the society. Another important part of the scientific program will be the student competition. The board has selected four abstracts from those submitted by students to enter 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 which makes the poster sessions again a source for discussion and exchange of information and ideas.

I would like to thank the members of the Local Organising Committee for their effort and enthusiasm in order to ensure a pleasant stay and a successful meeting. Special thanks also to our sponsors, which generously provided the financial support to allow the meeting to take place.

Finally I want to invite you all to join the 2012 meeting and I am looking forward to see you again in September.

Claire PONSART

President A.E.T.E

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Use or reproductive technologies in the conservation of mountain ungulates

Santiago-Moreno J, Castaño C, Toledano-Díaz A, Esteso MC, López-Sebastián A

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Many wild ruminant species of the Mediterranean Basin are threatened by either low food availability or the loss of heterozygosity, a problem derived from habitat fragmentation. Strategies for the preservation of threatened species must include those that focus on in situ conservation. Assisted reproduction technologies can, however, provide complementary help, and in many cases is the only way to guarantee the preservation of certain species at serious risk of extinction. The research at the laboratory of Spermatology and Cryopreservation in Wild Species (INIA, Madrid, Spain) focuses on conservation of several wild species (e.g. ibex, mouflon, aoudad, chamois, fallow deer, etc.). The objectives of our research projects are to improve the conventional sperm freezing, the characterization of reproductive biology and gametes, the development of species-specific assisted reproduction technologies, to develop alternative methods, such as ultra-rapid freezing and vitrification of spermatozoa, and the creation of genome resource banking (GRB) in threatened wild species.

The main limitation of assisted reproduction in non-domestic animals is the lack of detailed information on their reproductive physiology; thus great efforts need to be made to characterise the endocrine and environmental mechanisms that control their seasonal reproductive cycles. Recent advances in our knowledge of seasonal breeding, ovulatory cycles and testicular activity in mountain ungulates has allowed assisted reproduction technologies to be successfully used. Social interactions should be also taken into account in ex situ conservation strategies designed to improve breeding rates under captive or semi-captive conditions. Indeed, recent studies on captive ibexes have revealed that the anovulatory condition may be related to social status (Santiago-Moreno et al., 2007a). This suggests that social cues have an important effect on ovarian function, with subordinate social status appearing to suppress ovulatory activity. Thus, focusing the use of hormonal treatments on dominant animals could be cost-effective.

GRB is one way of preserving the genetic material of threatened and endangered species. A fundamental requirement of any GRB program is the ability to successfully cryopreserve cells and tissues. Since spermatozoa are more accessible than oocytes or embryos, they are currently of greater potential in breeding programs, and at present are the primary cell types preserved in most emerging GRBs. The cryopreservation of sperm is a complex process that involves balancing many factors in order to obtain satisfactory results. To ensure even minimal success an intricate knowledge of the appropriate methods of sperm collection, the proper diluents to use, and sperm dilution and cooling rates is essential.

Viable epididymal spermatozoa can be retrieved from the dead males (Santiago-Moreno et al., 2006). The time that elapses between death and sperm recovery affects the final sperm quality, and this should be taken into account when sperm doses are prepared for use in assisted reproduction (Fernández-Santos et al., 2011). Electroejaculation allows repetitive sperm collection from captive or semi-captive animals without their death. Electroejaculation has been successfully used in a wide range of wild. However, the sperm quality of electroejaculates is very often poor due to urine contamination, low semen volumes and low sperm concentrations. A suitable anaesthetic protocol for electroejaculation must be followed to ensure good immobilization and to prevent pain associated with the procedure. The need to select an appropriate anaesthetic is underscored by the fact that several interfere with the neuromuscular mechanisms that control the erectile and ejaculatory functions, while others favour retrograde ejaculation during electrical stimulation (Santiago-Moreno et al., 2011). Transrectal ultrasound-guided massage of accessory sex glands allows optimizing sperm recovery by electroejaculation (Figure 1). This new technique is a useful way of obtaining sperm samples because can reduce or even avoid the electrical stimuli during electroejaculation.

There are important differences in the physiological characteristics between epididymal and ejaculated spermatozoa, especially in terms of their membrane properties, that affect cell survival after cooling and freezing. Epididymal spermatozoa have never been exposed to the secretions of the accessory sex glands found in ejaculated semen, which may alter their resistance to the freezing. In ibex and aoudad, the seminal plasma has a negative effect on sperm survival when egg yolk-based diluents are employed. The problem appears to be caused by a phospholipase secreted from the bulbourethral glands that hydrolyzes the membrane phospholipids of spermatozoa and produces toxic derivates from egg yolk phospholipids. The removal of the seminal plasma is found to be more beneficial during the time of declining photoperiod than at other times during the year, reflecting the increased

activity of the accessory sex glands during the rutting season (Coloma et al., 2010a).

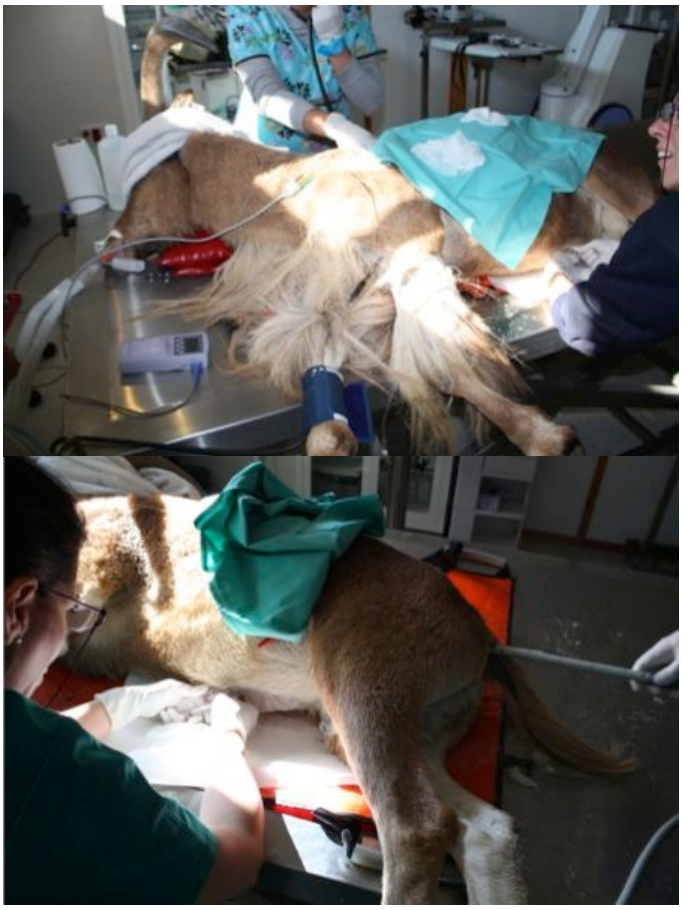

Figure 1, 2*: Transrectal ultrasound-guided massage to sperm recovery in aoudad.*

The cryoprotection offered by extenders containing different additives has been tested in sperm samples obtained by electroejaculation and post-mortem collection from the cauda epididymis. Although the replacement of egg yolk with other additives, such as lactose, leads to very low post-thaw motility (Santiago-Moreno et al. 2007b), the use of high egg yolk concentrations (≥12%) can negatively affect the fertilization rate in several wild ruminant species. Thus, the use of extenders containing egg yolk at low concentrations (6%) is usually recommended for the cryopreservation of both epididymal and ejaculated spermatozoa of ibexes, mouflons and aoudads. At present, glycerol is the most widely used protective agent in sperm cryopreservation. Nevertheless, glycerol has been shown to damage sperm cells by changing the viscosity of the cytoplasm, altering the plasma membrane structure, and even compromising the bioenergetic balance of the cells. Most mountain ungulates have shown an acceptable 4-9% glycerol tolerance. Testosterone shows a seasonal rhythm closely linked to the reproductive cycle. Sperm membrane properties can be influenced by testosterone, and differences in the toxic effect of glycerol are expected depending on the level of circulating hormone. Indeed, high testosterone levels have a detrimental effect on the freezability of electroejaculated sperm in ibexes (Coloma et al., 2010b). Testosterone secretion increases about 55 days before the onset of the rutting period in all wild ruminants studied, coinciding with the duration of spermatogenesis and the passage of spermatozoa through the epididymis. Hence, optimum sperm function coinciding with the oestrous cycles of the females should be guaranteed. Since high testosterone concentrations appear to alter the resistance of sperm to freezing-thawing, the best period for freezing electroejaculated semen is during the rutting season, when sperm production is optimum and testosterone secretion decreasing.

Although spermatozoa are the primary cell types preserved in most emerging GRBs, the future strategies should be focused on embryo cryopreservation and embryo transfer. However, the cryopreservation of the embryos of wild ungulates has not been extensively studied, which may be due to the low rates of embryo recovery following superovulation. Usually, embryo cryopreservation in a wild species involves a standard equilibrium freezing method developed for the embryos of a related domestic species. Interspecific embryo transfer may be a useful strategy in animal conservation programs when there is a lack of suitable female recipients. Interspecific embryo transfer has been successfully performed between the European mouflon and domestic sheep (Santiago-Moreno et al. 2001), Urial sheep and domestic sheep, the gaur and domestic cattle (Stover et al. 1981), and the Iberian ibex and domestic goat (Fernández-Arias et al. 1999).

In conclusion, assisted reproduction technologies may be the only way to guarantee the continued survival of certain species, subspecies or ecotypes at serious risk of extinction. Moreover, its use in game species allows the sustainable development of renewable natural resources and contributes to diversify livestock productions. Recent advances in these areas have allowed the establishment of GRBs for the most representative ecotypes of the Iberian ibex. However, great efforts need to be made to improve the conventional sperm freezing, to develop alternative sperm freezing methods, and to develop species-specific assisted reproduction technologies for embryo collection, freezing and transfer in mountain ungulate species.

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CREAVIA

Hélène Quinton and Frédéric Charreaux

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This last newsletter before our annual congress in France gives us the opportunity to present you our Embryo Transfer team, involved in the local organization committee. This team belongs to CREAVIA, a cooperative union and a major player in French selection, mainly in dairy breeds like Holstein, Normande and Pie Rouge, but also beef breeds like Charolaise, Parthenaise and Rouge des prés. This entity groups together 25.000 cattle farmers from the West of France and it carries out more than 3.6 millions inseminations each year. CREAVIA is therefore placed in the leading position for genetic selection in France and then has his own embryo transfer team for its bovine breeding programs needs. The CREAVIA embryo transfer team is born in 2008 after the merger of the two cooperatives URCEO and GENOE teams.

***Photo 1**: Donor station*

At this time, the CREAVIA embryo transfer team is made up of 2 vets, 1 engineer, 3 laboratory technicians, 11 field technicians equipped with mobile laboratories and 2 secretaries. In 2011, the technicians have made 1772 conventional flushes in bovine to obtain 9817 viable embryos (16.529 collected embryos). This represents one third of French enmbryo transfer activity. Most of the flushed females are Holstein (81.6%), followed by the Normande females (9%). Only 5.1% of the flushes concern beef purpose. Most of the embryos are transferred immediately (4.938) or within a few months after freezing (4.739). The objective is to minimize the delay between collection and embryo transfer, in order to have calves birth as soon as possible: 66% of the demands for collections come from the CREAVIA selection scheme. The private demands from breeders represent 604 flushes. Beside the conventional embryo production, a special mobile laboratory for biopsies is used above all for sexing embryos in field.

***Photo 2**: Conventional collection on field and mobile laboratory*

Since 2008, with the beginning of intensive use of genomic for heifers, CREAVIA transformed 2 of its semen production center in embryo donor's stations. The purpose was to intensify embryo production on the most

interesting heifers. An IVF laboratory has been very recently created for these donors stations. In 2011, 450 conventional flushes (2.531 viable embryos) and 133 OPU sessions (188 embryos) were done in these stations. One of the next goals of the team is the embryo genotyping.

***Photo 3**: IVF laboratory*

Beside this intensive bovine embryo production, the CREAVIA embryo transfer team proposes its services for equine breeders and then has a little equine embryo transfer activity with between 100 and 200 flushes made on mares.

But a new plan will occupy a lot our team for the end of this year: the next merge in January 2013 between GENOE, URCEO and AMELIS that will lead to a new union in which embryo transfer will take a major role for the selection schemes purpose.

CREAVIA TEAM

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Upcoming Events

17th International Congress on Animal Reproduction **(ICAR)**
July 29 - Aug. 2, 2012.
Vancouver Convention Centre
Vancouver, British Columbia, Canada
For more information, Please visit the ICAR web site at: http://www.icar2012.com/

American Embryo Transfer Association **(AETA)** & Canadian Embryo Transfer Association **(CETA/ACTE)**
Joint Scientific Convention
September 13-15, 2012
Victoria Inn Hotel & Convention Centre
Winnipeg, Manitoba, Canada R3H 0G3
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/2012/

39th Annual Conference of the International Embryo Transfer Society **(IETS)**
January 19-23, 2013
Hannover Congress Centrum
Hannover, Germany
For more information, please visit the IETS web site at: http://www.iets.org/2013/

IETS Annual Conference 2013

Hannover Congress Centrum, Hannover, Germany

Program Co-Chairs:

Christine Wrenzycki and Dimitrios Rizos

Local Organizing Committee Chair:

Heiner Niemann

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 19–22, 2013, in Hannover, Germany.

The scientific program includes several world class speakers talking on recent progress in embryo transfer technologies, both with relevance for basic science and practical application of modern breeding technologies.
The Conference features invited talks, oral presentations selected from abstracts, at least 300 poster presentations, the industrial exhibition and ample opportunity to meet with friends, colleagues and experts. The Conference starts with a pre-conference symposium on recent advances in transgenic domestic animals with outstanding speakers on this subject.

Further details can be found on the IETS website http://www.iets.org/2013/index.asp.
This will continually be updated.

Please reserve these days in your diary for 2013!

We look forward seeing and welcoming you in Hannover.

Yours sincerely

Christine Wrenzycki and Dimitrios Rizos
- Program Co-Chairs IETS Annual Conference 2013

Heiner Niemann
- Chair of the LOC IETS Annual Conference 2013

Main Scientific Program of IETS 2013
"Advances and new concepts in the understanding of…."

Saturday, January 19, 2013
Preconference Symposium "Advances in Transgenic Animal Production"

Sunday, January 20, 2013
Session I*: …follicular development*

Regulation of Anti-Müllerian hormone production in domestic animals
***Danielle Monniaux**, INRA, France*

Influence of superstimulatory treatments on the expression of genes related to ovulatory capacity, oocyte competence, and embryo quality
***Ciro M. Barros**, University of São Paulo State, UNESP, Brazil*

Session II: *…early embryonic development*

Dynamic regulation of sperm interactions with the zona pellucida prior to and after fertilization
***Bart Gadella**, Utrecht, The Netherlands*

Sex-specific embryo programming of postnatal phenotypic variability
***Alfonso Gutierrez-Adan**, INIA, Madrid, Spain*

Session III: *…uterine biology*

Associations between lipid metabolism and fertility in the dairy cow
***Claire Wathes**, Royal Veterinary College, United Kingdom*

Hosting the preimplantation embryo: maternal challenges during bovine pregnancy
***Susanne Ulbrich**, Technical University Munich, Weihenstephan, Germany*

Monday, January 21, 2013
Session IV*: …reproductive outcome*

Luteal blood flow: basic mechanisms and clinical relevance
***Heinrich Bollwein**, Vetsuisse-Fakultät Universität Zürich, Switzerland*

Assisted reproduction techniques in the horse
***Katrin Hinrichs**, Texas A&M University, USA*

Poster Session I

Session V: *…modern reproductive biotechnologies*

Early development of the porcine embryo: the importance of cell signaling in development of pluripotent cell lines
***Vanessa Hall**, University of Copenhagen, Copenhagen, Denmark*

Pluripotent cells in farm animals: state of the art and future perspectives
***Monika Nowak-Imialek**, Institut für Nutztiergenetik, Mariensee, Germany*

Tuesday, January 22, 2013
Practitioners' Forum: How can ET praxis find his feet in the age of genomics?
*Chair: **Claire Ponsart** and **Sybrand Merton***

DABE Forum
*Chair: **Fulvio Gandolfi***

Poster Session II

Session VI: *Keynote address*

Contributions of an animal scientist to understanding the biology of the uterus and pregnancy
***Fuller Bazer**, Texas A&M University, USA*

Invitation to the 28th Annual Scientific Meeting of AETE, September 7th to 8th 2012 in Saint Malo, France

Chair of the Organization committee

Helene Quinton
CREAVIA, France

Dear colleges and friends,

On behalf of the European Embryo Transfer Association the local organizing committee cordially invites you to the 28th scientific meeting of the organization in Saint-Malo, France, from the 7th to the 8th of September 2012.

For further information about the conference visit the AETE website (www.aete.eu).

Yours sincerely

AETE LOC

The 28th Scientific Meeting of the AETE

Will be held in

Saint Malo, France
7th-8th September 2012

The Conference Location

In 2012, the meeting will take place in Saint-Malo, at "**Le Grand Large**", a conference center in the heart of the city: http://www.pgl-congres.com/

Welcome to Saint-Malo, France.
Welcome to the "Far West" of France, to the Bretagne region. After the walled city of Chester in United Kingdom, come to meet another walled city in France, but this time in front of the sea. A must-do tour of the ramparts, gives you a chance to admire panoramic views of the English Channel and its ever-changing tidal landscape.

In the 12th century, to escape Viking invasions, the residents of Saint-Malo moved to a neighboring islet, which is now the walled city. A small port city was born and was soon defended by ramparts that continued to expand in the following centuries. From the 13th to the 18th, Saint-Malo was a Corsair City: the privateers of Saint-Malo, who were among the most highly feared throughout the seven seas, actively participated in the prosperity of the city.
Saint Malo is a touristic city and thus, offers large possibilities of accommodation, at a walking distance from the Congress Centre who will take care of all hotels registrations.


As social events, the gala dinner will take place in the congress center, including a cocktail on board on the "Etoile du Roy", majestic three-masts, docked in front of "Le Grand Large", replica of a 1745 corsair frigate. Saturday evening, we propose to go to the Norman neighbors and to offer to all participants the rare opportunity to have a prestigious evening on the top of the Mont-Saint-Michel.


As a prelude on Thursday afternoon (6th of September), Creavia proposes to discover its new bovine semen production center in Saint-Aubin-du-Cormier opened in 2010 and to organize the transport of participants by bus from Rennes to Saint-Aubin-du-Cormier, and after the visit, to drive to St Malo, which should facilitate the arrival to Saint-Malo city. For people interested by this visit, "rendez-vous" will be organized at the airport or at the station of Rennes, or directly at the production center in Saint-Aubin-du-Cormier. Please, register yourself for it. *More details for the time of "rendez-vous" and registration please see below.*

How to travel

- by plane :

1/ Rennes Saint-Jacques Airport: direct daily routes from major French and European cities, including 5 daily round-trip flights from Paris. Low-cost flights from the United Kingdom, Ireland, and Spain.

Departure	Time	Arrival	Time
Roissy Charles de Gaulle airport (CDG)	9h35	Rennes airport (RNS)	10h45
Roissy Charles de Gaulle airport (CDG)	13h25	Rennes airport (RNS)	14h35
Roissy Charles de Gaulle airport (CDG)	20h00	Rennes airport (RNS)	21h10

2/ Dinard Airport (15 min. from St-Malo): daily round-trip flights from London and Nottingham

- by train :

1/ from CDG Airport Roissy or from Paris Montparnasse (station in Paris) with high-speed trains (TGV) to Rennes, followed by regular (each hour) connections for Saint Malo

Departure	Time	Arrival	Time
Roissy Charles de Gaulle airport (CDG)	09h48	Gare de Rennes (station)	12h50
Roissy Charles de Gaulle airport (CDG)	12h48	Gare de Rennes (station)	15h50

Departure	Time	Arrival	Time
Gare Montparnasse (station in Paris)	07h12	Gare de Rennes (station)	09h17
Gare Montparnasse (station in Paris)	07h42	Gare de Rennes (station)	10h00
Gare Montparnasse (station in Paris)	08h12	Gare de Rennes (station)	10h30
Gare Montparnasse (station in Paris)	09h12	Gare de Rennes (station)	11h17
Gare Montparnasse (station in Paris)	10h12	Gare de Rennes (station)	12h18
Gare Montparnasse (station in Paris)	11h12	Gare de Rennes (station)	13h35
Gare Montparnasse (station in Paris)	12h12	Gare de Rennes (station)	14h25
Gare Montparnasse (station in Paris)	14h12	Gare de Rennes (station)	16h25
Gare Montparnasse (station in Paris)	15h12	Gare de Rennes (station)	17h18
Gare Montparnasse (station in Paris)	16h12	Gare de Rennes (station)	18h16
Gare Montparnasse (station in Paris)	17h12	Gare de Rennes (station)	19h17
Gare Montparnasse (station in Paris)	17h42	Gare de Rennes (station)	19h55
Gare Montparnasse (station in Paris)	18h12	Gare de Rennes (station)	20h17
Gare Montparnasse (station in Paris)	18h42	Gare de Rennes (station)	20h57
Gare Montparnasse (station in Paris)	19h42	Gare de Rennes (station)	21h47

Departure	Time	Arrival	Time
Gare de Rennes (station)	07h30	Gare de Saint-Malo (station)	08h30
Gare de Rennes (station)	09h40	Gare de Saint-Malo (station)	10h30
Gare de Rennes (station)	12h25	Gare de Saint-Malo (station)	13h08
Gare de Rennes (station)	12h45	Gare de Saint-Malo (station)	13h43
Gare de Rennes (station)	13h43	Gare de Saint-Malo (station)	14h31
Gare de Rennes (station)	14h40	Gare de Saint-Malo (station)	15h30
Gare de Rennes (station)	16h37	Gare de Saint-Malo (station)	17h34
Gare de Rennes (station)	17h00	Gare de Saint-Malo (station)	17h52
Gare de Rennes (station)	17h30	Gare de Saint-Malo (station)	18h28
Gare de Rennes (station)	18h00	Gare de Saint-Malo (station)	19h03
Gare de Rennes (station)	18h35	Gare de Saint-Malo (station)	19h25
Gare de Rennes (station)	19h10	Gare de Saint-Malo (station)	20h02
Gare de Rennes (station)	20h05	Gare de Saint-Malo (station)	20h56
Gare de Rennes (station)	21h00	Gare de Saint-Malo (station)	21h47
Gare de Rennes (station)	22h08	Gare de Saint-Malo (station)	23h00

2/ from Paris-Montparnasse - Saint Malo with a direct high-speed link (TGV, < 3 h)

Departure	Time	Arrival	Time
Gare Montparnasse (station in Paris)	07h42	Gare de Saint-Malo (direct)	10h53
Gare Montparnasse (station in Paris)	10h12	Gare de Saint-Malo (direct)	13h08
Gare Montparnasse (station in Paris)	18h42	Gare de Saint-Malo (direct)	21h47

- by boat:
daily ferry services to and from Great Britain (Portsmouth) and the Channel Islands

- by road:
370 km from Paris. The journey takes 3 hours and 30 minutes (A11/A81 motorway via Rennes or A13/A84 via Caen)

Accommodation:-

For hotel booking in Saint-Malo for September 2012 please choose the following link: http://www.pepss.com/gti/0151/GTI_151_STMALO/173/

We look forward to seeing you in Saint Malo.

Helene Quinton
Chairman of the Organizing Committee.

Language
The official language of the conference is English.

Scientific Secretariat
AETE board

REGISTRATION FEES

Saint Malo, France 2012	**Euros**
Full/Associate Member **Before** *15th July 2012*	**270 €**
Full/Associate Member **After** *15th July 2012*	**320 €**
Student Member **Before** *15th July 2012*	**140 €**
Student Member **After** *15th July 2012*	**155 €**
2012 Membership Fee ***Members who pay their annual fee but do not attend the Meeting will receive a copy of the proceedings***	**70 €**

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

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European Embryo Transfer Association

28th SCIENTIFIC MEETING

Le Grand Large

Saint Malo, FRANCE

PROGRAMME

7th and 8th September 2012

THURSDAY, September 6th 2012

16.30-18.00 : Visit of a semen production center in St Aubin du Cormier
19.00-20.00: Registration
20.00-22.00: Welcome Reception

FRIDAY, September 7th 2012

07.30-09.00: Registration

09.00-09.10: Opening meeting by the AETE President **CLAIRE PONSART**

SESSION 1 - Chairpersons: HIEMKE KNIJN & SERGE LACAZE

09.15-10.00: First invited lecture:
Alex Evans (IRELAND): Effect of Metabolism on Embryo Development

10.00-11.00: Short oral communications (Student Competition)

(1) **Brisard Daphne** et al.: Alteration of prostaglandin synthesis regulation in cumulus cells might affect the oocyte and embryo quality in dairy cows with unfavorable haplotype "fertil-" of one female fertility quantitative trait locus located on chromosome 3
(2) **Van Hoeck Veerle** et al.: Elevated concentrations of saturated NEFA during bovine *in vitro* embryo culture compromise pre-implantation embryo development.
(3**) Aardema Hilde** et al.: Follicle size is not related to the concentrations of estradiol and progesterone in bovine follicles after superstimulation
(4) **Held Eva** et al.: Development of bovine 2-cell stage embryos correlates with expression of genes related to oxidative stress response

11.00-11.15: Sponsor presentation

11.15-12.00: POSTER SESSION 1 and coffee break

12.00-13.15: Lunch

SESSION 2 – Chairpersons: DIMITRIOS RIZOS & URBAN BESENFELDER

13.15-14.00: Second invited lecture:
Alireza Fazeli (UK): Embryo-Maternal Communication

14.00-14.45: Short oral communications (Environmental factors on embryo development)

(1) **Peugnet P, Tarrade A, Chaffaux S , Guillaume D, Wimel L, Duchamp G, Reigner F, Serteyn D, Chavatte-palmer P**: *In utero* programming of the postnatal growth and insulin sensitivity after between-breeds transfers in the horse
(2) **Lopera R, Beltran P, RAMOS-IBEAS P, Gutierrez-Adan A, Ramirez MA, Rizos D**: The effect of embryo co-culture with different types of bovine oviductal epithelial cells and conditioned media in vitro on embryo development and quality
(3) **Cordova A, Perreau C, Archilla C, Ponsart C, Duranthon V, Mermillod P**: Regulation of early cleavage kinetics and embryonic genome activation by bovine oviductal epithelial cells in vitro
(4) **Gad A, Besenfelder U, Havlicek V, Hölker M, Cinar M, Rings F, Dufort I, Sirard MA, Schellander K, Tesfaye D:** Molecular mechanisms associated with effect of environmental factors during bovine blastocyst formation

15.00-16.00: POSTER SESSION 2 and coffee break

16.00-17.30: Workshop I – Oocyte collection: what is new?
Managed by Hiemke Knijn (The Netherlands)

18.30: Guided visit of Saint Malo

19.30: Social event/Conference Dinner

SATURDAY, September 8th 2012

SESSION 3 – Chairpersons: RAINER SANER & PETER VOS

09.00-09.45: Third invited lecture:
Gabriel Bo (ARGENTINA): Superovulation Programmes in Cattle

09.45-10.30: Fourth invited lecture:
Danielle Monniaux (FRANCE): Ovarian response following superovulation and embryo research

10.30-10.45: Danielle Monniaux AETE Medallist Presentation
(introduced by Philippe Monget (FRANCE)

10.45-11.15: General Assembly

11.15-12.00: POSTER SESSION 3 and coffee break

12.00-13.15: Lunch

SESSION 4 – Chairpersons: IAN KIPPAX & FRANK BECKER

13.15-14.00: Fifth invited lecture:
Claire Ponsart (FRANCE): Genotyping of embryos

14.00-14.45: Short oral communications (Embryo manipulation)

(1) **Guignot F, Perreau C, Reigner F, Mermillod P, Duchamp G**: Early pregnancies after transfer of biopsied equine embryos

(2) **Smits K, Govaere J, Hoogewijs M, Van Soom A:** The method of choice for ICSI in horses

(3) **Colleoni S, Lazzari G, Duchi R, Baca Castex C, Mari G, Lagutina I, Galli C:** fertilization and development of equine and swine oocytes following ICSI with refrigerated and frozen semen of fertile and infertile stallions

14.45-15.15: Coffee break

15.15-16.45: Workshop II – Equine Reproduction Biotechnology
Managed by Hélène Quinton and Marc Spalart (FRANCE)

16.45-17.00: Closing session: Student Competition results and invitation to the AETE Conference 2013

17.30: Post Conference tour to the Mont Saint Michel and typical "mechoui"

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