

**2<sup>nd</sup> Cost Action FA0702**  
**Gemini General Conference**  
**Maternal Interactions with Gametes and Embryos**

1<sup>st</sup>-3<sup>rd</sup> October 2009  
 Alghero, Sardinia, Italy

## Abstract Submission Form

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<b>Presenting Author Name :</b> Marta Villani		
<b>Other Authors:</b> Bianca A.M. Vriend, Damien B.B.P. Paris, Tom A. E. Stout		
<b>Abstract Title:</b> Intrauterine expression of LIF and its receptors in the cycling and early pregnant mare		
<p><b>Abstract:</b>          Leukaemia Inhibitory Factor (LIF) plays a critical role in blastocyst development and implantation, as clearly demonstrated by the failure of wild-type mouse embryos to implant in the uterus of LIF-knockout female mice unless the latter receive LIF supplementation. Expression of LIF and its receptors (LIF-R and gp130) in the early pregnant horse have not been described. However, the horse may be an interesting animal in which to study such 'implantation factors' because various aspects of implantation occur both unusually late and in a temporally distinct fashion in this species.          The aim of this study was to examine LIF, LIF-R and gp130 gene expression in the endometrium of cycling and early pregnant mares, and in the early conceptus. Endometrial biopsies were recovered from 4 mares at each of late oestrus, days 7 and 14 of dioestrus (cycling mares), and days 7, 14 and 21 of gestation. Conceptuses were recovered by uterine lavage (day 7) or using a video-endoscopically guided net (days 14 and 21). For day 14 and 21 conceptuses, only the bilaminar trophoblast was used in gene expression studies. Expression of mRNA for LIF, LIF-R and gp130 was analysed by rtPCR, with relative expression calculated with respect to the 3 most stable housekeeping genes using GeNorm analysis.          A dramatic increase in LIF mRNA expression (<math>p &lt; 0.01</math>) was observed in both the endometrium and the trophoblast on day 21 of pregnancy. Expression of LIF-R and gp 130 increased significantly in the trophoblast on day 21 (<math>p &lt; 0.01</math>), but did not vary in the endometrium at the various stages examined. We propose that LIF plays a role in the adhesion between trophoblast and endometrium which, in the mare, cannot begin until the blastocyst capsule is dissolved somewhere between days 18 and 22 of gestation.</p>		

**Please tick if you wish to be considered for:**

- Oral presentation only  
 Poster presentation only  
 Both an oral presentation and/or a poster presentation

**Please indicate which working group session you would like your presentation to be considered for:**

- Working Group I:** Experimental models; In vivo and In vitro  
 **Working Group II:** Tools, Technologies and Systems Biology  
 **Working Group III:** Maternal Nutrition

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**NOTES TO AUTHORS:**

- Abstracts must be received by 17:00 (UK Time) on 10 August 2009 for consideration by the Gemini Meeting Executive.

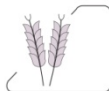
- Submitted abstracts should be accompanied by registration forms and payment of registration fees of presenting author.
- Abstracts should NOT exceed 300 words.
- Abstracts received will be considered for oral and poster presentations.
- All abstracts will be published in the meeting's abstract book and online at [www.cost-action.eu/meetings](http://www.cost-action.eu/meetings).

**Please note responsibility for accuracy rests with the author.**

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## Maternal Interaction With Gametes and Embryos

Participating countries: AT, BE, DK, EE, FR, DE, GR, HU, IT, LT, MK, NL, PL, PT, SI, SK, ES, SE, CH, UK

Chair of the Action: **Dr Alireza Fazeli**, UK, a.fazeli@sheffield.ac.uk

Vice Chair of the action: **Prof Fulvio Gandolfi**, fulvio.gandolfi@unimi.it

COST Science Officer: **Dr Ioanna Stavridou**, istavridou@cost.esf.org

[www.cost-gemini.eu](http://www.cost-gemini.eu)



# Second General Conference

## Alghero, Sardinia, Italy

### 1<sup>st</sup> – 3<sup>rd</sup> October 2009

Speakers that have already accepted our invitation:

**Philippe Andrey, INRA, France**

*How-to: A practical approach to the mathematical modeling of biological systems*

**Veronique Duranthon, INRA, France**

*Rabbit as a pre and post-implantation developmental model*

**Yuri Lazebnik, Cold Spring Harbor Laboratory, USA**

*Can a biologist fix a radio?*

**Heiner Niemann, Institute of Farm Animal Genetics, Germany**

*Unravelling the transcriptome of bovine preimplantation embryos derived in vivo*

**Kevin Sinclair, University of Nottingham, UK**

*Developmental origins of health and disease: Maternal diet and epigenetic programming in the oocyte and pre-implantation embryo*

**Thomas Werner, Genomatix Software, Germany**

*Next generation sequencing: Opportunities and challenges on the example of ChIP-seq application*

**Mike White, University of Liverpool, UK**

*Spatial and temporal information coding by the NF- $\kappa$ B system*



### Organising Committee

Chair: Prof Fulvio Gandolfi, University of Milan  
 Vice Chair: Prof Sergio Ledda, INISS, Italy  
 Member: Dr Alireza Fazeli, University of Sheffield  
 Member: Dr Ann vanSoom, Gent University  
 Member: Dr Andras Dinnyes, Hungary  
 Member: Prof Eckhard Wolf, University of Munich  
 Member: Prof Tom Fleming, University of Southampton  
 Member: Dr Jean-Pierre Ozil, INRA  
 Member: Dr Pascale Chavatte-Palmer, INRA

### Meeting Details:

- Abstract deadline – **Monday 10<sup>th</sup> August 2009**
- Website: [www.cost-gemini.eu/meetingalghero.html](http://www.cost-gemini.eu/meetingalghero.html)
- Abstract forms can be downloaded from the website and should be returned to [secretary@cost-gemini.eu](mailto:secretary@cost-gemini.eu)
- To register complete the online registration form and return to: [secretary@cost-gemini.eu](mailto:secretary@cost-gemini.eu)
- For further information please contact: [secretary@cost-gemini.eu](mailto:secretary@cost-gemini.eu)