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Title: *(Use Normal style (Times New Roman 12). Only capitalise the first letter of the first word. No full stop at the end of the title)*

The researcher and the user in the field – a two way street or a stop sign?

Summary: *(Your summary (Times New Roman 10) must use Body text style and must not be longer than this box)*

Each year, much scientific research is performed with the ultimate intent of assisting equine reproduction. Some research disproves theorem that have been considered dogma for many years; other has far-reaching effects into the future for processes not yet perfected; while other has immediate value and impact for the practitioner and breeder. How rapidly does that new research make its way to the field though? What avenues are available for the practitioner and breeder to access that information? How much of the research ends up “on the shelf”, or used by only a few for many years before finally becoming “mainstream”?

The converse is also true – what reproductive factors are the practitioner and breeder facing on a regular basis that would benefit from research but are never researched because the scientists are not aware of the issues? What channels of communication between “the field” and “the lab” are available? Do more need to be developed?

While there are scientific meetings where the scientists themselves can gather and discuss research, and there are similar meetings for veterinarians and for breeder groups, the opportunities for all three spheres of reproduction to meet and discuss on an even playing field are often at a minimum.

This session will briefly present an overview of some practical work with a review of some often overlooked research with practical application – some of it not so new – related to equine breeding and pregnancy. In addition it will stimulate subsequent discussion with the particular aim of developing a list of areas that would benefit from research and development of a better means of transmission between the industry groups. Some of the items being reviewed include the following, although this is not an all-inclusive list:

Pre-breeding evaluations:

Use of a 1/10th dose of prostaglandin to promote oestrus while avoiding unpleasant side-effects in the mare;¹

The importance of a cytology smear being prepared and read in conjunction with a uterine swab culture - and the lack of accuracy of the culture alone.²

The breeding process:

Value of exogenous oestrogens to encourage receptivity and improve uterine blood flow.³

Identification of the delayed uterine clearance mare and suitable treatment - oxytocin, frequency, dose and type.

Use of agents for improving uterine biopsy scores or treatment of biofilm-producing organisms.^{4,5}

Use of anti-inflammatory treatment for control of inflammatory response.⁶

Early pregnancy:

Development of the "early pregnancy factor" test and the value thereof.

Nuclear transfer - "cloning" - value, scares and registry options.

Progestin supplementation - do we or don't we and why is there no research to tell us?

Use of colour doppler ultrasound for early pregnancy diagnosis.

Mid to late pregnancy:

Placentitis detection and treatment;

Colour doppler ultrasound for fetal and placental evaluation;

Dogma - 340 days "my mare is due now" – a wide variation in “normal” gestational duration.⁷

References:

1 Wüstenhagen A, Handler J, Kindahl H and Aurich C. (2002) Luteal function and oestrous cycle characteristics in mares treated with subtherapeutic doses of prostaglandin F2? *Theriogenology*, 58: 2-4; 537-539

2 LeBlanc MM; (2008) The chronically infertile mare; *Proc. AAEP* 2008 (54):391-407

3 Burns PJ; Personal communication, 2012

4 Ley WB, Bowen JM, Sponenberg DP, Lessard PN; (1989) Dimethyl sulfoxide intrauterine therapy in the mare: effects upon endometrial histological features and biopsy classification. *Theriogenology*. 32 (2):263-76

5 LeBlanc MM; (2008) When to refer an infertile mare to a theriogenologist; *Theriogenology* 70(3):421-9

6 Bucca S, Carli A, Buckley T, Dolci G, Fogarty U; (2008) The use of dexamethasone administered to mares at breeding time in the modulation of persistent mating induced endometritis; *Theriogenology* 70:7 1093-1100

7 Equine-Reproduction.com on-line poll: “What was the duration in days of your mare's live-foal producing pregnancy?”

<http://www.equine-reproduction.com/articles/overdue.shtml>