

IETS recommendations regarding the risk of disease transmission via *in vivo* derived embryos

Based on the conclusions of the Research Subcommittee of the Health and Safety Advisory Committee (HASAC) of the IETS¹, the following *diseases* and pathogenic agents are categorised into four categories, which applies only to *in vivo* derived embryos.

1. Category 1

a. Category 1 *diseases* or pathogenic agents are those for which sufficient evidence has accrued to show that the risk of transmission is negligible provided that the embryos are properly handled between collection and transfer according to the IETS Manual².

b. The following *diseases* or pathogenic agents are in category 1:

Aujeszky's disease (pseudorabies) (swine): trypsin treatment required

Bluetongue (cattle)

Bovine spongiform encephalopathy (cattle)

Brucella abortus (cattle)

Enzootic bovine leukosis

Foot and mouth disease (cattle)

Infectious bovine rhinotracheitis: trypsin treatment required

Scrapie (sheep).

2. Category 2

a. Category 2 *diseases* are those for which substantial evidence has accrued to show that the risk of transmission is negligible provided that the embryos are properly handled between collection and transfer according to the IETS Manual², but for which additional transfers are required to verify existing data.

b. The following *diseases* are in category 2:

Bluetongue (sheep)

Caprine arthritis/encephalitis

Classical swine fever (hog cholera).

3. Category 3

a. Category 3 *diseases* or pathogenic agents are those for which preliminary evidence indicates that the risk of transmission is negligible provided that the embryos are properly handled between collection and transfer according to the IETS Manual², but for which additional *in vitro* and *in vivo* experimental data are required to substantiate the preliminary findings.

b. The following *diseases* or pathogenic agents are in category 3:

Bovine immunodeficiency virus

Bovine spongiform encephalopathy (goats)

Bovine viral diarrhoea virus (cattle)

Campylobacter fetus (sheep)

Foot and mouth disease (swine, sheep and goats)

Haemophilus somnus (cattle)

Maedi-visna (sheep)
Mycobacterium paratuberculosis (cattle)
Neospora caninum (cattle)
Ovine pulmonary adenomatosis
Porcine reproductive and respiratory disease syndrome (PRRS)
Rinderpest (cattle)
Swine vesicular disease.

4. Category 4

- a. Category 4 *diseases* or pathogenic agents are those for which studies have been done, or are in progress, that indicate:

that no conclusions are yet possible with regard to the level of transmission risk; or

the risk of transmission via embryo transfer might not be negligible even if the embryos are properly handled according to the IETS Manual² between collection and transfer.

- b. The following *diseases* or pathogenic agents are in category 4:

African swine fever
Akabane (cattle)
Bovine anaplasmosis
Bluetongue (goats)
Border disease (sheep)
Bovine herpesvirus-4
Chlamydia psittaci (cattle, sheep)
Contagious equine metritis
Enterovirus (cattle, swine)
Equine arteritis virus
Equine rhinopneumonitis
Escherichia coli O9:K99 (cattle)
Leptospira borgpetersenii serovar *hardjobovis* (cattle)
Leptospira sp. (swine)
Lumpy skin disease
Mycobacterium bovis (cattle)
Mycoplasma spp. (swine)
Ovine epididymitis (*Brucella ovis*)
Parainfluenza-3 virus (cattle)
Parvovirus (swine)
Porcine circovirus (type 2) (pigs)

Scrapie (goats)

Tritrichomonas foetus (cattle)

Ureaplasma/Mycoplasma spp. (cattle, goats)

Vesicular stomatitis (cattle, swine).

1. Based on available research and field information, the Research Subcommittee of the Health and Safety Advisory Committee (HASAC) of the International Embryo Transfer Society (IETS) has categorised some diseases based on their relative risk of dissemination by properly processed and handled *in vivo* derived embryos. This chapter that contains the complete list of IETS categorised diseases is shown in Article 4.7.14.

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