TRANSPORT OF FMDV RNA RATHER THAN LIVE VIRUS; OPTIMISATION OF VIRAL RECOVERY BY TRANSFECTION OF INFECTIOUS RNA

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**Rescue of FMDV from RNA**
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**Transport of FMDV samples**
- Live virus, highly infectious but relatively hard to preserve
- RNA, very low (zero) infectivity (without assistance), requires stabilization (no RNase, e.g. in Triazol) but under these conditions should last a long time.
- Virus can be rescued from FMDV RNA

**FMDV RNA is infectious**
- 1) Microinjection of RNA

**FMDV recovery from RNA**
- 2) Transfection e.g. with lipofectin/Fugene6
- 3) Electroporation (Nayak et al., 2006)

**Plan**
- Proof of principle
- Isolation of RNA from infected animal samples
- Quantification of FMDV RNA (qRT-PCR)
- Optimization of FMDV rescue from RNA

**Variables**
- Electroporation conditions (V, number of pulses, amount of RNA)
- Cell type (e.g. BHK, BTY, mix)
- Time of harvesting
Analyses

- CPE
- Antigen ELISA
- qRT-PCR

Issues

- Sensitivity
- Survival of intact RNA (i.e., this is a more stringent requirement than for RT-PCR etc.)
- Suitability of different preservation systems
- Type of samples (epithelium, probang, swabs)