

Summary of Club 5 project progress, AHVLA on 12-05-2012

The pan-viral array was updated to include the viruses added to the GenBank in the last two years. The current version (6.1) includes all the GenBank entries up to the 1st Jan. 2012. The chip now contains 60,000 probes to about 2,500 virus species and it was printed by Agilent Technologies in an 8 x 60,000 format. The chip is currently being used in an MSc project to optimize depletion of ribosomal RNA from virus samples to increase amplification efficiency of viral nucleic acid in random PCR. The chip was used to examine Schmallenberg virus positive samples and the virus could be detected on the array.

As mentioned in the previous report, through collaboration with an EU project we also developed a minichip array covering all the viruses infecting avian species. The avian chip is currently being printed and it should be with us in the next 1-2 weeks. The protocol for sample preparation and hybridization conditions for the minichip is under optimization using minichips from a previous project. Benefits from this project will be incorporated into the main pan-viral array.

Detection of Schmallenberg virus using the pan-viral array version 6.1

| Virus name | No. of probes | t value | p value | Average |
|--------------------------------------|---------------|--------------|--------------|--------------|
| Schmallenberg virus | 10 | 2.8156 31 | 0.0100 95 | 2.06 1557 |
| Shuni virus | 4 | 5.2766 93 | 0.0066 35 | 2.03 5121 |
| Enzootic nasal tumour virus of goats | 8 | 4.3888 97 | 0.0016 | 1.91 5515 |
| Castelo dos Sonhos virus | 6 | 3.7779 28 | 0.0064 59 | 1.90 2883 |