Two-dimensional polyacrylamide gel electrophoresis of seminal plasma samples indicate that two proteins (26 kDa, pI 6.2; 55 kDa, pI 4.5) predominated in higher fertility bulls and two proteins (16 kDa, pI 4.1; 16 kDa, pI 6.7) predominated in lower fertility bulls. A regression model was developed to predict bull fertility using the four fertility-associated protein densities. A plot of actual bull fertility versus that calculated by this model was linear and positively correlated ($r=0.89$). These findings indicate that bull seminal plasma contains fertility-associated proteins which are predictive of bull fertility. Additionally, the ability of seminal plasma to alter the in vitro fertility of ejaculated bull sperm was examined using a sperm penetration assay for zona-free bovine oocytes. Washed, ejaculated sperm from bulls of below (low) or above average (high) fertility were mixed with seminal plasma from the same bull, or with seminal plasma from a bull of contrasting fertility. Washed sperm exposed to seminal plasma from high fertility bulls penetrated more oocytes than when those sperm were mixed with seminal plasma from low fertility bulls ($p<0.01$). Mixing low fertility sperm with high fertility seminal plasma generally improved penetrating ability compared to low fertility sperm mixed with low fertility seminal plasma.

5569582

RAPID AMPLIFICATION AND DETECTION OF NUCLEIC ACIDS

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Disclosed herein are methods, primers, probes, and kits for the rapid amplification and detection of nucleic acids. The invention provides improved methods for amplifying small amounts of nucleic acid in a sample in which the amplification steps are conducted at the same temperature, or alternatively, at two different temperatures. The invention also provides improved methods for detecting the amplified nucleic acid in which the detection signal is boosted. Related probes and test kits are also provided. The invention is particularly useful in the detection of HIV-1.

5569583

RAPID AND SENSITIVE DETECTION OF CYTOMEGALOVIRUS

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The present invention relates to novel compositions comprising herpesvirus-specific oligonucleotides which are useful as primers to amplify particular regions of the genome either herpes simplex virus or cytomegalovirus during enzymatic nucleic acid amplification. The invention also provides a rapid, sensitive and specific method for the detection of the respective herpesvirus which may be present in a clinical specimen, using the herpesvirus-specific primers and enzymatic nucleic acid amplification; hybridization of amplified target sequences, if present, with one or more herpesvirus-specific oligonucleotide probes which are labeled with a detectable moiety; and detection of the detectable moiety of labeled oligonucleotide probe hybridized to amplified target sequences of herpesvirus DNA.

5569584

METHOD FOR DISTINGUISHING OR MONITORING THE STATE OF PREMALIGNANT OR MALIGNANT TRANSFORMED HUMAN COLONIC TISSUE

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The present application is directed to a method for distinguishing between normally differentiated and benign or malignantly transformed cells in human colonic tissue. It is also directed to a method for monitoring the state of premalignant or malignant human colonic tissue. In both methods, a 50F1 complementary DNA standard probe is utilized which hybridizes to the RNA in