

UNIVERSITI TEKNOLOGI MARA

**COMPARISON OF DIFFERENT REVERSE
TRANSCRIPTASE TO GENERATE FULL-
LENGTH MRNA TRANSCRIPT BY CAPFINDER
METHOD**

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APPROVAL SHEET

I hereby recommend that the thesis prepared under my supervision by Noor Haslina binti Zainor Abidin (2008410624) entitled Comparison of Different Reverse Transcriptase to Generate Full-length mRNA Transcript By CapFinder Method be accepted in partial fulfilment of the requirement for the degree of Bachelor of Pharmacy (Hons) from Faculty of Pharmacy, UiTM.

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ABSTRACT

The CapFinder method is a method to amplify full-length mRNA transcripts. CapFinder technology is a much simpler method and it requires a cDNA synthesis reaction and PCR reaction to amplify the desired 5' or 3' ends of a cDNA. The major objective of this study is compare three different reverse transcriptases from three different point-mutant Moloney Murine Leukemia Virus (MMLV) reverse transcriptase which are SMARTScribe Reverse Transcriptase (Clontech), SuperScript III Reverse Transcriptase (Invitrogen) and RevertAid H Minus Reverse Transcriptase (Fermentas) to generate full-length mRNA transcript via capFinder method. The study will compare these three reverse transcriptases that vary with price range with regards to sensitivity and efficiency in generating full-length first-strand cDNA by agarose gel analysis of the amplified cDNA.

Keywords: CapFinder, reverse transcriptase, mRNA transcript, Polymerase Chain Reaction