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## **Viral Detection by Nano-amplification Micro Array Technique**

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**Statement of the Problem:** Microarray as a novel biological technique has been used in gene detection widely. But this method needs improvement, considering expensive probe labeling material and valuable signal scanner. So a visual detection technique was established by applying sandwich hybridization and silver stain. This technique was 100 times as sensitive as LCS (laser confocal scanning) and made it possible to develop a rapid and cheap detection method for Virus. Increasing studies revealed the application of gold nanoparticle as oligonucleotide label was wide.

**Methodology & Theoretical Orientation:** Materials of Viral detection microarray. Preparation of gold nano-particles described by Grabar (Grabar et al., 1995). Preparation of detection microarray for Virus

**Findings:** Cumulative evidences showed gold labeled probe was efficient and could be alternative marker in microarray assay. On the other hand, the silver stain enhancement, a technique accompanied with nano-gold labeling oligonucleotide, was used to amplify detection signal of nano-gold. This technique made detection signal visual and its sensitivity of gene detection was approximately 1000-fold high as that of Cy3-based fluorescence.

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