Faster Down's test in the works: U.S. scientists

A new test for Down syndrome that gives results in hours - instead of the standard two weeks - could be available south of the border within a year, say U.S. scientists.

Current prenatal genetic testing involves growing cells for two weeks following their removal through amniocentesis — taking a small piece of tissue from the uterus during early pregnancy. This process produces DNA, which can then be karyotyped, a process by which a person's chromosomes are profiled.

Current pre-natal genetic testing involves growing cells for two weeks following their removal through amniocentesis or chorionic villus sampling.
(CBC) It's a lengthy and anxious period for expectant parents.

The new test, developed by researchers at Stanford University, was developed through a technique known as digital polymerase reaction. Through this method, scientists replicated DNA from two cultures of cells growing in the laboratory.

One consisted of a normal human cell line and the other had human cells with the Down syndrome variant. The digital polymerase reaction process allowed the researchers to count DNA molecules from the samples, substituting for the two-week cell culture process traditionally needed.

Researchers were then able to establish which samples had the extra chromosome that indicates the fetus has Down syndrome.