

Rapid prenatal test for alpha-thalassemia

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Researchers from Mahidol University have developed a rapid, high-throughput screening method for prevention and control of thalassemia. The related report by Munkongdee et al, "Rapid diagnosis of α -thalassemia by melting curve analysis," appears in the May 2010 issue of *The Journal of Molecular Diagnostics*.

α -Thalassemia is a blood disease caused by a genetic defect in the production of a component of hemoglobin. This disease is more prevalent in areas that either were previously or are currently endemic for malaria, including the Mediterranean and South Asia. Carriers of mutations in α -thalassemia may have some degree of protection against malaria, but children of parents who both carry the mutation α -thalassemia-1 may develop Hb Bart's hydrops fetalis, which results in fetal death in utero or soon after birth.

Prenatal screening and genetic counseling are essential for prevention and control of α -thalassemia. The current diagnostic assay is both labor-intensive and time-consuming. Therefore, researchers led by Dr. Saovaros Svasti of Mahidol University developed a novel, rapid, and reliable assay for the diagnosis of α -thalassemias. This assay has high sensitivity and specificity, rapid turnaround time, and a decreased risk of contamination between samples.

Munkongdee et al suggest that this technique will "allow [for] high throughput [screening](#) suitable for [prevention](#) and control of thalassemia in the Southeast Asia population."

More information: Munkongdee T, Vattanaviboon P, Thummarati P, Sewamart P, Winichagoon P, Fucharoen S, Svasti S: Rapid diagnosis of α -thalassemia by melting curve analysis. J Mol Diagn 2010, 12:354-358.

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