Quarter-million-dollar grant for research into diagnosing baby-killing disease

It’s a genetic condition that can lead to fetal demise and can affect up to 75 per cent of the population in some countries.

And while prenatal screening for alpha thalassaemia, a form of blood disorder, is available, current diagnostic methods for the condition, such as amniotic fluid tests, are invasive and carry a 1-4 per cent risk of miscarriage.

Now, a spin-off company from the National University of Singapore (NUS), Fetal Genetix, is hoping to develop a non-invasive screening test for alpha thalassaemia in unborn babies by using the mother’s blood.

The company yesterday received a boost for its research efforts in the form of a $250,000 grant from SPRING Singapore’s Technology Enterprise Commercialisation Scheme (TECS).

“We chose this project because alpha thalassemia is a relatively common condition in Asia, so we want to try and study it,” said principal investigator Associate Professor Mahesh Choolani from the NUS Department of Obstetrics & Gynaecology in the Yong Loo Lin School of Medicine.

The non-invasive screening test proposed by Assoc Prof Choolani’s research team involved a blood test by drawing blood from the mother’s arm and can be conducted from the end of the first trimester onwards. Parents will have to wait 48 hours for the test results.

“We hope to help couples whose babies are at risk to diagnose the fetal conditions non-invasively,” said Assoc Prof Choolani, who is also one of Fetal Genetix’s founders.

With the grant, Assoc Prof Choolani and his team will work on increasing the accuracy of the test.

Three other NUS projects were also awarded a grant of $250,000 each under SPRING Singapore’s TECS.

One project will focus on developing technology to boost the efficiency of solar cells by allowing the cells to absorb more sunlight. Another will look at making broadband more efficient. The third will develop a cordless, handheld arthroscopic shaver that improves surgical efficiency and reduces clutter in operating theatres.