



Professor P.C. Wong (with bow tie) and Associate Professor Bian Jinsong led the study on hydrogen sulphide as a treatment for male infertility.

PHOTO: LIM YAOHUI FOR THE STRAITS TIMES

Infertility: NUS team smells a possible cure

Samantha Boh

Men having trouble with their swimmers could one day get some help from a stinky source.

Hydrogen sulphide, known for its smell of rotten eggs, could potentially be the key to a new form of infertility treatment for men, according to local researchers.

It is naturally produced in small amounts by the body and used as a signalling molecule that tells cells how to respond to changes in their immediate environment.

A team from the Yong Loo Lin School of Medicine at the National University of Singapore (NUS) has demonstrated for the first time that the gas can protect male reproductive cells from heat-induced injury – a well-recognised cause of male infertility.

Heat stress can be caused by elevated body temperatures brought about, for instance, from working extensively in a hot environment.

The researchers noted that more studies have to be done to determine how their finding can be applied to humans, but tests on mice found that heat caused levels of hydrogen sulphide to decrease, resulting in lower sperm activity. However, when mice were injected with low concentrations of the gas, new sperm were protected from heat stress.

The study was conducted between 2012 and last year, and the findings were published in the

scientific journal *Nitric Oxide*.

Associate Professor Bian Jinsong from NUS' department of pharmacology, who co-led the study, said the colourless gas has anti-oxidant effects. When it is lacking, cells are damaged.

The gas is being studied internationally for its possible protective effects on cells, but this is the first time its effects on sperm have been studied.

About 7 per cent of men worldwide are infertile but little is known how to treat the condition.

Research into fertility has traditionally focused on women, said Professor P.C. Wong, the study's other lead researcher, who is from NUS' obstetrics and gynaecology department.

He said: "Nowadays when a couple come to me for fertility treatment, we automatically check both the man and the woman."

About 15 per cent of couples in Singapore do not succeed in conceiving within 12 months of trying. Half the time it is because the man has a medical disorder.

While there are treatments for male infertility, such as oral hormone medication, they do not always work.

"This finding is like a clue to say, 'Look, this could be a new area of research'," said Prof Wong, who also heads National University Hospital's division of reproductive endocrinology and infertility.

samboh@sph.com.sg