or 10 consecutive days in mid 2010, Samantha\*, a lawyer from Connecticut, and her husband made the two-hour drive to New York City to visit Dr Attila Toth, a fertility specialist who thought

he could solve the mystery of why, at 28, Samantha couldn't get pregnant. Until then, "No-one could figure it out," recalls Samantha. "[Fertility experts] all suggested IVF, but I knew that wouldn't work if the true cause of the problem wasn't found. With each doctor we saw, we got no answers. I got more desperate and was losing hope."

On the first morning, Dr Toth placed IV drips in the couple's arms, which delivered an antibiotic that they each carried around in bumbags for the entire 10 days. He then threaded a catheter into Samantha's cervix so that, for the next hour, a cocktail of four antibiotics, a steroid, and a yeast-infection medication could wash out her uterus. On the first two mornings, Samantha suffered excruciating cramps from the daily washes. After each wash, Dr Toth

After their last visit, Dr Toth gave the couple scripts for two more antibiotics they'd take for a month. "My husband was very sceptical," admits Samantha. "The whole thing looked pretty scary, but I was desperate at that point. He knew how much I wanted to have a baby. I didn't want to take the IVF route and it was our last hope to conceive naturally."

When their treatments were over.

that produce most of a man's semen).

When their treatments were over, the couple returned to see Dr Toth, To begin with, he treated chlamydia patients with a conventional dose of oral antibiotics, but, when traces of the bacteria remained, he lengthened the time to a month. Then he added another antibiotic and doubled the duration of both medications to eight weeks. "The longer they took them, the faster they got pregnant," explains Dr Toth. In the '80s, he introduced IVs for men and the uterine lavages. In 2002, he added prostate injections.

## "I wanted to get tested by Dr Toth because I liked his approach of finding the root cause of infertility" Kelly, who had a baby girl after being treated by Dr Toth

who declared them "clean", by which he meant they were free of *Chlamydia trachomatis* – a bacterium that can cause infertility in women and has been linked to recurrent miscarriage, premature labour, ectopic pregnancy and pelvic inflammatory disease.

Outside of Dr Toth's office, such an elaborate assault on chlamydia is practically unheard of. The standard treatment – which US health officials say is at least 97 per cent effective – is a seven-day course of antibiotics.

However, Dr Toth thinks chlamydia is far harder to detect and treat, and that it may be responsible for a large portion of the one third of infertility cases that doctors classify as "unexplained".

The 72-year-old medico developed the idea of intrauterine washes in the late 1970s. Back then, public health authorities were becoming increasingly concerned about chlamydia, and Dr Toth's boss at New York Hospital suggested he look into it. "He said: 'That's far more important and can do much more damage to the reproductive

tract'" than mycoplasma bacteria, remembers Dr Toth. Pictures were telling: scarred and blocked fallopian tubes; uterine adhesions; and blocked epididymides (the coiled ducts that collect sperm). "I thought, "This is destroying people's anatomy," adds Dr Toth.

Dr Toth now sees about 150 couples a year for infertility. New York Citybased gynaecologist and infertility specialist Dr Gideon G. Panter has referred 40 to 50 of his patients to Dr Toth, "always with the same story" of unsuccessful IVF cycles. "Toth has been saying this stuff for 20 years," notes Dr Panter, "but fertility medicine is big business. Doctors don't stop to think: 'Wait! My patient's IVF cycle failed twice. Something else must be going on.' Toth's treatments cut into the economic overhead of infertility treatment."

hen Kelly\*, from Denver, Colorado, got married three years ago at 39, she and her husband wasted no time trying to conceive. After six months with no luck, a fertility specialist told Kelly her eggs were poor quality and she should look into using donor eggs or adoption. "We were both healthy," says Kelly. "I just wasn't ready to accept that I was too old."

She heard about Dr Toth through a friend, but didn't think she had chlamydia. "Even so, I wanted to get tested by Dr Toth because I liked his approach of finding the root cause of infertility," says Kelly, "and I didn't have time to fail multiple IVF cycles or go through multiple miscarriages to find out what was wrong." Kelly and her husband went to New York, where Dr Toth's tests showed they both had chlamydia.

Still, her husband was reluctant to proceed with Dr Toth's unconventional treatment, but he eventually agreed to a compromise: he passed on the



removed the catheter and inserted a paste containing a fifth antibiotic.

Meanwhile, every other day, Dr Toth gave Samantha's husband a painkiller and then injected antibiotics into his rectum and prostate; twice, Dr Toth also injected his seminal vesicles (the organs



prostate shots and underwent treatment via an IV at home in Colorado, while Kelly flew to New York for the full course. Last March, at age 42, she gave birth to a healthy baby girl.

Despite such successes, Dr Toth eschews conferences and has published infrequently in academic journals. He says cynical resistance from the medical community early in his career made him rely on his patients' word of mouth to grow his practice. "I just became frustrated by the lack of interest in the role of infections on fertility," he explains. "So I treat my patients according to my best understanding, and my reward is seeing them get pregnant."

The Australian Institute of Health and Welfare says the rate of chlamydia notifications more than tripled in the decade to 2009, with almost 50 per cent more notifications recorded for women than men. Dr Toth insists conventional treatment only kills active chlamydia bacteria, not the bacteria that can "hide" in cells. It's this low-lying chlamydia, he thinks, that might be inflaming the uterus and making it difficult for an embryo to attach and grow. "I'm waking up the dormant chlamydia," asserts Dr Toth. "The steroids tease them out. and the antibiotics that are already sloshing around in there kill them."

"This is ridiculous," insists Dr Margaret R. Hammerschlag, an infectious disease specialist at the State University of New York's Downstate Medical Center. "Chlamydia is easy to diagnose and easy to treat." Other medical professionals are also quick to sneer. "It's as if you've got a sore throat and they diagnosed strep throat and put you in the hospital for seven days," muses Dr William B. Schoolcraft, medical director at the Colorado Center for Reproductive Medicine.

Dr Toth recently examined the cases of 63 couples he treated between 2006 and 2009 who'd failed to get pregnant with IVF. After both partners completed his treatment, 12 women fell pregnant, 23 underwent another round of IVF and, of those, 17 delivered babies. However, Dr Toth lost track of the other 28 couples – which is why retrospective reviews of one's own work hold little sway in the medical community; it's too easy to

cherrypick your patients. Furthermore, the results don't prove the treatment made the difference. It's possible, says Dr Jamie A. Grifo, program director of the New York University Fertility Center, that the next round of IVF treatment would have worked anyway.

Yet there's enough mystery in the science of infertility that entirely dismissing Dr Toth's talk of lurking chlamydia is difficult – especially if, like Samantha and Kelly, you're struggling to conceive. It's easier to endure all those antibiotics than face the fact that your inability to become pregnant might be outside your control.

Six months before visiting Dr Toth, Samantha and her husband saw New York fertility specialist Dr Sami S. David. He ruled out chlamydia, but found both of them tested positive for ureaplasma, another asymptomatic bacterium that can damage a woman's reproductive tract and a man's sperm count. Dr David prescribed a seven-day course of antibiotics, then, when the couple still tested positive, a course of a different antibiotic. When the couple was still infected, Dr David referred them to Dr Toth, who thought ureaplasma was only a part of

chlamydia can flourish in the uterus during pregnancy (the body shuts down the immune system so it doesn't reject the fetus), Dr Toth prescribed Samantha oral antibiotics every two months to prevent any "straggler" bacteria from infecting the baby. Last year, after receiving a final antibiotic IV during her Caesarean, Samantha gave birth to a robust baby girl. Dr Toth's total bill? \$16,000. "We'll be forever grateful to him, and we are now trying to have our second child," says Samantha. "I do wish his methods were more accepted, but I look at my beautiful and healthy daughter, and that is all the proof I need."

Dr Toth wouldn't be the first doctor people thought was crazy who turned out to be right. Australians Dr J. Robin Warren and Dr Barry Marshall were routinely dismissed when they suggested bacteria caused stomach ulcers. In 2005, they were awarded the Nobel Prize in Physiology or Medicine, and today ulcers are routinely treated with antibiotics. "[Toth] is controversial, but I have patients who swear he walks on water because they went home with a baby," says Dr Charles March, an LA-based

## "It's as if you've got a sore throat and they diagnosed strep throat and put you in the hospital for seven days" Dr William B Schoolcraft, who's sceptical of Dr Toth's methods

the problem. As usual, he suspected chlamydia, even though Dr David had used the recommended chlamydia test.

Dr Toth says most of his patients have had negative chlamydia test results, but he finds the bacteria in 60 per cent of them after using another, more labour-intensive test. He worries about the standard test's accuracy, especially given there's evidence that chlamydia might be mutating. The antibody tests on Samantha and her husband confirmed Dr Toth's hunch: they both had chlamydia. Dr Toth believed the bacteria had irritated Samantha's uterus.

A few months after their treatment, Samantha was pregnant. But because reproductive endocrinologist. "It's not that no-one wants to believe him," adds Dr Grifo, "they just want better data."

Dr Andrew Toledo, a fertility doctor and chief executive officer at Reproductive Biology Associates in Atlanta, Georgia, first heard about Dr Toth from his patients in 1998 and has so far referred 20 of them to him. "When they come back to me, nine times out of 10 they get pregnant and stay pregnant," confirms Dr Toledo. "I can't blow that off. People thought it was voodoo, but I think more and more of us think there has to be something to it. Now I tell my unexplained cases: "There's this doctor in New York City ..."