



**Main pic:** S.aureus cell growing inside a mammalian cell.

**Below:** Prof James with actress Leslie Ash, patron of CHAI, at the centre's launch.

# Out of control?



Are hospital superbugs one of the biggest health threats we face? Professor Richard James, Director of the University's newly-launched Centre for Healthcare Associated Infections, shares his views.

The launch symposium to open the Centre for Healthcare Associated Infections held at the University in January had a wider significance for me. Since 1975 I have lectured on resistance to antibiotics and the problem of hospital-acquired infections (now called healthcare-associated infections, HCAI). In the early years, antibiotic resistance was largely a scientific curiosity since a number of antibiotics were still available to treat every bacterial infection. As the years passed bacteria became resistant to multiple families of antibiotics and the rate of antibiotic discovery went into a long term decline. Gradually my lectures changed from what could be done to try to counteract the problem to why is something not being done. Even the publication in 1998 of the seventh report of the House of Lords Science and Technology Committee on "Resistance to antibiotics and other antimicrobial agents" did not relieve my sense of gloom and foreboding as the periodic press interest concentrated on the one small aspect of the problem that appeared to interest politicians — "cleaner hospitals".

In 2000 I moved to Nottingham and was now giving lectures on antibiotic resistance to BSc, MSc and medical students. The term hospital superbug had entered into common usage as the incidence of methicillin-resistant *Staphylococcus aureus* (MRSA) and later *Clostridium difficile* infections (and

deaths) in hospitals rapidly increased. Rightly the government can claim that they have reduced waiting times for admission to hospital but achieving this target is incompatible with control of infection procedures.

Diagnostic microbiology laboratories in UK hospitals are seriously under-resourced so that they have not adopted molecular diagnostic technology that is routinely used in many countries in mainland Europe to help contain the problem of HCAI. Computer modelling exercises show that if we screen all patients for MRSA on admission to hospital, and then isolate those identified as MRSA positive to reduce the risk of transmission to other patients, then this would reduce the MRSA infection rates in the UK down to match the best in Europe. We are in a war against HCAI and a new front has recently been opened by the realisation that potentially more dangerous strains of MRSA are now circulating in the community. Politicians have consistently underrated the threat posed by these formidable bacterial enemies. Having been accused of sensationalism and scaremongering by the Department of Health, I await their inevitable conversion to policies that fully acknowledge the scale of the threat of HCAI. The first sign that this is happening will be the announcement of mandatory screening for MRSA of all patients admitted to hospital.