



OF LONDON

THURSDAY NOVEMBER 6 2014 | THETIMES.CO.UK | NO 71347

€4 every day



## Sherlock, a mystery woman and their special announcement

Pages 44-45

### Forthcoming Marriages

MR B.Y. CUMBERBATCH AND MISS S.J. HUNTER  
The engagement is announced between Benedict, son of Watson, and the daughter of King.

# Scientists create drug to replace antibiotics

## Breakthrough in fight against superbugs

Hannah Devlin Science Editor

Scientists have developed the first effective alternative to antibiotics in what is being hailed as a significant advance in the fight against drug-resistant infections.

In a small patient trial, the drug was shown to be effective at eradicating the superbug MRSA. Scientists say it is unlikely that the infection could develop resistance against the new treatment, which is already available as a cream for skin infections. Researchers hope to develop a pill or an injectable version of the drug within five years.

Conventional antibiotics are steadily losing their effectiveness at treating infections, prompting David Cameron to warn this year that the rise of drug-resistant superbugs could take medicine "back to the dark ages".

Dame Sally Davies, the chief medical officer, has predicted an "apocalyptic" scenario in which basic procedures, from hip replacements to chemotherapy, become fatal unless new drugs are rapidly brought on to the market.

About 5,000 deaths in England each year are caused by antibiotic-resistant strains of disease. The last new class of antibiotics was produced in the late 1980s and many experts believe that new approaches are necessary to provide a more lasting solution to the problem of drug resistance.

The latest treatment attacks infections in an entirely different way from conventional drugs and, unlike them, exclusively targets the *Staphylococcus* bacteria responsible for MRSA, and leaves other microbes unaffected.

Mark Offerhaus, chief executive of

the biotechnology company Microcos, which is behind the advance, said that it marked "a new era in the fight against antibiotic-resistant bacteria". "Millions of people stand to benefit," he said. "That's very exciting and gratifying."

The treatment is inspired by naturally occurring viruses that attack bacteria using enzymes called endolysins. It uses a "designer" endolysin, Staphsefekt, which the scientists engineered to latch on to the surface of bacteria cells and tear them apart.

Bjorn Herpers, a clinical microbiologist, who tested the drug at the Public Health Laboratory in Kennemerland, the Netherlands, said: "Endolysins exist in nature, but we've made a modified version that combines the bit that is best at binding to the bacteria with another bit that is best at killing it. It's a new molecule designed from fragments that already exist in nature."

Conventional antibiotics need to reach the inside of the cell to work, and part of the reason they are becoming less effective is that certain strains of bacteria, such as MRSA, have evolved impenetrable membranes. By contrast, endolysins target basic building blocks on the outside of bacterial cells that are unlikely to change as infections genetically mutate over time.

Scientists believe that the results could mark the first of a wave of endolysin-based therapies for infections that conventional drugs are no longer able to treat. About 80 per cent of gonorrhoea infections are resistant to front-line drugs, and multidrug-resistant salmonella, tuberculosis and *E. coli* are regarded as significant threats. Naturally occurring endolysins can

Continued on page 4, col 1



Holding fire About 80,000 spectators watched the local bonfire societies parade through Lewes in East Sussex last night

# Obama defiant despite poll humiliation

David Taylor US Editor

President Obama suffered a humiliating defeat in the midterm elections, losing control of both houses of Congress to Republicans for the first time.

Faced with the prospect of political impotence in his final two years in office, Mr Obama came out fighting last night. He threatened to veto legislation he did not like and vowed to impose sweeping immigration reform before the end of the year.

His issued the threat less than an hour after Mitch McConnell, the new Republican leader of the Senate, had warned that such a step would be "like waving a red rag in front of a bull". The

two men will meet over lunch at the White House tomorrow along with a larger group of congressional leaders, where they will try to find common ground to break Washington's gridlock.

Tuesday's result marks a complete transfer of power on Capitol Hill since Mr Obama first won the White House in 2008. When he lost the House of Representatives in 2010, Mr Obama called the defeat a "shellacking". This time, he merely conceded that the Republicans had a good night and congratulated them on their victory.

Speaking in the East Room of the White House, he said that he had heard the judgment of voters but noted that two thirds of Americans did not cast a

vote in Tuesday's election. "My number one goal is to deliver as much as I can for the American people in these last two years," he said. "The American people overwhelmingly believe that this town doesn't work well... they hold me accountable to make it work."

The president set out priorities including an early deal to make funds available for the battle against ebola, and to have Congress pass new military authority for the war against Isis. Mr Obama has asked military chiefs to brief leaders on the campaign against the jihadists, admitting: "It's too early to say if we are winning."

Leading article, page 20  
Republicans jubilant, page 22

### IN THE NEWS

#### Labour reshuffle

Ed Miliband has overhauled his election team to arrest a slump in the party's rating. Fears are growing in the shadow cabinet that MPs plan to oust their leader. Page 2

#### Cybercrime warning

Cybercriminals are stealing twice as much money from bank accounts than is being reported. Banks are accused of "systematically understating" the problem. Page 5

#### Gaddafi clan's return

The cousin of Muammar Gaddafi, the Libyan dictator overthrown and killed three years ago, said that former regime figures were plotting a return to government. Page 24

#### Britain's visa windfall

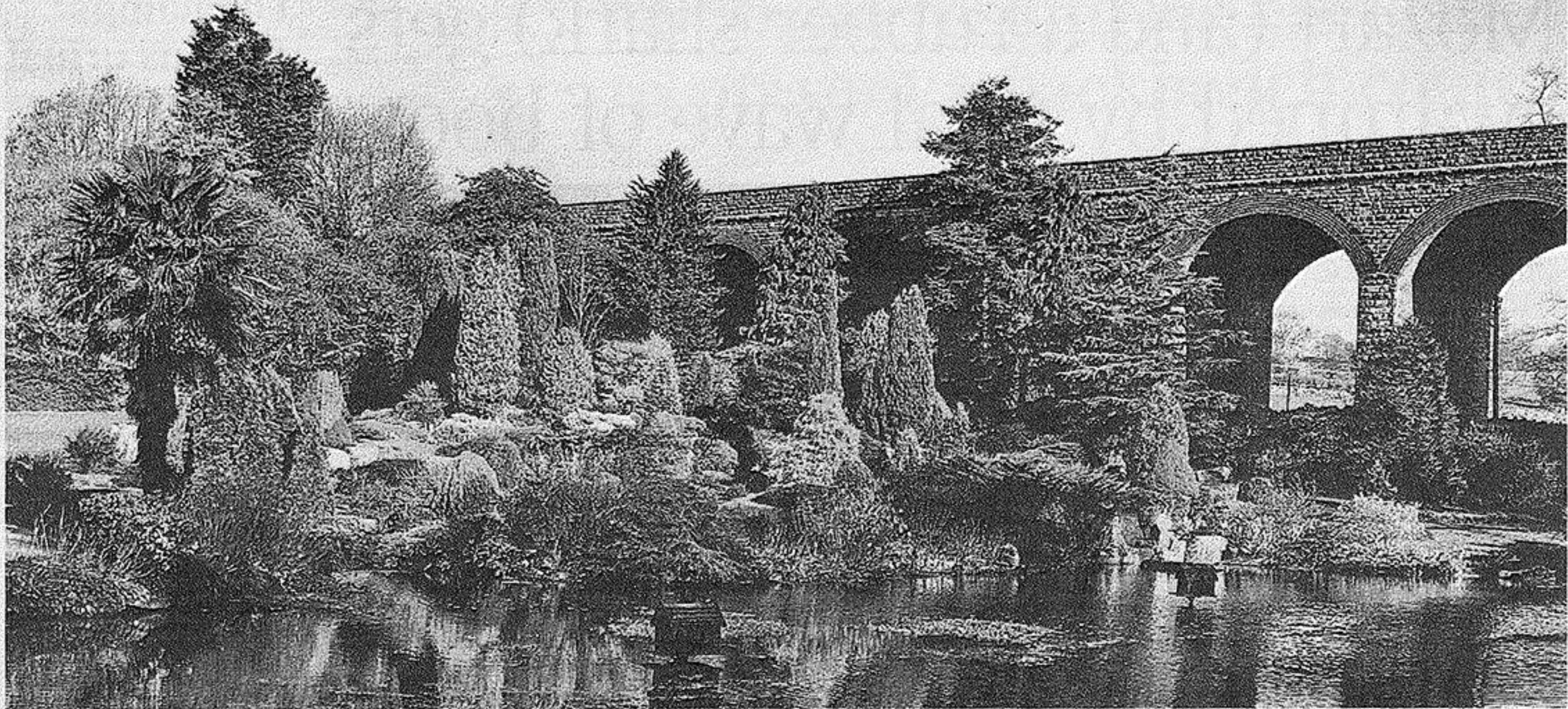
Wealthy Chinese and Russians have invested £700 million in Britain through a visa programme that encourages the super-rich to buy their way into the country. Page 31

#### Nine-man City lose

Manchester City's hopes of progress in the Champions League suffered a huge blow as two players were sent off in their 2-1 defeat at home to CSKA Moscow. Pages 60-64







Inspiring colours The secret gardens at Kilver Court, Shepton Mallet, were created a century ago by Ernest Jardine, a progressive industrialist who wanted to give his millworkers inspirational working conditions

## Midlife checks for worried well leave no time to treat the sick, warn GPs

Chris Smyth Health Correspondent

Millions more patients are expected to demand statins after "midlife MoTs" given to people aged over 40 recommended wider use of the cholesterol-lowering drugs.

Controversial guidance from the National Institute for Health and Care Excellence (Nice) is likely to be incorporated into the programme of NHS health checks given to everybody aged between 40 and 74, Public Health England signalled.

GP leaders say that the plans would heap further pressure on overstretched family doctors who would be forced to devote more time to the "worried well" at the expense of sick patients.

Nice confirmed it would halve the threshold at which patients should be offered statins. Now GPs are advised to discuss them with anyone considered to have a 10 per cent risk of a heart

attack within ten years, about 4.5 million more people than under previous guidance. For every 100 low-risk patients taking statins for five years, three will avoid a heart attack or stroke as a result.

A recent survey by *Pulse* magazine suggested that many GPs were ignoring the guidance because of time pressures or concerns about "medicalising" healthy patients.

Andrew Green, of the British Medical Association's GP committee, told *Pulse*: "Official policy on cardiovascular disease prevention is about as consistent and evidence-free as the voting on *Strictly*."

"In assessing the overall impact of this change, you must add on the pressure that resulting activity will have on general practice, and the knock-on effect there will be on the care we can offer to sick patients. GPs are likely to conclude that Public Health England

views general practice as having an inexhaustible supply of time and expertise to be drawn on at will.

"It is disappointing that there has been no discussion about this change between Public Health England and the representatives of the profession



who will have to pick up the pieces of their decision."

Concerns have previously been raised over the £300 million health checks programme after an overview of research concluded that such schemes did not improve people's health and led to them taking drugs they did not need. Paul Cundy, a GP in Wimbledon, said:

"By taking this 10 per cent non-evidence-based threshold and adding it to the non-evidence-based NHS health checks scheme, they are making the entire scheme even worse and an even greater waste of resources."

Jamie Waterall, of the NHS health check programme, said it "provides the health and care system in England with an opportunity to focus on the key behavioural and physiological risk factors which are responsible for the majority of preventable deaths and ill health. Public Health England's expert scientific and clinical advisory Panel has recently reviewed the Nice lipid modification guidelines and recommended that these should be included in the NHS health check's best practice guidelines.

"Up to 8,000 lives could be saved every three years by offering statins to anyone with a 10 per cent risk of developing cardiovascular disease."

## Dementia payment 'unethical'

Chris Smyth Health Correspondent

Doctors have urged the NHS to scrap its "cash for diagnoses" scheme that offers GPs £55 for every case of dementia they spot.

They say the "unethical" plan sets a dangerous precedent that could undermine patients' trust in doctors. Health chiefs countered that doctors were unlikely to be swayed by a few hundred pounds a year towards surgery running costs.

David Cameron has promised to let tens of thousands of people know they have dementia; fewer than half the 800,000 people who are thought to have the condition know that they suffer from it. To meet the target, NHS England wants family doctors to identify "at-risk" patients, such as people over 60 who smoke, drink or eat too much, and give them memory tests. Practices will be paid for each patient they record as having the condition.

In an open letter to NHS England published in *The BMJ*, the doctors, along with Katherine Murphy, chief executive of the Patients Association, argue that there must be "absolute surety that doctors have no other motivation than the patient's best interests when they make a diagnosis. A direct financial payment like this undermines this confidence, and with it the basis of trust inherent in the doctor-patient relationship."

Martin McShane, the national director for people with long-term conditions at NHS England, said: "Dementia is an absolutely devastating condition, and there are too many people undiagnosed who are being denied the care they need."

"It would be wrong to overstate the level of financial incentive. These are paid to GP practices — not individuals — and are unlikely to amount to more than a few hundred pounds a year."

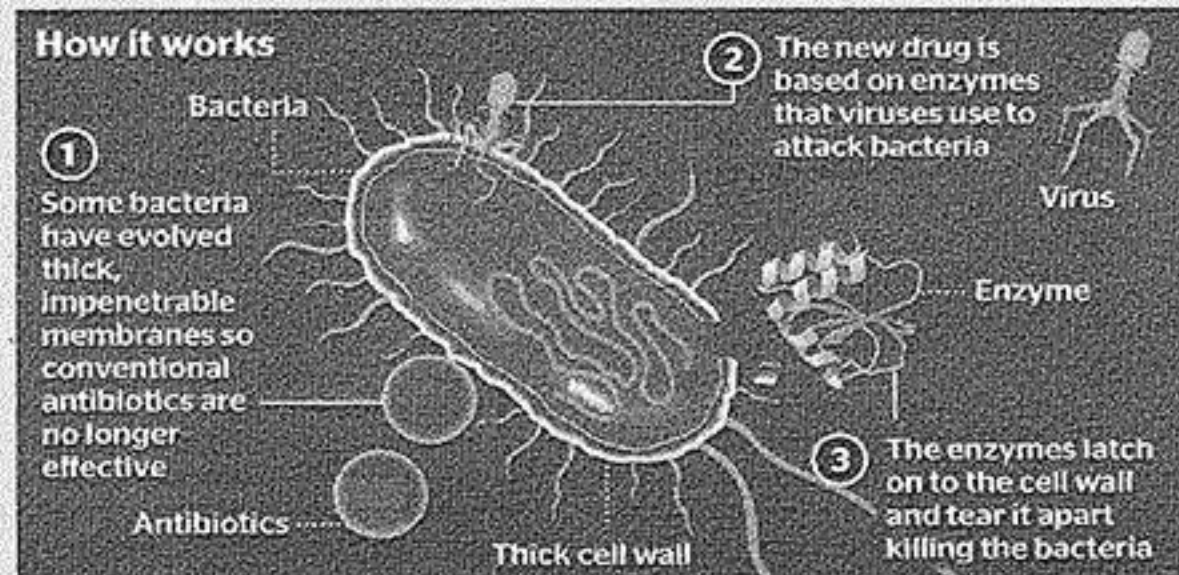
## New drug set to tackle hospital bug

Continued from page 1

attack all of these diseases, and the challenge is to create stable versions that can be packaged as drugs.

Mark Woolhouse, of the University of Edinburgh, said that scientists had been exploring the idea of endolysin-based therapies for decades. "What's exciting is that they seem to have made it work," he said.

The findings, presented yesterday at the conference Antibiotic Alternatives for the New Millennium, in London, showed that in laboratory tests, Staph-



efekt was effective at killing *Staphylococcus* bacteria equally well in its normal and drug-resistant (MRSA) forms. In an observational study, the drug was shown to eliminate MRSA in five out of

six patients with skin infections. Similar results were found in two further small studies on patients with skin infections linked to eczema, dermatitis and rosacea. Brendan Wren, an expert in infec-

tious diseases at the London School of Hygiene and Tropical Medicine, said: "We are all aware that the post-antibiotic apocalypse is upon us, where we won't be able to use antibiotics because of resistance, and one could argue that this is more acute than concerns such as climate change. We're so desperate for new alternatives and this one looks like it's at the leading edge." The treatment is licensed as a treatment for skin conditions and scientists predict that it could now be rapidly introduced to hospitals to reduce the risk of MRSA infections spreading between patients.

• A three-minute pin-prick blood test for bacterial infections can reduce excessive antibiotic use, a study has found. When doctors used the test, patients took about 22 per cent fewer antibiotics, with no impact on recovery times, researchers from the University of Copenhagen said.