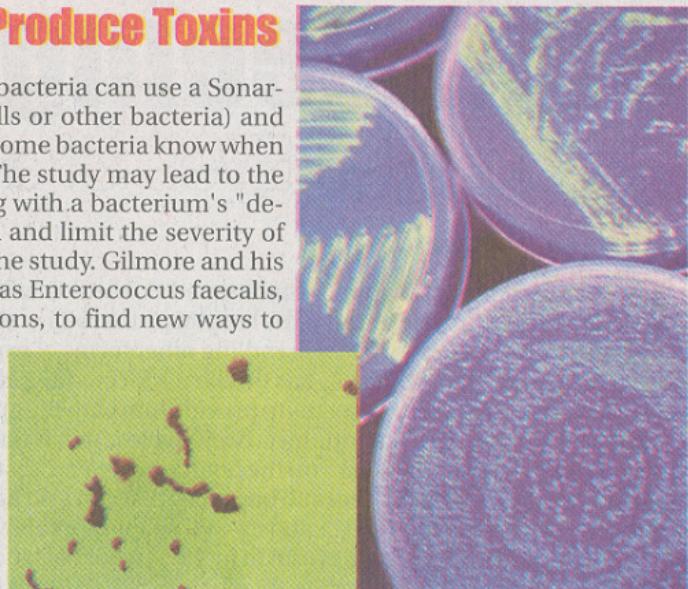


## System through which Bacteria Produce Toxins

In a breakthrough study, scientists have found that bacteria can use a Sonar-like system to spot other cells (either normal body cells or other bacteria) and target them for destruction. This finding explains how some bacteria know when to produce a toxin that makes infection more severe. The study may lead to the design of new toxin inhibitors. "Blocking or interfering with a bacterium's 'detection' mechanism, should prevent toxin production and limit the severity of infection," says Michael Gilmore, PhD, lead author of the study. Gilmore and his team have spent years studying the bacterium known as *Enterococcus faecalis*, one of the leading causes of hospital-acquired infections, to find new ways to treat them. These infections are frequently resistant to many and sometimes all, antibiotics. Gilmore says this discovery has several significant implications for the future. "This is a new mechanism that nature devised to 'see' the environment, and based on that information, respond accordingly. We may be able to learn from nature and adapt a similar strategy to help the aging population cope with loss of vision," he adds.

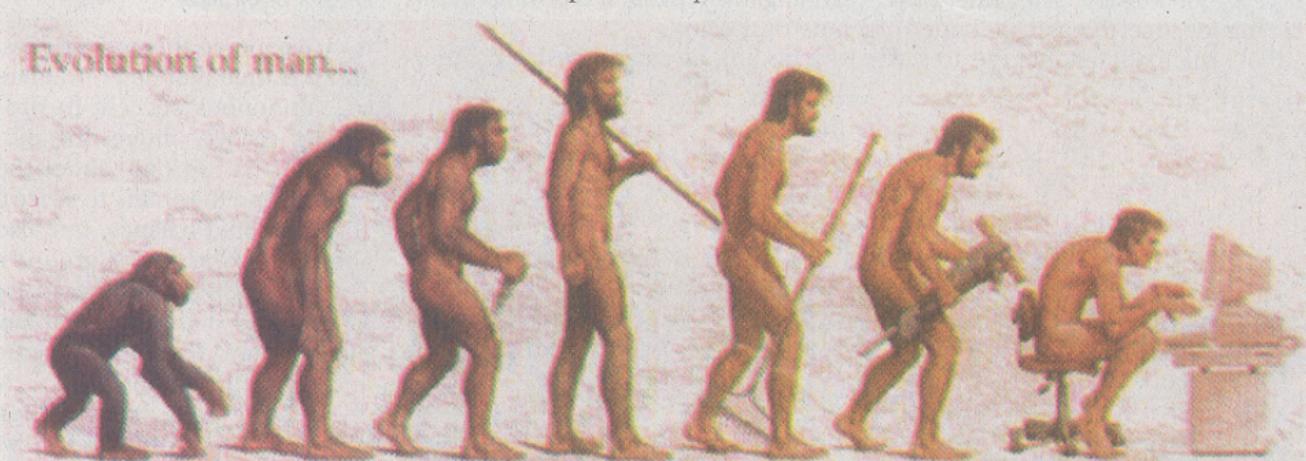


## Contradiction to Theory of Evolution

**C**ONTRADICTING the well established theory of evolution of mankind from ape-like creatures to modern humans via knuckle-grazing cave-dwellers, scientists have made a comprehensive study of all the fossils, which has revealed that they are probably all variants of *Homo sapiens*. The discovery comes as fossil-hunters in Indonesia continue to defend claims to have found yet another new species of human, dubbed "Hobbit Man". The findings have significant implications for the often bitter debates between fossil-hunters about the significance of their finds. The number of human species claimed by fossil-hunters now stands at around 10, while the total number of human-like species

exceeds 50. Such claims have long been based on supposedly significant differences in sizes and shapes of fossil bones. Now they have all been thrown into doubt by research showing that the differences lie within the range expected for just a single species. Professor Maciej Henneberg, of the University of Adelaide, made the discovery after analysing the skull sizes and estimated body weights for all of the 200 identified specimens of human-like fossils known as hominins. He said: "The argument they are a different species is, of course, only a hypothesis but comparisons of skull shape published recently certainly show they are as different from us as monkeys and apes are different from each other".

### Evolution of man...



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