

bacteria survive freezing, and there are cultures which have been thawed out which were frozen before many modern antibiotics were developed. Some of these bacteria are already resistant to one or more antibiotics.

In 1988, researchers did autopsies on three of the Northwest Passage explorers who froze to death in the Arctic in 1845. Bacteria from their colons were carefully cultured, and many were already resistant to the most powerful modern antibiotics.⁴

Evolutionists may speculate that such resistance factors arose originally by step-by-step mutations, perhaps as they encountered similar chemicals in some past environment. However, as far as observation is concerned, most cases of antibiotic resistance arising are not the result of mutation at all. The information is already there; selection acts by choosing between the various forms. This does not create any new information, so does not tell us anything at all about the evolution of increased complexity.

So-called 'supergerms' in hospitals are not 'super' at all. What has happened is that the use of antibiotics in modern hospitals has meant that the only ones surviving are those which have all the resistance factors. If a person gets a serious infection with one of these resistant types, the infection is not therefore more aggressive than if it was a non-resistant form of the same bug; it is simply that doctors are powerless to treat it. In fact, it is generally a weaker form of the pathogen.

Many patients are discharged from hospital carrying such 'supergerms' on their skin, which resist all attempts to get rid of them in hospital. However, when the patient gets home into a 'dirtier' environment, they usually rapidly disappear, because they are now forced to compete with ordinary microbes, which are 'stronger'. These other microbes could not survive in the artificial environment of the hospital with its arsenal of antibiotics.

Such back-and-forth shifts in bacterial populations in response to the environment therefore tell us nothing about how something like a bacterium may have evolved into a more complex organism. Even though bacteria have been mutating through millions of generations (equivalent to many millions of years in more complex animals) since first discovered, the bacterial types we have today have not significantly altered since first described by Robert Koch last century.

REFERENCES

1. Neu, H. C., 1992. The crisis in antibiotic resistance. **Science**, **257**:1064-1073.
2. Zhang, Y, Heym, B., Allen, B., Young D. and Cole, S, 1992. The catalase-peroxidase gene and isoniazid resistance of *Mycobacterium tuberculosis*. **Nature**, 358:591-593. (See also the popular report by Beardsley, T., 1992. Paradise lost? Microbes mount a comeback as drug resistance spreads. **Scientific American**, **267**(5): 12-13.)
3. Lewin, C. S., 1992. Resistance to the 4-quinolones. **Journal of Medical Microbiology**, **36**:9-11.
4. McGuire, R., 1988. Eerie: human Arctic fossils yield resistant bacteria. **Medical Tribune**, December 29, pp. 1, 23.

QUOTABLE QUOTES: Darwinism's Forte — Naturalism

'The importance of Darwinian theory does not lie in its predictive strength, for, as we have seen, the nature of its key explanatory concept, fitness, precludes such strength. The importance of the theory lies in the freedom it provides biologists to view natural phenomena as just that, as natural, and not as the creation of an artificer with designs for natural phenomena.'

— Rosenberg, A., 1985. **The Structure of Biological Science**, Cambridge University Press, Cambridge, England, p. 163.

'Charles Robert Darwin stands among the giants of Western thought because he convinced a majority of his peers that all of life shares a single, if complex, history. He taught us that we can understand life's history in purely naturalistic terms, without recourse to the supernatural or divine.'

— Eldredge, N., 1986. **Time Frames — The Rethinking of Darwinian Evolution and the Theory of Punctuated Equilibrium**, Heinemann, London, p. 13.