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## Man or Mouse?

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stant, predictable rates. If these proteins actually evolved more slowly than the molecular biologists believe, then close biochemical similarity and a long time since divergence would be compatible. The controversy is by no means settled, but the mounting molecular evidence has caused the conversion of some scientists who had previously believed in the older date for the split. Unfortunately, the fossil record for the period in question (4-6 MYA) is very poor and thus direct evidence is lacking.

A final comment. We as humans are self-centered in our view of life. This is evidenced in the emphasis we place on studying our own species and in the delight we take in the apparent success of it. The average mammalian species in the fossil record lasts between 200,000 and 2 million years. Modern humans have only been around about 50,000 years, since the appearance of Cro-Magnon. If the evolutionary success of a species is evidenced by its longevity, then by this measure *Homo sapiens* has a long and dangerous path to follow before it can be considered successful.

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When testing a new compound (Chlorfenvinphos) for killing ectoparasites on dogs, Vernon Brown of the Shell Toxicology Lab in England found the LD<sub>50</sub> differences between species to be enormous. For rats, the LD<sub>50</sub> value was 12 mg per kilogram of ordinary feed, for mice 100-200 mg, while dogs proved indestructible at 12,000 mg.

Since veterinarians would be handling the substance it was necessary to know whether man was more like a rat, a mouse, a dog, or none of these. Believing man to be more like a dog than a rat, the intrepid researcher swallowed some of the compound. Unpleasant reactions persuaded him that he had been wrong. Man, or at any rate one man, was in this instance more rat than dog.

It could be said that millions of people unwittingly act like Vernon Brown everyday. Birgitta Werner of the Poison Information Center in Stockholm, Sweden produced LD<sub>50</sub> figures on nicotine. For dogs the value is 9.2 mg/kg, for rats 53 mg/kg, for pigeons 75 mg/kg. But for man a lethal dose of nicotine can apparently be as low as 0.9 mg/kg. This huge difference between species is not one that favors the cigarette smoker. Question: Why are taxpayers asked to subsidize the tobacco industry while science, education and food producers are cut from the federal budget?