

## Gene that protects cells from ageing

In the United States, researchers have uncovered a gene that protects cells from a destructive form of oxygen and could possibly extend the lifespan of mammals. In lab-scale trials at the National Institutes of Health (NIH), researchers studied mice that had been bred to lack in a specific gene linked to neutralizing the effects of oxygen free radicals. It was observed that these specimens tended to have a lifespan about 40 per cent less than mice with normal genes. This finding could lead to the development of drugs that help cells resist ageing.

Oxygen free radicals are produced during cell metabolism and are capable of damaging genes, causing changes in proteins. The gene being scrutinized produces an enzyme called methionine sulphoxide reductase (MsrA) that, studies show, helps protect cells from being damaged by the highly reactive oxygen free radicals. According to Mr. Jakob Moskovitz, a researcher at the National Heart, Lung and Blood Institute, MsrA enzyme neutralizes the oxygen free radicals and repairs proteins that have been damaged.

In a study, researchers closely followed the lives of 17 mice that lacked the MsrA gene and 22 mice that had at least one MsrA gene. Mice with just one of the genes had an average lifespan of 672 days, while mice with normal genes had an average lifespan of 680 days. However, mice missing both copies of the MsrA gene had an average lifespan of only 409 days, about 40 per cent less. Researchers plan to breed a mouse with genes that cause it to produce the MsrA enzyme in abundance. (Express Pharma Pulse, 1 November 2001)