'Keep turmeric at bay during Salmonella infections'

**Mumbai**: Consumption of turmeric should be avoided during the outbreak of food-borne diseases, according to a new study by scientists of the Bangalore-based Indian Institute of Science (IISc).

Experiments conducted at IISc pointed out that Salmonella bacteria that causes typhoid and other food-borne diseases, grew three times faster when exposed to 'curcumin', the main molecular component of turmeric:

"Our data is the first of its kind which suggests that curcumin can increase the pathogenicity of Salmonella by making it more robust. Hence, especially during Salmonella infections, the consumption of curcumin should be avoided," PhD scholar Sandhya Marathe and Dipshikha Chakravortty, Associate Professor, Centre for Infectious Diseases Research, Department of Microbiology and Cell Biology at IISc, said.

The findings were carried in the latest edition of 'PloS ONE', a scientific journal published by US Public Library of Science.

Turmeric is an indispensable spice of the Indian and Asian kitchens, "but the latest experimental data urges us to rethink the indiscriminate use of curcumin especially during Salmonella outbreaks, although curcumin is known for its action against several diseases including cancer, hypertension and Alzheimer's, and is even sold as tablets over the counter as a panacea for all," Chakravortty said.

The scientists hypothesised that the high intake of curcumin could be one of the reasons for the widespread Salmonella infections in Asian countries, where typhoid kills close to five lakh people every year.

In certain Asian communities, each person consumes an average of 1.5 gm of turmeric a day (corresponding to 0.03-0.12 gm of curcumin), the study said.

"Curcumin activates certain genes in Salmonella, making it more robust and increasing its resistance to its host's defences such as anti-microbial peptides," it said.

According to Centre for Disease Control and Prevention, the prevalence of Salmonella infection is more in Asia, Africa and Latin America.

Also, the prevalence of typhoid is highest in Asia. Of 2,16,000 deaths due to typhoid in the year 2000, more than 90 per cent of morbidity and mortality cases took place in the region.

Last year, Chakravortty had demonstrated the Salmonella bacteria's 'stealthy' modus operandi to colonise its host's cells, dodge and finally paralyse the immune system.