

Cold tolerant gene identified in trout fish

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Indian scientists identify cold tolerant gene in snow trout fish



New Delhi: A group of scientists at the directorate of Cold Water Fisheries Research, Bhimtal, led by Dr Ashoktaru Barat, principal scientist, have identified and characterized Glycerol phosphate Dehydrogenase (GPDH) gene in snow trout species.

The gene is supposed to play a key role in providing protective mechanism to the fish against extreme cold condition at high altitude Himalayan rivers. The level of gene expression increases 19-fold at low temperature (less than 50C) as compared to relatively higher temperatures (more than 150C) and is highest in the muscle of the fish.

The expression profile of GPDH gene among co-generic species of the genus *Schizothorax* showed that GPDH cDNA expression was highest in *S. richardsonii* and lowest in *S. esocinus*, which gives an indication of species specific adaptation in relation to different geographical areas. These research observations have been published in the journal *Molecular Biology Reports*.

The work has been supported technically and financially by the National Agricultural Innovative Project of the Indian Council of Agricultural Research (NAIP-ICAR) in a project titled 'Bioprospecting of genes and allele mining for abiotic stress tolerance'.