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## In vitro study of echovirus 30 infection in rhabdomyosarcoma cell by NMR spectroscopy

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The Human echovirus 30 causes acute aseptic meningitis, viral replication requires energy and macromolecular precursors derived from the metabolic network of the host cell. The effect of viral infection within a host cell metabolic activity remains unclear. To give an insight of cell-virus interaction of echovirus 30 infection were studied on human rhabdomyosarcoma cell line. The new approach of metabonomics the <sup>1</sup>H NMR was measured the levels of various cellular metabolites at different times of infections by morphological examination of the cells. The 1H NMR metabolite spectrum signals were observed between uninfected and infected cells. Both uninfected and infected cells utilized the glucose through metabolic pathways and released the metabolic end products. After infection the concentration of Alanin, Lactate, Acetate, Glutamate, Tyrosine, Histidine, Phenylalanine, Creatine, Choline and Formate were increased and all these augmented metabolites were decreased at the end of the infection. The cells showed wide-ranging lipid signals at the end of the infections, which correlates with the morphological changes as apoptosis of cells were observed. Progressive breakdown and utilization of all cellular components were observed as the infections were increased. The study is useful for monitoring the cellular metabolic changes during virus infection.

## **Biography**

Sarika Tiwari is presently working as a Post Doctoral Fellow (Research Associate) in Indo-UK DBT-BBSRC project in the Division of Pathology, Center for Animal Disease Research and Diagnosis, Indian Veterinary Research Institute, India. She has completed her PhD from Department of Microbiology, SGPGIMS, India in 2013 under the supervision of Prof. T. N. and her research focus was to explore the role of central nervous system damage in the pathogenesis of Japanese encephalitis virus (JEV).

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