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Sorting of Exclusive Mitochondrial Enzymes from Databases: at the First Step of Studying Mitochondrial Enzymes as the Biomarker of Acute Aluminium Phosphide Poisoning

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Use of aluminium phosphide (ALP) for storage of food is a common practice in the developing world. The menace of acute ALP poisoning is also ongoing. ALP liberates phosphine gas which is a mitochondrial poison. Expectedly that is going to disrupt mitochondrial membrane and leak the mitochondrial proteins in the extracellular space. In other words, the mitochondrial proteins should be screened for biomarkers of acute ALP overdose. To take a systemic approach, we should get a total list of mitochondrial proteins. With this background, we have searched the dedicated mitochondrial database (Mitoproteome) and observed that some proteins are mentioned there are also available at other places. We will demonstrate our observation as we believe that the results of this investigation will help to understand which proteins are exclusively mitochondrial and which proteins are not. Needless to emphasize that this can be used for screening mitochondrial proteins/enzymes as biomarkers of ALP and other mitochondrial poison exposure.

Keywords: Poisoning, Biomarkers, Mitoproteome, Aluminium Phosphide, Mitochondrial Poison.

Biography:

Deepak Yadav is a Ph.D Student. Mitoproteome database, Uniprot, OMIM, NCBI Blast, The human protein atlas