

## **Internal Webinar**

### **Understanding the effect of mutations at 112th position on the structure of apoE**

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Apolipoprotein E4 (apoE4) is a major risk factor in late-onset Alzheimer's disease relative to the common ApoE3 isoform. Difference between ApoE3 and ApoE4 in primary structure is Cys/Arg mutation at 112 position. So, we expressed and purified 112 mutants by substituting 112R with Val and Ile to see how this one amino acid difference affect the structure of the protein. Later for the same we made the protein crystals and diffracted them using synchrotron radiation to see how their structure differ from each other. But the diffraction data shows no difference in their 3D structure and we concluded that it is the dynamic structure which is different in these proteins.

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***2:30 PM***