Tata Institute of Fundamental Research
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Colloquium

Chirality based proofreading during translation of the genetic code

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D-aminoacyl-tRNA deacylase (DTD) removes D-amino acids mischarged on tRNA and therefore is implicated in enforcing homochirality in proteins. We elucidated the 'Chiral Proofreading' mechanism of DTD by which D-amino acids are prevented from infiltrating the translational machinery and figured out a new cellular role of DTD, in addition to its canonical role as D-aminoacyl-tRNA deacylase. Recently, we have identified a unique variant of DTD, which we call as ATD for Animalia-specific tRNA deacylase that proofread a unique tRNA selection error in higher eukaryotes. The necessity of this variant in the context of genome expansion in animalia will also be presented.

Wednesday, Mar 07th 2018

04:00 PM (Tea/Coffee at 03:30 PM)

Auditorium, TIFR-H