BioSpect
the business of Bi
24 years of leveraging the business of Bio
www.biospectrumindia.co

Three share Nobel Prize 2013

08 October 2013 | News | By BioSpectrum Bureau

Three share Nobel Prize 2013



The three Nobel Laureates from US have discovered the molecular principles that govern how molecules like hormones, and neurotransmitters are delivered to the right place at the right time around the cell, through small packages called vesicles.

Randy W Schekman, 64, professor, department of molecular and cell biology, University of California at Berkeley, discovered a set of genes that were required for vesicle traffic. James E Rothman, 62, professor and chairman, department of cell biology, Yale University, unravelled protein machinery that allows vesicles to fuse with their targets to permit transfer of cargo. And German-born Thomas C SÃ?Â¼dhof, 57, professor of molecular and cellular physiology, Stanford University, revealed how signals instruct vesicles to release their cargo with precision.

The three laureates' work spanning over the last four decades, made pioneering research on understanding how tiny bubbles called vesicles act as cargo carriers inside cells. Through their discoveries, Rothman, Schekman and SÃ?Â¼dhof have revealed the precise control system for the transport and delivery of cellular cargo. Disturbances in this system have deleterious effects and contribute to conditions such as neurological diseases, diabetes, and immunological disorders.

The three Nobel Laureates' have discovered a fundamental process in cell physiology. These discoveries has a major impact on our understanding of how cargo is delivered with timing and precision within and outside the cell.