

Statement of Research Achievements, if any, on which any Award has already been received by the Applicant. Please also upload brief citations on the research works for which the applicant has already received the awards

Citation: Role of Autophagy in Diseases

Award: S Ramachandran-National Bioscience Award for Career Development- DBT-2019

Statement of Research Achievements

Dr. Chauhan research work have attempted to understand the molecular mechanisms by which autophagy play decisive role in controlling the diseases. In an important contribution to the autophagy field, he showed a novel molecular mechanism of biogenesis of protein aggregates under oxidative and proteotoxic stress conditions. In the same study, he and his group uncovered the molecular mechanism by which the stress-induced toxic protein aggregates are degraded by autophagy. This study have enormous implication in understanding the protein aggregates-associated diseases such as neurodegeneration and cancer. In this explicit study, they also showed that inhibiting autophagy and oxidative stress response system (NRF2) can lead to regression of tumors and thus, they described a new combinatorial mechanism for therapeutic targeting of cancer.

Publications:

1. Jena KK, Kolapalli SP, Mehto S, Nath P, Das B, Sahoo PK, Ahad A, Syed GH, Raghav SK, Senapati S, Chauhan S, **Chauhan S**. TRIM16 controls assembly and degradation of protein aggregates by modulating the p62-NRF2 axis and autophagy. **EMBO J**. 2018 Sep 14;37(18). * **Corresponding author**.