Publications,

Oral and Poster presentations
Publication:

Sharma M., and Prabha., C. R. Compensatory effects of S20F and A46S over L50P and I61T mutations in ubiquitin (Manuscript under preparation).

Sharma M., Doshi A., Prabha., C. R. Ubiquitin with Q2N-E64G substitution in parallel β- bulge of ubiquitin in Saccharomyces cerevisiae displays functional alterations (Manuscript under preparation).

Oral/ Poster presentation

Oral presentation entitled:

Mrinal Sharma and C. Ratna Prabha “Functional importance of mutated residues in dosage dependent lethal mutation of ubiquitin” at XXVI Gujarat Science Congress organized by The M.S. University of Baroda, Vadodara on 26th February 2012.

Mrinal Sharma, Ankita Doshi and C. Ratna Prabha “Functional Importance of the mutant ubiquitin Q2N-E64G of parallel β-bulge of ubiquitin in S. cerevisiae” Regional Science Congress on Science for Shaping the Future of India, organized by The M.S. University of Baroda, Vadodara on 15th-16th September 2012.

Poster Presentation entitled:

**ABSTRACT**

Ubiquitin is a small, low molecular weight globular protein bearing 76 amino acid residues. The characteristic function of this highly conserved polypeptide is to target proteins through proteasome mediated degradation in eukaryotic cells through a consecutive process of ubiquitin activation and substrate recognition. The substrate proteins for Ubiquitin-proteasome system (UPS) consist cell cycles, antmitosis proteins and transcription factors. As ubiquitin-proteasome system plays central role in cellular homoeostasis and cell cycle regulation, it has become a potential target for drugs with anticancer potential. Ubiquitin contains two β-bulges. The second β-bulge which is located at the C- terminal region of the type I β-sheet, holds three residues Glu84 (G), Ser85 (S) and Gly86 (X). The β-bulge at C terminal in Ubiquitin

**EXPERIMENTAL STRATEGY**

**RESULTS**

**CONCLUSIONS**

Our results establish that replacement of residues in β bulge of ubiquitin exert severe effects on growth and viability in Saccharomyces cerevisiae due to functional failure of the mutant ubiquitin. The results observed in Saccharomyces cerevisiae can be extrapolated to higher eukaryotic systems, suggesting a possibility for biomedical applications especially under conditions of cancer and certain neurodegenerative disorders.

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**REFERENCES**