



Department of Biochemistry
School of Life Sciences
University of Hyderabad

First Annual Endowment Award Lecture

“LIFE-DEATH DECISION SWITCHES” in Biology:
How do they function in Cellular & Tissue context?

by

Professor B. J. Rao

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(Former Senior Professor, Chair of Biology programme & Dean-Faculty at IISER-Tirupati, A.P., Senior Professor and Chair-of Biology Programme at TIFR Mumbai)

Date: 26th August 2021, Time: 3.00 pm

Venue: Auditorium, School of Life Sciences, UoH

Online link: <https://meet.google.com/coz-xiuq-wit>



Abstract

Cells encounter myriads of stressful situations, which push them into responses that are either protective or trigger cell-death. How do cells compute such life *versus* death decisions? I detail some mechanisms operational at cellular as well as tissue level that encompass these aspects. Cellular machines are dynamic and “computational” in nature, the ON/OFF and in-between states of which constitute the fundamental part of adaptive responses in Biology. We describe our mechanistic work in *Drosophila* and mammalian cell nucleolar proteins to convey some insights on these molecular switches.

About the speaker

National Science Talent Search Awardee (NCERT) (1973) (1st rank in AP & 16th rank in India)

Sir JC Bose National Fellow (Dept of Science & Technology)

Fellow of Indian National Science Academy, New Delhi

Fellow of Indian Academy of Sciences, Bengaluru

Fellow of National Science Academy of Sciences, Allahabad

Fellow AP & Telangana Academy of Sciences

DST-Inspire Teacher

Chief-Editor: J BioSciences (Indian Academy of Sciences)

Winner of several awards & National & International Committee leadership roles related to Academic/Research matters

Varied areas of Research Interests: Genome Homeostasis, Cellular adaptations, Biophysics of genome dynamics and Computational Biology

Publications: ~140 peer reviewed research papers in International Journals (PNAS, Nucleic Acids Research, Genome Biology, J Biological Chemistry, JMB & Biochemistry, Phys Rev Letters, JPC, J Theoretical Biology etc.)

https://en.wikipedia.org/wiki/B._J._Rao

Recipient of First Annual Endowment Best Review Article Award (2020): Dipika Gupta

SUMOylation in fungi: A potential target for intervention

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