ICMR INDIAN COUNCIL OF MEDICAL RESEARCH | NIRRCH NATIONAL INSTITUTE FOR RESEARCH IN REPRODUCTIVE AND CHILD HEALTH

Dr. Shanta Rao Oration-2026
On the occasion of the 56th Foundation Day of ICMR-NIRRCH

Functional dynamics of age-specific FSH glycoforms

Friday, 27th February 2026
3 pm onwards.

T. Rajendra Kumar, PhD

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ABSTRACT

Follicle stimulating hormone (FSH) is a heterodimeric pituitary glycoprotein. Both the subunits of FSH, i.e., the a-, and the hormone specific b-subunit contain two N-linked glycan chains. FSH acts by binding to G-protein coupled receptors (GPCR) known as FSH receptors (FSHRs) on ovarian granulosa cells and regulates estrogen production in the female. In the aging female, the inevitable ovarian senescence leads to cessation of estrogen output, resulting in elevated FSH because of loss of negative feedback at the level of the hypothalamus and pituitary. Elevated serum FSH correlates much better with various menopause-associated symptoms than declining estrogen levels during peri/post menopause transition. We have identified age-related dynamic changes in expression of pituitary FSH glycoforms, which differ in their number of N-glycans on the beta subunit. These age-specific FSH glycoforms act via different GPCR pathways in ovary and other extra-gonadal tissues. Functional analysis of these age-specific FSH analogs using biochemical, cell biological and cutting-edge mouse genetic models will be discussed in the physiological context of gonadal and extra-gonadal tissues.

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PROGRAMME

Welcome Address
Dr. Geetanjali Sachdeva, Director, ICMR-NIRRCH

Introduction of the Orator
Dr. Vikrant M. Bhor

Felicitation

Orator's Citation
Dr. Smita Mahale

Oration
Prof. T. Rajendra Kumar

Vote of Thanks
Dr. Nupur Mukherjee

Refreshments