

# IETS Foundation 2023 Early Career Achievement Award (Practicing Professional)

## Siddhartha Shankar Layek



Dr. Siddhartha Shankar Layek is presently working as Manager (Animal Breeding), National Dairy Development Board, Anand, India (NDDB, Anand) and largely responsible for operations of OPU-IVEP-ET facility and field ET. He is a veterinarian and completed master's degree and PhD in the field of livestock production and management with major focus on animal reproduction from National Dairy Research Institute, Karnal, India. He also received Fulbright Nehru Doctoral and Professional Research Fellowship and pursued his PhD research in Department of Animal Science, Cornell University, Ithaca, New York, USA. Apart from his tenure at Cornell, he was trained in OPU-IVEP-ET at EMBRAPA, Brazil, and Transova, USA.

NDDB established its laboratory to standardize the technology in cattle and buffaloes and to create a large trained manpower pool to drive the technology in India. Dr. Siddhartha played a pivotal role in establishing this laboratory and standardizing the procedures in the facility. The facility has lately craved "hub and spoke" model to popularize ET in marginal smallholder system of dairying in India. In this model, dairy cooperatives are playing the role of the spoke. They are identifying recipients, synchronizing, detecting estrus, and finally,

transferring the embryos, after obtaining training from NDDB. OPUs and production of embryos is happening at NDDB, which is acting as hub. They are presently working with the five biggest dairy cooperatives of India, including Amul, and expecting to create some impact within a few years.

Dr. Siddhartha acts as training manager for OPU-IVEP-ET trainings conducted by the facility. He is also supervising master's and PhD dissertation work in collaboration with neighboring universities, focusing on the challenges in implementation of the embryo transfer technology. Few of their works are getting presented in the 49th IETS Meeting.

He has been selected as a member of the central monitoring unit for IVF laboratories in India by the government of India. In this capacity, he is helping other IVF facilities funded by government to establish and grow through continuous guidance.

Presently Dr. Siddhartha is working on developing in-house media to reduce the cost of embryo production and an artificial intelligence-based embryo-grading software, which may help new practitioners. Apart from embryo biology, he also holds interest in bovine semen biology and is pursuing that interest by providing technical support to commercial semen production centers in India.