

## Report

### **Hands-On Training Workshop on Techniques in Immunohistochemistry & Immunofluorescence for Research Applications**

**September 23<sup>rd</sup> to 24<sup>th</sup> – 2025**

Venue: Department of Pharmacology & Centre for Experimental Pharmacology & Toxicology, JSS College of Pharmacy, JSSAHER, Mysuru.

Date: September 23<sup>rd</sup>–24<sup>th</sup>, 2025.

The workshop was inaugurated on September 23, 2025, at 10:00 am with a warm welcome by Dr Nagashree K.S., followed by the welcoming of the guest of honour, Dr Jyothi Priya. Dr Saravana Babu, HOD, highlighted the objectives of the program, emphasising the significance of immunohistochemistry and immunofluorescence in research. Dr Pramod Kumar delivered the keynote address, stressing the importance of developing advanced technical skills among scholars.



*Inaugural session of the Hands-On Training Workshop on Techniques in Immunohistochemistry & Immunofluorescence at the Department of Pharmacology, JSS College of Pharmacy, Mysuru.*

The theoretical session introduced immunohistochemistry and histopathology, explaining principles, scope, and applications. Dr Jyothi Priya detailed tissue trimming, fixation, dehydration, clearing, paraffin infiltration, and embedding, with emphasis on biosafety and tissue integrity. Participants observed demonstrations of tissue processing and block preparation.



*Dr Jyothi Priya is delivering the first session on the basics of immunohistochemistry, highlighting protocol steps, common pitfalls, troubleshooting approaches, and a comparison of monoclonal and polyclonal antibodies.*

#### **Day 1 – Afternoon Session (2:00 pm–5:00 pm)**

The session focused on staining, mounting, and microscopic examination. Steps of deparaffinization, rehydration, and antigen retrieval using hot-air oven and cooker methods were explained. Participants learned about direct and indirect detection, blocking endogenous peroxidase, primary antibody incubation, secondary antibody principles, chromogen application, counterstaining, and mounting techniques. Slides were prepared for primary antibody incubation and stored overnight for continuation.



#### **Day 2 – Morning Session (10:00 am–1:00 pm)**

The theory session by Dr. Jyothi Priya elaborated on the Matrix method for antigen retrieval, use of citrate and EDTA buffers, blocking non-specific binding with BSA or serum, and primary antibody incubation with proper controls. Nuclear counterstains (hematoxylin, DAPI, Hoechst) and chromogens were also discussed.

The hands-on session continued with trimming and sectioning of tissue blocks, floating sections on a water bath, and mounting on positively charged slides. Previously incubated slides were processed with secondary antibody, followed by washing to prepare for chromogen development and microscopic examination. Emphasis was placed on careful handling to preserve tissue morphology and achieve optimal staining.



*Participants analysing immunostained slides using digital microscopy tools*

The workshop concluded with a validation function and certificate distribution at the Centre for Experimental Pharmacology & Toxicology. Dr. Nagashree addressed the gathering, and the HOD, Dr. Saravana Babu, delivered the closing thank-you speech. The event was well-received by participants, who appreciated the practical knowledge gained.



*Valedictory ceremony*