

WORKSHOP SUMMARY

Workshop: Sample preparation I/II

Topic: FFPE: sectioning

Session: 1C & 2C

Time: Tuesday 10:30 am & 1:30 pm

Background

The majority of banked clinical tissue samples are formalin fixed and paraffin embedded (FFPE), a fixation process that allows stable storage of specimens for decades at room temperature. These samples can be sectioned at room temperature using a microtome and do not require a cryostat. The paraffin wax acts as a support for the tissue allowing for easy sectioning of very thin sections. This workshop will demonstrate the process of collecting FFPE tissues on microscope slides and MALDI target slides.

Highlights

- Soaking tissues in an ice bath prior to sectioning
- Alignment of the tissue block using a histocollimator
- Production of tissue section ribbon
- Section collection using a two water bath approach (one room temperature, one heated to 55°C)
- Collection of multiple sections on a single conductive MALDI slide
- Oven treatment of sections for proper adherence

Summary

A variety of mouse and rat tissue will serve as models to allow hands-on experience with different tissue types. Participants will learn tips and tricks for the successful collection of FFPE tissue sections for mass spectral analysis. The practical considerations for section collection and storage will be discussed.

Suggested Reading

Casadonte, R., and Caprioli, R. M. (2011) Proteomic analysis of formalin-fixed paraffin-embedded tissue by MALDI imaging mass spectrometry, *Nat Protocols* 6, 1695-1709.

