Immunohistochemistry (IHC) is used routinely in research labs and hospitals as a tool to help study, diagnose, and treat disease, but how does it work? NSH is excited to present this unique hands on, intense training session for techs working in a clinical IHC lab. During this training techs will learn and perform the individual steps of an IHC protocol which will result in a stain. Participants will leave this training with an understanding of how and why IHC works, knowledge that will help participants understand how to perform manual IHC as well as what is taking place on the staining platform.

Come spend an enjoyable and informative 2 days with fellow technicians in a supportive and stimulating atmosphere.

TOPICS COVERED INCLUDE:

**Background Information**
- Describe what pretreatment is and why it's performed
- Explain the different pretreatment methodologies, their uses and limitations
  - Enzyme unmasking
  - Heat unmasking
  - Chemical unmasking

**Antibodies**
- Summarize how immune reactions are used to produce antibodies (anti-sera) used in Immunohistochemistry (IHC) techniques
- Give a basic explanation of the various production methods for antibodies
  - Monoclonal
  - Polyclonal
  - Rabbit Monoclonal
- Classify the various antibody formats and make use of a specification sheet
- Explain how titrations are used in immunohistochemistry

**Secondary Antibodies**
- Explain the difference in a secondary antibody and a primary antibody
- Discuss how secondary antibodies are created for immunohistochemistry assays
- Identify the approach you would use to select the best secondary antibody for an immunohistochemistry assay/stain

**Detection**
- Discuss the concept of detection chemistry
- Identify the types of "labels" used for detection:
  - Fluorescent & Chromogenic labels
- List the differences between the types of detection technologies, their uses, and limitations

**Counter Staining**
- Explain why counterstaining is important to an immunohistochemistry stain
- Summarize in your own words some of the ways mounting media can impact immunohistochemistry staining

**Double Staining**
- Summarize your understanding of single/double staining

**Multiplexing**
- Understand why multiplexing is important
- Explain key components of running a multiplex immunohistochemistry stain
- Summarize the importance of running proper control protocols during a multiplex stain

**Background Elimination - Blockers**
- Articulate what blockers are and their uses
- Discuss potential sources of non-specific staining
- Differentiate between the types of blockers, their uses, and limitations
  - Protein blockers
  - Enzyme blockers
  - Biotin blockers
  - Fc blocker

**Artifacts**
- Describe the encoding by which artifacts are produced
- Discuss some of the typical causes of artifacts

**Troubleshooting**
- Identify some common problems that occur during an immunohistochemistry assay and how to troubleshoot them
- Discuss some common mistakes that occur and how to avoid them

**Automation**
- Discuss the concept of automated systems in histology
- Describe how automation is used in a clinical setting

**Preparation**
- Discuss what material is and why it is used

Hands-on Interactive Training!
important laboratory test.

For continued education and qualification of our employees, we offer a full range of courses at our own facility, as well as at various off-site locations. The training topics cover a wide range of areas, including immunohistochemistry, molecular diagnostics, and tissue dynamics.

In addition to the formal training courses, we also provide on-the-job training and development opportunities. Our goal is to ensure that all team members have the skills and knowledge necessary to provide the highest quality care to our patients.

If you are interested in more information on our training programs, please contact our training department today.