Immunohistochemistry: The Scientist’s Paintbrush

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Let’s Talk about…. 

Purpose: A new drug for Inflammatory Bowel Disease
## Inflammatory Bowel Disease

**Reference:**


Let’s Talk about….  

**Purpose:** A new drug for Inflammatory Bowel Disease  

**Project goal:** Will the drug work in the intestines?
The Drug works in blood vessels

By trapping toxic cells in the bloodstream
Where will the drug bind in human intestines?

Can we locate the drug binding target?
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Purpose: A new drug for Inflammatory Bowel Disease

Project goal: Will the drug work in the intestines?

Methods: Immunohistochemistry
A tool to see the drug binding sites using color
Preparing the intestine biopsies for immunohistochemistry

1. Biopsy
2. Biopsy in Wax
3. Cut thin sections
4. Mount sections on slides
Immunohistochemistry: A tool to see the drug binding sites using color
Let’s Talk about....

A new drug for Inflammatory Bowel Disease

Will the drug work in the intestines?

Immunohistochemistry:
A tool to see inside cells using color

What answers have we found using immunohistochemistry?
Result: The drug binding site is located in the blood vessels of the intestine.
Let’s Talk about….

A new drug for Inflammatory Bowel Disease

Will the drug work in the intestines?

Immunohistochemistry:
A tool to see inside cells using color

What answers have we found using immunohistochemistry?

What are we working on now?
Current Experiment:
Are there more drug binding sites in Ulcerative Colitis or Crohn’s Disease?

Healthy Colon  Ulcerative Colitis  Crohn’s Disease

Specific drug for types of IBD types
Visualizing Phosphodiesterase 8A: a novel therapeutic target for autoimmune and inflammatory diseases

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