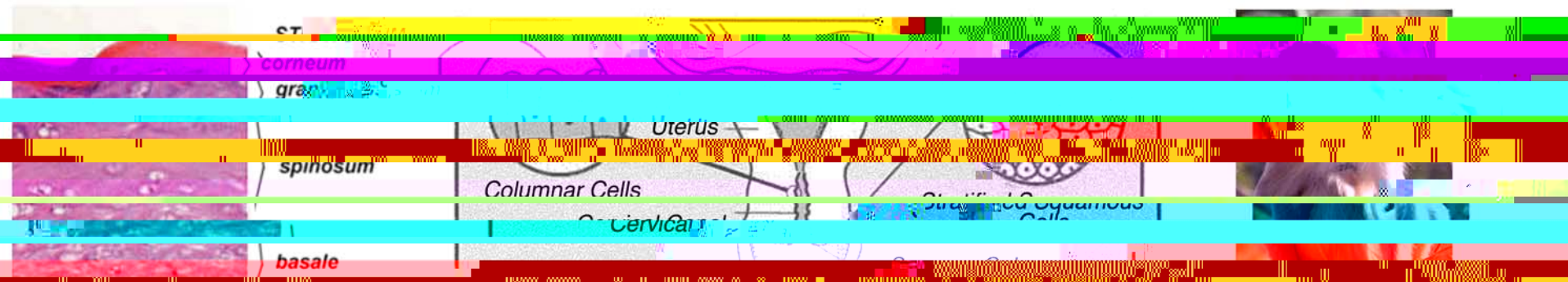


# Tissue Models of Infection

## Project #1

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Biologically integrated and increasingly complex 3-D tissue systems with v



FUTURE

Organotypic tissue infection  
wounding, cell strata infected  
response to wounding

Mouse Genital Tract Infection  
wounding, cell types infected  
(i.e. columnar, squamous, vaginal)

Human Genital Tract Infection  
wounding, cell types infected  
persistence, immune response

# Project#1 Aims

***CENTRAL HYPOTHESIS: monolayer cell cultures fail to display essential aspects of HPV infections in epithelial tissue and important features of HPV infection establishment can be determined from 3 D tissue based models***

**Aim 1: Define requirement for HPV infection of cells in differentiated epithelium *in vitro***

- 1A. Evaluate the contribution of wounding to infection, identify the cells in the stratified epithelium capable of binding and internalizing virions and those cells able to express viral early genes
- 1B. Determine how the cellular response to wounding affects tissue infection

**Aim 2: Identify the cell types that are susceptible to HPV infection in a rodent genital infection model (interface with Project#2).**

