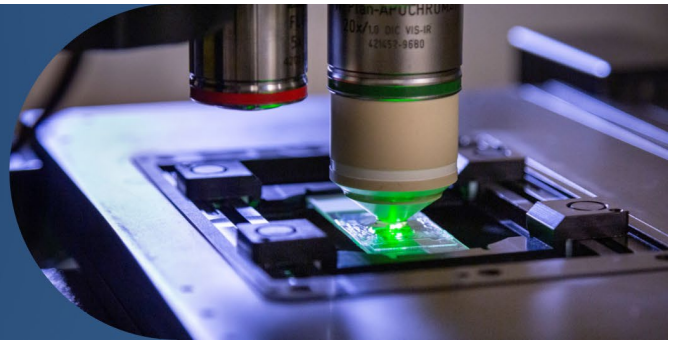


# Preclinical Imaging

Research Administration  
Seattle, WA • 501(c)(3) Nonprofit



Fred Hutch's Shared Resources are catalysts for lifesaving discoveries. This uniquely centralized program of 15 specialized core facilities and scientific services drives advances by integrating dedicated experts and cutting-edge technologies across the entire research pipeline, from basic science to clinical trial.

## PerkinElmer IVIS Spectrum In Vivo Imaging Systems

Our optical imaging systems can non-invasively measure fluorescent or bioluminescence signals to track whole-body tumor progression with high throughput.

### Bioluminescence imaging (BLI)

BLI measures light emission resulting from an enzymatic reaction catalyzed by one of several different luciferase enzymes. The amount of light produced by the optical reporter of tagged cells is proportional to the number of cells expressing the enzymatic activity. This is an excellent, highthroughput method for tracking whole-body tumor progression.

### Fluorescence imaging (FLI)

FLI uses light to probe fluorescent dyes or proteins tagged to cells of interest. Multiple fluorophores can be simultaneously imaged within the same sample and distinguished from one another to provide multiplexed information with high cellular specificity.

**Spatial resolution limit:** ~ 20  $\mu\text{m}$

**Throughput:** Up to five animals per image

**Image acquisition time:** milliseconds – seconds

### Detection bands:

- 10 excitation filters (430/50, 465/30, 500/40, 535/30, 570/30, 605/60, 640/40, 675/30, 710/40, 745/30)
- 18 emission filters with 20 nm bandwidth (500, 520, 540, 560, 580, 600, 620, 640, 660, 680, 700, 720, 740, 760, 780, 800, 820, 840 nm)

**Analysis software:** Living Image



### LEARN MORE

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