

Advance candidates with comprehensive biodistribution profiles

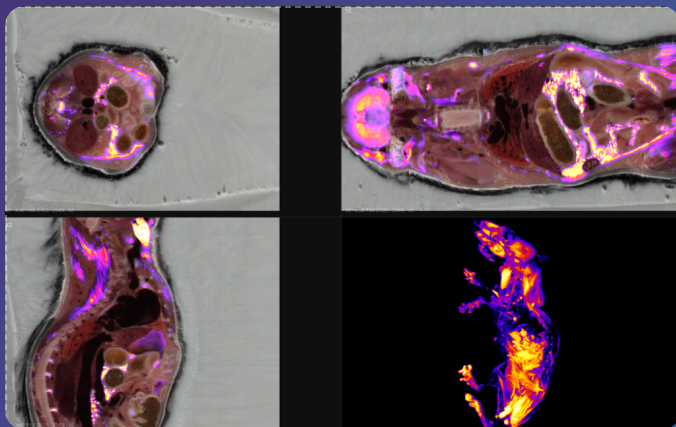
THE CHALLENGE

Whether you are screening candidates in discovery, optimizing a delivery platform, or characterizing the models used to test them, program decisions depend on knowing where a fluorescently labeled therapeutic or cell travels, where it accumulates, and which off-target tissues it reaches. *Ex vivo* methods such as dissection and histology answer these questions one tissue or one section at a time, and *in vivo* imaging captures the whole body at lower resolution, leaving gaps that surface later in development, when they cost the most to address.

- ✗ Dissection-based studies rely on preselected organs, introducing sampling bias
- ✗ Delivery and downstream response can't be confirmed in the same tissue
- ✗ Uneven or localized signal is easily missed between tissue sections
- ✗ Off-target accumulation outside sampled organs goes undetected

THE SOLUTION

Cryo-Fluorescence Tomography (CFT)



20 μ m
RESOLUTION

6
FLUORESCENCE
CHANNELS

50+
FACILITIES

32+
PUBLICATIONS

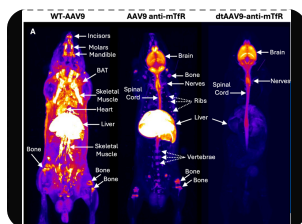
CFT delivers a whole-animal or tissue 3D view that co-registers white-light anatomy with multiplexed molecular fluorescence.

- Compatible with fluorescently labeled antibodies, ADCs, nanoparticles, AAVs, LNPs, cells, and reporter proteins
- Quantify signal across organs and tissues
- Use CFT services or purchase a Xerra™ system for in-house use
- Designed to image a variety of animal models and sample sizes
- Collect tissue samples during CFT imaging for downstream analysis
- Service projects include access to the newly launched EMIT Viewer for 3D data visualization

WHAT CFT ENABLES

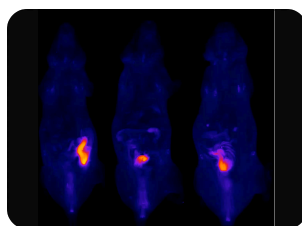
- ✓ Map biodistribution of drugs, biologics, delivery vehicles, and cells across every organ and tissue, including bone
- ✓ Identify unintended or off-target distribution
- ✓ Multiplex fluorophores to follow multiple compounds, cell populations, or readouts in one study
- ✓ Co-localize a labeled therapeutic with reporter expression or labeled cell populations in the same animal
- ✓ Screen whole-body biodistribution patterns across candidates to inform early selection
- ✓ Guide tissue collection for downstream assays based on observed signal localization

COMMON APPLICATIONS OF CFT



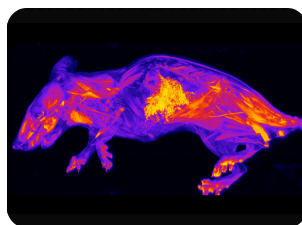
Gene Therapy

Whole-body view of how capsid engineering changes where transgenes express.



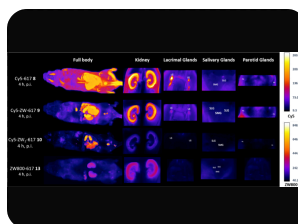
Antibody Targeting

Target-specific antibody uptake confirmed against wild-type controls.



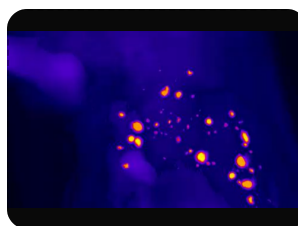
Transgenic Models

Whole-body macrophage distribution mapped in a GFP-expressing transgenic mouse.



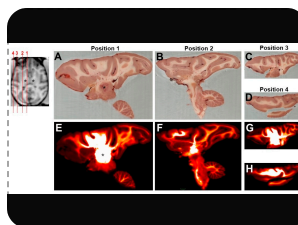
Candidate Screening

Quantitative whole-body data to rank lead candidates.



Oncology Models

Metastatic lesions detected as small as 0.003 mm³ across the whole animal.



Large Animal Imaging

AAV expression mapped across a primate hemibrain at 30 µm resolution.

Biodistribution studies, coordinated end to end



EMIT Imaging serves as your project management partner, coordinating *in vivo* studies, CFT imaging, and downstream tissue analysis, so your team spends less time managing vendors and more time focused on research.

In Vivo Pharmacology Study

Animals dosed and prepared for imaging via partner network

↓ Samples frozen + sent to EMIT Imaging

CFT Biodistribution Imaging

CFT creates a high resolution 3D map of therapeutic biodistribution for whole-body or individual tissues

↓ CFT informs tissue collection

Confirmatory Tissue Analysis

qPCR/ddPCR, RNA-Seq, light sheet microscopy, and histology are performed via partner network

↓ Initial results shared and compiled

Data Review

Final reports are consolidated and reviewed with your team