Discovery Solutions

perceptive discovery

Preclinical Imaging Services to Advance your Drug Discovery

With industry-leading expertise in model development, preclinical imaging, imaging analytics, and radiochemistry, Perceptive Discovery is your ideal research partner. Our customized services deliver high-quality study design, image capture, and analysis, enabling deeper insight into:

- Biodistribution
- Efficacy
- Pharmacoexpression
- Radiopharmaceutical therapies and theranostics
- Combination therapy
- Target expression and engagement
- PK and PD
- Dosimetry

Solutions

Imaging Capabilities	*In Vivo*	*In Vitro & Ex Vivo*	Therapeutic Modality	Imaging Agent Chemistry
MRI	Rodent models	Radioligand binding assays	Radioligand Therapy and theranostics	Radiolabelling for imaging and therapy
PET	Syngeneic	Western Blots	ADCs	Fluorescent labelling
SPECT	CDX	FACs	Therapeutic antibodies	
CT	PDX	ELISA	Small molecules	
Ultrasound	Orthotopic	2D & 3D autoradiography	Peptides	
IVIS Bioluminescence	Higher species including NHP	Gamma Counting	Cells (ie T cells)	
IVIS Fluorescence	Dosimetry	Liquid Scintillation counting	External Beam Radiation	
Cryofluorescence Tomography (CFT)		Dosimetry	Viruses	
Optoacoustic Tomography			Nanoparticles	
			Nucleic Acids (e.g. ASO, RNA, DNA)	
			Novel ligands	

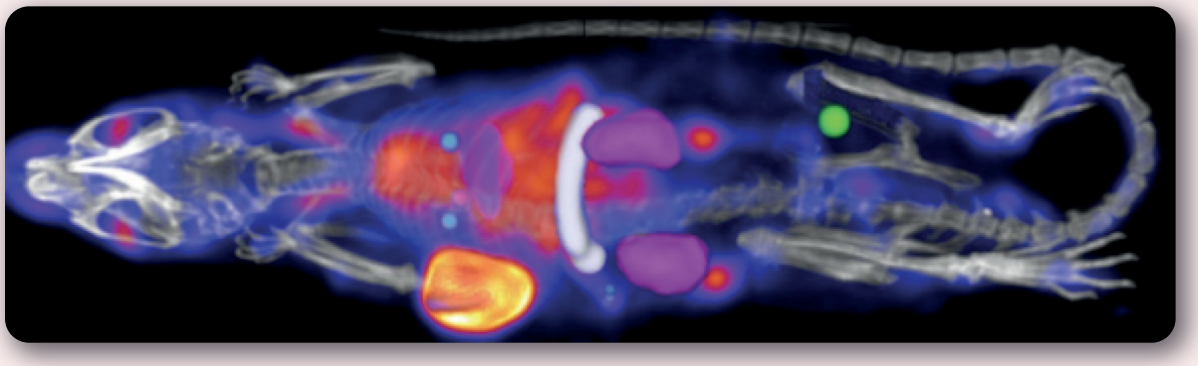
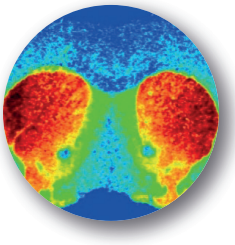


Fig 1. Processed SPECT-CT image showing region of interest placement for biodistribution analysis of a radiolabelled antibody targeting transformed MUC1, a cancer associated antigen overexpressed in >90% of triple negative breast cancers (Kelly et al, Theranostics 2020)

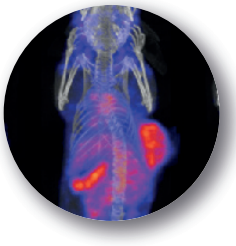
Example Application Areas

Target Expression and Engagement



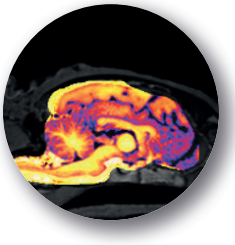
- *in vivo, ex vivo* and *in vitro* quantification and localization of target expression and candidate affinity
- Determine relationships between dose, plasma concentration and receptor occupancy

Biodistribution - Radiolabeling & Optical Reporters



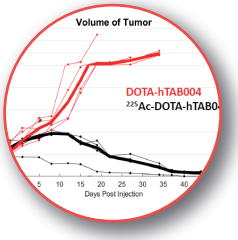
- Proteins from peptides to antibodies
- Cells, viruses, nanoparticles, oligonucleotides
- Targeting, kinetics, and whole body distribution in 3D

Pharmacodynamic (PD) Biomarkers



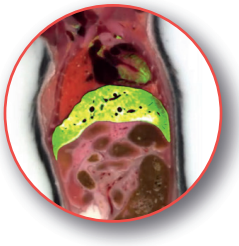
- Non-invasive, quantitative and translational imaging biomarkers for PD response
- Correlate PD response with efficacy
- Translate for trial stratification, receptor binding and response assessment

Efficacy



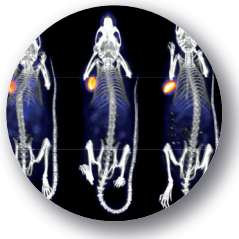
- Quantify efficacy outcome measures in research models *in vivo*
- Screening and candidate selection
- Secondary efficacy biomarkers through imaging

Gene Therapy



- Image gene delivery and time course in whole body *in vivo*
- Visualize viral trafficking *in vivo*
- High resolution and high sensitivity *ex vivo* gene imaging

Radiopharmaceutical Therapies & Theranostics



- Radiolabeling for imaging and therapy
- Imaging isotope to validate targeting and distribution
- Therapeutic isotope for efficacy using alpha and beta emitters

Therapeutic Expertise

- Small Molecules
- Oligonucleotides
- ASOs
- DNA/RNA
- Peptides
- Proteins
- mAb/Fabs
- ADCs
- T Cells
- Stem Cells
- Viruses
- Nanoparticles/LNPs

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