

# Immuno-Oncology: Animal Models

## Oncology - Xenograft (s.c)

- ❖ Brain – U87MG, A172
- ❖ Breast – MCF-7, MDAMB-231, MDA-MB-453, MDA-MB-468, HCC1395, BT474
- ❖ Bladder – T24, HT-1376
- ❖ Colon – HT29, HCT116, DLD1, COLO-205
- ❖ Epidermoid – A431
- ❖ Gastric – N87
- ❖ Lung – A549, H1975
- ❖ Liver – HepG2
- ❖ Kidney – ACHN
- ❖ Melanoma – A375, SK-MEL-28
- ❖ Medulloblastoma – D283
- ❖ Prostate – PC3
- ❖ Pancreas – BxPC-3, Mia PaCa-2
- ❖ Ovary – SKOV-3
- ❖ Tongue – CAL27



## Syngeneic

- ❖ Breast – 4T1
- ❖ Bladder – NBT-II
- ❖ Colon – CT26, MC38<sup>#</sup> (#License fee as applicable)
- ❖ Melanoma – B16F10
- ❖ Myeloma – J558
- ❖ Fibrosarcoma – WEHI-164, MCA205
- ❖ Lung – LLC
- ❖ Liver – Hepa 1-6
- ❖ Renal – Renca

## Leukemia & Lymphoma

- ❖ AML - THP1, HL60
- ❖ CML - K562,
- ❖ Lymphoma – H929, U937

## PD biomarker: Tumor Infiltrating Lymphocytes (TIL) FACS Analysis

Lineage	Markers
<b>Lymphoid</b>	
T cell	CD45, CD3, CD4, CD8
Treg	CD4+ CD25+ FOXP3+
B cell	CD19, CD20
NK cell	CD16, CD56
<b>Myeloid</b>	
TAM	CD33, CD11b, Ly6C
MDSC	CD33, CD11b, Ly6G
DC	CD11c+ CD103+ CD24+

## Orthotopic

- ❖ Colon – DLD-1, HT29, HCT116
- ❖ Breast – MADMB-231, 4T1
- ❖ Pancreas – MiaPaCa2, BxPC-3
- ❖ Bladder – T24
- ❖ Brain – U87MG

## Metastasis

- ❖ Lung – A549
- ❖ Melanoma – B16F10

## Study end points

- ❖ Tumor Growth Inhibition (% TGI)
- ❖ Tumor Growth Delay (TGD)
- ❖ Partial regression/Complete regression
- ❖ Tumor volume
- ❖ Tumor weight
- ❖ % Body weight change
- ❖ Clinical signs
- ❖ Survival; ILS (increase in life span)
- ❖ Biomarker Analysis (TIL analysis in blood, Tumor, spleen and Cytokine)



- Whole body 3D Optical Tomography
- Bioluminescence
- Fluorescence

The IVIS® Spectrum

# IVIS Spectrum: In Vivo Imaging Capabilities at Adgyl



Our state-of-the-art, preclinical **small animal IVIS imaging system** has **2D & 3D optical tomography** in one platform to offer following services,

- ❖ **Non-invasive longitudinal monitoring of disease progression:** Oncology, Inflammation, CNS, CVD, Metabolic Disorders
- ❖ **Real time monitoring and biodistribution of**
  - Stem cells trafficking
  - Antibodies (mAbs, Bispecific's, CART, T cells, Gamma-delta ( $\gamma\delta$ ) T cells)
  - Target specificity for antibodies

## PerkinElmer IVIS® Spectrum

### Whole body 3D Optical Tomography

#### Labelling range

- ❖ **Bioluminescent : cell line**
  - BxPC3 Red F-luc
  - IU87MG Red F-luc
  - PC3 Red F-luc
  - T24 RFP cell line
- ❖ **Luciferase MC38**
- ❖ **Fluorescent agents**
- ❖ **Dil fluorophore**
- ❖ **RFP - Red to far infra red range**
- ❖ **Gold nanoparticles**

