Cancer pharmacology services

- Integrated package of pre-clinical cancer pharmacology services
- For targeted oncology and immuno-oncology:
  - *in vitro* cell-free and cell-based assays
  - *in vivo* tumor models
- Multidisciplinary *ex vivo* PD analysis

-*in vitro* assays

- **Biochemical assays**
  HTRF, AlphaScreen, High throughput screening , FRET, ADP-Glo
- **Biophysical assays**
  SPR with Biacore 8K,HTRF, ELISA, AlphaLisa FACS
- **Cellular assays**
  Viability and cytotoxicity
  Spheroid/Organoid
  600+ human cancer cell lines
  70+ PDX-derived cell lines

Confocal-TCS SP8

Cybio Felix

Echo655

Incucyte S3

Biacore 8K

MST

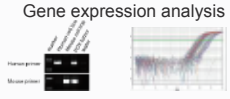
-*in vivo* tumor models

- **Targeted oncology**
  320+ CDXs/**30** cancer types
  1,400+ PDXs/**30** cancer types
  Well annotated by **SOC** and **NGS**
- **Immuno-oncology**
  88 syngeneic models/**21** cancer types
  Transgenic mice for **20+** targets
  20+ PBMC/HSC humanized models
- **Translational models**
  42 orthotopic models/**15** cancer types
  32 metastatic models/**7** cancer types
  32 drug resistant models/**11** key targets
  Hamster and rat models
- **Informative online database**
  1,800+ model datasets
  Growth kinetics: **3,000**
  Histopathology: **2,800**
  Pharmacological sensitivity: **4,000**
  NGS (WES/RNAseq): **2,700**

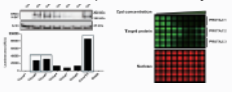
-*ex vivo* PD analysis

Molecular PD assays

Gene expression analysis



Protein expression analysis



Cytokine expression analysis

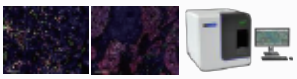
Meso Scale Discovery (MSD)

Luminex Multiplex System

Histopathology

Single IHC/IF

Multiplex IF up-to **12** colors



BaseScope and RNAScope

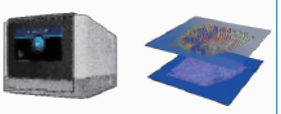
Flow cytometry

Cytek Aurora (**40** colors)
BD LSR Fortessa (**18** colors)
BD LSR Fortessa X20 (**18** colors)
BD Canto plus (**10** colors)
BD Canto II (**8** colors)
BD FACS Aria II (**18** colors)
Intellicyt iQue3

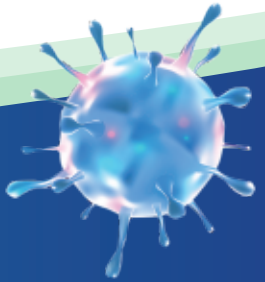
NGS

scRNA-seq

Spatial transcriptomics



NanoString



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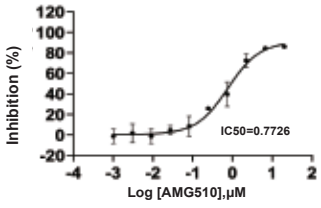
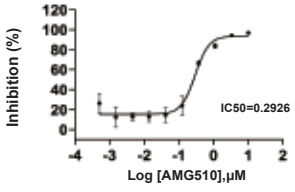
Case study: pharmacological evaluation of a KRAS G12C inhibitor

1 Protein-based screening

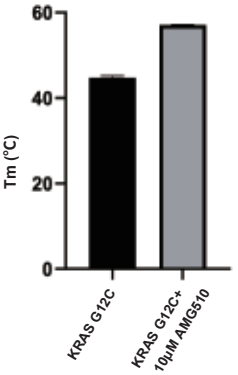
KRAS G12C/RAF1 binding assay HTRF



KRAS G12C/SOS1 binding assay HTRF

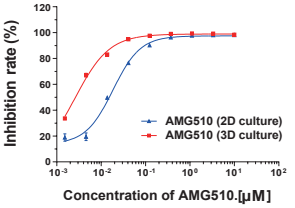


KRAS binding assay_TSA

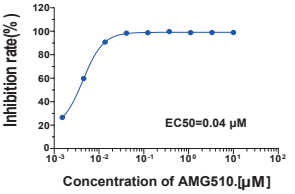


2 Cell-based screening and MoA

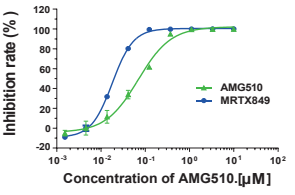
NCI-H358 CTG screening (2D&3D)



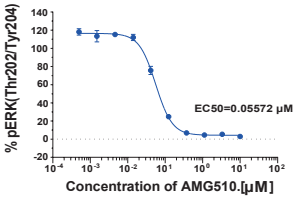
NCI-H358_cell p/t-ERK MSD analysis



Ba/F3-KRAS^{G12C} CTG screening (2D)

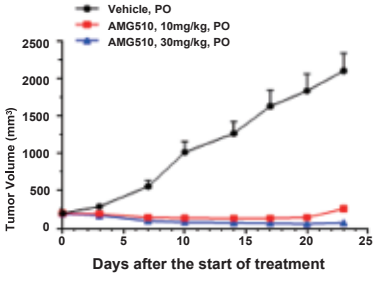


NCI-H358_cell p-ERK HTRF analysis

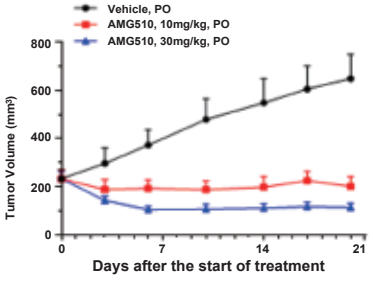


3 *in vivo* model efficacy study

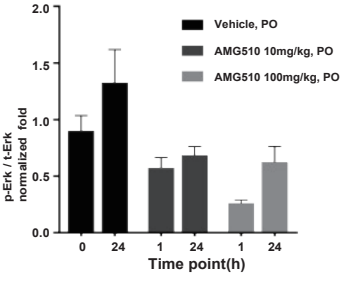
MIA PaCa-2 CDX model efficacy study



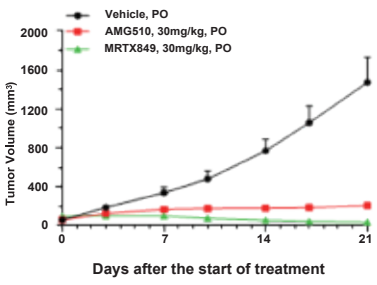
LU-01-0030 PDX model efficacy study



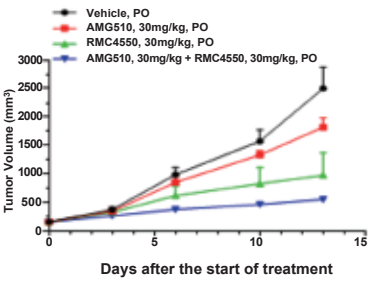
NCI-H358 tumor MSD analysis



Ba/F3-KRAS^{G12C}cell model efficacy study



AMG510-induced resistant MIA PaCa-2 model efficacy study



4 *ex vivo* PD analysis