

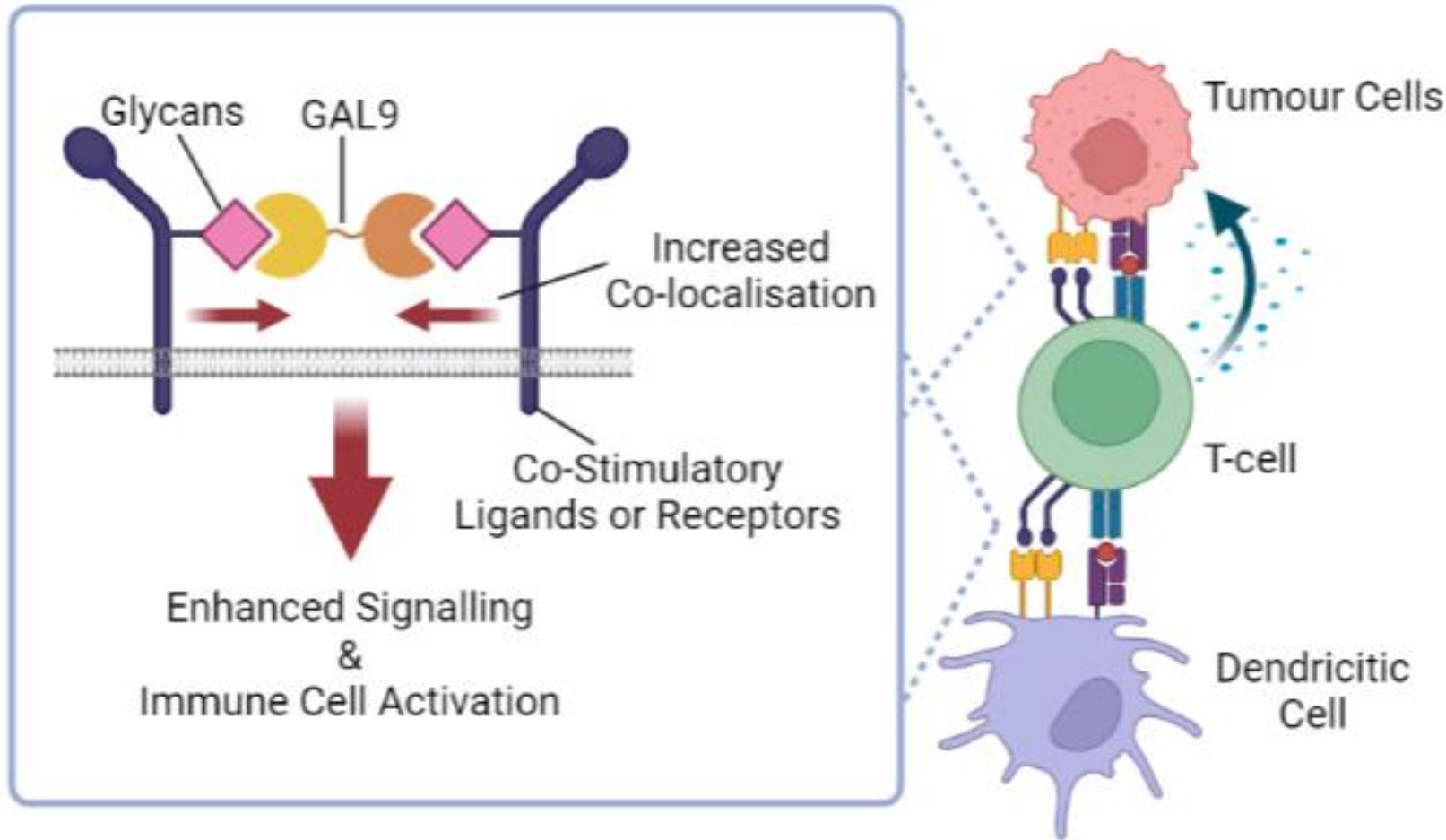


QIMR Berghofer
Medical Research Institute

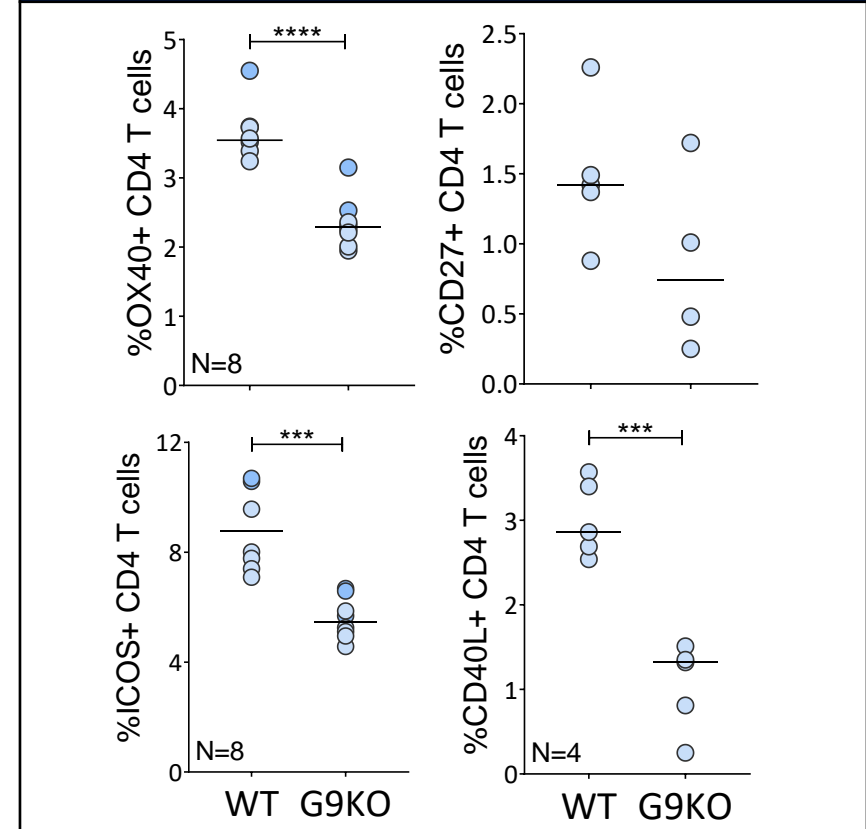
Galectin-9 targeting mAb for solid tumours

Partnering Opportunity

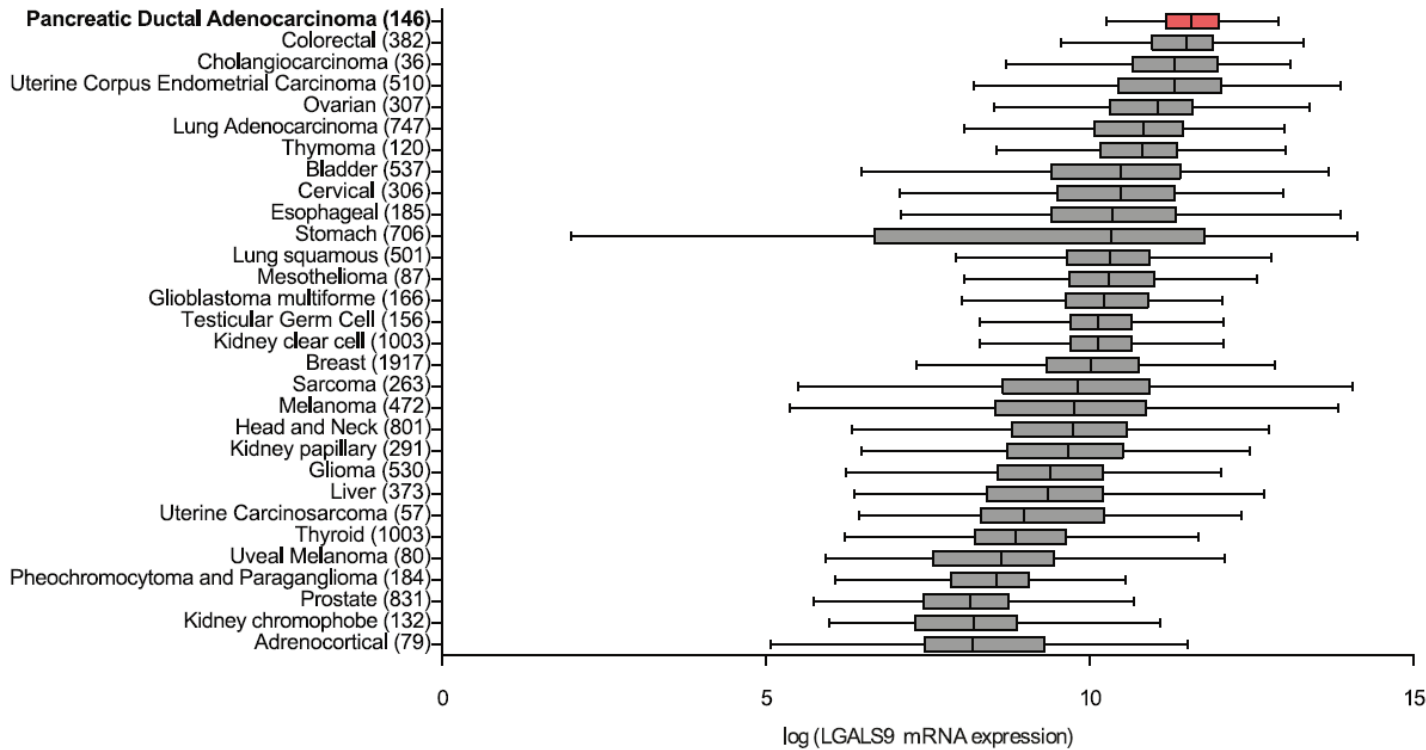
Galectin-9 (GAL9) modulates anti-tumour immune cell activity via enhancing co-stimulatory signalling



GAL9 KO Reduces Co-stimulatory Molecules on T-cells

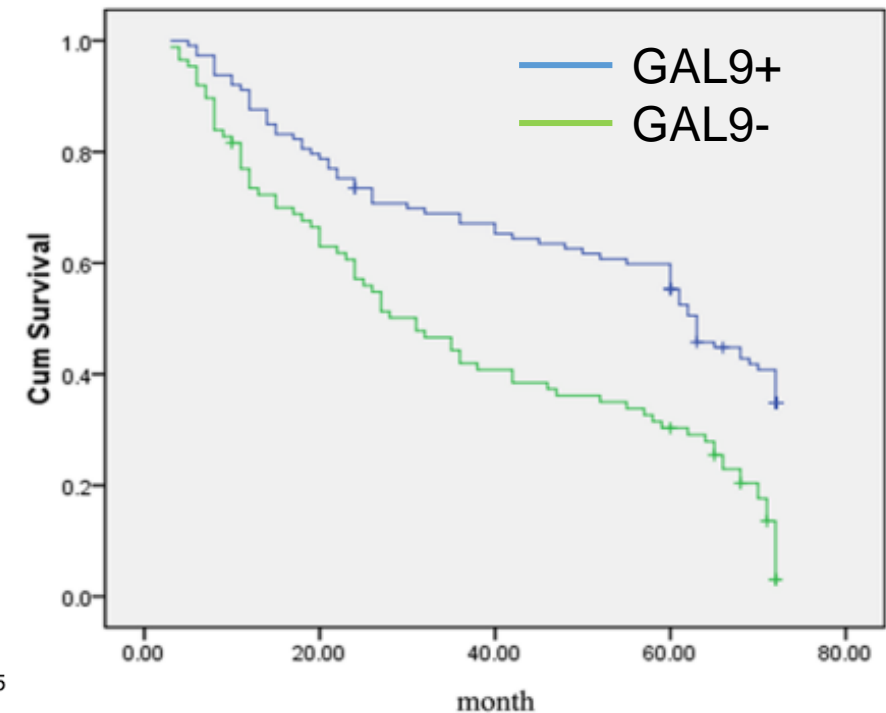


Galectin-9 is overexpressed in the TME of solid tumours and associated with improved survival in some indications



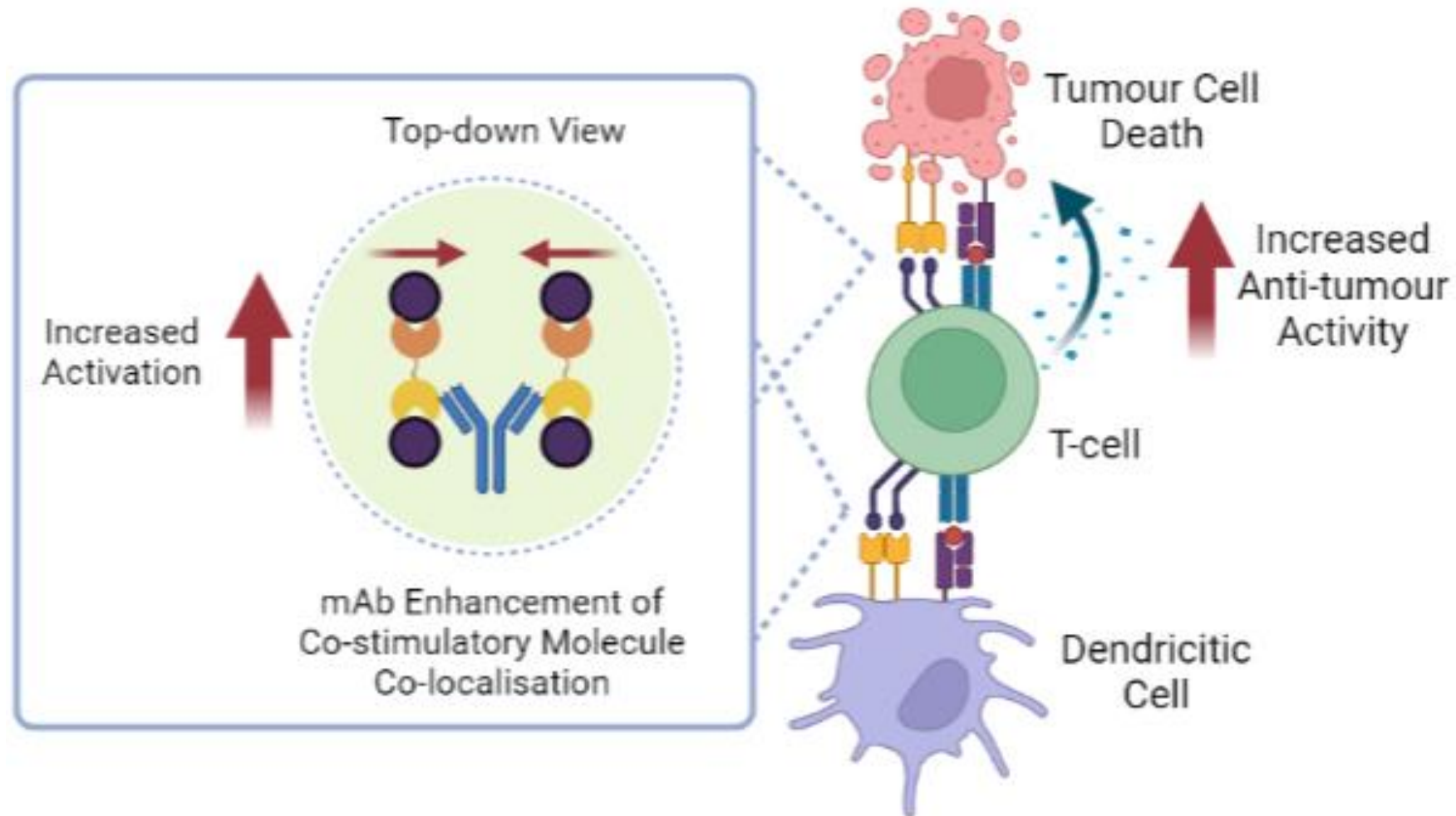
(Seifert et al 2020)

Hepatocellular Carcinoma



(Zhang et al 2012)

Developing mAbs to enhance Galectin-9 mediated co-localisation of co-stimulatory molecules



Galectin-9 targeting mAb program is backed by an experienced drug discovery team



Antibody Discovery

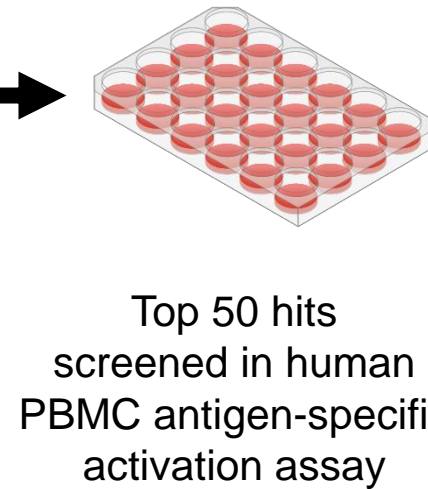
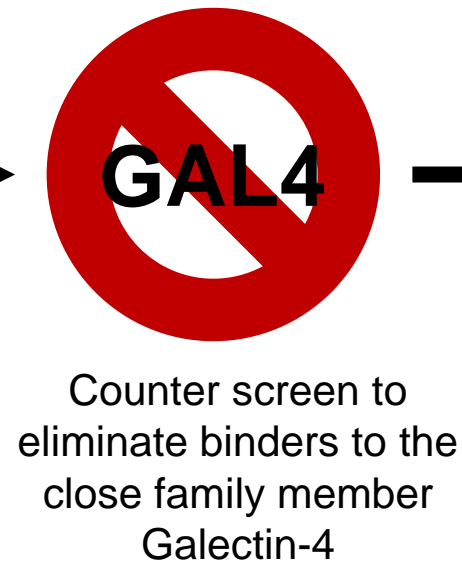
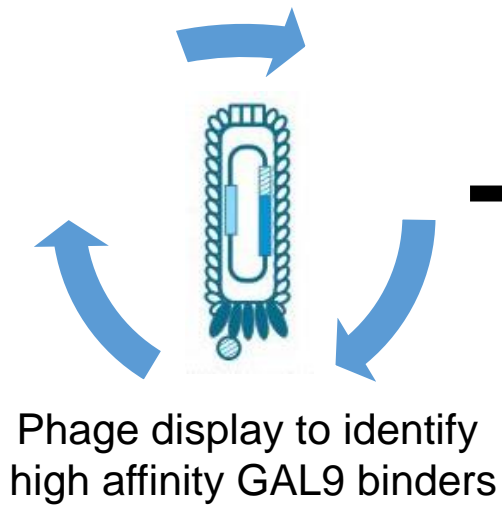
- US based, antibody drug discovery biotech
- Established in 2011
- Track record of partnering with pharma and including Merck, Exelixis, Oxford Bioteherapeutics, AgonOx

Target Discovery & Preclinical Biology

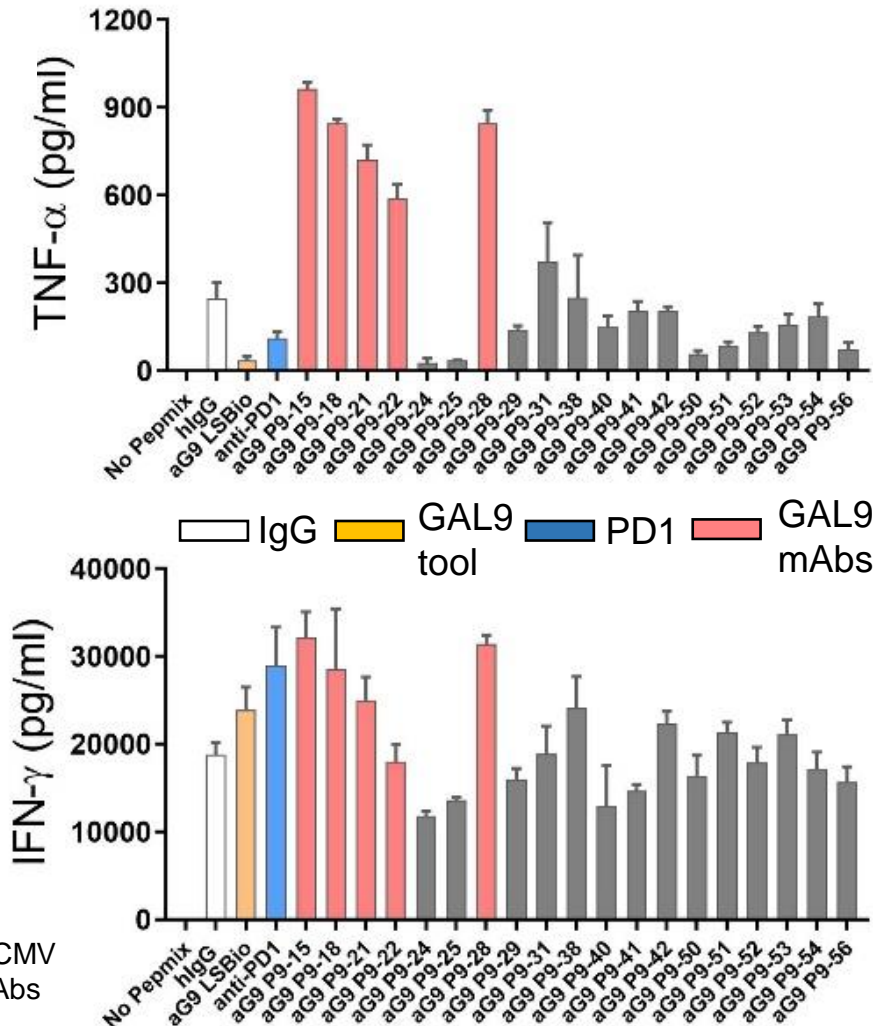


- A.Prof Michelle Wykes** – Lead Scientist
- ex University of Oxford
 - Expertise in GAL9 biology in cancer
 - 2 active preclinical IO drug development programs
 - Co-developing a preclinical mAb for autoimmune diseases with CSL Behring

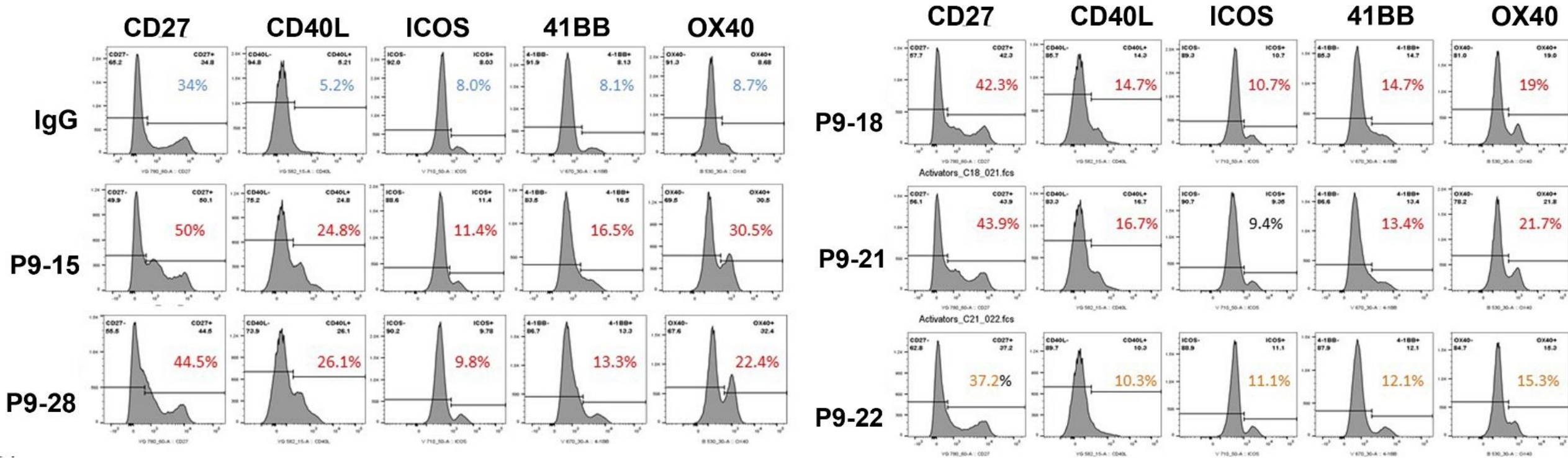
Identified GAL9 mAbs that outperform anti-PD1 at enhancing antigen-specific human immune cell activation



Human PBMCs stimulated with CMV peptides, 72h treatment IgG1 mAbs



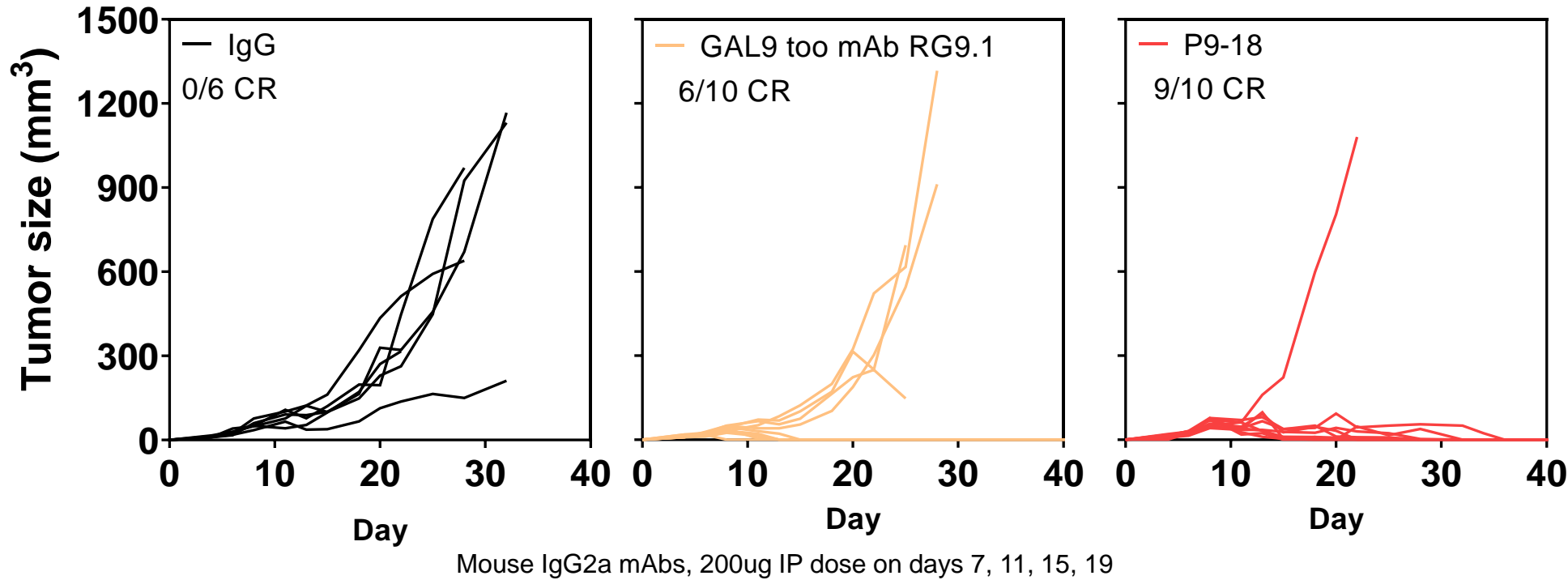
GAL9 mAbs increase co-stimulatory expression on human CD8+ T-cells in an antigen-dependent manner



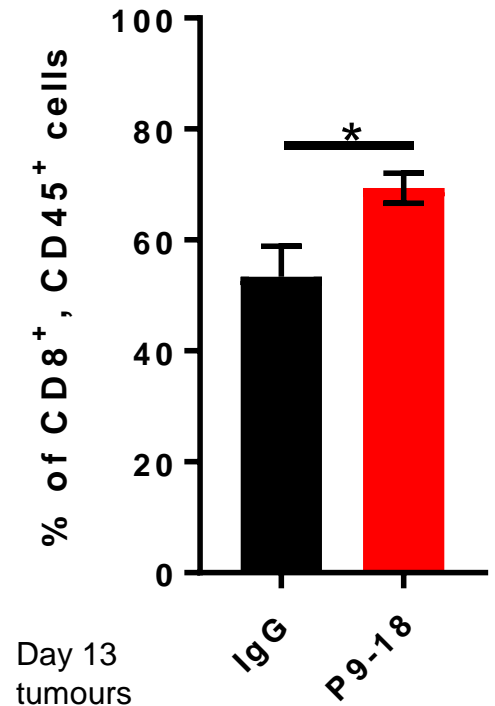
Human PBMCs stimulated with CMV peptides, 72h treatment with IgG1 mAbs, % value represents the % of CD8+ T cells

GAL9 mAb has single agent activity and increases CD8+ T-cells in CT26 tumours in vivo

Strong single agent activity in a CT26 xenograft model

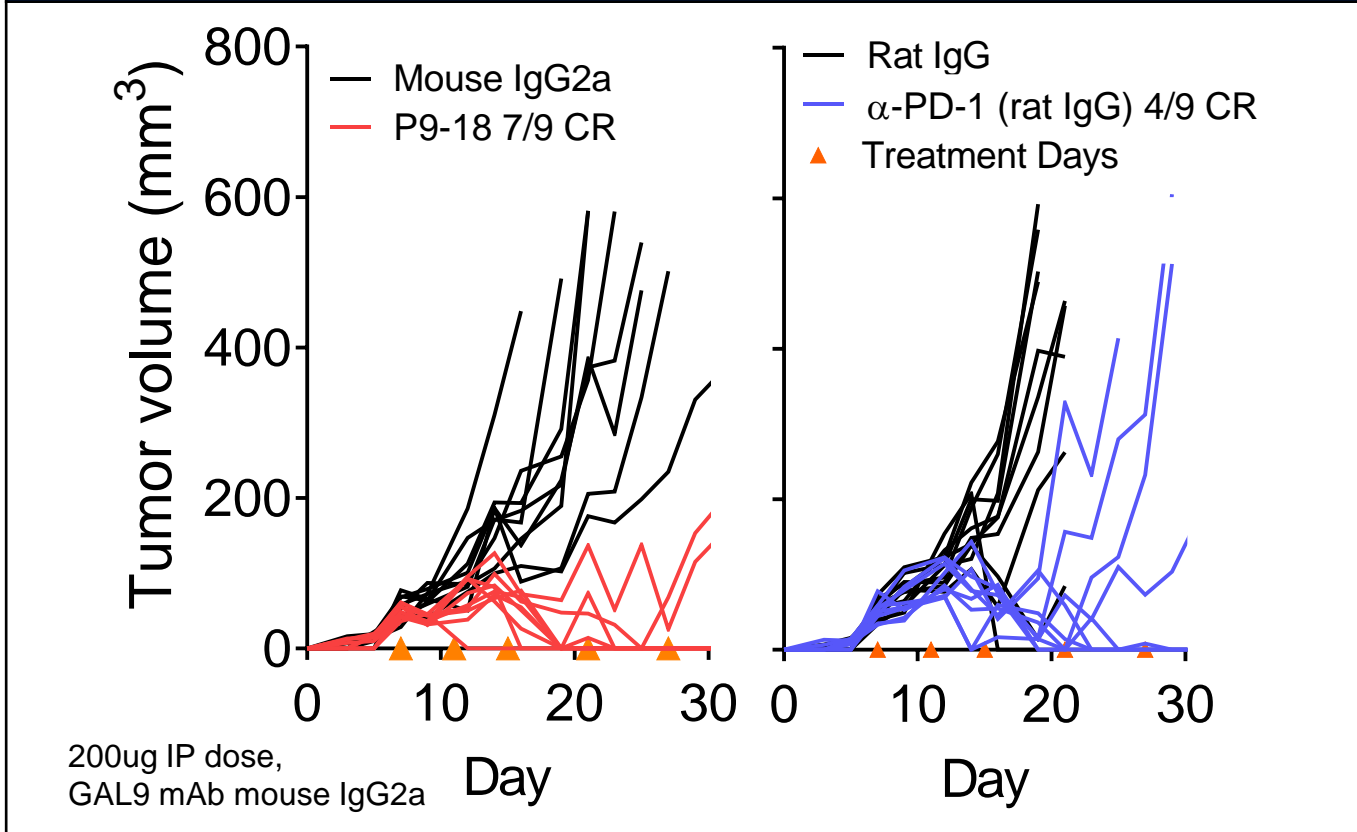


Increased tumour CD8+ T-cells

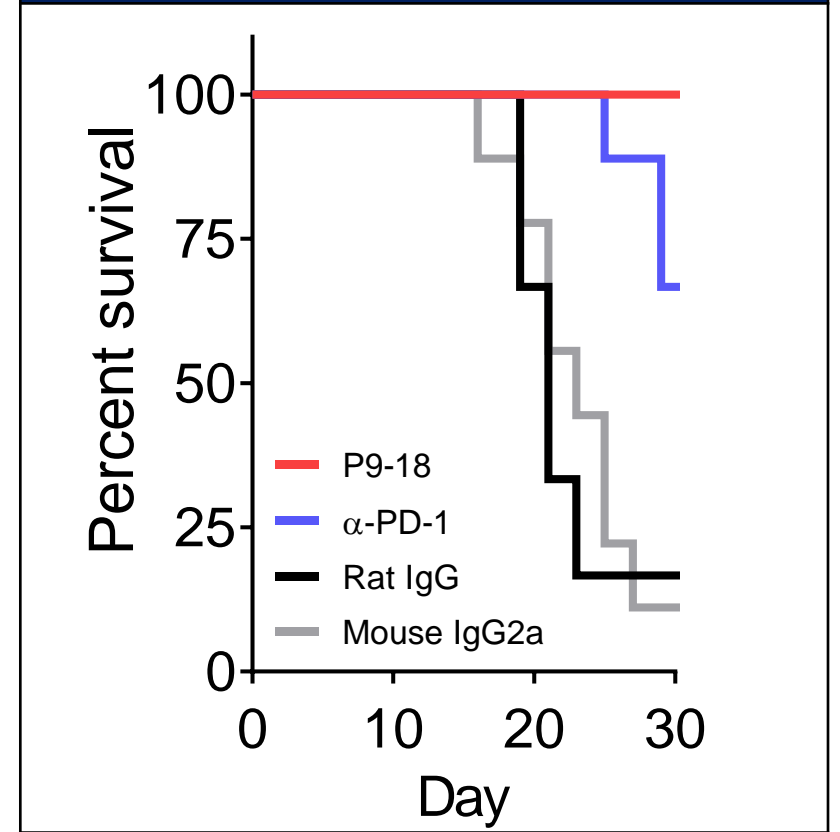


GAL9 mAb has single agent activity and outcompetes anti-PD1 in orthotopic 4T1 tumours

Strong single agent activity in a 4T1 orthotopic model



Improves Overall Survival

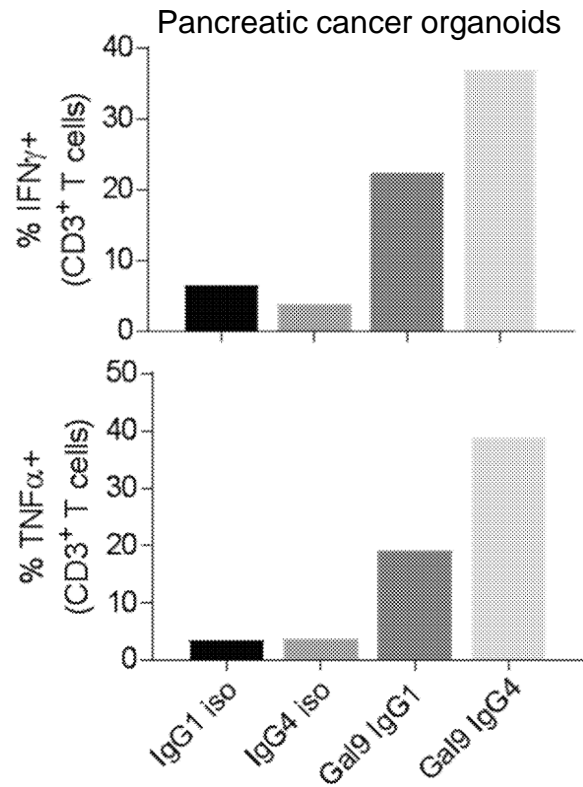


Positioned for differentiation from GAL9 mAb competitors Fibrogen and PureTech

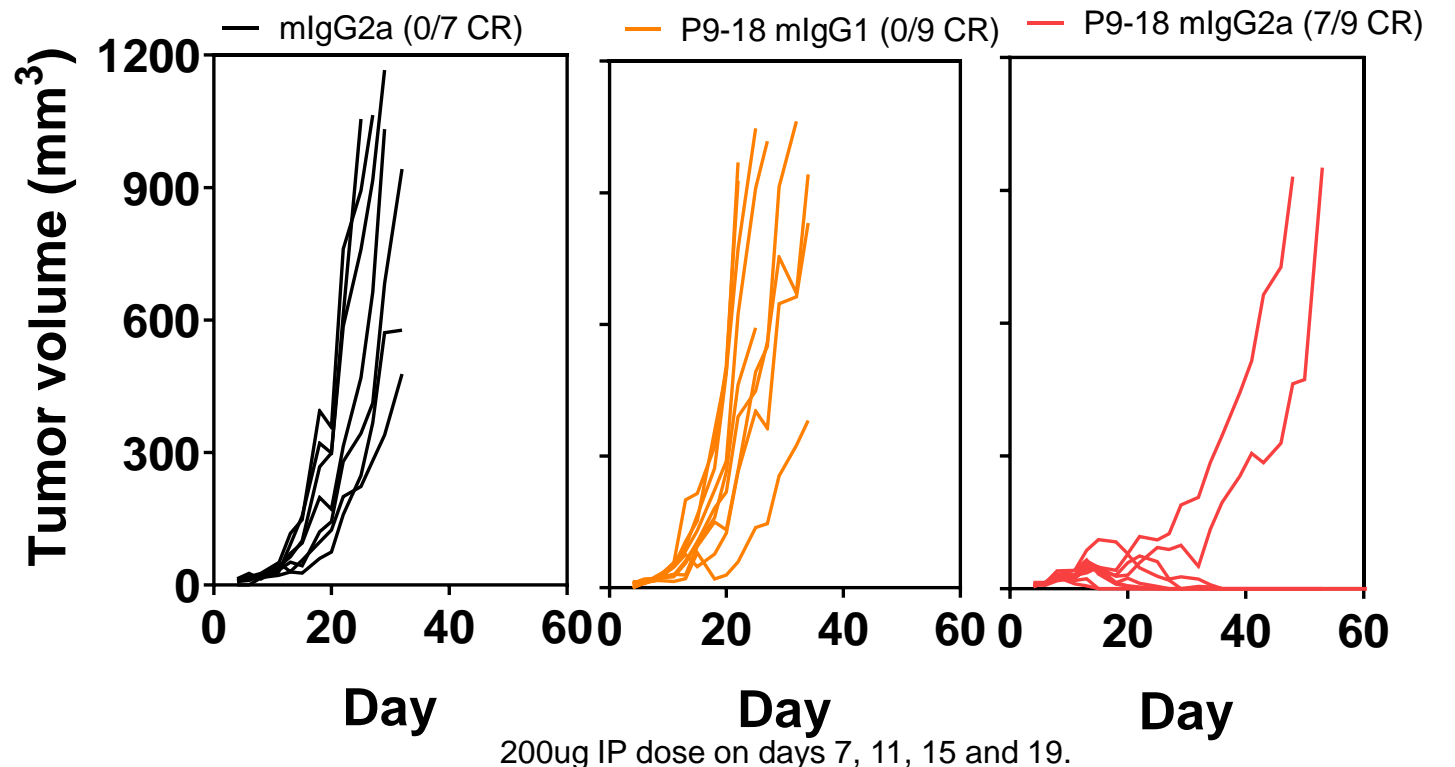
Feature	Fibrogen	PureTech	QIMR Berghofer
Development Stage	IND Enabling	Phase Ia	Preclinical
Species	Humanised mouse	Fully human	Fully human
Epitope	Linker Domain	W309 of CRD2 Domain	Distinct (undisclosed)
MoA	Blocks GAL9 binding to CD44 & TIM3	Blocks GAL9 binding to PD-1 & TIM3	Enhance Co-stimulatory Co-localisation
IgG Format	Undisclosed	IgG4	IgG1
Lead Indication(s)	AML	Pancreatic, colorectal, bile duct	Differentiate

Differentiation from Puretech MoA evidenced by QIMR GAL9 mAb activity only in IgG1 (mouse IgG2a)

Puretech mAb is more active in IgG4 format



QIMR GAL9 mAb is only active in mlgG2 (human IgG1) in CT26 xenograft tumours in vivo



Overview of data package available under CDA, program currently in final stage of lead selection

Data Package	GAL9 mAb Profile
In Vitro Activity	<ul style="list-style-type: none"> ✓ Low nM Kd of antibodies ✓ Increase in antigen-dependent immune cell activation & TNFα and INFγ secretion ✓ Increase in CD8+ T-cell co-stimulatory molecules ○ Enhanced GAL9 induced co-stimulatory co-localization MoA TBC
In Vivo Activity	<ul style="list-style-type: none"> ✓ Single agent activity in multiple tumour models: CT26, B16F10, LLC, EBV PTLD, 4T1 ✓ Long-term anti-tumour memory in CT26 & 4T1 models ✓ IgG format assessment
Epitopes	<ul style="list-style-type: none"> ✓ Pepscan epitope mapping & binning
Developability	<ul style="list-style-type: none"> ✓ In silico CDR liability assessment ✓ Human/murine/cyno cross reactivity ✓ Battery of testing: SEC, HIC, SMAC, DLS, Melting & Aggregation temp, non-reduced and reduced SDS-Page
Selectivity	<ul style="list-style-type: none"> ✓ Selective v Galectin-4
Safety	<ul style="list-style-type: none"> ✓ No adverse events & weight loss observed at 200ug IP

Near-Term Future Activities
<ol style="list-style-type: none"> 1. Finalise lead selection 2. Further validate GAL9 mAb MoA 3. Competitive benchmarking against GAL9 mAb competitors

Seeking licensee or VC investment to launch start-up to progress the program

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