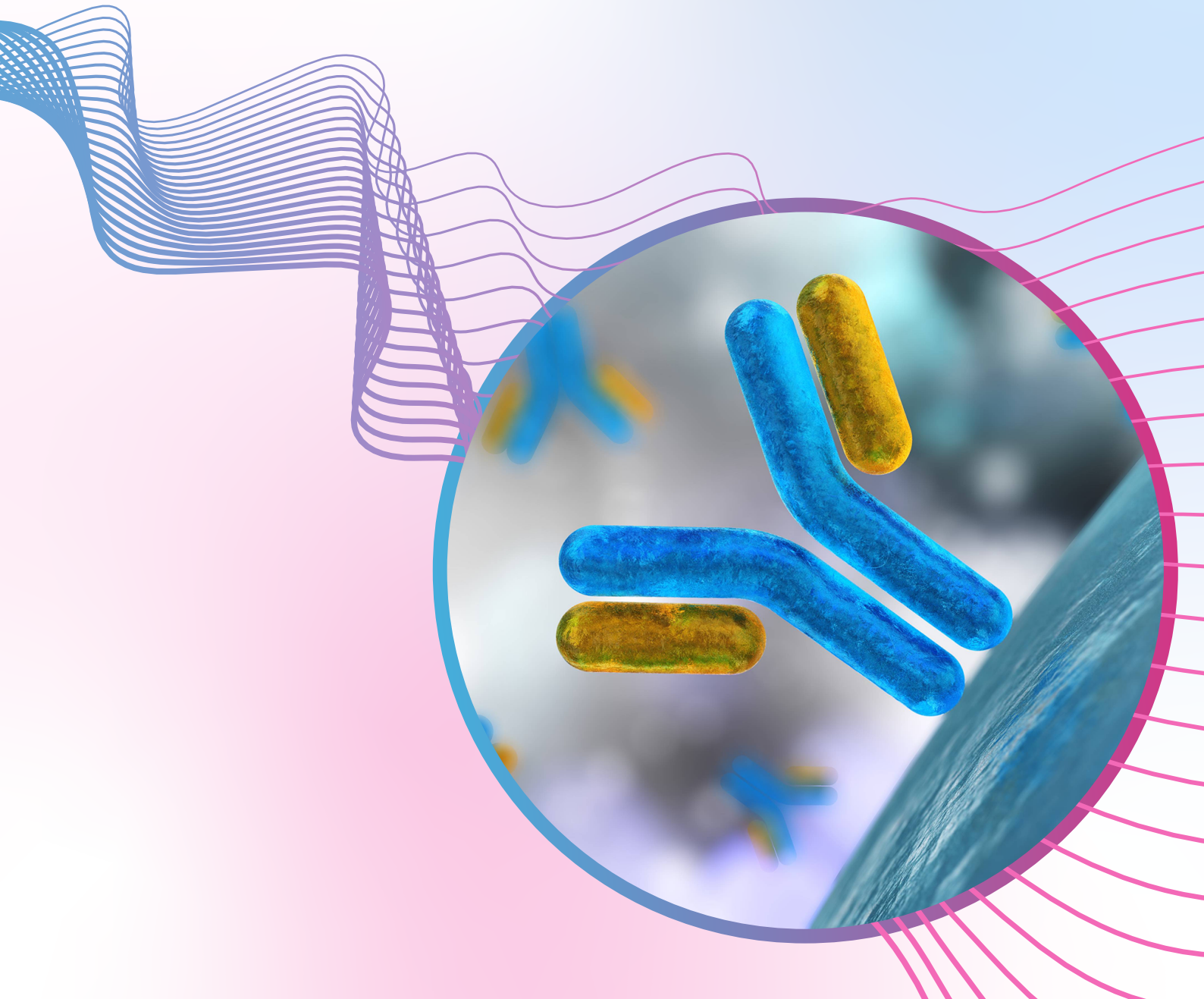# excelra

Comprehensive analysis of putative drug targets and their comparison

Target dossier service

CASE STUDY

Purpose

A large pharma company requested for a comprehensive assessment on two new drug targets of interest which are the most abundantly expressed inhibitory Leukocyte immunoglobulin (Ig)-like receptors.

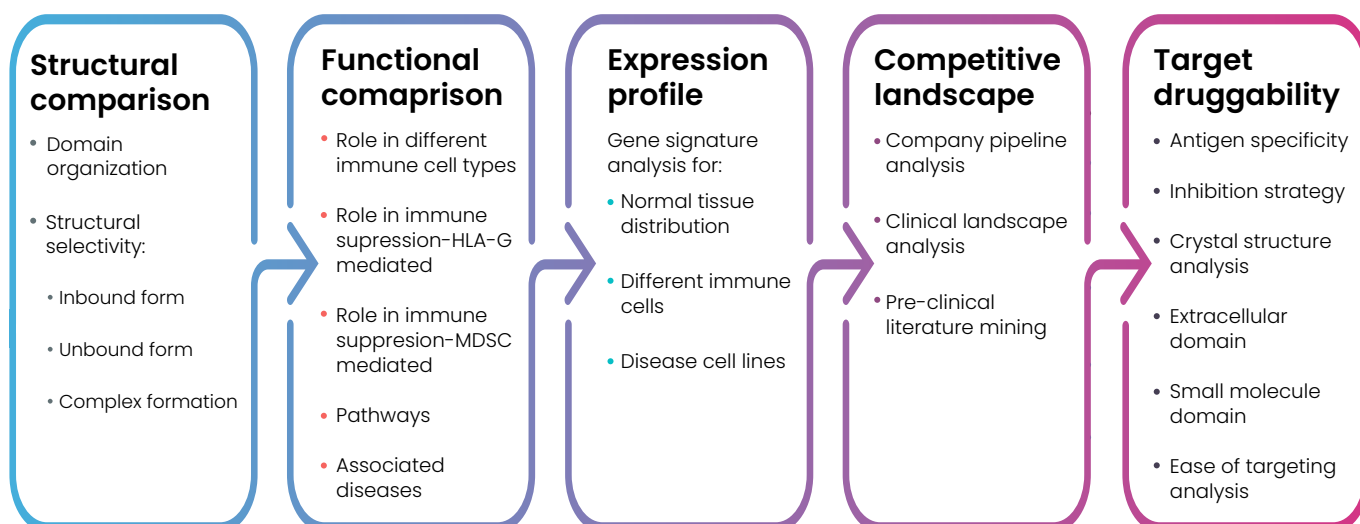## Client

Industry
Pharma

Location
US

Sector
Immuno-oncology

Our approach

Some key highlights from the outcomes are:

- Target function in healthy tissues as well as its association with disease(s)

- Molecular pharmacology, target expression across human tissues/organs, species, gene alterations and target interactions with other proteins/genes

- Sequence, crystal structure, domains and homology modelling

- Adverse events or toxicity data for compounds at any stage of development

- Recommendation of animal models and pre-clinical assays

- ON- and OFF- target safety assessment and de-risking strategies

- Competitor profile: Competitive landscape of drug development by stage (approved, clinical & pre-clinical drugs)

Structural comparison	**Functional comaprison**	**Expression profile**	**Competitive landscape**	**Target druggability**
• Domain organization	• Role in different immune cell types	Gene signature analysis for:	• Company pipeline analysis	• Antigen specificity
• Structural selectivity:	• Role in immune supression-HLA-G mediated	• Normal tissue distribution	• Clinical landscape analysis	• Inhibition strategy
• Inbound form	• Role in immune suppresion-MDSC mediated	• Different immune cells	• Pre-clinical literature mining	• Crystal structure analysis
• Unbound form	• Pathways	• Disease cell lines		• Extracellular domain
• Complex formation	• Associated diseases			• Small molecule domain
				• Ease of targeting analysis

Our contribution

A holistic view of the two targets was provided. The role and MoA of both isoforms were established in the disease of interest. One target was recommended over the other, given that it would be first in class therapy with no current evidence of clinical testing in humans and is easier to target based on crystal structure analysis.

Our service portfolio

Data	**Data curation** Filter out the noise, focus your attention **Clinical data** Analysis-ready data for informed clinical decision-making **Semantic data** Refine your decisions, find your value

Insights	**Bioinformatics** Illuminating the path to faster discoveries **Data science** Unlock the power of data **Visualization** Pictures paint a thousand words

R&D technology	**Product design and development** Unlock your potential with data-driven design and development **Cloud enablement** Optimize your output on the cloud **Data engineering** Mitigate risks, protect your data, and rationalize your portfolio and processes.

Where data means more

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