

---

# Bioanalytical Solutions for Immuno-oncology Therapeutics



# Improving the quality of human health through innovative biomarker and bioanalytical solutions.

## Bioanalytical Solutions for Immuno-oncology — Therapeutics

**Cancer remains one of the most complex and difficult to treat diseases and is a leading cause of death worldwide. Advances in the understanding of the immune system holds great promise for treatment solutions.**

Synexa Life Sciences is a specialist in complex biomarker and bioanalytical assay development, execution and interpretation, providing bespoke assay solutions in an integrated, science driven and quality-orientated approach.

**Our expertise in the field of immunology and immune-based analytical technologies makes us the perfect partner in advancing immuno-oncology therapeutic pipelines.**

Several approaches are currently being explored to overcome tumour evasion mechanisms by harnessing the body's own immune system, with particular emphasis placed on:

- **Monoclonal antibodies**
- **Checkpoint inhibitors**
- **Cell therapies**
- **Oncolytic virus therapies**

We have a range of complementary assays for the assessment of Immuno-oncology therapeutic modalities as well as the required expertise for custom development and validation of bespoke assays. Our proficiency extends across a diverse range of matrices, encompassing the entire biological continuum.

**SOLUTIONS THAT SERVE AT THE FOREFRONT OF THERAPEUTIC DEVELOPMENT**

### Immuno-oncology — Services

**We use innovative approaches and validated platforms to answer customer-specific questions for quality, clinically-relevant data.**

#### **Target Engagement**

Assessment of target engagement quantifies the effects of the therapy on the immune system, providing integral early insight into the therapeutic's activity, saving time and money on molecules with suboptimal engagement.

#### **Mechanism of Action**

Data obtained to quantify the effects of the immune system on the malignancy are best studied in an integrated manner by utilising biomarkers from across the biological continuum, from DNA through to tissue.

# Flow Cytometry Services

Flow Cytometry is core to Synexa’s positioning as a biomarker expert.

Synexa Life Sciences is positioned at the forefront of the rapidly expanding field of flow cytometry, offering up to 28-colour panels. Our team, led by experts in the field with decades of experience, utilise robust and proven technology platforms. These platforms are harmonised across our strategically positioned labs, enabling us to serve our global customer base with high-quality, scientifically rigorous clinical data.

We possess full capability of managing samples through the complete analytical cycle, with dedicated project, logistics and sample management policies.

## Immuno-profiling & Phenotyping Assays

- Lymphocytes (TH, TFH, Treg, TMemory, NK and B cells)
- Dendritic cells (DCs)
- Monocytes
- Macrophages
- Myeloid-derived suppressor cells (MDSCs)
- Multimers staining
- Intracellular staining
- Treg polarisation assessment

## Target engagement/PK/PD Assays

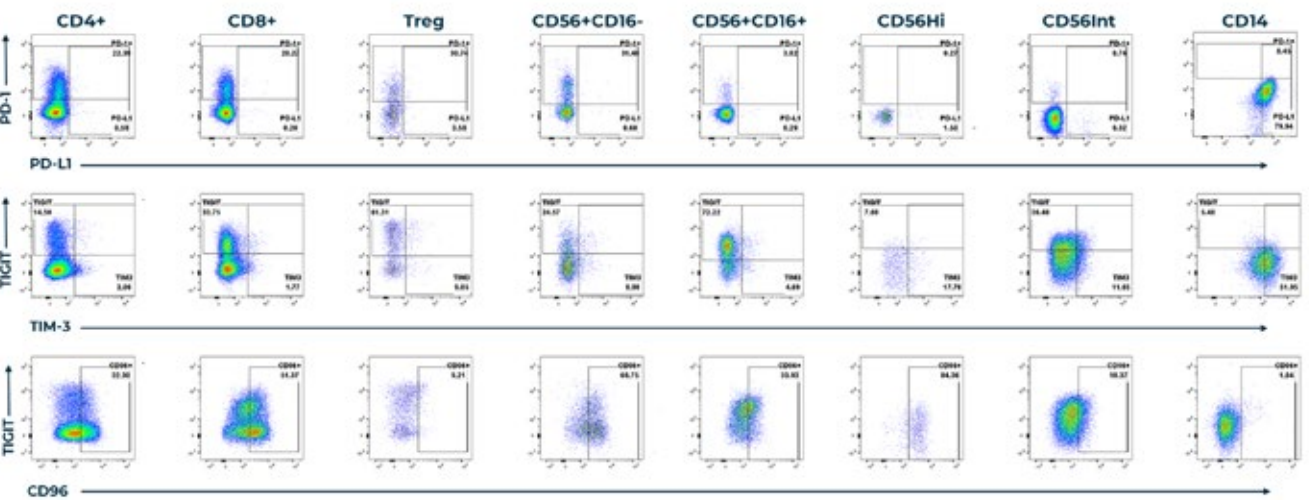
- Receptor occupancy assays
- Phospho-flow assays
- Polyamine uptake assessment
- Flow cytometry-based PK assessment

## Functional Assays

- Cytokine expression
- Cytotoxic markers
- Activation and exhaustion
- Proliferation assays
- Basophil degranulation
- Rare cell detection and quantification
- Antibody-dependant cellular cytotoxicity (ADCC)
- Complement-dependant cytotoxicity (CDC)
- Small particle detection and analysis

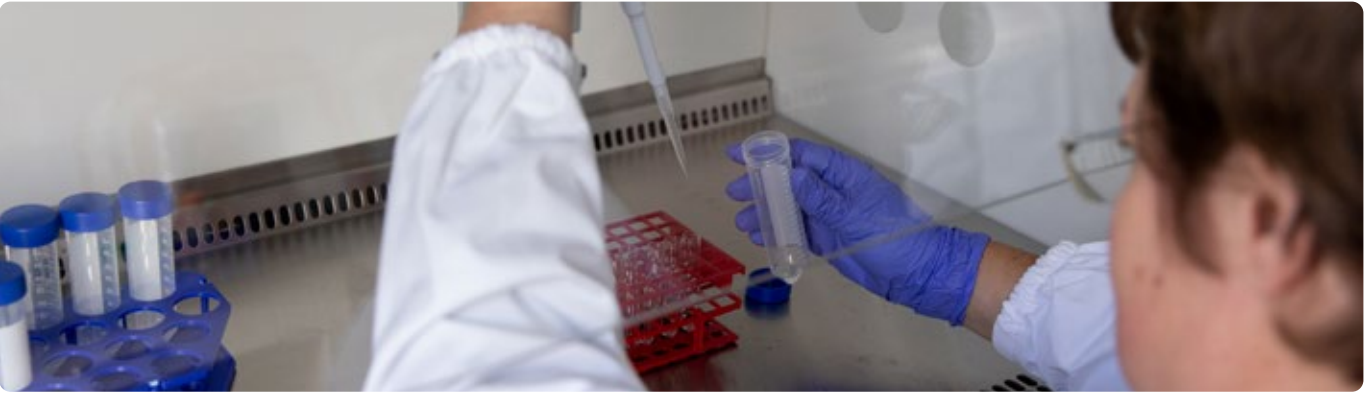
# Case Study Applications

## Immunophenotyping – Co-inhibitory Receptor Expression



Representative dot plots depicting ex vivo co-inhibitory receptor expression of TIM-3, PD-1, PD-L1, CD96 and TIM-3 on multiple cell subsets. B cells are not shown.

# Our Biomarker & Bioanalytical Services



Synexa specialises in providing bespoke end-to-end biomarker and bioanalytical solutions, developed and validated to meet your specific challenges.

## Pre-clinical/ ProtoTrials®

- Biomarker selection & strategy
- Functional human *in vitro* testing

## Genetic

- Digital PCR
- Tumour immunosensitivity
- Microbiome profiling
- Persistence of cell therapies
- Nanostring oncology panels

## Soluble Biomarkers

- Cytokines & Chemokines
- Complement assays
- Serology
- Auto-antibody profiling
- Customised immunoassays

## Cellular

- Immunophenotyping
- Cellular expansion and persistence
- Polyfunctionality
- Receptor occupancy assays
- Cellular avidity

## Tissue

- Histopathology
- IHC & FISH
- Multiplex Immunofluorescence
- Nanostring

## Olink Multiplex Proteomics®

- Oncology panel
- Immuno-oncology panel
- Inflammation panel
- Cytokine panel
- Biological process panel

## Clinical Bioanalysis

- Pharmacokinetics
- Immunogenicity

## Data Analytics & Insights

- Integrated immunological insights
- Complex biosignatures & stratification



Synexa Life Sciences (Pty) Ltd  
4 Kunene Circle  
Omuramba Business Park  
Omuramba Road  
Montague Gardens  
Cape Town 7441  
South Africa

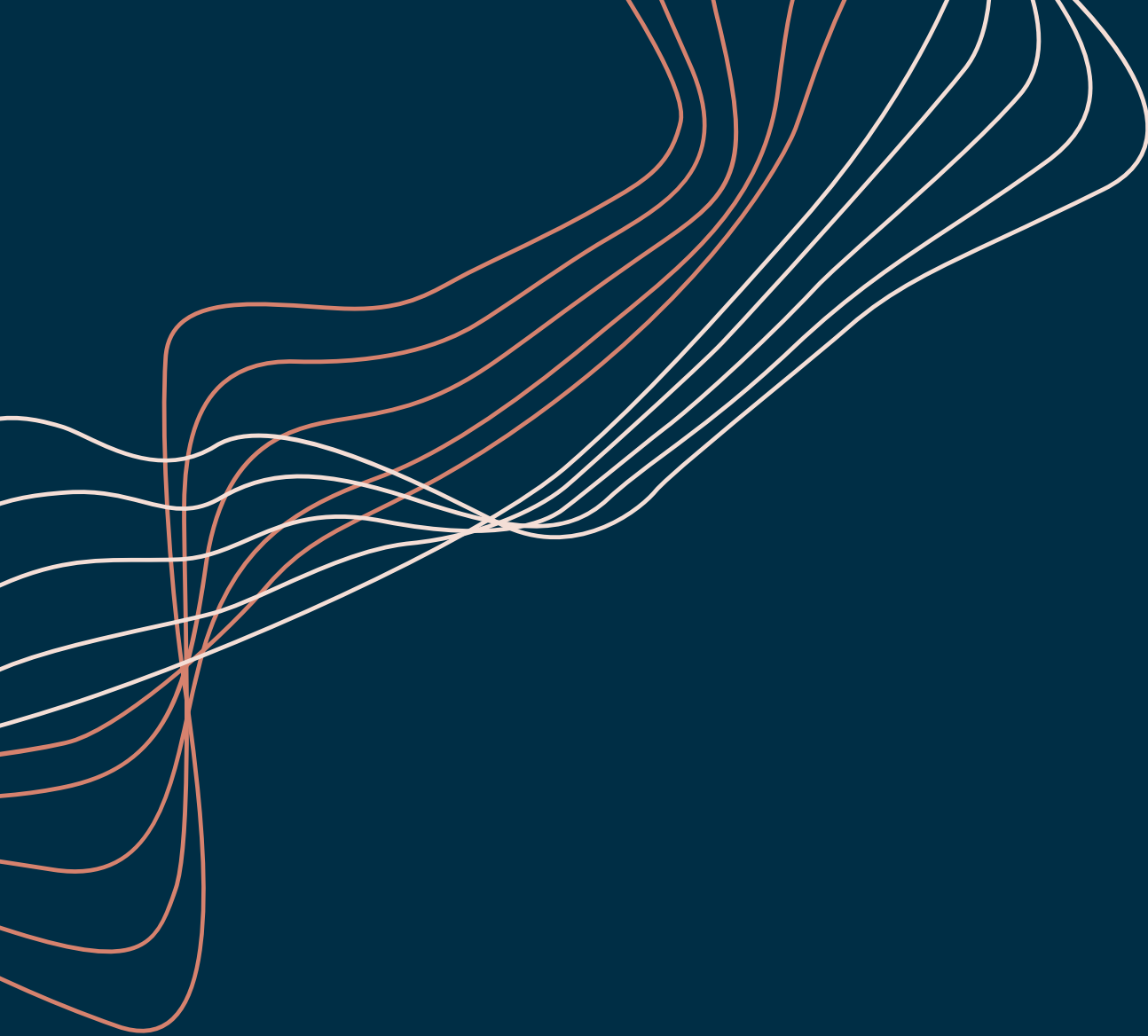
Synexa Life Sciences Ltd  
Room 3.042 Y Block (c/o NPIMR)  
St Mark's Hospital  
Watford Road, Harrow  
Middlesex HA1 3UJ  
UK

Synexa Life Sciences GmbH  
Potsdamer Str. 88 / Lützowstr. 89  
Berlin 10785  
Germany

Tengströminkatu 8  
Turku FI-20360  
Finland

Synexa Life Sciences (US) Inc  
9601 Medical Center Drive  
Rockville  
Maryland 20850  
USA

Synexa Life Sciences BV  
32 Mendelweg  
Leiden Bioscience Park  
2333CS, Leiden  
The Netherlands



## Get in Touch

- [ContactUs@synexagroup.com](mailto:ContactUs@synexagroup.com)
- 🌐 [synexagroup.com](https://synexagroup.com)