synexa | Life Sciences

Translational Services

Access the right biology. Earlier.

>60
Translational Studies Completed

2000+
Patient Samples Analysed

20+
Years Bioanalytical Experience

De-risk Your Assets Before Entering the Clinic

Many programmes reach the clinic before key translational questions in human disease biology have been answered. When these uncertainties surface during early trials, they are difficult and costly to correct.

Critical questions that often remain include:

- Does this mechanism behave in human disease as it does in experimental models?
- Which patient biology should the programme be designed around?
- Which biomarkers will be measurable and clinically meaningful in humans?
- What should success look like in early clinical studies?

At Synexa Life Sciences, we help answer these questions before clinical commitment by bringing human disease systems, patient-derived samples, and translational biomarker analysis into early decision-making.

Fewer false positives • Better biomarker strategies • Clearer go/no-go decisions • Smarter prioritisation

Unrivalled Access to Fresh Human Biological Samples

Synexa's clinical network is extensive; we collaborate with a wide range of clinicians who provide fresh (healthy and disease-matched) human biological samples from patients in support of clinical studies. Samples come with full clinical metadata, enabling access to well-characterised populations with disease-relevant heterogeneity.

Ethical integrity is the foundation of every study we support. All patients provide informed consent, and we follow stringent national and international guidelines throughout. Our team manages the full ethics protocol development and submission process.

Rheumatology

Disease access
- Rheumatoid arthritis
- Systemic lupus erythematosus
- Cutaneous lupus
- Psoriatic arthritis
- Myasthenia gravis

Sample matrices
- Peripheral blood/PBMCs
- Serum & plasma
- Urine
- Synovial fluid
- Tissue biopsies

Active disease cohorts

Dermatology

Disease access
- Atopic dermatitis
- Psoriasis
- Hidradenitis suppurativa
- Lichen planus
- Vitiligo
- Pemphigoid

Sample matrices
- Fresh skin biopsies (lesional & non-lesional)
- Peripheral blood/PBMCs
- Serum & plasma
- Harpera microbiopsy

Established skin biopsy workflows

Neurology

Disease access
- Multiple sclerosis
- Parkinson's disease
- Alzheimer's disease
- Neuroinflammatory conditions
- Neuropsychiatric conditions

Sample matrices
- Peripheral blood/PBMCs
- Serum & plasma
- CSF *where possible*

CNS-immune axis focus

Oncology

Disease access
- Acute myeloid leukaemia
- Chronic lymphocytic leukaemia
- Chronic myeloid leukaemia
- Non-Hodgkin's lymphoma
- Hodgkin's lymphoma
- Ovarian cancer

Sample matrices
- Peripheral blood/PBMCs
- Serum & plasma
- Ascites
- Biopsies *where possible*

Haematological

Gastroenterology & others

Disease access
- IBD: Crohn's and ulcerative colitis
- Fibrotic conditions
- Respiratory
- Ophthalmology

Sample matrices
- Peripheral blood/PBMCs
- Colon biopsies
- Serum & plasma
- Bronchoalveolar lavage fluid
- Aqueous and vitreous humour
- Retinal biopsies
- Fibrovascular membranes

Active expansion

Key Insights

Biomarker Strategy

Build clinically relevant biomarker strategies. Assess real biomarker behaviour, baseline variability, dynamic range, and clinical noise. Outputs aligned to fit-for-purpose assay development and Phase I success metrics.

Early Efficacy & Safety

Assess drug efficacy, safety, and pharmacodynamics before clinical entry. Confirm target validation, engagement and mechanism of action to improve early efficacy insights.

Benchmarking

Evaluate therapeutic potential across multiple diseases to refine focus. Compare drug leads against marketed competitors. Rapid iteration allows efficient testing cycles.

Study Design and Platform Capabilities

Synexa's translational studies are built around your scientific question. We work consultatively from the outset, helping to define the right patient cohort, sample matrices, assay selection and readout strategy before a single sample is collected.

Studies can be configured as standalone biomarker feasibility assessments, multi-platform mechanistic packages, or full indication prioritisation frameworks testing across multiple disease cohorts in parallel. Whether you need a focused single-assay readout or an integrated multi-omic data package spanning flow cytometry, Olink proteomics, MSD multiplex and transcriptomics, the platform scales to your programme's stage and budget.

All analytical work is conducted in-house at Synexa, with integrated data analysis and translational interpretation delivered alongside raw outputs so you receive decision-ready insights, not just data.

Design your Translational Study

01

Consultation & Study Design

CRS risk? Efficacy? Biomarker feasibility? Work with a specialised team to design your protocol around your research question.

02

Ethics & Sample Collection

Our team manages the ethics protocol development and submission process.

Sites are trained to collect samples in accordance with assay requirements.

03

Data Generation

Assays are developed specifically for the needs of your therapeutic candidate. Integrated multi-platform readouts: proteomics, flow cytometry and genomics.

04

Data Analysis & Decision Making

Rapid data analysis and integration to inform decision making: Go/no-go, mechanistic insights, biomarker signatures of response.

Integrated Multi-platform Toolkit

EX VIVO FUNCTIONAL TESTING

- PBMC/whole blood/co-cultures
- Lesional tissue biopsies
- Dose-response, cytokine readout, target engagement
- Mechanistic proof-of-concept ahead of clinical entry

MULTI-OMIC READOUTS

- Olink, MSD, LC-MS/MS
- Targeted-gene signatures
- Multi-parameter flow cytometry
- Imaging
- Pathway-level PD signature generation

DATA ANALYSIS AND INTERPRETATION

- Cross-platform integration
- Pathway enrichment & mechanistic analysis
- Responder/non-responder stratification
- Translational decision-ready reports

Configure into Defined Packages

Target Indication Refinement Package

- Multi-indication testing in parallel
- Prioritise disease subgroup with the highest response rate
- Dose response and combination effects

Preclinical Safety Package

- Cytokine release
- Complement
- ADCC/CDC
- Whole blood activation
- T-cell proliferation and immunogenicity
- Platelet activation

Biomarker Strategy Package

- Biomarker feasibility in human matrices
- Baseline variability and dynamic range
- PD signatures
- Responder subgroups
- Clinical phase biomarker design

Illustrative Case Studies

01

Longitudinal Immune Cell Profiling in SLE & Lupus Nephritis

Flow cytometric assessment of activated T-cell subsets (CD8+, CD4+, Th1), memory B cells and naive B cells tracked longitudinally in healthy controls (HC), SLE and SLE+LN cohorts, enabling robust disease stratification.

Flow Cytometry • Immune Monitoring

02

Urine MCP-1 as a Renal Inflammation Biomarker

Quantification of creatinine-corrected urine MCP-1 levels across healthy volunteers, SLE and LN patients using the Meso Scale Discovery platform, demonstrating significant elevation in LN and supporting utility as a non-invasive nephritis activity biomarker.

MSD • Soluble Biomarkers • LN

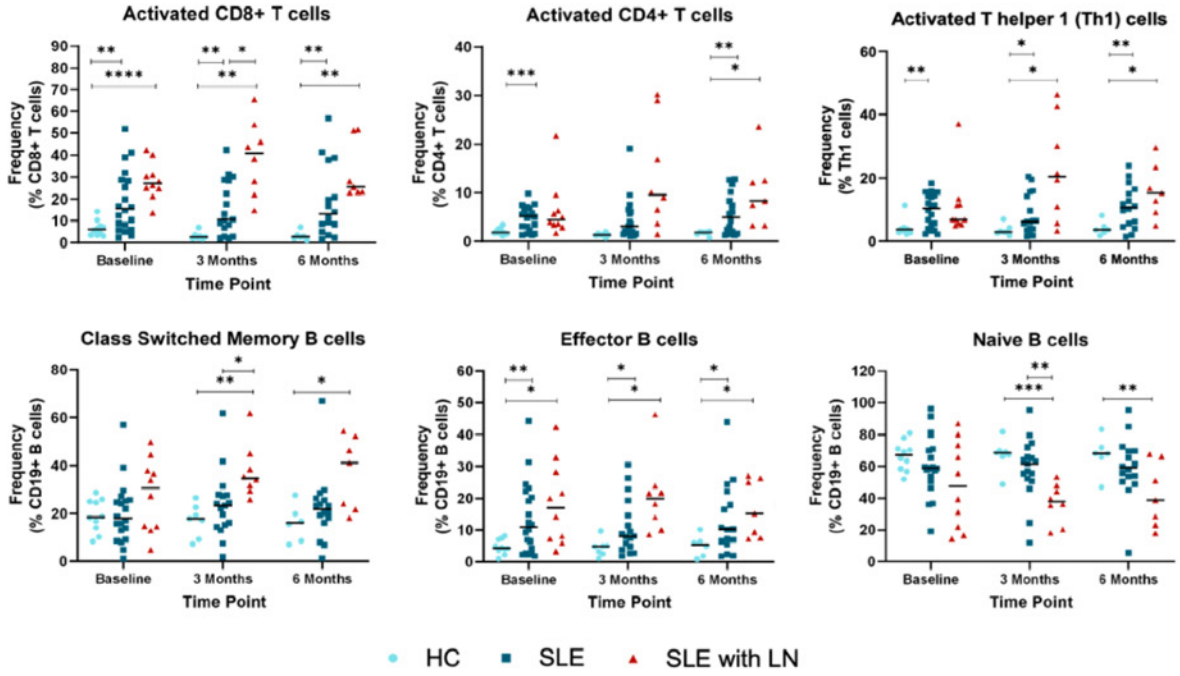
03

pSTING Pathway Inhibition in CD14+ Monocytes

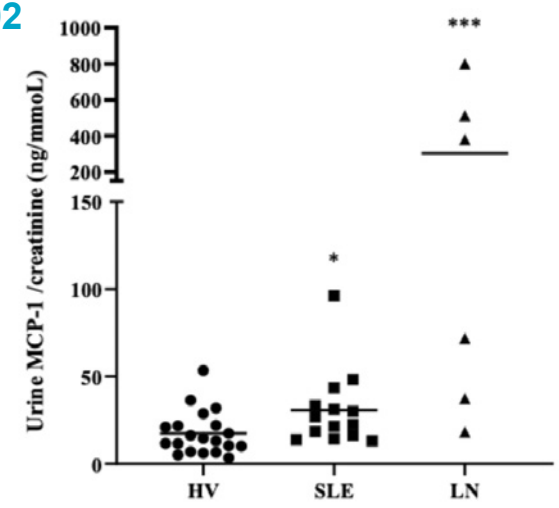
Flow cytometric assessment of phosphorylated STING on CD14+ monocytes following in vitro IFN pathway upregulation, with concentration-dependent characterisation, supporting target engagement for early-phase programmes.

Target engagement • IFN pathway

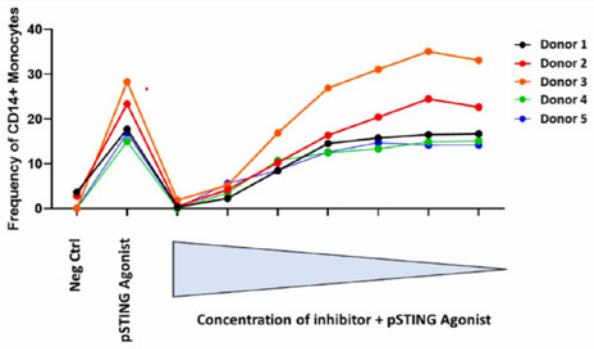
01



02



03



Discuss your programme with a scientist

Speak directly with a Synexa scientist about your Translational study requirements today.
Email our team at **ContactUs@synexagroup.com** to get started.

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Get in Touch

ContactUs@synexagroup.com

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