

Protein Profiling Services

Our Portfolio for Pharma & Biotech

NMI Technologietransfer GmbH is a provider of services and products for industrial clients in pharma, biotech and medtech, with a wide range of offerings in the fields of

- Pharmaservices
- Microdevices
- Testing Services

NMI Technologietransfer GmbH was founded in 2002 in Reutlingen/Germany, as the commercial subsidiary of the NMI Natural and Medical Sciences Institute at the University of Tübingen, a renowned private research foundation with >200 staff and >30 years of scientific leadership combined with a successful business track record.

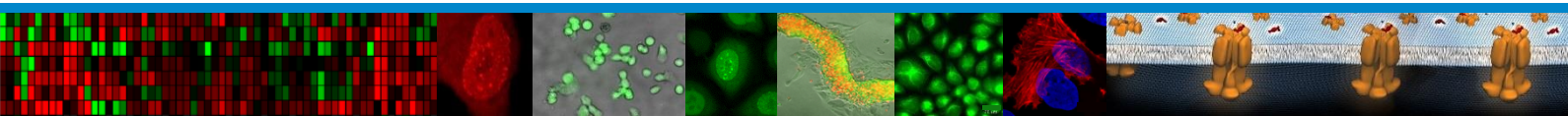
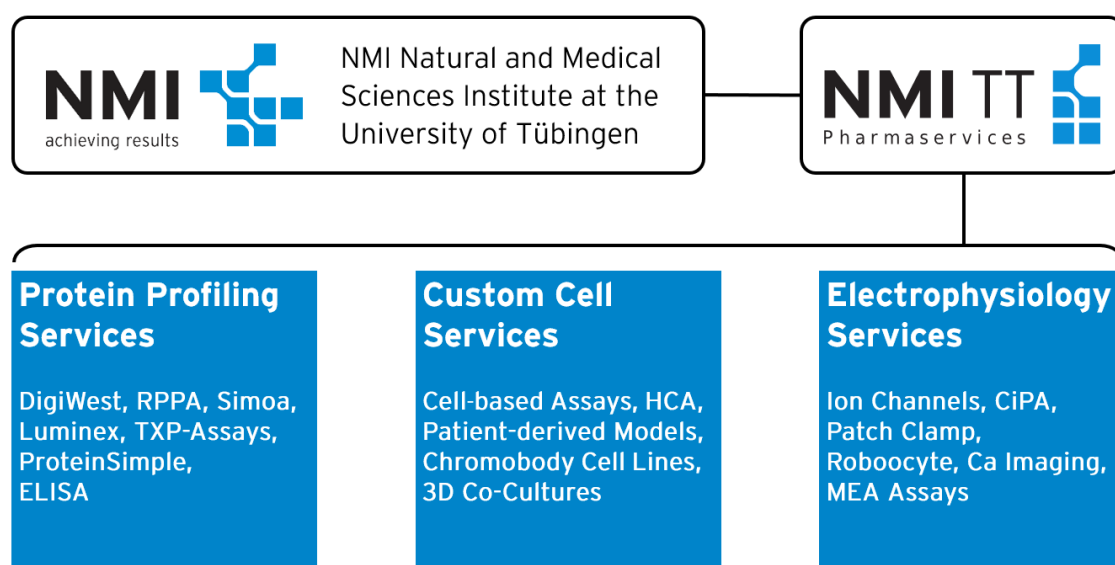
NMI Technologietransfer GmbH is committed to providing high-quality research services using cutting-edge technologies.



In our **NMI TT Pharmaservices** division we offer advanced contract research in the areas of

- Protein Profiling Services
- Custom Cell Services
- Electrophysiology Services

All our services are fully customizable to the needs of our clients in the pre-clinical as well as in the clinical space.



Our scientists have built up a long-standing expertise in the area of multiplexed immunoassays.

Applications range from pathway mapping and lead characterisation to biomarker identification and verification, thus covering preclinical and clinical phases alike.

Project scopes vary from assay development and validation studies to routine screening.

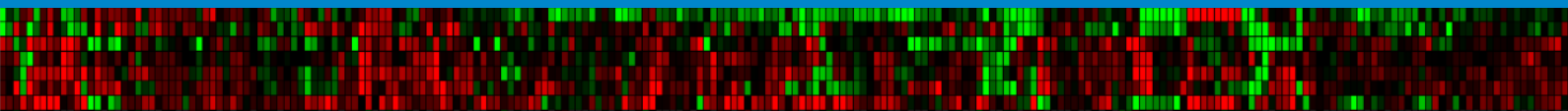
Sample types include blood, serum, cultured cells, sections, biopsies and solid tissues.

Several technology platforms are available, such that we can offer an unparalleled diversity of technologies to meet the demands of our clients with validated ready-to-go assays as well as highly customised services:

- DigiWest® Multiplex Protein Profiling
- Reverse Phase Protein Arrays (RPPAs)
- Ultra-Sensitive Simoa® Protein Assays
- Standard/Custom Luminex® Assays
- MassSpec-based TXP Immunoassays
- ProteinSimple® Assays
- Standard ELISAs & Western Blots

Our Protein Profiling Portfolio

	DigiWest	Protein Simple	RPPA	Luminex	ELISA	Simoa	MS-TXP
Sensitivity	10 pg/μg	10 pg/μg	10 pg/μg	10 pg/μL	1 pg/mL	0.01 pg/mL	100 pg/mL
Protein required [μg]	10-60	10-50	30-60	10-100 μL sample	10-100 μL sample	5-100 μL sample	5-50
Analytes per sample	60-800	1-20	20-300	1-60	1-5	1-5	1-25
Samples per study	2-60	dozens	35-hundreds	hundreds	hundreds	hundreds	hundreds
Sample-to-result	5d	3d	5d	4h	4h	3h	1d
Cells/tissues	+	+	+	(+)	(+)	(+)	+
Plasma/serum	-	-	-	+	+	+	+
Urine/CSF	(+)	(+)	(+)	+	+	+	+
Analytes established	1,000+	300+	380+	50+ & vendor kits	vendor kits	25+ & vendor kits	150+
Custom assay development offered	+	+	+	+	+	+	+



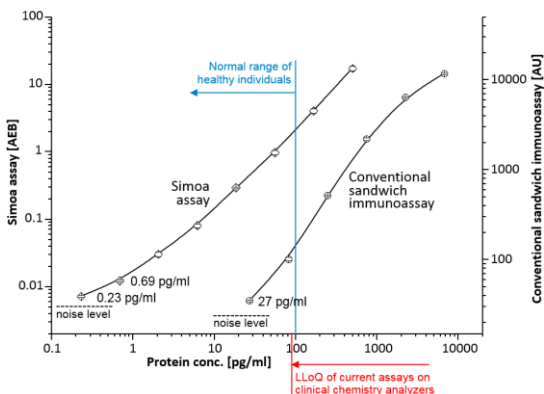
PD marker analysis of fresh frozen tumors vs normal liver at defined Ha-ras/B-raf mutation status

Simoa®: Ultra-Sensitive Protein Profiling

- Key features:
- From 100 up to 1,000-fold higher sensitivity as compared to conventional sandwich ELISAs, using standard or custom Simoa® assays
- Applications:
- Biomarker research, quantification of low-abundance analytes for pre-clinical and clinical studies (under GCP conditions)



As an experienced user of Quanterix' technology, we are a leading expert in Simoa® assay services



Case study: Quantification of Procalcitonin, comparing different assay technologies

TXP Immunoassays for Any Protein in Any Species

- Key features:
- Peptide antibody-based enrichment of protein classes for MassSpec quantification allow cross-species protein assays
- Applications:
- Translational ADME/Tox assays for cross-species quantification of CYPs, drug transporters, DILI markers, etc.

CYP	TXP Tag
1A1	YIPK
1A2	
2B6	
2C8	FSGR
2C9	
2C18	
2C19	
2E1	SVLK
2D6	
3A4	LPNK
3A5	
3A7	
MDR1	FVEK
CPR	

TXP Antibody



IFFYDSENPPASEVLR



VFFYDSENPPASEVLR



IFFYDSENPPGSEVLR



IFFYDPENPPASEVLR



VFFYDPENPPGSEVLR

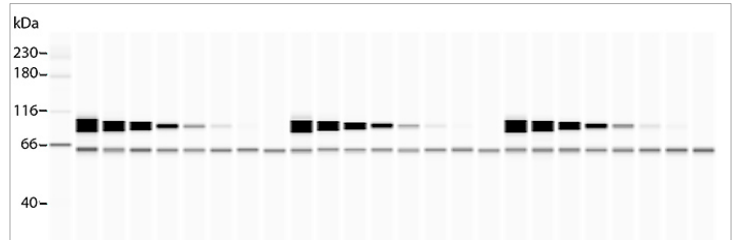
MS-based TXP (Triple X Proteomics) antibody assays for quantification of multiple Cytochrome P450 family members (left); cross-species Paraoxonase assay (right). TXP assays are accessible through our spin-out company Signatope GmbH

ProteinSimple®: Low Complexity Multiplex Assays

Key features:

- Multiplex profiling of 2-10 analytes in up to 100 samples (cells, tissues, plasma/serum)

Simple Western® assays close the gap between standard ELISA/Western and high-complexity high-throughput immunoassay technologies

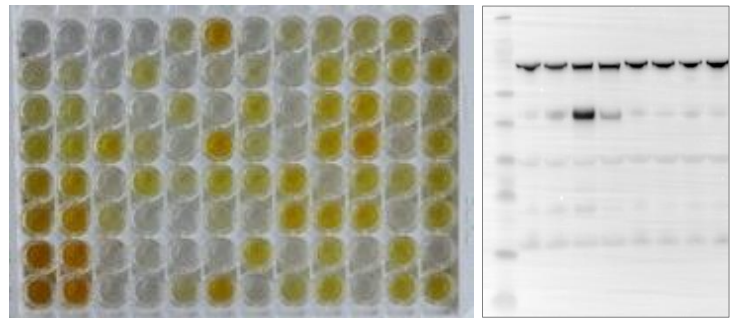


Standard ELISAs & Westerns

Key features:

- Sensitive quantification of individual or multiple analytes in higher throughput, using commercial ELISA kits, or
- Analysis of single analytes using established or custom antibodies by classical Westerns

We offer standard assays for preclinical research as well as clinical applications

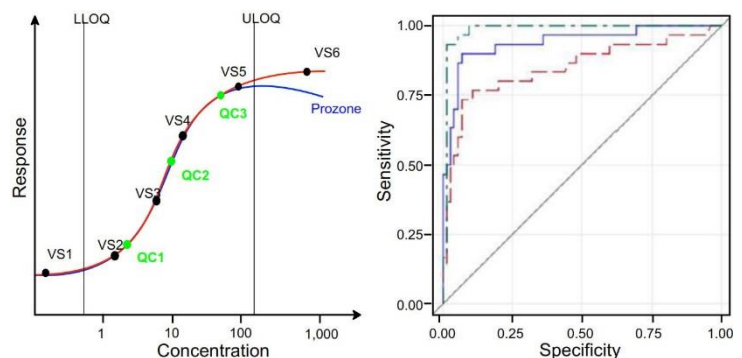


Standard & Custom Luminex® Immunoassays

Key features:

- Luminex® bead-based assays for plasma proteins (>50 analytes), cell signalling proteins, and serological assays
- Assay development and validation according to CLSI and FDA guidelines

We design, establish and validate miniaturized multiplex assays for PK/PD studies, drug-induced organ injury, pathogen infections, protein-protein interactions etc.





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