

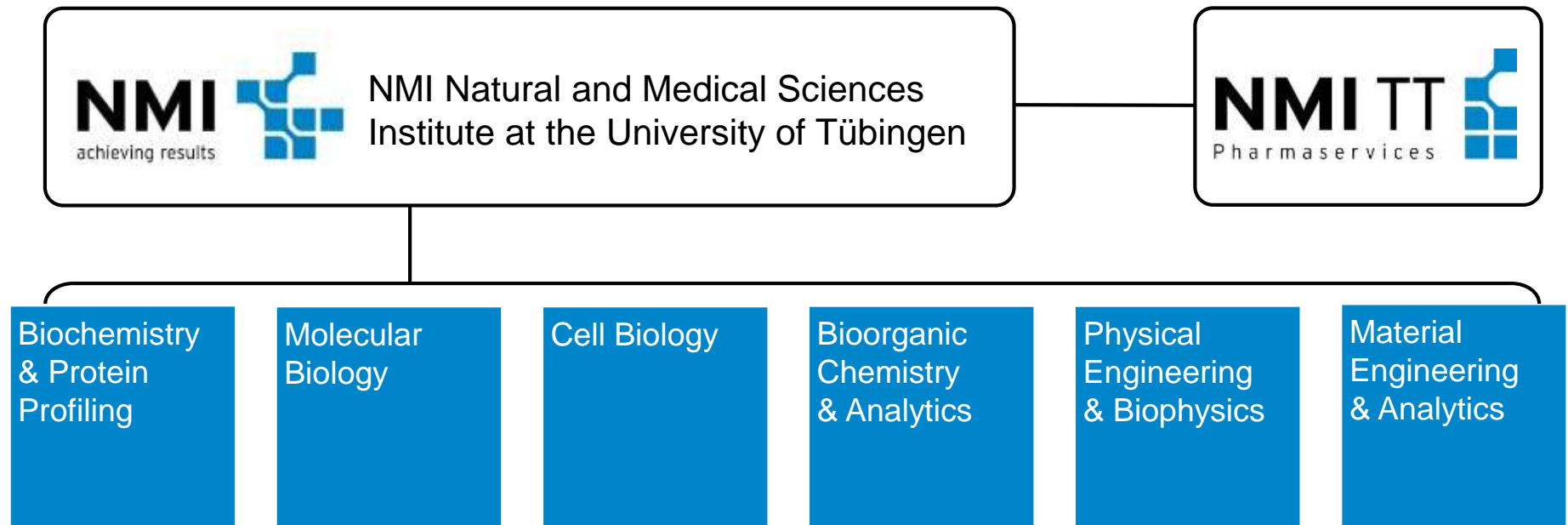


**Dr. Richard Griesbach**  
Target Expression Systems

**Applied Contract R&D Services  
for Industrial & Academic Clients**

Natural and Medical  
Sciences Institute  
at the University of Tübingen

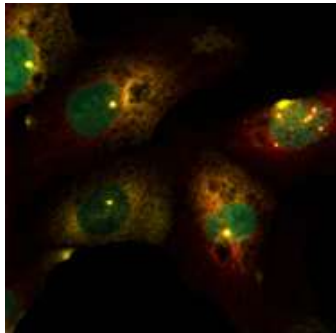
# NMI: Overview and expertise



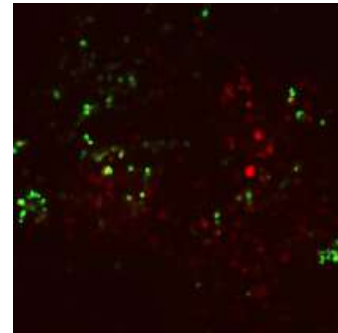
## » Application-oriented research at the interface of life sciences & materials science

- Established in 1985 in Reutlingen/Germany, >150 staff
- Long-standing track record of contract research work for European Pharmas (Bayer, Roche, Boehringer), Biotechs, Medtechs and Research Institutions

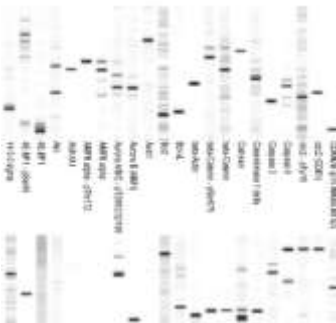
# The NMI is your extended workbench



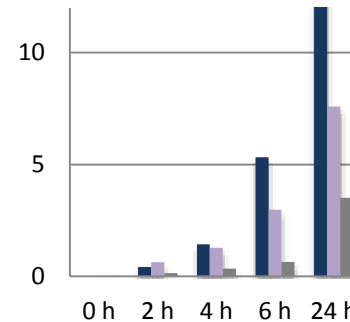
Target validation and cell line generation



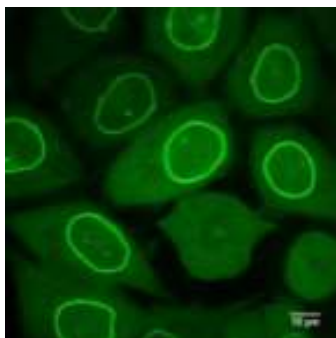
Patient-derived tumour immunology assays



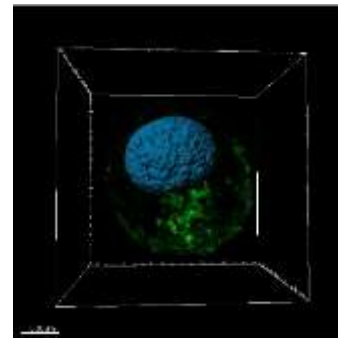
Multiplex protein profiling  
(→ **Poster 43**)



Inflammation co-culture assays

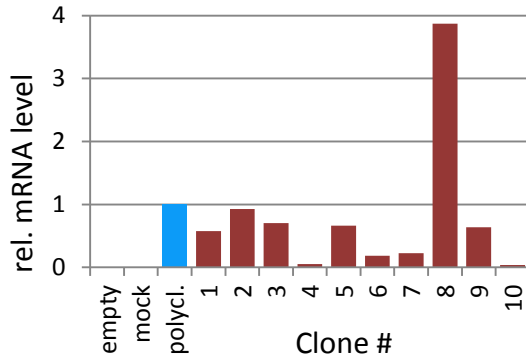


Chromobody<sup>®</sup> cell lines



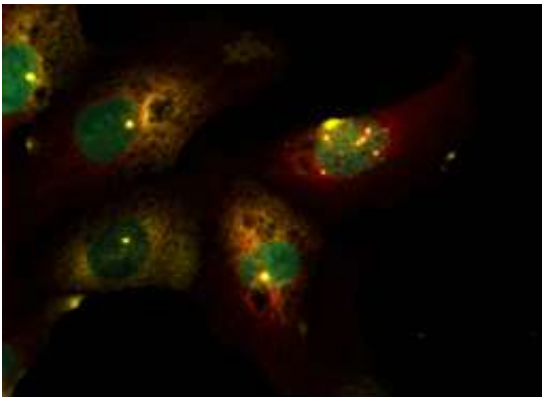
Antibody internalisation

# Target validation services



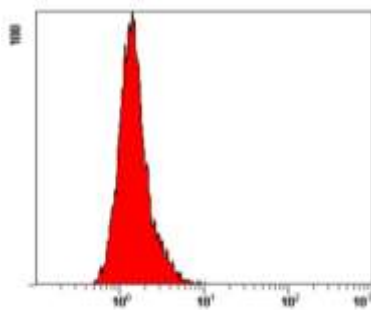
## Gene transfer and expression analysis

- > 250 cDNA expression vectors
- > 1000 shRNA vectors for >250 targets
- > 100 stable recombinant cell lines
- > 200 targets expressed



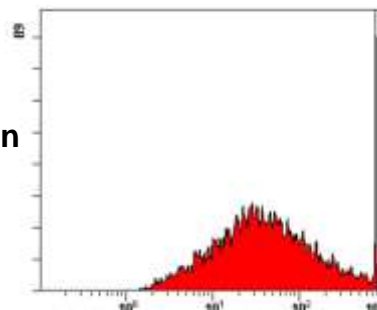
## Fee-for-service generation of viruses

- > 1000 lentiviruses generated and shipped
- Adenoviral & retroviral technology in house
- **NEW: Application of CRISPR/Cas9**



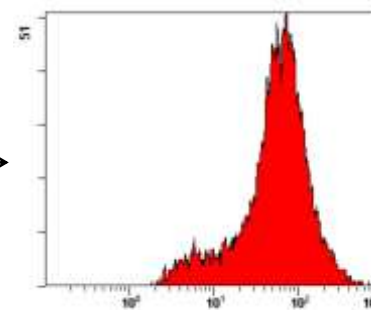
mother cells

lentiviral  
transduction →



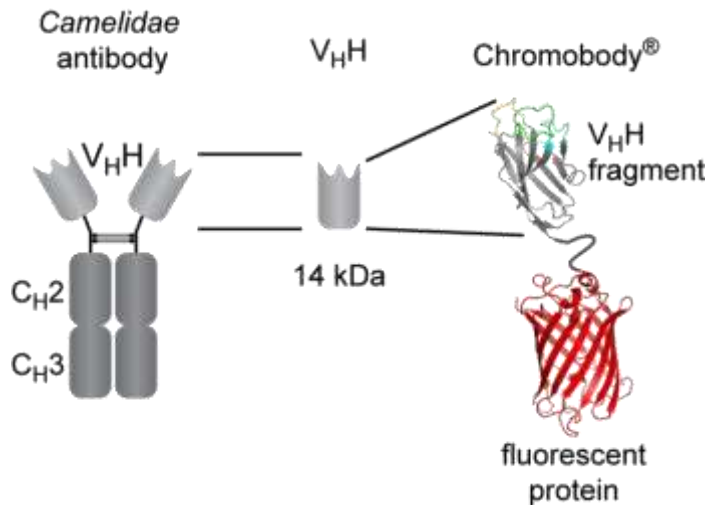
polyclonal cells

clonal  
selection →



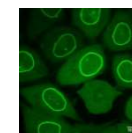
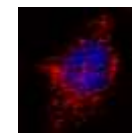
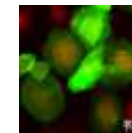
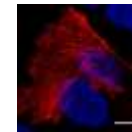
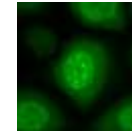
monoclonal cells

# Chromobodies<sup>®</sup>: Novel fluorescent nanoprobes for high-content analysis



- Extremely small (≈14 kDa)
- Highly stable, highly reliable
- Functional in living cells
- Detects endogenous cellular targets (incl. post-translational modifications)

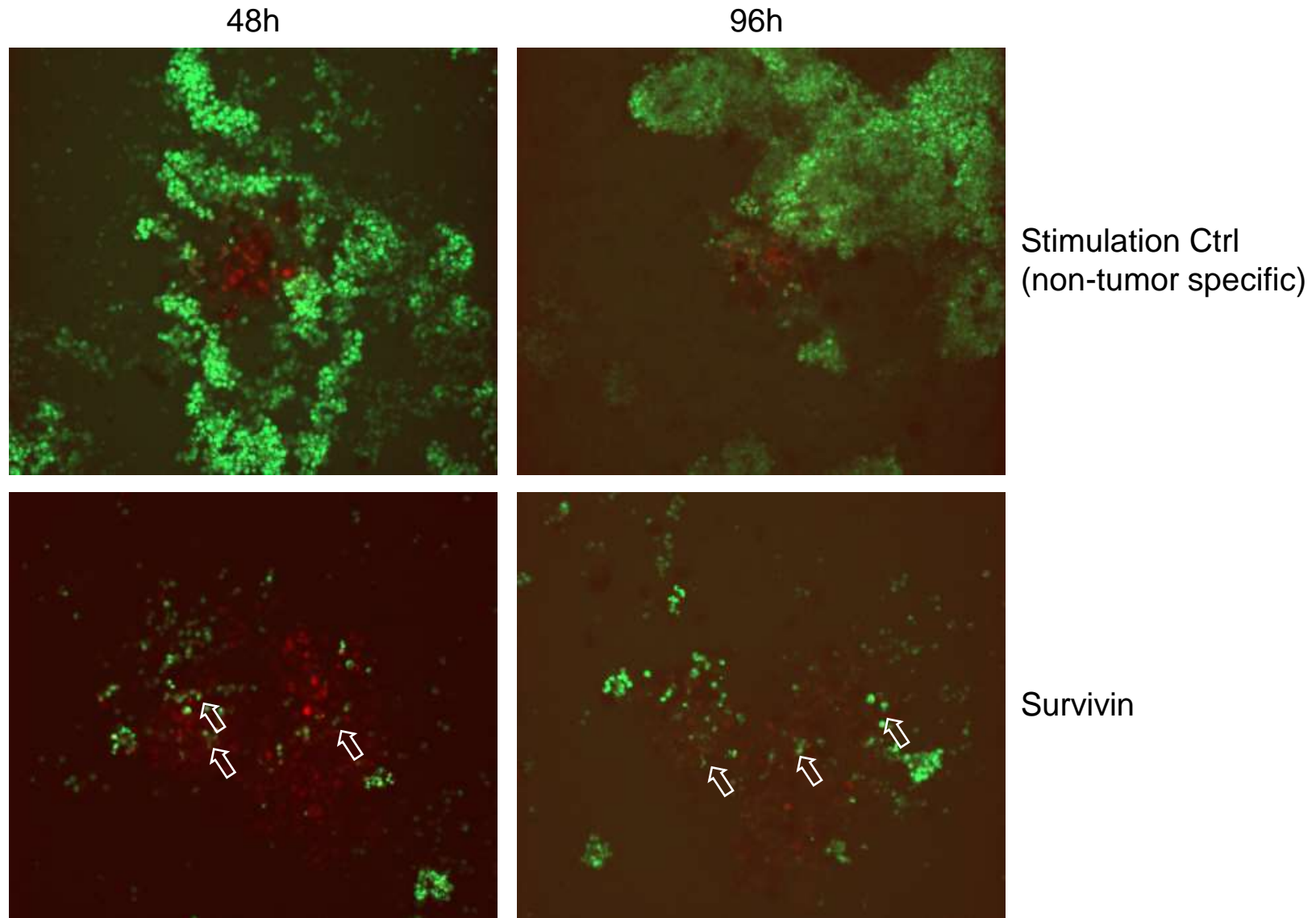
- *Cell cycle*
- *Actin*
- *Cell cycle / Actin*
- *Mito*
- *Nuclear morphology*



Chromobody<sup>®</sup> expression in customer-defined cell lines available

**Custom tailor-made Chromobodies<sup>®</sup> on request**

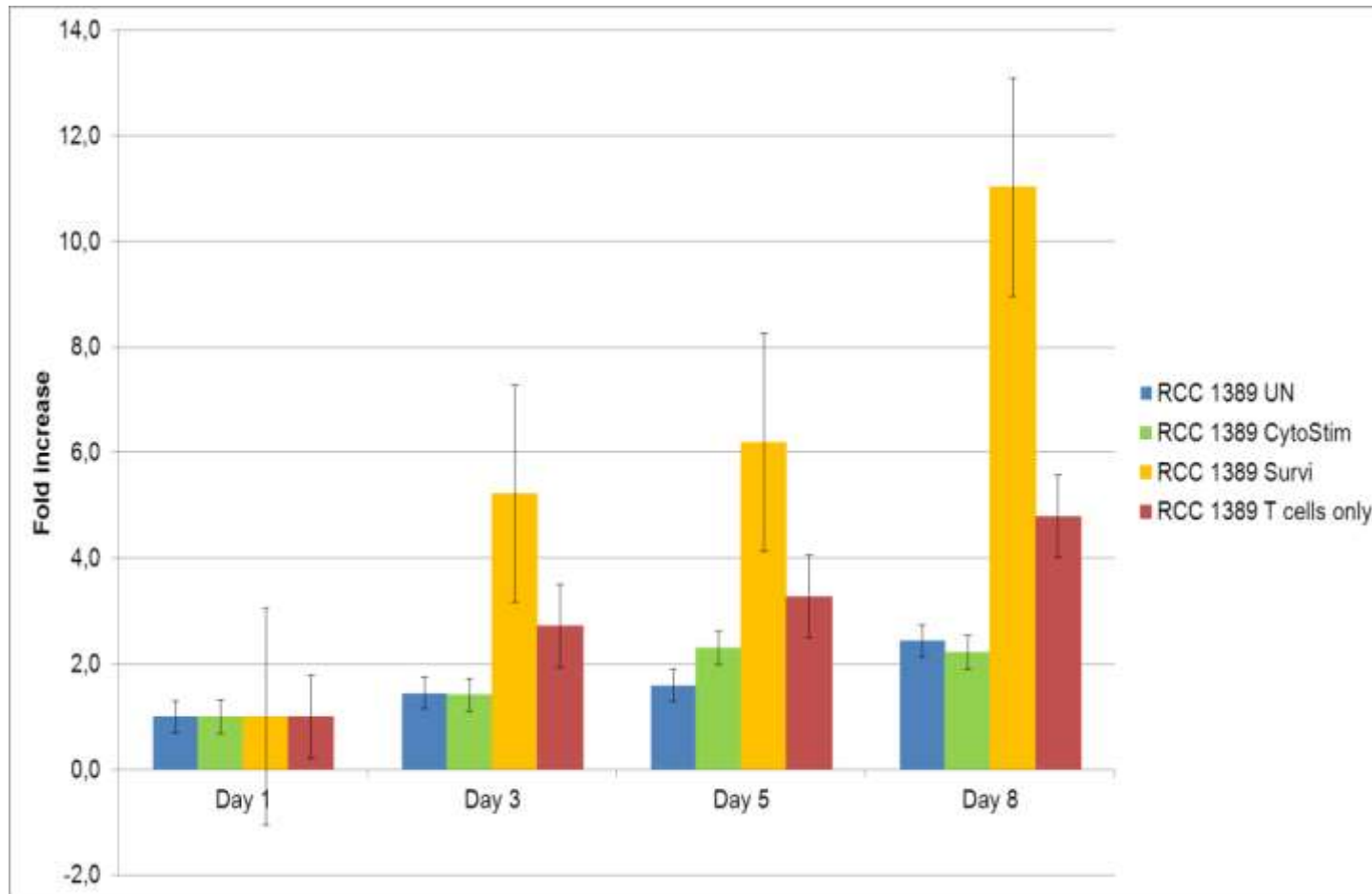
# Tumor immunology: Infiltration of patient-derived 3D tumour organoids by autologous antigen-specific T cells



Green: CFSE-labelled T cells  
Red: Draq5-labelled RCC organoids

White arrows: Infiltrating cytotoxic T cells

# Tumor immunology: Infiltration of patient-derived 3D tumour organoids by autologous antigen-specific T cells



Patient 1389

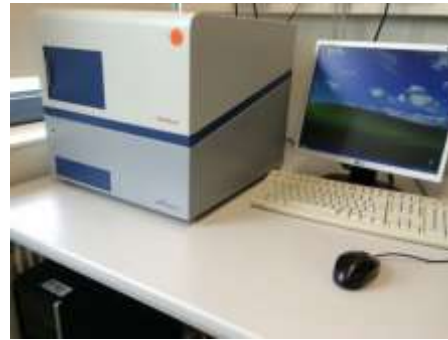
**Tumour-specific T cells induce cytotoxicity in tumour organoids**



# Technological versatility



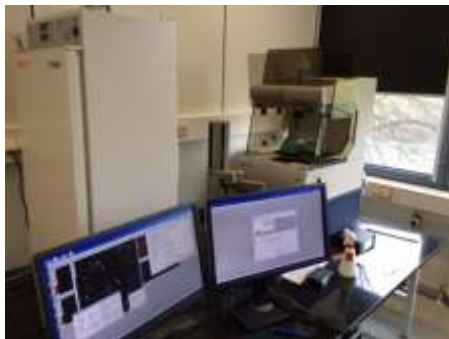
Beckman Coulter | Biomek FXP



BMG | PheraStar



PerkinElmer | EnVision



Molecular Devices | ImageXpress



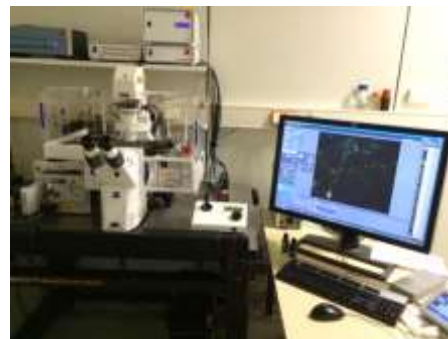
Life | QuantStudio 12k Flex



Beckman Coulter | FC500 Cytometer



xCELLigence | Impedance device



Zeiss | Spinning disc microscope



Zeiss | Laser scanning microscope



**"There is only one proof of ability - action!"**

**Meet us at Poster 56!**

[www.nmi.de/en](http://www.nmi.de/en)