

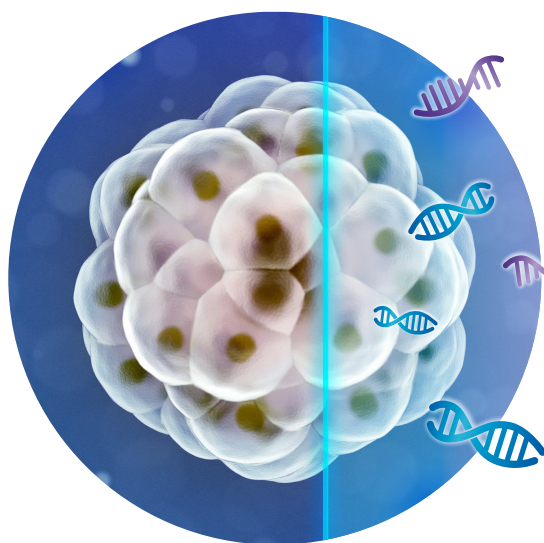


# Advanced Cell Culture Solutions

From Input to Insight

Optimize your workflows, secure your data, and validate every step with GenXPro's cutting-edge NGS and digital PCR (dPCR) platforms.

This includes solutions for upstream validation and downstream characterization in cellular models of any species.



CGA TAG CAT TAC CAA GTA CCA CGC

CGA AGC CUG ACC AAG

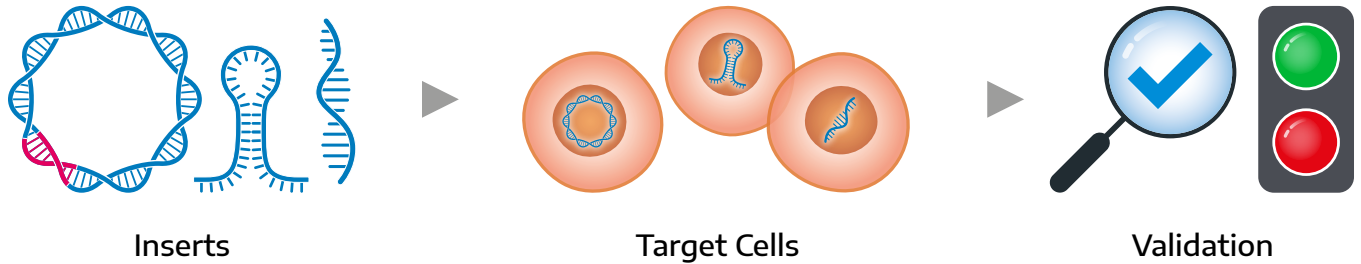
CGA TAG CAT TAC CAA GTA CC

TGA CAT GAC TAG GAA GT

GAA CAU GAC UAG GAA GUA CCA CGC

# Advanced Cell Culture Solutions

## From Input to Insight



## Upstream Validation

### Input Quality Control

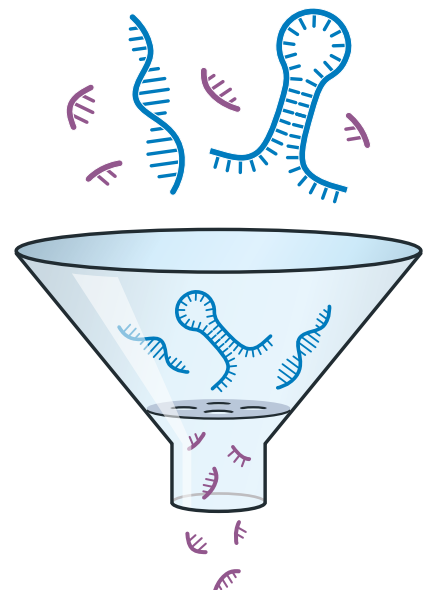
#### Plasmid Verification: Sequence Fidelity

- Full-Length Sequencing
- Oxford Nanopore (ONT) Sequencing
- Unique Molecular Identifiers (UMI)
- Insert Accuracy
- Mutation & Deletion Detection
- Backbone Integration Screening
- dPCR Absolute Quantification
- Copy Number Verification



#### RNA Constructs: Design & Purity Validation

- Sequence Integrity
- mRNA & gRNA Validation
- NGS Homogeneity Assessment
- Trace DNA Contamination Testing
- Degradation Fragment Profiling
- Assurance of Sequence Fidelity by Short Read and ONT Sequencing

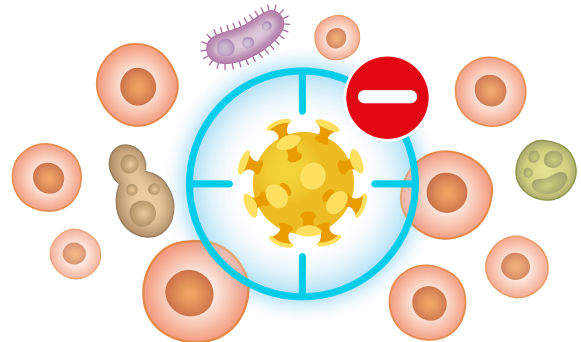




## Quality & Downstream Characterization

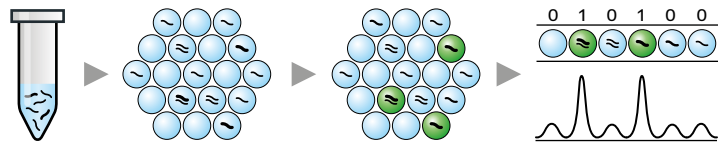
### Contaminants: Purity Assurance

- Comprehensive Contamination Screening
- Mycoplasma, Fungi, Yeast & Viral Detection
- Cross-Species Contamination Audit



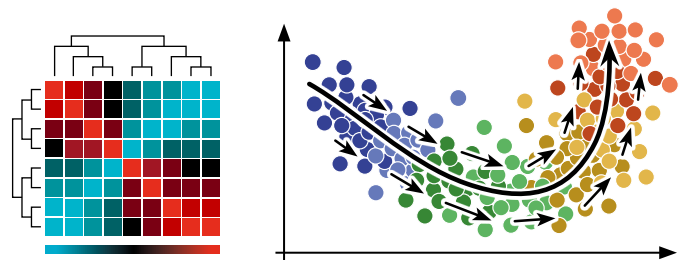
### DNA-Level: Genomic Stability & Identity

- Structural Variant Detection
- CNV & Genetic Drift Analysis
- Cell Sources Authentication
- Multi-Passage Stability Tracking
- Ultra-Sensitive Target Quantification



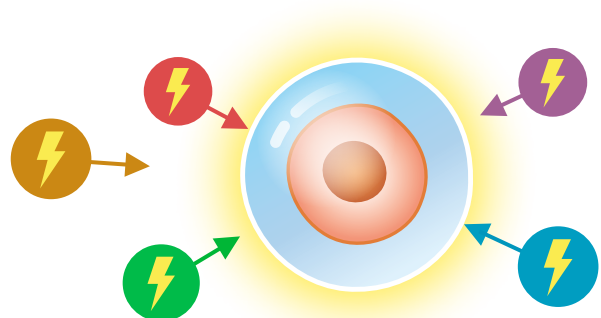
### RNA-Level: Entire RNAome (sRNA, lncRNA, mRNA)

- Whole-Transcriptome Profiling
- Low-Abundance Transcript Detection
- Drug Sensitivity Predictions
- Molecular Pathways
- Functional State Mapping



### Stress & Environmental Impacts: Cellular Resilience

- Culture Stress Analysis
- Hypoxia & Media Adaptation
- Epigenetic/Transcriptional Tracking
- Environmental Resilience Mapping
- Biomarker Identification



# Advanced Cell Culture Solutions

## Ready to Elevate Your Cellular Models?

Do not let undetected genetic drift or impurities compromise your therapeutic milestones. Partner with GenXPro to secure high-resolution genomic insights from input to validation in your in vitro cell models.

- **Schedule a Technical Consultation:** Speak directly with our NGS and dPCR experts to tailor a screening pipeline for your specific cellular models.
- **Request a Custom Quote:** Send us your project requirements and receive a detailed, scalable analytical framework.

## Contact Us Today

GenXPro GmbH – High-Resolution Insights for Biotechnology Innovation

support@genxpro.de | www.genxpro.de | +49 69 95739710

## References

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