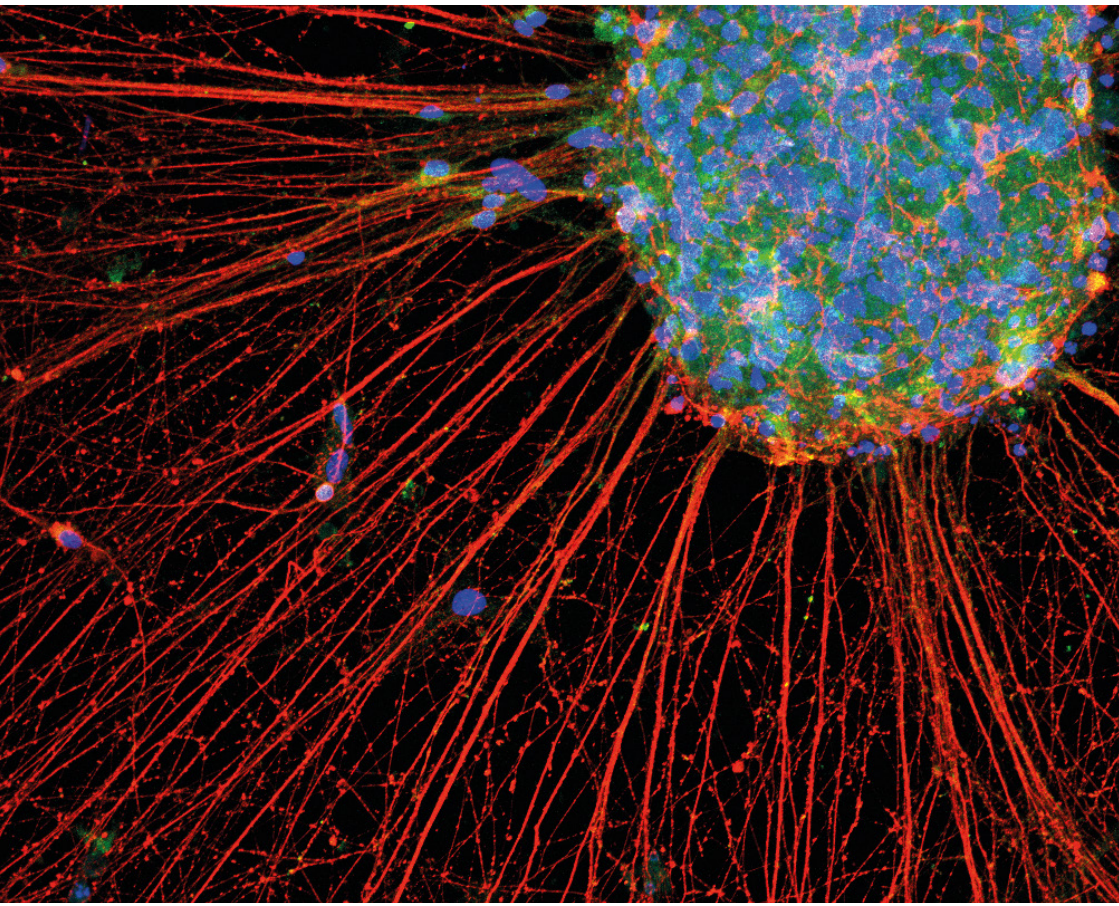
NUVISAN



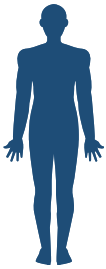
DRUG DISCOVERY

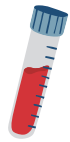
Human Induced Pluripotent Stem Cell Platform

www.nuvisan.com

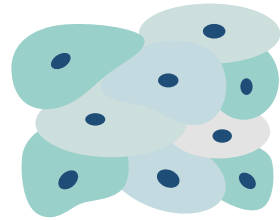
HUMAN iPSC PLATFORM

HUMAN MODEL SYSTEM





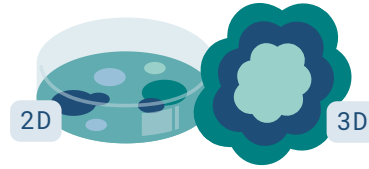
REPROGRAMMING



iPSCs

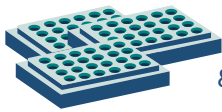
GENOME EDITING

ADVANCED MODELS



TARGET IDENTIFICATION

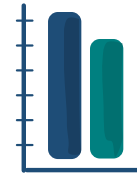
Hit drug candidates



Imaging & Analysis

NGS

TARGET VALIDATION



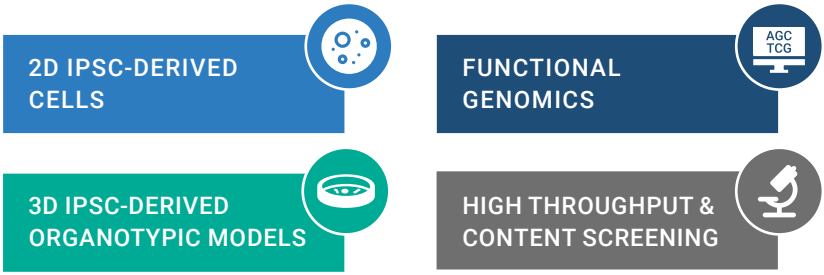
Cellular Mechanistic Assays

NUVISAN

Revolutionizing Drug Discovery: Using Human iPSCs to Recapitulate Complex Human Biology

The use of patient-derived human induced pluripotent stem cells (iPSCs) provides unparalleled opportunities to dissect human disease pathogenesis and progression. Human iPSCs retain the genetic signature of the donor patient and are as close to reality as we can currently attain with contemporary scientific tools. NUVISAN strongly believes that iPSCs are indispensable in contemporary drug development pipelines.

- Human iPSC expertise: We collaboratively develop your projects with our **flexible and customized solutions**. Whether we use your own iPSC lines or one of our curated in-house lines, we always implement stringent quality control measures to ensure optimal and reproducible results
- With our **CRISPR/Cas9** toolbox, we can generate genome edited iPSCs from healthy lines resulting in a disease-causing mutation, isogenic controls, or reporter lines. The transcriptome of iPSCs and their derivates can be assessed with our **in-house next-generation sequencing (NGS) platform**
- Human iPSC-derived cells can be utilized in every part of the drug discovery pipeline, and our services span assay development, automation, compound management, **high throughput and content screening**, data acquisition and processing
- We are specialists in adapting to the needs and requirements of our customers and offer a range of entry and exit points



Scalable Complexity: From Single Cells to Organotypic Constructs

2D iPSC-derived Cells

We employ state-of-the-art differentiation protocols to transform human iPSCs into a range of somatic cell lineages that are extensively tested to recapitulate disease phenotypes. We can functionally assess these iPSC-derived cells with (amongst other methods):

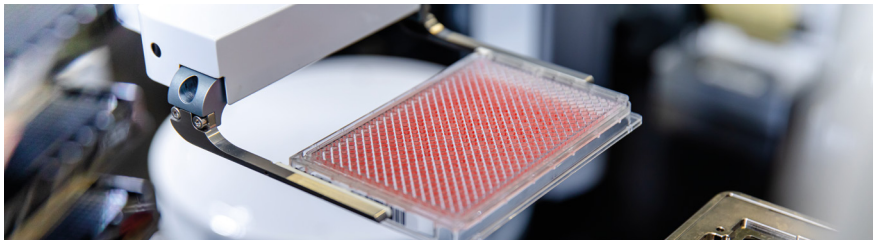
- Multi-well microelectrode array (MEA)
- Mitochondrial bioenergetics
- High content analysis, Ca^{2+} imaging (FLIPR)

3D iPSC-derived Organotypic Models

We are able to generate the following types of models to study disease mechanisms and perform screening campaigns that yield a hit or lead candidate:

- Organoids as spheroids or assembloids in low and high-throughput formats
- Multi-cellular tissue engineered constructs
- Trans-well or co-culture systems

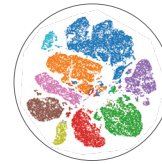
NUVISAN



In-depth Assessment of iPSC-derived Cells and 3D Constructs

Functional Genomics

Our **CRISPR/Cas9 experts** can generate disease-causing mutations or correct known mutations in patient-derived iPSC lines (isogenic controls). Our NGS services include **bulk and single cell RNA sequencing** for which we are a 10x Genomics certified service provider. This provides a powerful and in-depth look into organoid cellular composition and gene expression.



10x GENOMICS Certified Service Provider

High Throughput and Content Screening

We have developed our 2D and 3D differentiation protocols to be suitable for high throughput screening and high content analyses. This enables high resolution imaging and assessment of our cells and organoids. Our FLIPR-based assessments for Ca^{2+} imaging can also be performed to provide insight into ion channel function.

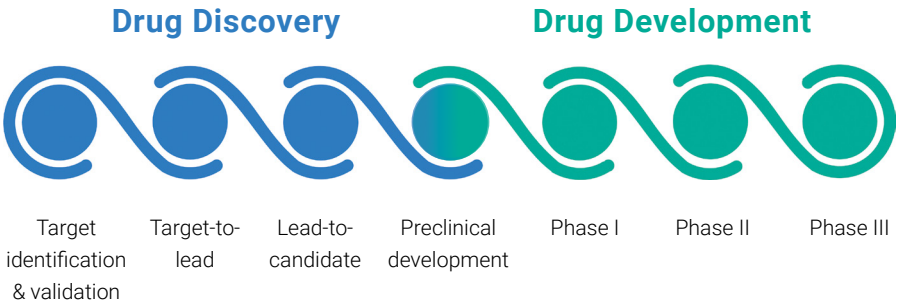
NUVISAN

The Science CRO - From Target to Patient

The NUVISAN group is a contract research and development and manufacturing organization (CRO/CDMO) with six sites in Germany and France as well as local experts situated in Latin America.

We offer unique, high-quality, and tailored integrated solutions along the drug discovery and development value chain to our biotech startup, pharma, non-profit, and venture capital clients – from target identification to the patient.

Thanks to more than 40 years of experience and about 1,000 employees (incl. > 70 % industry experienced scientists and lab professionals), we know how to discover, develop, and bring the next generation medicines to market. At the same time, our scientists understand that every project is different. With a flexible and innovative approach and transparent communication, our teams are passionate about closely collaborating with you to adapt to your individual needs.



Contact us

Dr. Norman Liaw
Head of iPSC Platform
norman.liaw@nuvisan.com

Dr. Christoph Sachse
VP Business Development
christoph.sachse@nuvisan.com

NUVISAN ICB GmbH
Muellerstr. 178
13353 Berlin, Germany

Web: www.nuvisan.com
Email: hello@nuvisan.com
LinkedIn: company/nuvisan

iPSC Platform I 01-2024 I Wmd