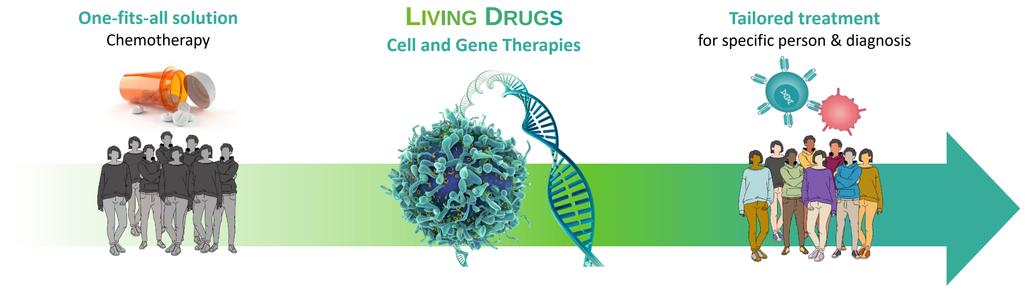
SaxoCell®

Living Drugs

Saxonian Precision Therapy Cluster

The Future of Cancer Treatment: Cell and Gene Therapies

For decades, chemotherapy has been the standard treatment for cancer—using chemical substances (cytostatics) to slow down tumor growth. However, chemotherapy is not tailored to individual patients, often causing severe side effects by harming healthy cells alongside cancer cells. The 2010s marked a turning point with the rise of **personalized medicine**, particularly through the approval of groundbreaking **cell and gene therapies** like CAR-T cell therapy. These innovative treatments harness the body's own immune system to fight cancer in a more precise and effective way.



Why Cell & Gene Therapies Are a Game Changer

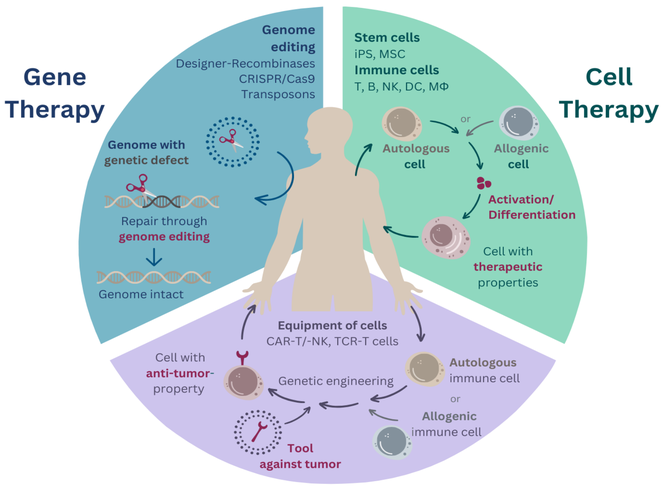
- ✓ **Targeted action** – Designed to attack cancer cells specifically (e.g., CAR-T cells that recognize unique cancer markers)
- ✓ **Long-lasting effect** – Immune cells can "remember" cancer cells and help prevent relapses
- ✓ **Fewer side effects** – Less damage to healthy cells compared to chemotherapy or radiation
- ✓ **Personalized approach** – Treatments can be adapted to the unique genetic profile of the tumor

While these tailored therapies are still expensive and not yet available for all cancer types, they represent a major step toward a future where cancer treatment is more effective, individualized, and with fewer side effects. The revolution in cancer therapy has only just begun!

What Are Cell and Gene Therapies?

Cell and gene therapies represent a new era in medicine, offering hope for conditions that were once considered untreatable. Unlike conventional treatments that mainly manage symptoms, these advanced therapies have the potential to provide long-term cures—particularly for genetic disorders and aggressive cancers.

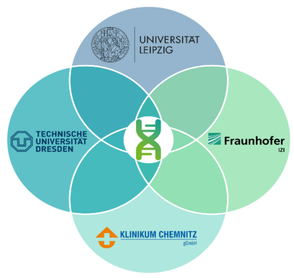
The foundation of these therapies lies in harnessing the power of **immune cells** (such as T cells, NK cells, and macrophages) or **stem cells**, combined with cutting-edge **gene-editing technologies**. By modifying or reprogramming these cells at a molecular level, scientists can correct genetic defects, enhance immune responses, or replace damaged tissues—offering highly personalized and effective treatment options.



Combined Gene & Cell Therapy

The aim of SaxoCell is to develop and optimize **safe, effective and cost-effective cell and gene therapeutics in Saxony**, the so-called **living drugs**. We work in a strong network of local partners from academia, healthcare and industry to make Saxony a hotspot for gene and cell therapy.

SaxoCell: Living drugs made in Saxony



Core parters of the cluster

- **2 Universities** (TU Dresden, Leipzig University)
- **1 Research institute** (Fraunhofer IZI)
- **3 Hospitals** (Chemnitz Hospital, University Hospitals Dresden & Leipzig)
- **23 Industrial partners** (regional, national & international)

With funding from the:

CLUSTERS 4 FUTURE Next generation innovation networks

Federal Ministry of Research, Technology and Space

Funding

SaxoCell is one of 7 winners of the **BMBF's Clusters4Future initiative** and prevailed nationally against 137 competitors. The first funding period started in 2021 for 3 years and a funding volume of 15 million euros. A second funding phase was secured in 2024, which followed on seamlessly from the first and is characterized by a strong increase in industrial share. We are planning a third and final funding period from 2027, but are already starting the process of cluster sustainability through the **SaxoCell e.V.**

Achieving more together: The SaxoCell R&D Projects

T Cells

UniK-T - Developing **universal, off-the-shelf CAR-T cell therapies** for cancer, inflammatory, and autoimmune diseases. Using AI and adapter molecules to improve treatment precision, effectiveness, and safety.

SyafeTy - Making **CAR-T and stem cell therapies safer** by preventing severe immune reactions (GvHD and CRS) through innovative biotechnological approaches, including new treatment strategies like extracorporeal immunomodulation.

SB-TRACT - Automating the production of **Sleeping Beauty transposon-modified T cells** for treating solid tumors, making T-cell therapies more efficient and accessible.

NK Cells

NK-Alliance - Advancing **natural killer (NK) cell therapies** for cancer and autoimmune diseases by improving genetic modifications, production processes, and clinical translation.

Stem Cell Derived

AlloMac - Developing an **affordable, off-the-shelf macrophage therapy** for solid tumors, using genetically modified immune cells to destroy cancer cells effectively.

Edit-Save - Creating **safe, virus-free genome editing** techniques to treat blood, autoimmune, and cancer diseases, using advanced gene-editing tools like recombinase and transposon systems.

MSC-READY - Scaling up the **production of MSC-based cell therapies** (e.g., Desacell®) for serious diseases, ensuring cost-efficient manufacturing and global clinical application.

SaxoCellutions

Support for R&D projects in management and **tech transfer**. Sharpening the **cluster strategy** and strengthening Saxony as a **biotech hub** by expanding research-industry collaborations, funding opportunities, education programs, and investor engagement.

The current SaxoCell successes

Scientific Breakthroughs

First successful antibody production at Fraunhofer IZI (S1 GMP facility) in 2024

Further development of the Designer recombinase technology

Clinical Studies

ROR2 CAR-T - Fh IZI & UK Würzburg
Clinical study with ROR2-specific CAR-T cells in patients with ROR2+ tumors

UC-CISSII – TU Dresden & Canadian centers
MSCs from the umbilical cord as cellular immunotherapy for septic shock

Patents

10 new patent applications
6x macrophages, 5x genome editing, 2x NK cells, 1x T cells, 3 others

Additional Funding

GEFÖRDERT VOM GO·Bio Bundesministerium für Bildung und Forschung

xMac / AlloMac – 1mio€

UltraCART / SB-TRACT – 9mio€

SaxoCell Forums

SaxoCell meets Politics — Networking of politics & healthcare

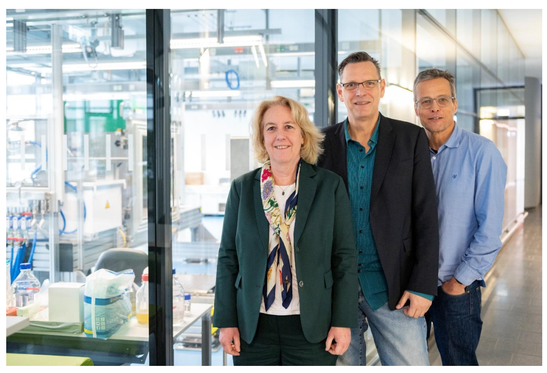
SaxoCell Investors Club — Presentation of Saxon business ideas to investors

Spin-offs & Settlements

3 Spin-offs: seamless THERAPEUTICS, MDTB CELLS THERAPEUTICS, cancilico AI Cancer Diagnostics

2 Settlements: HAN BIOMEDICAL INC., BAUSCH+STRÖBEL Werk Sachsen

SaxoCell Speakers & Consortium



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