

#RESEARCHNEVERSTOPS

iPSC-based off-the-shelf cell therapeutics

Next generation cell therapies



Revolutionising cell therapy by iPSC technology

Advantages of iPSC-based "off-the-shelf" versus autologous/donor-based approaches



iPSC-based off-the-shelf therapeutics

- **Reduced complexity:** Patient is not part of manufacturing process
- Unlimited starting material
- Clonal & high-fidelity gene editing
- **Consistent quality** of final product
- **On demand** product available to patients
- Versatile: Single platform suitable to manufacture multiple cell types for various diseases

In contrast to autologous (and many allogeneic) approaches, Evotec's iPSC-based cell therapies offer the opportunity to cure patients and be commercially successful



Truly "off-the-shelf", fully scalable cell therapy products

A process to overcome a major hurdle in cell therapy



Developing industrialized GMP manufacturing processes that are fully scalable to serve the market with up to tens of thousands of doses



End-to-end process for iPSC-based therapeutics in place

From iPSCs to patients – Evotec's know-how and expertise



Evotec has all components of the end-to-end iPSC platform in place and makes it available for partners to establish and drive the development of a product candidate portfolio together

1 Proof-of-concept 2 Process development 3 Master cell bank



Advancing iPSC-derived beta cells into the clinic

Evotec-Sernova collaboration to develop iPSC-based cell therapeutics for diabetes



Creating a universe of innovative cell therapy projects

Evotec's iPSC-based immune effector cell platform

Immune cell types	Validated genetic modifications	Targeting moieties		
iNK cells	Enhance persistence	Chimeric Antigen Receptors (CARs) and T cell receptors (TCRs)		
iMacrophages	Overcome hostile tumour environment	Immune cell engagers (ICE)		
$i\alpha\beta$ T cells		uDock "universal" CAR (multiple targets)		
iγδ T cells	Increase safety	Targeting moieties from partners		

Combining the different components of this platform is now available for drug development partnerships and enables the rapid generation of a portfolio of differentiated product candidates



Experience matters - the broadest iPSC portfolio in industry

Evotec's internal off-the shelf cell therapy programs

Field	Program/ Project		Disease area	Protocol	Pre-clinical research	Pre-clinical development	IND / Phase I	iPSC-derived cell types	
Cancer immuno- therapy	iNK		Oncology					iNK	Natural killer cells
	iM		Oncology		•				
	γδ iT	Pharma partner	Oncology	Undisclosed				iT	T cells
	αβ iT		Oncology					iM	Macrophages
I&I1	iNK, αβ iT		Fibrosis, SLE ²					iBeta	Pancreatic islets
Metabolic disease	E.iBeta (Device)	Sernova	Diabetes					iCM	Cardiomyocytes
	E.iBeta (Engineered)		Diabetes					iRPE	Retinal pigment
Other	iCM		Heart failure					iDD	Photorogoptorg
	iRPE, iPR		Ophthalmology					IFK	Photoreceptors
Unpartnered, open for new business opportunities Partnered Each cell type can deliver multiple differentiated products									

1 Inflammation and Immunology 2 Systemic Lupus Erythematosus



Combing complementary strength to be fast and successful

How a collaboration could look like

Evotec's input



- Platform technologies, know-how, expertise everything from target ID up to clinical manufacturing
- Translational science plan plus clinical development plan
- All personnel, infrastructure and support functions (Alliance management, IP, legal)
- Oncology drug development ad disease area expertise
- Cell therapy development know-how
- Clear understanding of quality and regulatory requirements

Contribution from partner

Partner

- Validated targets and/or targeting moieties to further accelerate portfolio development
- Financial power to build a comprehensive pipeline of product candidates
- A dedicated and committed research team with expertise in the field to facilitate a smooth interaction and collaboration
- (Ideally) Clinical development expertise and team
- (Ideally) Marketing knowledge and organization

Evotec is ready to partner and can develop an entire iPSC cell therapy portfolio essentially without lead-in time based on its existing capabilities, infrastructure and capacities







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