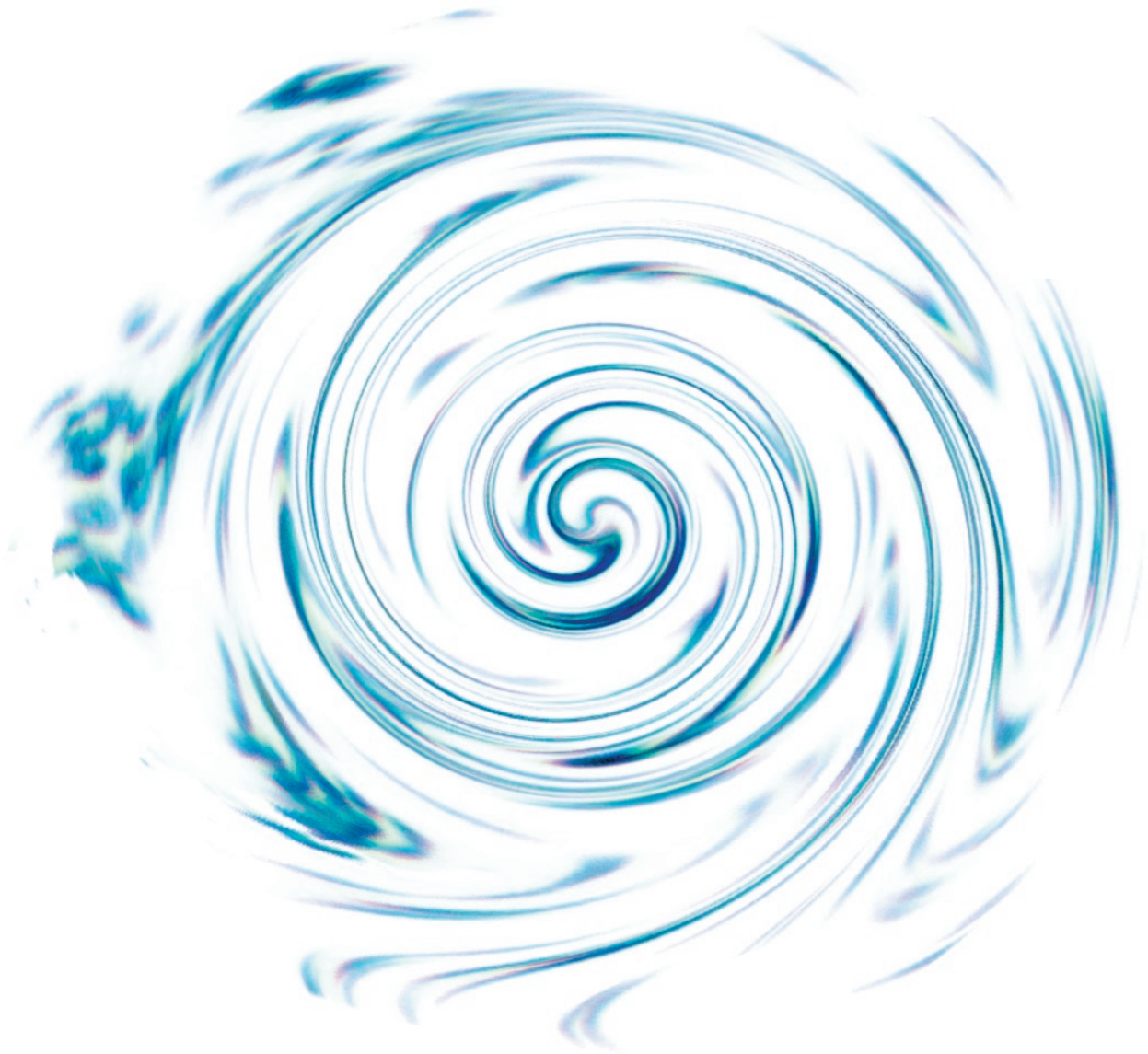


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Competence in Cell Culture and Tissue Engineering

NEW IDEAS AND INNOVATIVE PRODUCTS

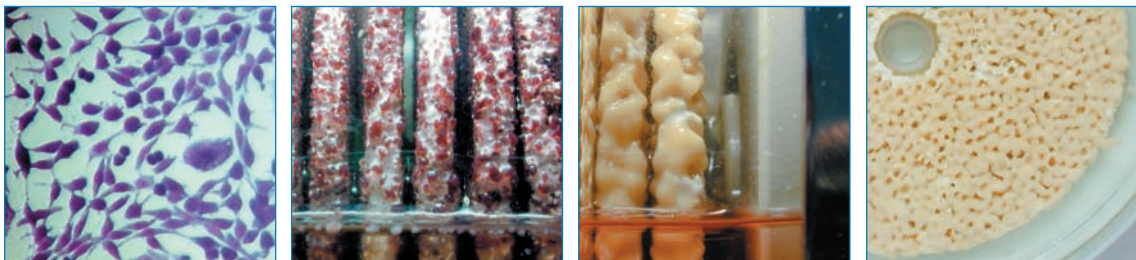
Zellwerk's mission focuses on creative solutions for unmet cell and tissue culturing needs in research, regenerative medicine and biopharmaceutical processing. We have developed several cutting edge technologies for adherent cell culture, tissue engineering and biopharmaceutical processing. Based on our comprehensive material and process engineering expertise we have launched innovative products like our Z[®] RP bioreactor technology as well as Sponceram[®] cell carriers and implant blanks. Zellwerk's products and services combine technological and economical benefits to help our customers surpass future challenges due to promising therapeutical potentials on one hand and rising cost barriers in worldwide health systems on the other.

OUR COMPETENCE

- Efficient cell- and tissue cultivation technologies for research, medicine and pharmaceutical production.
- Production of cell therapy products and biological API's in compliance with GCP, GTP and GMP standards.

SERVICES

Zellwerk produces cell formulations or colonized implant blanks for clinical and research use according to customers specifications. Culturing in Z[®] RP rotating bed bioreactors has proven as a superior way to generate large amounts of primary mammalian (human) cells. All procedures are either conducted under stringent quality control measures following GCP and GTP standards or in less costly experimental environments. Zellwerk offers comprehensive cultivation and isolation services regarding adult and embryonic stem cells. Either starting from our customers cell line or stem cell containing tissue material, we select, expand, extract, differentiate, characterize and formulate cells of interest.



Zellwerk provides services for cultivation and recovery of glycoprotein products from adherent mammalian expression systems. State-of-the-art recovery, purification and analytical techniques are applied to design and optimize product yields. Depending on customers requirements, Zellwerk delivers everything from bulk API glycoprotein substances complying with GMP standards on commercial scale to experimental glycoprotein products manufactured on pilot scale. Development of production cell lines completes Zellwerk's fully integrated approach to keep customers projects within budget limits and time lines.

Cell culture is a central method in many areas of scientific research, yet it's success often depends on personal experience and specific equipment. To date Zellwerk's Z[®] RP bioreactor system (GMP Breeder, Bioreactor, Control Unit, Operation Software) is the first complete cell culturing platform combining flexible cell or tissue hosting, clean room environment, high end process control and documentation in one system. Z[®] RP Technology allows researchers to implement culturing procedures for all kinds of cells and tissues perfectly adjusted to their specific needs.



The Z[®] RP system possesses unique characteristics. Sponceram[®] discs or cell carriers of any other kind can be inserted as rotating bed and colonized. Cells grow to high density on the inserts forming three-dimensional cell layers embedded in cell-specific extracellular matrix.

The Z[®] RP system is the first GCP and GTP compliant platform for cell therapy and tissue engineering applications. Operated by clinicians next to the patient a Z[®] RP cultivation system allows various autologous cell or tissue treatments in a safe and economical manner. Exploiting the numerous advantages of regenerative medicine becomes feasible for the first time.

A Z[®] RP system equipped with Sponceram[®] carrier material is the production method of choice when utmost biological quality of recombinant glycoproteins is mandatory. The tissue-like cultivation of mammalian cell-based expression systems gives rise to accurate folding, assembling and post-translational modification of many pharmaceutical proteins. Besides, yield and purity of many glycoproteins produced in a Z[®] RP system excel conventional fermentation techniques.

COMPANY PROFILE

Serving the life science industry since 1997, Zellwerk is marketing cutting edge bioreactor equipment and related services. Zellwerk's new production and research facilities comprise modern laboratories, two cleanroom production suites and customer training areas. Our products and services are addressed to business partners with interest in research, medical and biopharmaceutical fields. Our customers profit from comprehensive experience with cell-derived technologies no matter if our bioreactors and cell carriers are applied or cell and glycoprotein contract manufacturing services are demanded.



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