



PELOBiotech

More than Competence⁴ Cells

CRO & CMO Services

Cells

Media

Proteins

Assays

Global network
of high-end experts
waiting to be at
your service.

Reaching your goals – on time, on top, one-stop

Being a scientist was always fascinating, but never easy. Staying on top of science has always been challenging, but can be exploiting today. We know that you are on top of the Premier League, that you want to be the first to launch a new product and that you need to focus on your things, your core-strengths and time-lines.

You ask – we deliver

Market demands are often breathing down your neck, delays are costly and excruciating. So let us support you to easy the path and to reach your goals. Let us do the hard work, you deserve the best. CRO/CMO selection is often a long process, binding beyond the direct contractual and financial details. A firsttime-right decision is crucial.

Committed to predictability and on-time delivery

According to various studies Confidentiality and Quality are the main factors of choosing a CRO/CMO. We believe that PELOBiotech's approach and performance are speaking for itself. We delivered 99 % on time. So let us go that extra-mile for you. PELOBiotech is based at the hotspots of Europe's Biotech/LS scene, Munich and Heidelberg. Our CEOs combine a 40+ yrs Biotech experience and they offer a full-service CRO – from one source. We train our employees and partners intensively so they can deliver the quality you need. Because we subscribe to the belief that only a devoted team can live that passion that assures outstanding results. Results that are predictable and on-time.

**Global network
of high-end experts
waiting to be at
your service.**

YOUR 6 BENEFITS!

- ✓ Everthing has its time – on time
- ✓ On time enrollment
- ✓ On time delivery
- ✓ Quality assurance
- ✓ Global network
- ✓ Expertise

*"We live by the motto:
Reaching your goals – on time,
on top, one-stop."*



*Dr. Lothar Steeb and
Dr. Peter Frost,
CEOs PELOBIOTECH*

We have the right players – global and local

PELOBIOTECH offers different services carried out by our highly specialized partners. We are your light-house and scout. PELOBIOTECH has built-up a global network of high-end experts waiting to be at your service. And we are always reaching out for innovative and highly talented companies. Use our expertise to get in touch with the right people. Because as we all know – time is crucial. To ease the process we command a network of partner companies based local and global from Europe, to Asia to the US. They offer the following services:

Custom Product Development

- Custom Cell Isolation & Media Development
- Custom Generation of iPS Cells
- Custom Recombinant Viruses Services (AV, AAV and LV)
- Custom Bioprinting
- Custom Protein Expression
- Custom Microsphere Engineering

Contract Research

- Contract Research Services using Primary Cells, adult Stem Cells, iPS Cells and h ES cells (ES cells are used only at our partner Translational Cell Science, New York)
- Genomics, Transcriptomics, Epigenetics and Bioinformatics Services

Contract Manufacturing & Biobanking

- CMO Services for (Stem) Cell based Products and Therapies

You will be in contact with the expert you need to discuss your demands in detail. Our dedicated team is speeding up the communication process and makes sure that deadlines and needs are understood and met. We take care of every single contract and accompany the whole process from the early beginning to the very end. We are there and ensure that all involved partners keep on the same page.

www.pelobiotech.com

Custom Product Development

Custom Cell Isolation & Media Development

Adult Stem Cells, Primary Cells from a huge number of human and animal tissues can be isolated from healthy and diseased donors. All cells will be delivered cryopreserved or we use the cells within your contract research project. Together with the cells we can also develop media for different applications. So far we already developed defined media for primary cells or tested different media compositions for a specific application.

Custom Generation of iPS Cells

iPS cell generation can be done using different reprogramming strategies from human fibroblast and endothelial progenitor cells which are isolated from skin or peripheral blood. Noteworthy to mention that we have access to healthy as well as diseased donors. Furthermore we can also generate iPS derived cells (cardiomyocytes, hepatocytes and neural progenitors) and use these cells for research or compound testing.

"Your cell projects in my experienced hands for reliable results."



*Dr. Lothar Steeb (CSO)
PELOBIOTECH GmbH*

Custom Recombinant Virus Services (AV, AAV and LV)

Development of recombinant viruses (AV, AAV and LV), virus amplification and production. Premade AV particles are available for your vascular research eg

- Human VEGF (1)
- Human VEGF B
- Human VEGF C
- Human VEGF D
- Human PDGF B
- Human CTGF
- Human Neuregulin-1



For Order Information just scan the QR-Code with your smartphone.

Custom Bioprinting

3D Bioprinting of cells to create custom spheroid cultures (homotypic or heterotypic) or using hanging drop technology for microtissue generation. It is also possible to create homotypic or heterotypic cellular ring structures using magnetic 3D bioprinting.

Please note that we offer compound testing using 3D spheroids in the field of toxicology, pharmacology, oncology and vascular research.

3D Printing of cells using the "Kenzan method" will create 3D Tissues without any gel or scaffold. In just four steps you will be ready from single cells to 3D tissue. Different structures are possible e.g. cubes, tubes or rows.

Custom Protein Expression

Protein expression using different expression systems

- E.coli
- P.pastoris
- Baculovirus/Insect
- Mammalian Cells (HEK293 or CHO)

We can use up to 500 l fermenters and reach up to gram scale after purification depending on the expression systems.

We can also offer recombinant proteins as cGMP products. Just call us to learn more about our cGMP opportunities.

Custom Microsphere Engineering

Microsphere technologies continue to revolutionize life science research and development, by enabling new technologies for sample preparation and purification, proteomics, genomics, bio-assays, and diagnostics.

Our partner ReSyn Biosciences provide a customized solution for your research and development requirements to accelerate your R&D programs.

The exceptional binding capacity of their polymer technology provides a range of options for the attachment of proteins, DNA and RNA with high biological activity and enhanced detection sensitivity. The high binding capacity also guarantees unique opportunities for the development of customized research solutions that are impossible to achieve using conventional polymer microsphere supports.

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HOW TO ORDER: CALL: +49 (0)89 517 286 59-0

Contract Research

Contract Research Services using Primary Cells, Adult Stem Cells and iPS Cells

Using primary cells is the right way to increase predictivity and is relevant. During the last decades drug development and drug testing was done mainly by using cell lines and animal models which have only a low predictivity. Anti cancer drug development is not very successful as more than 90% of drug candidates will not get an approval. It is even worse as many of these compounds failed during clinical trials which makes the financial loss even higher. In the last decade 3D cell culture systems were used instead of 2D cell culture systems which increases the predictivity already. In our opinion only primary cells and the best 3D technology can substantially increase predictivity and will also help to find the right animal models. These are the reasons why we offer contract research mainly using primary cell systems.

Our contract research services are offered in the following areas:

- Oncology/Hematology – solid tumors & hematologic diseases
- Angiogenesis – co-culture assays for stimulatory and inhibitory effects
- Immunology - cytokine storm risk analysis
- Toxicology – using iPS derived cells (hepatocytes & cardiomyocytes), primary hepatocytes, kidney fibroblast in 2D as well as in 3D, blood cells and adult stem cells (CD34⁺)
- Cosmetic – stem cell related research and classical compound testing using 2D cell culture as well as organotypic cell models

We support your projects from cell sourcing to cell-based assays and furthermore we will develop together the best experimental design.

How does it work?

We at PELOBIOTECH have a network of highly specified CRO partners beside our own expertise and are happy to be your front desk. Once you are interested in our contract research services we will discuss the possible projects to involve the best suitable partner. Our partner will develop the experimental design and will perform all services we agreed on. In many cases it is only a cell sourcing service which is our daily business. Beside cells from healthy donors we can source many diseased cell systems and all cells will fullfill compliance regulations. Do you have special requirements? If yes, just ask us what we can do.

Below you will find examples of services we can offer to you:



Figure 1: Process will be defined with milestones and only single steps can be assigned.



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- Cell Sourcing - healthy and diseased cell systems and tissues (iPS derived cells, adult stem cells and primary cells)
- Cell Sourcing - healthy and diseased cells and tissues (adult stem cells, iPS derived cells and primary cells)
- Characterization of sourced cells - biomarker profiling, functional assays, karyotyping
- 2D Cell Culture - cell expansion, differentiation, cell banking
- 3D Cell Culture - assays using 3D spheroids/microtissues/organotypic models
- Customized 3D spheroid development using the sourced cells
- Cell-based Assays - e.g. CFUs; cytokine storm
- Compound Testing in 2D or 3D for drug development and toxicology

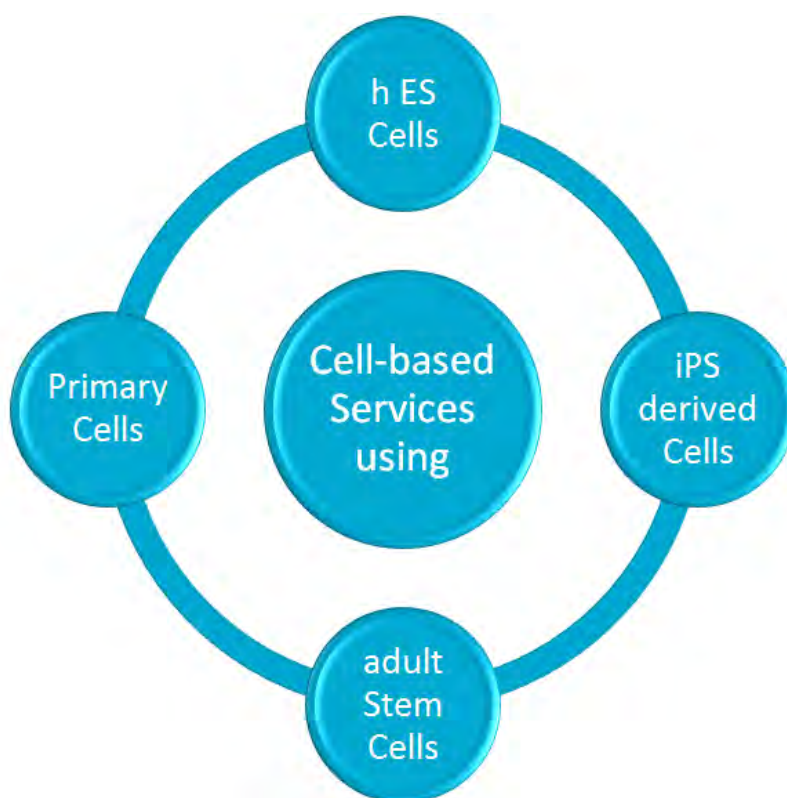


Figure 2: Overview of cells we can use. Our partner Translational Cell Science (New York,US) is allowed to use humane mbryonic stem cells (Wisconsin patents) and can offer this to our clients. Experiments has to be executed in New York.

Just contact us for detailed information or schedule a meeting with us.

(P) +49 89 517 286 59-12

Email: services@pelobiotech.com

www.pelobiotech.com

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Genomics, Transcriptomics, Epigenetics and Bioinformatics Services

Together with our partner GenXPro we offer excellence in Genomics, Transcriptomics, Epigenetics and Bioinformatics.

What can we do?

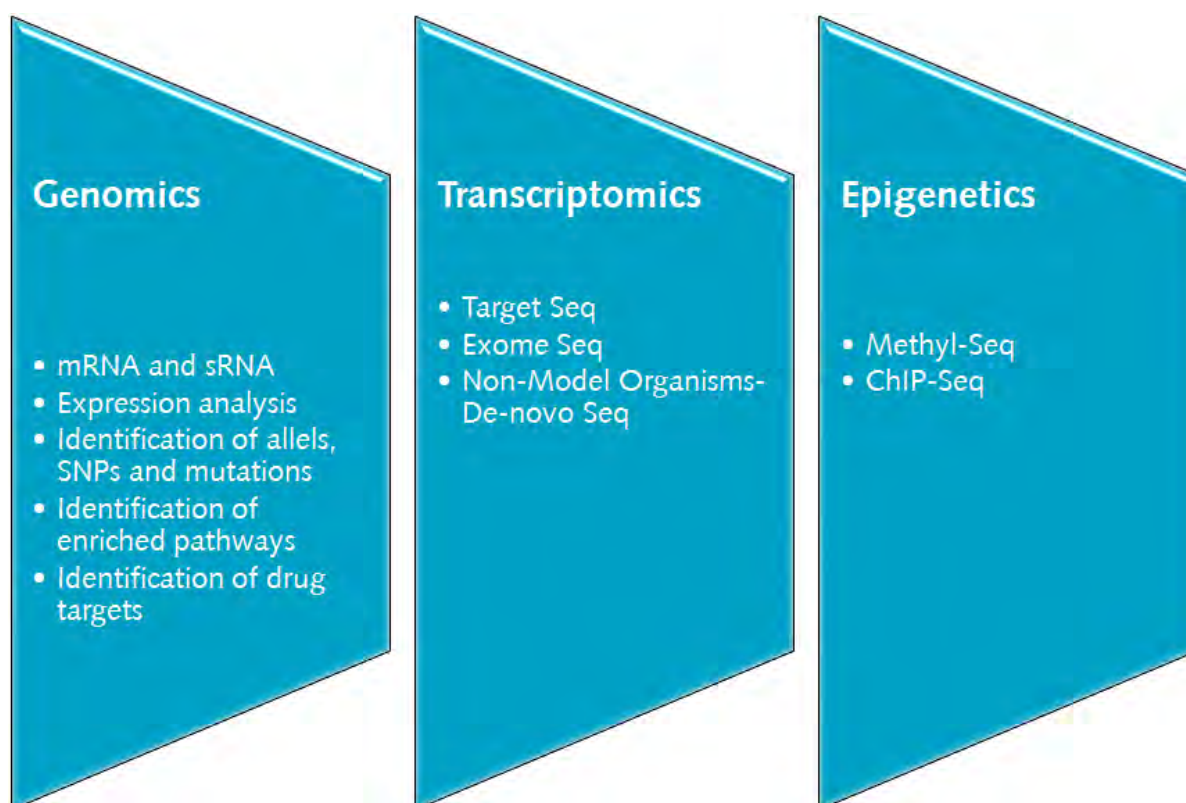


Figure 3: Genomics, Transcriptomics, Epigenetics services

GenXPro offers all genetic analysing tools (e.g. RNA-SEQ, MACE analysing, epigenetic tools) and combines this with customized bioinformatic solutions.
It is the only provider of a solution for very low amounts of DNA/RNA based on their patented TRUEQUANT Technology.



For Order Information just scan the QR-Code with your smartphone.

Contract Manufacturing & Bio Banking

Our partner Stematters (Barco GMP, Portugal) offers cGMP CMO services which include tissue processing, cell-based product manufacturing and cell banking. All services are performed under cGMP guidelines with comprehensive documentation of all manufacturing operations and quality control testing.

Tissue Processing

We develop standard operating procedures (SOP) to be able to offer you biological material according to current regulations (compliance) and GMPs from several tissue sources. Tissue processing is based on mechanical and enzymatic digestion, cell depletion and other techniques.

Tissues were transported from the tissue acquisition centers using special transport devices and under strict temperature control.

Cells

We provide human stem cells which are isolated by different animal product-free techniques e.g. magnetic isolation and/or tissue dissociation. Of course we provide a broad range of stem cell manipulation services e.g. isolation, expansion and differentiation.

We have established a standardized manufacture of adipose derived cell systems.

- Human stromal vascular fraction (hSVF) which are isolated from adipose tissue
- Human adipose stem cells which are enriched from the hSVF after cell expansion

Cellular based therapies and products

Development and validation of manufacturing processes for cell based therapies and tissue engineering products.

Cell Banking

Cells will be cryopreserved using xeno-free or standard cryo-preservation procedures in different containers (bags or vials). The storage will be done in liquid nitrogen gas phase storage tanks with continuous temperature mapping.

We also can provide development and validation of freezing protocols.

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Tissue & Cell Sourcing

Primary Cells & Stem Cells

Ethically compliant human tissue sourcing, disease-specific or normal.

We and our partner TransCell Science provide a variety of human primary cells which we derive from disease-specific and normal tissue samples of many organs, e.g.:

- Cancer cells
- Organ cells
- Skin Cells
- Blood cells

- Human embryonic stem cells
- Human iPS cells
- Human adult stem cells
- Differentiated tissues from human stem cells
- Derivation of human iPS cells from a variety of target cells, e.g., fibroblasts, nucleated blood cells

Cell Analysis which we can offer:

- DNA FISH on interphase and metaphase chromosomes
- RNA FISH, also in combination with DNA FISH
- Immunofluorescence
- PCR and RT-PCR, conventional and real-time
- Sequencing
- Custom projects

Cell-based Assays:

TransCellScience offers primary cell-based assays for drug development which constitute the most accurate disease modeling and surpass cell lines, 3D organ culture and animal models. The assays cover many conditions, e.g., oncological, cardiovascular, metabolic, autoimmune, degenerative, genetic, aging-related etc.

- Cell viability assays, e.g., ATP-based
- Cell Proliferation Assays, e.g., EdU-based
- IC50/EC50 determination in 2D & 3D cell culture systems
- Compound discovery and screening
- Statistical data analysis



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