



# The CHO-cell technology advantage

acib has spearheaded for over a decade an international collaborative effort to unlock the potential of CHO-cells, addressing the main challenges of cell-line optimization. Benefit from reduced time-to-market and lower production cost and let acib streamline your process!

## BACKGROUND

The biopharmaceutical industry has witnessed remarkable growth, with biologics claiming a significant market share. CHO cells have been the backbone for producing therapeutic agents, but challenges persist, especially in the face of rising costs and the emergence of complex protein formats. Addressing these challenges requires a comprehensive understanding of CHO cell genetics and behavior, which acib has diligently pursued.

## TECHNOLOGY

acib's CHO-cell technology spans diverse aspects, from generating a high-quality reference genome to characterizing genetic diversity within cell lineages. Innovative tools for cell engineering and optimization of cell behavior have been established by the accessibility to genomic and epigenetic data. Moreover, acib has delved into epigenetic modulation, using non-coding RNAs and CRISPR engineering, paving the way for precise control over cellular behavior. This detailed understanding allows for improved bioprocessing, cell line optimization, and the creation of a minimal designer cell line.

acib's CHO-cell technology has already influenced the biopharmaceutical industry by advancing media formulation, enhancing protein purification, and enabling multiplexed cell engineering. The innovative approaches developed by acib offer tangible benefits, from improved process titers to higher yields, enhanced product quality and higher stability of production cell lines. Join us in shaping the future of biopharmaceutical manufacturing.

## OFFER

acib invites companies to join forces in further advancing CHO-cell technology. Collaborate with us to develop and implement advanced, but reliable technology in your biopharmaceutical processes. The intellectual property generated in this collaboration will be seamlessly transferred to you as our partner. Many industrial partners, including GSK, Sandoz, GE Healthcare, Boehringer Ingelheim, Novartis, and Janssen Scientific, have benefited from acib's expertise, and new opportunities for collaboration are there to further propel advancements in biotechnological CHO-processes.

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## acib-EXPERTS:

Prof. Dr. Nicole Borth

## DEVELOPMENT STATUS:

TRL4: technology validated in lab

## KEYWORDS:

Chinese Hamster Ovary (CHO) cells, Biopharmaceuticals, Epigenetics, CRISPR engineering, Metabolic modeling  
Industrial collaboration

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