



UNLOCK PICHIA
PRODUCTIVITY THROUGH DIVERSITY

VALIDOGEN - *Pichia pastoris* Protein Expression Excellence

Company name: VALIDOGEN GmbH
(formerly known as VTU Technology)
Headquarter: Raaba-Grambach, Austria
Founded: 2008

Contract Research Organization, CRO serving
(bio)-pharma, diagnostics, food & feed, chemical, agro
and other industries

Time-saving protein expression studies|
Comprehensive production strain development|
Bioprocess development|
Protein purification and DSP development|
Cell banking|
Enzyme engineering|

VALIDOGEN is a leading contract research and development company located in Austria, providing services for the fast-track generation of high performance *Pichia pastoris* protein production strains and economically viable protein production processes for biopharmaceuticals and other proteins.

As demonstrated by numerous completed and ongoing projects, protein production processes developed in VALIDOGEN's labs have been shown to be robust and scalable, facilitating sound technology transfer and straightforward implementation in large scale production facilities.

COMPANY OVERVIEW

SERVICE PORTFOLIO

COMPANY PORTRAIT

TRACK RECORD



To date several VALIDOGEN customers have licensed and successfully scaled-up commercial production processes for the manufacture of recombinant proteins with VALIDOGEN's Pichia system known as **UNLOCK PICHIA** to volumes ranging from several hundred to more than 50,000 L.

VALIDOGEN has established a broad range of tools and know-how for the generation of high-performance Pichia production strains & processes. Exclusive proprietary technologies and profound experience of the VALIDOGEN team lead both lead to competitive production processes for a wide range of recombinant proteins including

- antibody fragments (VHH antibodies, scFvs, Fabs)
- protein scaffolds
- fusion proteins (Fc-and albumin fusion)
- cytokines and growth factors
- hormones
- vaccine antigens
- enzymes
- allergens
- serum proteins

UNLOCK PICHIA - broadest Pichia protein production toolbox

VALIDOGEN's exclusive, highly approved 1st generation library of synthetic methanol-inducible PAOX1 promoter variants forms the core of the company's cutting-edge in-house *Pichia pastoris* toolbox. This enables high-level protein production of up to 25 g/L of secreted protein (peak productivity of 35 g/L).

VALIDOGEN's 1st generation library has been complemented with groundbreaking and unique methanol-free 2nd generation PAOX1 promoter variants, facilitating strong

expression even with just glycerol or glucose as the sole carbon source, clearly outperforming conventional promoter systems. In addition to abolishing toxic and explosive methanol as a substrate, while retaining high expression levels of up to 20 g/L, major advantages of this new technology include reduced oxygen consumption leading to significantly reduced heat production and cooling effort in bioreactor cultivation, as well as a significant potential to reduce process time and cost of goods.

The versatility and effectiveness of VALIDOGEN's Pichia system is further underlined by

- a set of proprietary expression enhancing helper factors
- several platform strains with different genetic backgrounds
- elaborated cloning and transformation protocols
- a high-throughput microscale cultivation and screening regime
- effective bioreactor cultivation protocols

Meanwhile, the *Pichia pastoris* expression system is an established, FDA approved, safe (GRAS) and highly competitive expression system with strong secretory capacities, while secreting only low amounts of endogenous proteins. Today, a large number of recombinant protein products on the market (pharma and non-pharma applications) are produced in *Pichia pastoris*.

Contact:

VALIDOGEN GmbH

Dr. Iskandar Dib

Business Development & Principal Scientist
iskandar.dib@validogen.com