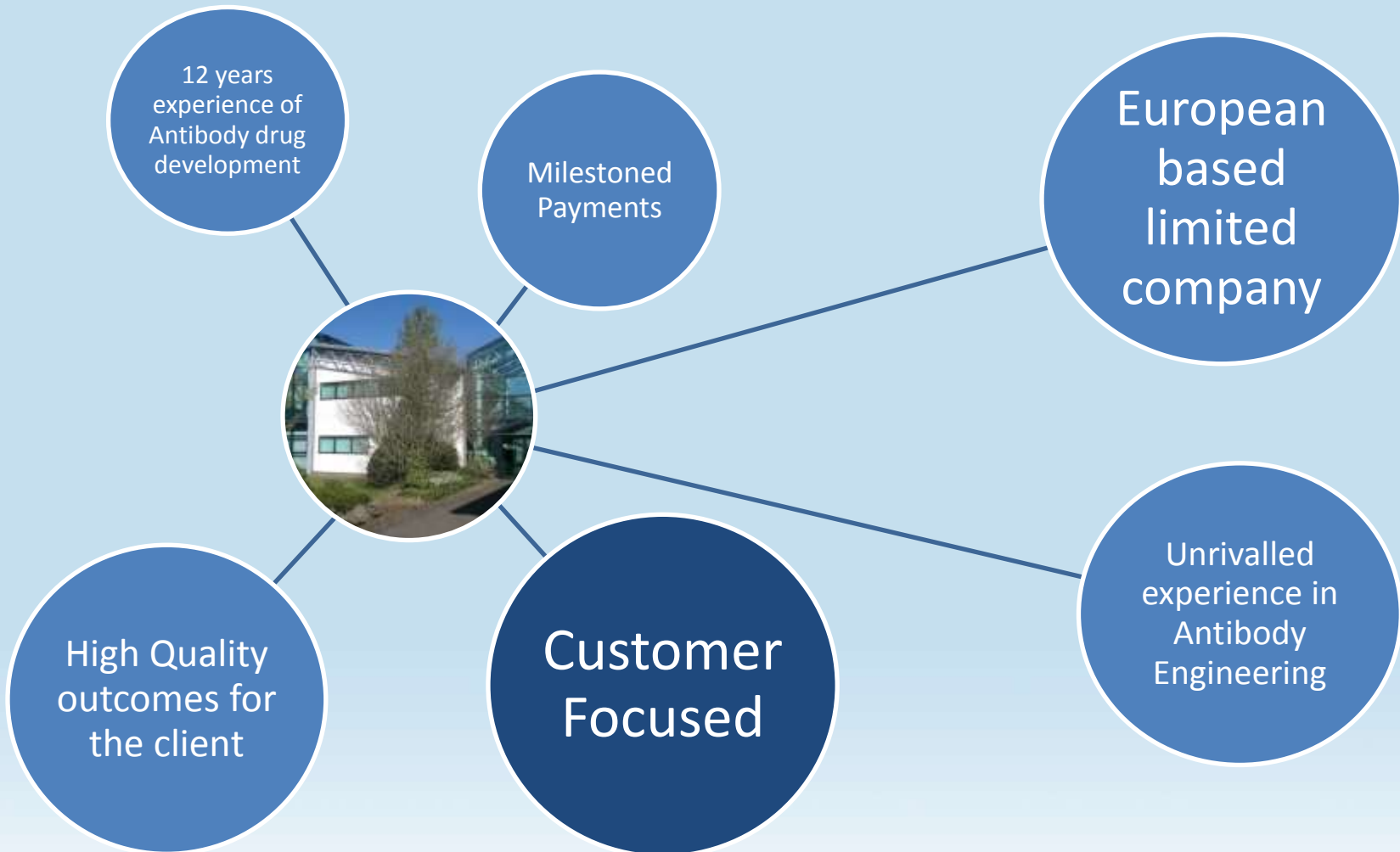


# Fusion Antibodies

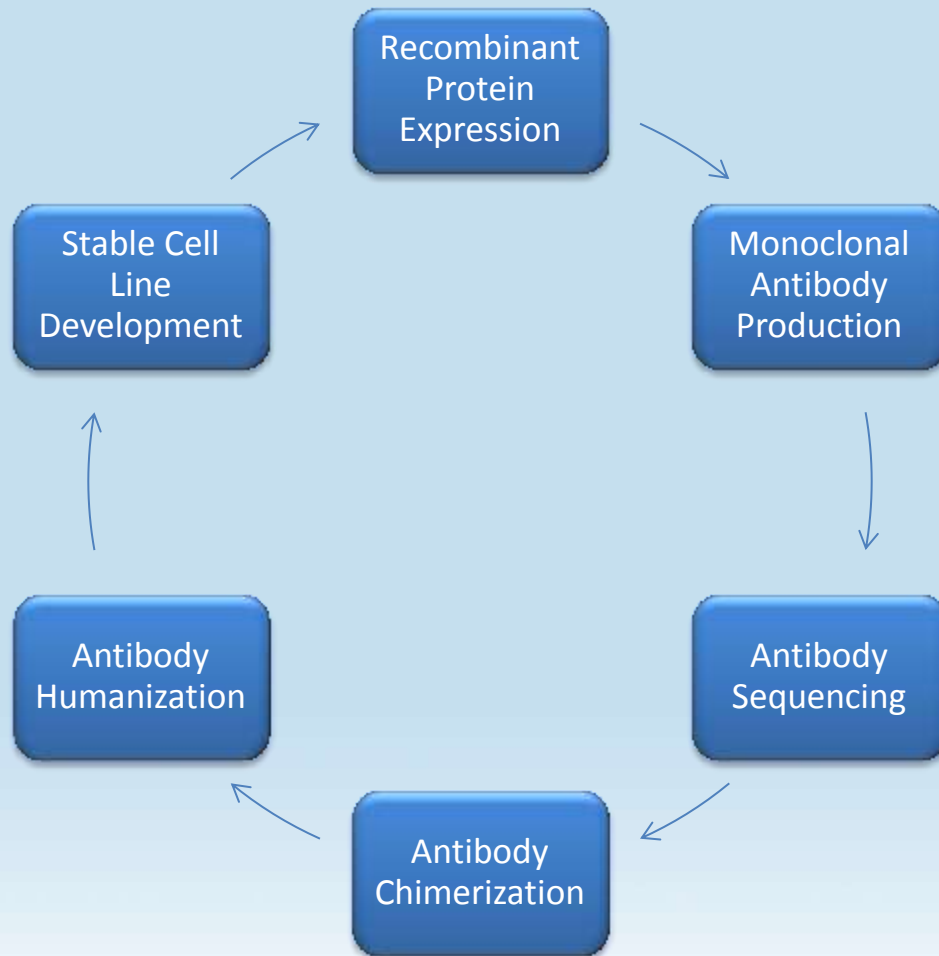
Genes to Proteins to Antibodies



# Why Fusion Antibodies?



# Our Services



# Recombinant Protein Expression

## The FET™ Bacterial Platform

- FET™ is a multi-parallel bacterial screening platform using a number of proprietary vector systems
  - High level expression of hard to-produce proteins
  - High solubility of target proteins
  - Excellent bioactivity
  - Over 550 proteins made
  - <5EU/mg
  - Range of purification methods available
    - IMAC
    - Affinity
    - SEC
  - Native conditions or Inclusion Body refolding




# Recombinant Protein Expression

## The FAbCHO™ Mammalian Platform

- FAbCHO™ is a highly developed process customized to suit your specific requirements.



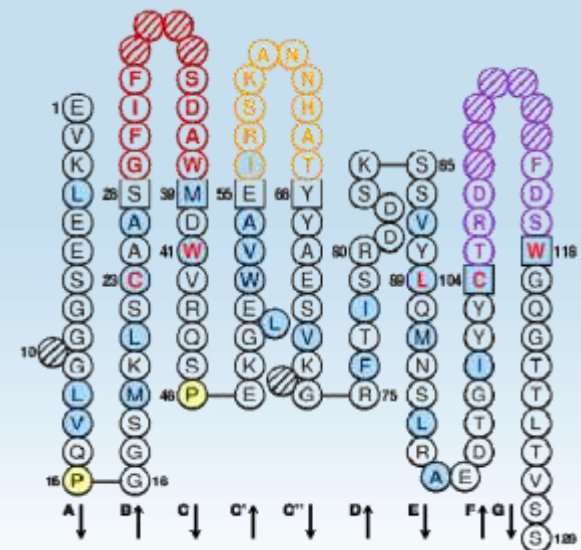
- Rapidly go from cloned gene to large quantities of protein in 3-7 days
- Obtain fully post-translationally modified and active mammalian proteins
- Fusion Antibodies are experts at “hard to express” proteins
- >70% Transfection of CHO suspension cells
  - GFP control
  - 5-20mg IgG/Litre

- 12+ Years of Monoclonal Antibody Development
  - From as little as 3 months time-scale
  - Over 500 antibodies produced
  - High Affinity
- 
- Wide range of follow up analysis and characterisation techniques available.

# Antibody Sequencing

- ✓ Unrivalled quality of service
- ✓ Guaranteed service
- ✓ CDR identification
- ✓ Aberrant Light Chain Identification
- ✓ Detailed analysis and report
- ✓ >600 projects completed to date

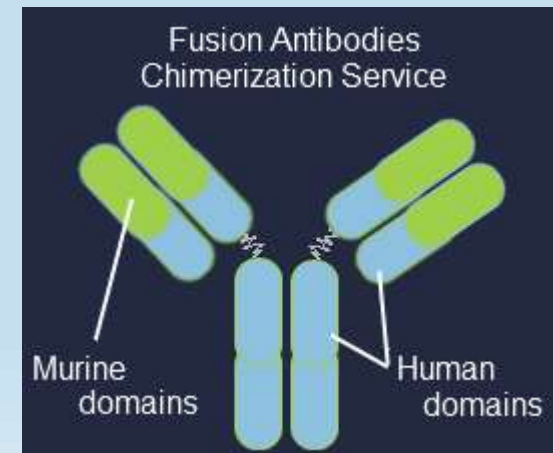
Standard Sequencing:	V <sub>H</sub> and V <sub>L</sub> only
5'RACE sequencing:	V <sub>H</sub> , V <sub>L</sub> and Leader sequence
Full Antibody Sequencing:	V <sub>H</sub> , V <sub>L</sub> , Leader and constant domains



# Antibody Chimerization

Fusion Antibodies Antibody Chimerization Service allows you to specify your requirements for expression and characterisation, ensuring outstanding results every time

- Murine variable domains sequenced from your hybridoma cell line
- Combined with human constant domains
  - reduce the immunogenicity of the antibody *in vivo*.
  - Many other constant domain available

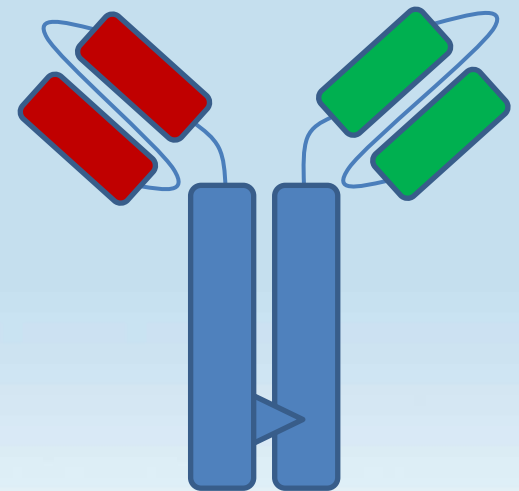




# Antibody Engineering

Fusion Antibodies have developed a range of engineered antibody technologies to produce custom configurations to suit your requirements

- Antibody class switching
- ScFv's
- Fab Fragments
- Mini-bodies
- Tri-bodies
- Bi-Specific Antibodies



Our Bi-Specific Antibody service uses scFv technology to combine antibodies

# Antibody Humanization

Fusion Antibodies provides **Royalty Free** Antibody Humanization of Monoclonal Antibodies. Using our next generation *in silico* CDRx™ technology we have modernized the traditional CDR grafting technique. We identify and combine the essential sequences from antibody variable domains into human donor sequences (not germ line) to create a panel of full length humanized antibodies for expression. Fully humanized monoclonal antibodies are an essential step in the progression of your drug to the clinic and the in-house expertise at Fusion Antibodies ensures its success.

- ✓ Modernized Version of Traditional CDR grafting
- ✓ T-Cell epitope screening
- ✓ Chimeric control included
- ✓ 10+ constructs in as little as 8 weeks
- ✓ Patented process with no Royalty Fee
- ✓ 2-fold Affinity Guarantee

# Stable Cell Line Development

Fusion Antibodies specialize in proof of concept cell line development. Your first choice for developing your cell line.

- Consistent high level expression of your protein of interest
- Development of cell lines in serum free media to meet regulatory requirements
- Expression of large functionally active multimeric proteins due to the presence of complex post translation modifications such as glycosylation and disulphide bond linkage
- Ease of transfer of cell lines for cGMP scale production



## Other Services

Fusion Antibodies also work in partnership with a range of carefully selected high quality partners who provide services which complement ours.

This relationship with our partners allows us to deliver a **complete package** and tailor a solution to your requirements.

- Biacore analysis
- Epitope mapping
- Mass Spec
- DSC Analysis
- cIEF Analysis
- **Plus Many more**

# Client Portfolio

Harvard University

ARIUS  
Research Inc.

TEVA

domantis  
The Domain Antibody Company

gsk

VHIO<sup>®</sup>

NOVARTIS

ALLERGAN



- High quality clients from small to large
- 3rd party verification of our technologies

dkfz.

Altech<sup>®</sup>  
...naturally

Pfizer

AXIS-SHIELD

LOSTAM  
BioPharmaceuticals

INSTITUT PASTEUR

MedImmune

CDC

Lundbeck

PALL  
Pall Corporation

NATIONAL  
CANCER  
INSTITUTE

NATIONAL INSTITUTES  
OF HEALTH

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