



The **Affinity** Experts

CaptureSelect[®] Affinity Ligands

BIO – Europe

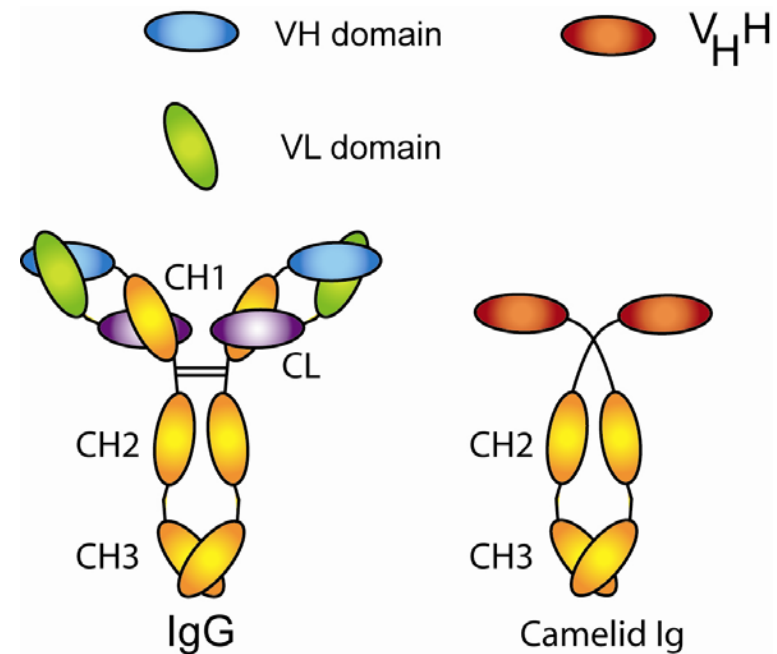
3-NOV-2009

- ⌚ Biotherapeutics fast growing area

- ⌚ Challenges in manufacturing have moved from upstream to down-stream
 - Unlike small molecules purity is key for regulatory approval
 - Complex media
 - Not correctly processed forms, aggregates, instability
 - No general purification strategies: multi-step decreases Yield
 - Time lost during process development
 - Manufacturing with high yield becomes key for biosimilars

- ⌚ BAC has a unique technology, multiple products and a rapidly expanding pipeline, which addresses the above needs

the Uniqueness of VHH Antibody Fragments



- 12-15 kDa fragment
- Tuneable specificity/affinity

Production

Fermentation



Biomass Removal & Concentration

Microfiltration & Ultrafiltration

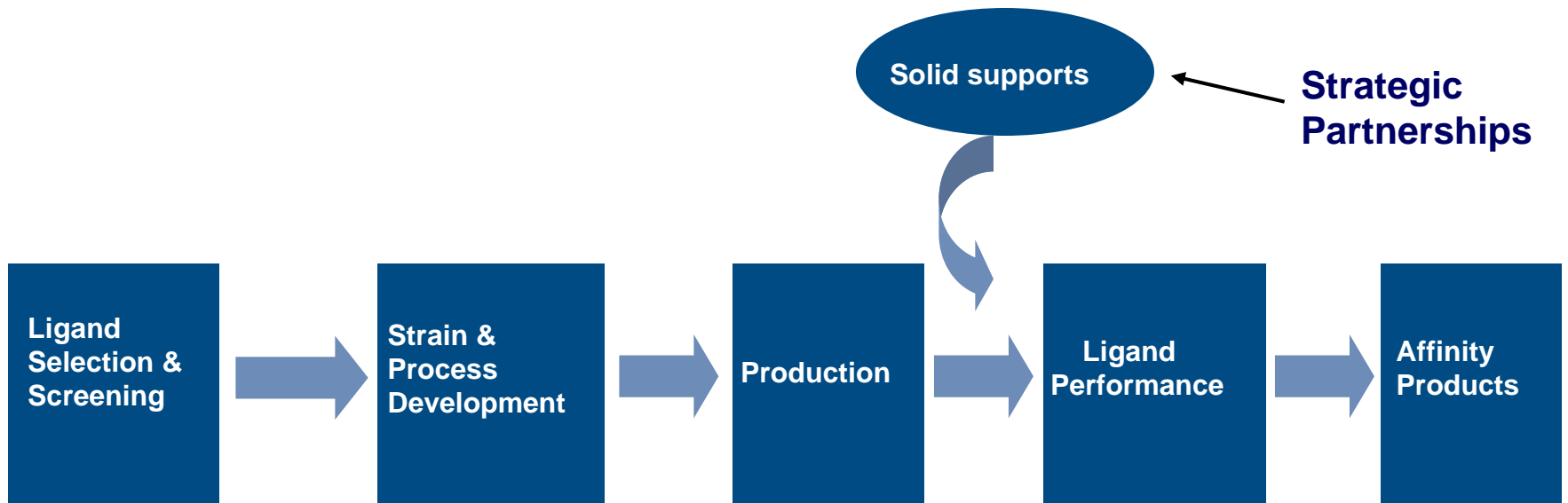


Purification

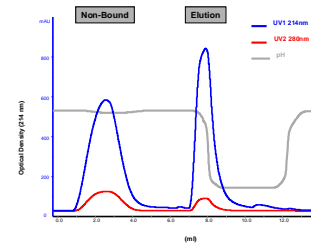
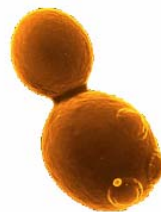
Chromatography



- 🌀 Microbial production of the ligands using Baker's yeast
 - Quick discovery and scale up, non animal derived sourcing
- 🌀 ISO9001
- 🌀 Audited by GEHC and end-customers



> 20 Patents and licenses





Life Sciences Research

Proteomics
Pre-purification

Separation
Antibody Toolbox

BAC products incorporated in all major supplier kits for proteomics for sample treatment of plasma in drug discovery

Webshop for immobilized finished products

Antibody Toolbox™ Media
Leakage ELISA

- Support for bioprocess products



Biopharma Manufacturing

Multi-Customer Ligands

- IgG
- Fab's
- AAV
- recFactor VIII

Custom ligands

- Recombinant proteins
- Vaccines
- Plasma proteins



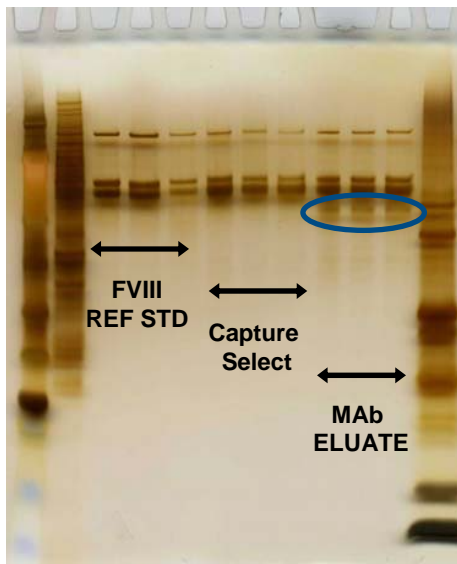
GE Healthcare

- IgSelect
- AVB Sepharose HP
- VIIISelect
- KappaSelect
- AAT

→ End-users

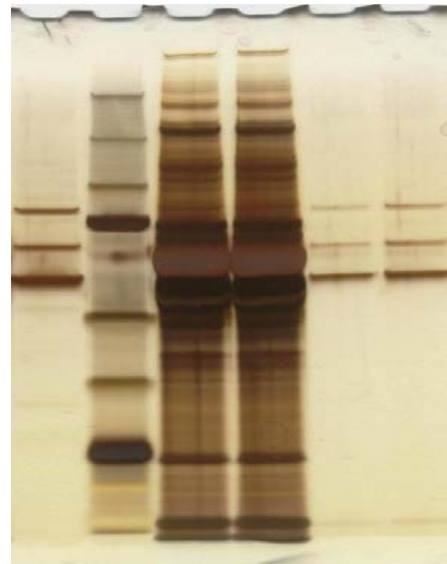


Recombinant Factor VIII



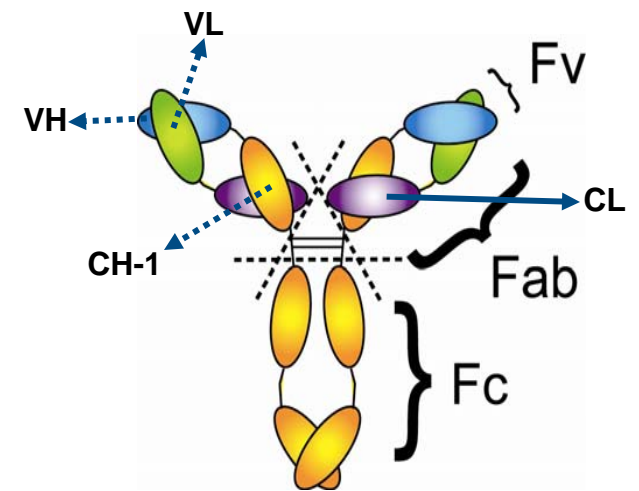
Mild elution conditions
High Purity
High Yield

Adeno Associated Virus



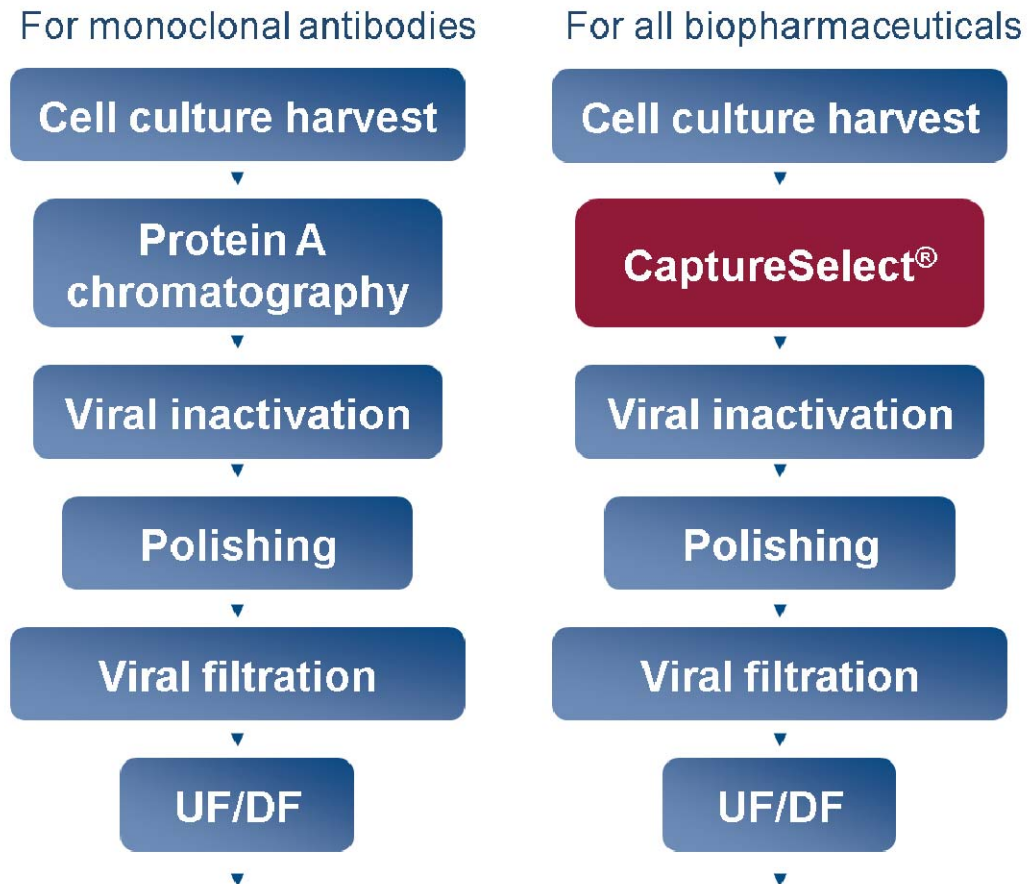
High single step purity

Antibody Formats



Unique Specificities

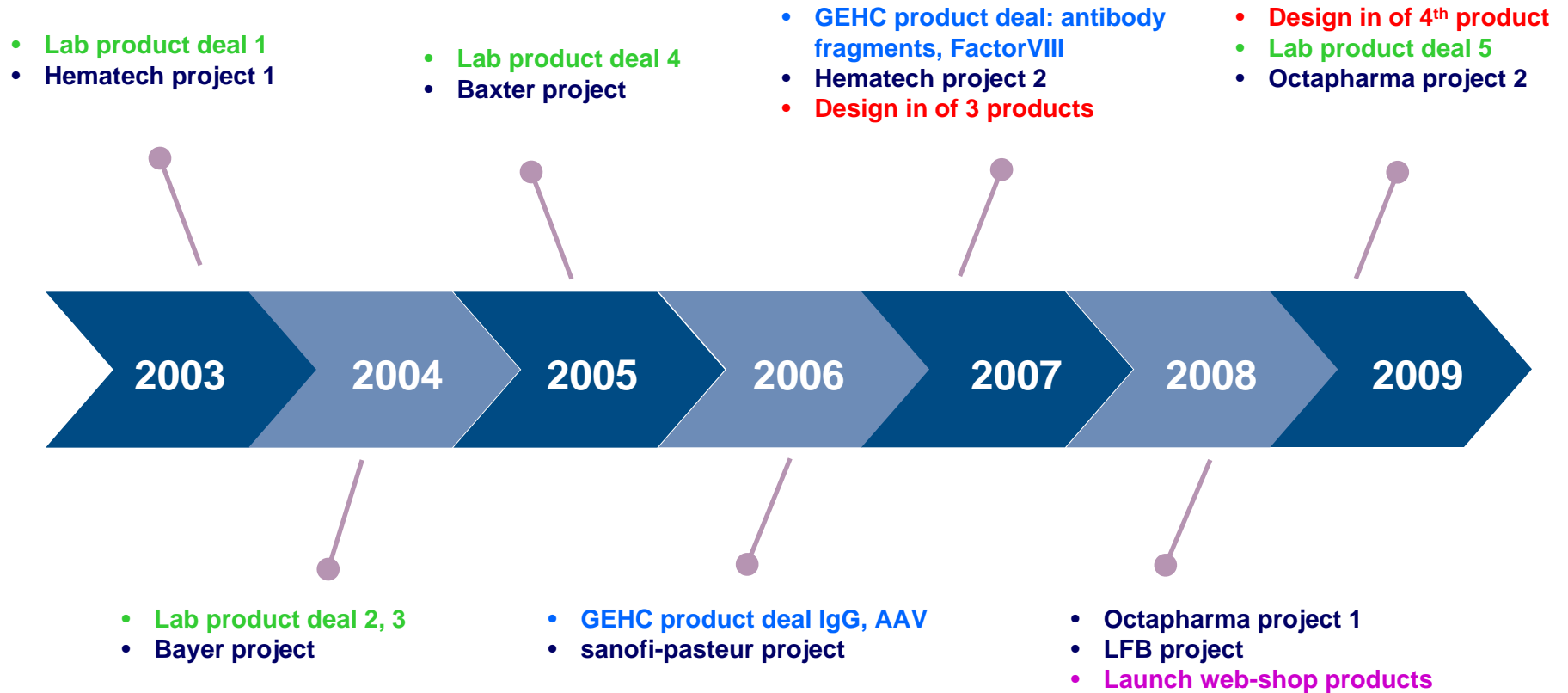
A Platform approach to purification



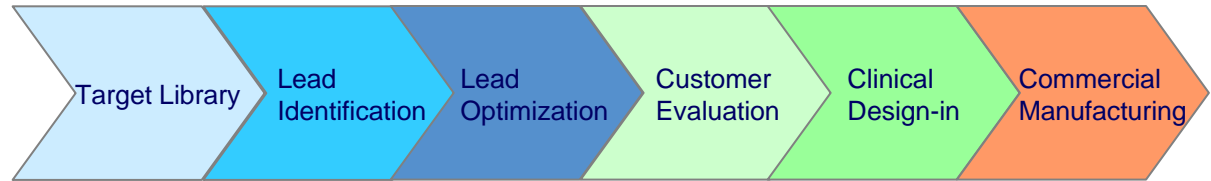
- Adopted the platform approach
- During clinical development the ligand is developed and upscaled
- Close collaboration between BAC, GEHC and Octapharma
- FVIII in clinical manufacturing
- FIX, licensed in and being upscaled
- G-CSF, currently in development



Deals and Products



BAC's Pipeline



IgG (Fc), AAV, FVIII, Fab kappa



Blood Clotting Factors,
Antibody formats



Biosimilars



Vaccines / Viruses



- ~ Product company with 5 launched products in 2009, extensive pipeline
- ~ Founded on unique technology, know-how and IP as Unilever spin-off in 2005
- ~ Management Team:
 - Laurens Sierkstra, PhD, CEO & Managing Director
 - Ingeborg van Gemeren, PhD, VP Business Development & Managing Director
 - Bruce Dawson, MBA, VP Marketing and Sales, US based
- ~ Investors: FF&P and Unilever Ventures (London)
- ~ Based in Naarden, NL
 - 37 FTE
 - Dedicated R&D (BioScience Park Leiden, NL)
 - Microbial Biotech manufacturing site (Naarden, NL)





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Visit us at:

<http://www.bac.nl>

<http://www.captureselect.com>